

Adult Occupational Therapy and Physiotherapy Services in the Kivalliq Region of  
Nunavut: Feasibility of Mapping the Client Journey

by

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## Abstract

Since 2000, following a community needs assessment, the Government of Nunavut has funded and Ongomiizwin – Health Services has coordinated Occupational Therapy (OT) and Physiotherapy (PT) services in the Kivalliq Region of Nunavut. There has been no formal evaluation since the inception. The student researcher conducted a feasibility study on client journey mapping with adult Inuit OT and PT clients. Using program utilization data, descriptive statistics were used to identify adult OT and PT clients with high utilization of services to determine clients for journey mapping. Client journey mapping is a methodology that can help us to understand a series of health care events by exploring the patient experience from their perspective and looks for opportunities to make improvements. The *Managing Two Worlds Together Patient Journeys* workbook (Kelly, Dwyer, et al., 2016) was adapted to focus on OT and PT services, and for use in Nunavut with Inuit OT and PT clients. Relevant areas of focus for feasibility studies were selected as the method to determine feasibility of client journey mapping with OT and PT clients in the region. The adapted client journey mapping tool was found to be feasible for ongoing program evaluation and could be considered for use in other regions of Nunavut. Further suggestions to adapt the tool incorporating Inuit Qaujimajatuqangit (IQ) principles (Inuit traditional knowledge) and aspects of cultural safety and decolonization frameworks were proposed. Program utilization data and the adapted client journey mapping tool can provide additional knowledge on OT and PT adult services for program improvement.

*Keywords:* occupational therapy, physiotherapy, Inuit, program utilization, journey mapping, program evaluation, rural and remote.

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## Chapter 1: Introduction

This study is set in the Canadian territory of Nunavut and will provide an overview of the utilization of adult Occupational Therapy (OT) and Physiotherapy (PT) services in the Kivalliq Region. The study will also explore the feasibility of client journey mapping with an OT and PT client with the revision of a tool for use in Nunavut that captures the client experience with health services. Further revisions to include aspects of cultural safety and decolonization frameworks are incorporated to increase knowledge and opportunities for program and system level improvements. The introduction will provide an overview of Nunavut and in particular health services including OT and PT services in the Kivalliq Region, an introduction to patient experience and journey mapping, the study purpose and research questions, and researcher positionality. The thesis is then organized into the literature review, research methods, findings, discussion, and conclusion.

### **Nunavut and the Kivalliq Region: A Brief Overview**

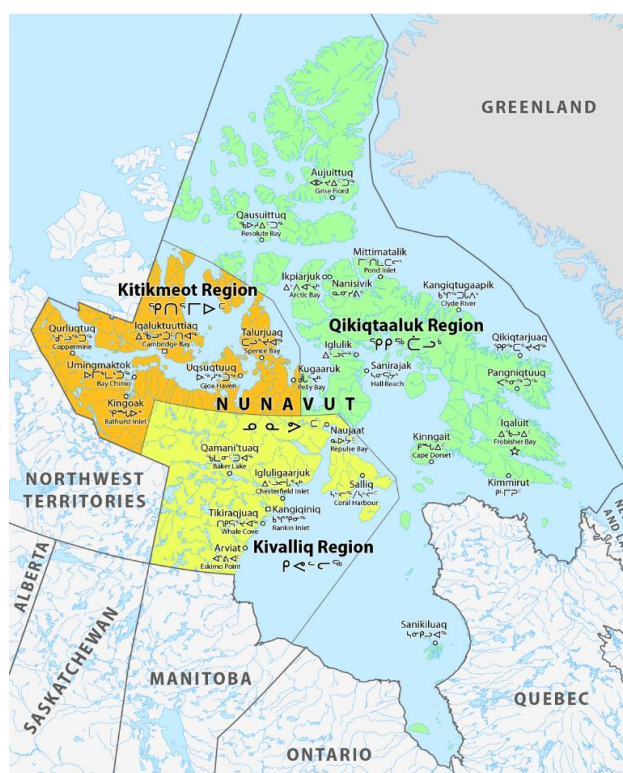
Canada's Inuit lands are known as Inuit Nunangat, which in the Inuit language of Inuktitut, is a term that includes land, water, and ice and includes four regions: Inuvialuit (northwestern part of the Northwest Territories), the territory of Nunavut, Nunavik (northern Quebec) and Nunatsiavut (Labrador Region of Newfoundland and Labrador). Nunavut (which means "our land" in Inuktitut) was created after extensive negotiations with the Government of Canada and the implementation of the Nunavut Land Claims Agreement in 1993. This agreement gave Inuit title to 350,000 square kilometers of land in Nunavut, which is the largest in Canadian history. The land claims provided for the establishment of the new territory of Nunavut including an outline of Government of Nunavut operations which were formally established with the *Nunavut Act* on April 1, 1999 (Dahl, Hicks, Jull, & International Work Group for Indigenous Affairs., 2000). The Government of Nunavut has 10 departments including Community and Government Services, Culture and Heritage, Economic Development and Transportation, Environment, Education, Executive and Intergovernmental Affairs, Family Services, Finance, Health and Justice (Government of Nunavut, 2021a).

The capital of Nunavut is Iqaluit, on Qikiqtaaluk Island, with a population of 7,740 (Statistics Canada, 2017a). Nunavut is a large, remote, and sparsely populated region with a landmass of 1,877,787 square kilometers and a population of 35,944 (Statistics Canada, 2017b). The majority of Nunavummiut (the people of Nunavut) are Inuit, representing 85% of the population of the territory; the population is young with a median age of only 23 years compared to 41 for the non-Indigenous population of Canada (Statistics Canada, 2015a). Communities in Nunavut are accessible only by plane, with no roads connecting communities in Nunavut, or communities to southern centres. The Inuktitut language is still commonly used. Eighty nine percent of Inuit in Nunavut reported they could have a conversation in an Inuit language; 95.8% being in the Inuktitut language (Statistics Canada, 2017). Inuit have been significantly impacted by the dramatic socio-cultural changes of colonization. Health disparities, disability rates, availability of health services, as well as social and economic determinants of health are further reviewed in Appendix A. The Kivalliq Region of Nunavut is located on the west coast of Hudson Bay about 300 km north of Churchill, Manitoba and has eight hamlets with a total population of 10,413 (Statistics Canada, 2017c). Rankin Inlet is the transportation, health services, and business centre of the region and has a population of 2,842 (Statistics Canada, 2017c). The Government of Nunavut Department of Health operates the Kivalliq Regional Health Centre. Outpatient clinics as well as an 11-bed inpatient unit and a birthing centre are staffed by community health nurses, midwives and family physicians. The communities in the region range in size from 435 to 2,514 people (Statistics Canada, 2017) and from a 15-minute to a four-hour trip by plane from Rankin Inlet. All communities have a health centre staffed by primary care nurses as well as itinerant physicians. Community health programs include primary care, public health, home care, mental health, and midwifery services. Tertiary care and other services not available in the region are provided out-of-territory in Winnipeg, Manitoba. The University of Manitoba Indigenous Institute for Health and Healing, Ongomiizwin– Health Services coordinates medical specialists that visit the communities, as well as library services and occupational therapy (OT), physiotherapy (PT) and speech language pathology (SLP) services in the region. OTs are self-regulated health care professionals that assist people resume or maintain participation in a variety of activities such as their jobs, leisure

and social activities, getting around or caring for themselves (College of Occupational Therapists of Ontario, 2017). PTs are self-regulated health care professionals that have extensive knowledge of the body and apply clinical hands-on skills to assess, diagnose and treat symptoms of illness, injury or disability (PhysioCanHelp.ca, 2020), with a particular emphasis on mobility.

**Figure 1**

*Map of Nunavut*



*Note.* By Maximilian Dörrbecker (Chumwa) - Own work, using this file by Flappiefh, CC BY-SA 2.5, <https://commons.wikimedia.org/w/index.php?curid=46895498>)

### **Occupational Therapy and Physiotherapy Services in the Kivalliq Region of Nunavut**

In 1999, the Government of Nunavut Department of Health was interested in initiating a local rehabilitation program to provide services which were not available in the region. Clients that required rehabilitation services had to travel out-of-territory to receive PT services in

Churchill, Manitoba. OT and SLP were only available in Winnipeg, Manitoba. To determine the need for OT, PT and SLP services in the Kivalliq Region in which to initiate the program, a community-by-community needs assessment using mixed methods was completed by Fricke (2003) in the winter of 1999-2000. Surveys were sent to representatives in health, education and social services that could identify individuals of all ages in the community that would immediately benefit from rehabilitation services. In addition, individuals with past experience with rehabilitation services were interviewed in each hamlet in order to provide the service-user perspective of leaving the region to access services. Finally, community radio shows were held in each hamlet in order to potentially engage entire communities in the development of new programming. The needs assessment provided a list of potential clients with chronic conditions for each community based on the surveys, chronic disease registries and collaboration with key informants. The needs assessment found 897 referrals representing approximately 9% of the total regional population (or 670 individuals) would benefit from immediate intervention by one or more of the three rehabilitation disciplines of PT, OT or SLP (Fricke, 2003). Fricke (2003) noted that this number was likely an under-estimate of need due to survey responders decreased awareness of OT, PT and SLP's scopes of practice related to the lack of access to services in communities and high staff turn-over resulting in limited knowledge of client needs in some community. In addition, the survey focused primarily on identifying chronic conditions, and therefore did not document needs associated with mental health issues and acute orthopaedic conditions. Cieza et al. (2020) studied the global need for rehabilitation services, presenting seen disease and injury categories in which rehabilitation would be essential, and estimated that 2.42 billion people, or one in every three people in the world needs rehabilitation at some point in the course of their illness or injury, and that rehabilitation services should be provided close to communities to reach those in need.

Fricke (2003) also reported high levels of stress for clients attending medical appointments in southern centres; discontinuity of care in current rehabilitation services and a lack of communication between southern centres and the communities they serve; and that rehabilitation services could play an important role in local education and professional support. This needs assessment provided a point prevalence estimate of those that could actively

benefit from OT, PT and SLP services to develop a medical rehabilitation program in the region, as well as fill gaps in communication and education within the health care team at the community level.

In 2017, the Indigenous Institute of Health and Healing at the University of Manitoba was created and includes Ongomiizwin – Health Services<sup>1</sup>; Ongomiizwin – Education and Ongomiizwin – Research. Ongomiizwin comes from the Anishinaabe word meaning, “clearing a path for generations to come.” The Indigenous Institute of Health and Healing enhances the ability of the University to support the independence, autonomy and authority in First Nations, Metis and Inuit communities. Ongomiizwin also fosters authentic engagement and relationship building in the development of research partnerships and platforms, and actively engages in the utilization of Indigenous knowledge for evidence and best practice development in curriculum, clinical skills, research skills and knowledge sharing.

Ongomiizwin Health Services has provided OT, PT, and SLP services to the Kivalliq Region of Nunavut under a service purchase agreement with the Government of Nunavut (GN) Department of Health and Social Services following the needs assessment completed in 2000. Initially, two PTs, one OT and one SLP were recruited; in 2009 an additional OT was funded to provide clinical services as well as provide an administrative team leadership role in Rankin Inlet. Staff are based in Rankin Inlet at the Wellness Centre, which also houses public health, home care and midwifery services, and is a short walk to the health centre. The medical rehabilitation services team provides community-based services to clients across the full age spectrum, in a variety of service locations outside the Wellness Centre, including the health centre, client’s home, workplace, and school. The two physiotherapists and two occupational therapists divide the six remote communities in the region and travel to them between four and six times per year for five-day clinical visits. Casual staff residing in Winnipeg service Sanikiluaq, a hamlet on the Belcher Islands of James Bay.

<sup>1</sup> Ongomiizwin Health Services was formally known as the J.A. Hildes Northern Medical Unit.



All communities have access to telehealth, a videoconferencing tool in the health centres.

The literature has identified evaluation of medical rehabilitation services in Nunavut as an important step in guiding and improving services (Fricke, 2003; Government of Nunavut Department of Health and Social Services, 2010; Miller Mifflin, 2010; Rokosh, 2002). Rokosh (2002), in a territory wide medical rehabilitation needs assessment, indicated that a formalized process to monitor and evaluate services would be required to ensure appropriate, effective, and efficient services were being delivered. Researchers need to consider the cultural setting of the evaluation and methods developed that are culturally appropriate.

Patient experience is a component of quality health care and considers interactions and aspects of patient care within the healthcare system to evaluate if they are receiving respectful and responsive health care (Agency for HealthCare Research and Quality, 2017). Jenkinson et al. (2002) suggest that questions about specific aspects of patients' experiences are likely to be useful for health care delivery improvements. Mapping the patient journey seeks to visualize and understand the end-to-end process as the patient proceeds through a series of health care events. Patient journey mapping explores the patient experience from their perspective; what was significant for the patient at each point and looks for opportunities to make improvements (Ben-Tovim et al., 2008; Kelly et al., 2016; NHS: Institute for Innovation and Improvement, 2013).

A patient journey mapping tool has been developed with and for Aboriginal Torres Strait Islander people to illustrate the patient's perspective related to their processes of care (Kelly et al., 2016). Further development of the tool with Inuit clients would enhance the cultural relevance of the evaluation process. The information gathered could highlight program strengths and weaknesses as well as opportunities to improve rehabilitation service delivery in remote northern Inuit communities in the Kivalliq Region.

## Study Purpose and Research Questions

The purpose of this study is to provide an overview of the utilization of adult OT and PT services and explore use of a client journey mapping tool for Inuit OT and PT clients in the Kivalliq Region of Nunavut. This study will utilize the term “client journey” to characterize the patient’s on-going experience of with OT and PT services. This research will review program utilization of adult OT and PT services and determine the feasibility of using a client journey mapping tool that captures the experience of care from the point of view of the client in Rankin Inlet, Nunavut.

The research questions guiding this project are:

1. How are adult OT and PT services utilized in the Kivalliq Region of Nunavut over a one-year period?
2. What client groups have the highest utilization of OT and PT services, and how does the utilization of OT and PT services compare between Rankin Inlet and remote hamlets in the Kivalliq Region?
3. What is the feasibility of using existing OT and PT services data to identify clients for journey mapping?
4. What is the feasibility of using client journey mapping with adult Inuit OT and PT clients with high utilization to understand the client experience and evaluate services?

The significance of this research will be to provide program utilization data on OT and PT services in the Kivalliq Region of Nunavut, and to determine the feasibility of client journey mapping with clients of OT and PT services. The utilization data and exploring the feasibility of the client journey mapping process, will provide insight and opportunities to implement evaluation methods for service delivery improvements for OT and PT adult services in the region.

## **Researcher Positionality**

As I started the research process I wished to locate myself, which is a fundamental principle in Indigenous research to reveal my context, connections, and intentions (Absolon & Willett, 2005). As a white settler in Canada, a second-generation Ukrainian Canadian woman, my grandparents emigrated from Ukraine with the promise of Canadian farmland and the hopes of escaping the challenges they faced in Ukraine. They made great sacrifices to leave their home and families and faced great hardships with their move to Canada. I acknowledge the arrival of settlers such as my grandparents impacted the lives of Indigenous Canadians, and I have committed to increasing my knowledge of colonization, and to reconciliation.

I am a non-Indigenous person working with Indigenous communities in this research. My connection to Nunavut came when I moved to Rankin Inlet as a new university graduate, to work as a physiotherapist in the Kivalliq Region. I loved to travel and saw this opportunity as an experience to work and live in the North and learn about Nunavut and the Inuit culture. I very much enjoyed the friends I made within the community and cherish that I was invited to participate in community events. The people in Rankin Inlet and the hamlets I visited invited me to learn about and experience their culture, for which I am very grateful. As a physiotherapist living in Nunavut, I experienced a shift in client engagement when we discussed that I lived in Rankin Inlet and how I became involved in the community.

In 2002 I became the program coordinator of the medical rehabilitation program in the Kivalliq Region, and in 2018 the Director of Medical Rehabilitation Programs. As the student researcher also occupying a program leadership role, I was aware that I could be viewed by the participants of the student in a management role, with authority. It was important to acknowledge and communicate with the participants that they are the experts in the experience of their journey, and it was my interest to learn from them in this process.

## **Chapter Two: Literature Review**

### **Focus Statement**

This chapter examines the literature on medical rehabilitation services in Indigenous populations in northern, rural and remote communities in Canada and internationally. This includes service delivery models and methods, considerations, recommendations, and evaluation of OT and PT services, primarily with Indigenous populations. To contextualize research questions related to utilization of services, OT and PT scope of practice, and referral prioritization practices were examined. Similarly, to answer research questions related to the client journey, the literature was reviewed to understand rehabilitation service delivery models and methods that the client experiences. Furthermore, cultural safety, and decolonizing health care systems in Indigenous communities was explored, as this can impact utilization of services as well as the client journey and experience. The goal of the literature review was to build knowledge and background information to assist in answering the research questions.

To gain a better understanding of Inuit client's journey with OT and PT services in Nunavut, one must first explore the different types of service delivery models and methods offered in the region along with the literature that discusses these approaches in rural, remote and in particular Indigenous communities.

### **Medical Rehabilitation Service Delivery Models in Northern/Rural Remote Communities**

Clients living in northern, rural and remote regions may be required to travel long distances to receive services in larger centres that have medical rehabilitation services. In Nunavut, OT and PT services are operating in each region to provide services closer to home. Remote areas in Nunavut provide significant challenges for any service delivery model given the large geographic areas with small communities that are unable to support medical rehabilitation services. Further challenges to outreach services in Nunavut include weather and airline delays, significant air travel costs, limited accommodations in the communities for staff, and community health centres having limited support staff and treatment space. In the

Nunavut Rehabilitation Services Review, Miller Mifflin (2010) recommended the development of a Nunavut rehabilitation service delivery model, suggesting that a more formal development of a Nunavut-wide service delivery model was warranted. This model should consider increased access to services at the community level and be equitable across regions, the appropriate mix of service delivery methods, establish guidelines on numbers of community visits, and incorporate community consultation, input of rehabilitation professionals, and Inuit societal values. A Strategic Approach to Rehabilitation Services (Government of Nunavut Department of Health and Social Services, 2010) provided further recommendations in some of these areas, with varying degrees of implementation in the territory due to territorial rehab leadership position vacancies and therefore regional approaches to the recommendations.

The models below were reviewed to understand the strengths and limitations of medical rehabilitation service delivery models utilized in northern, rural and remote areas in Canada and internationally.

### ***Outreach Medical Rehabilitation Programs***

The literature reports that northern, rural and remote locations use outreach programs for the delivery of medical rehabilitation services. The goal of outreach programs is to provide rehabilitation services to an area that would typically not receive these services in the community (Sullivan et al., 1993). Without outreach services, clients in northern/rural remote areas would either not have access to rehabilitation services or require clients to travel to southern centres to receive these services. Outreach services reduce the cost and burden of client travel. The literature has reported client preference for having services in their community as opposed to travelling to southern centres (Fricke, 2003; Wilson et al., 1995).

Dew et al. (2013) conducted a five-year study on PT, OT, and SLP services in rural and remote areas in Australia, gathering information from carers and people living with disabilities “in order to develop, implement and evaluate new sustainable models of service delivery” (p. 1565). They report that therapy services in rural and remote areas require “place-based and person-centred strategies to build local capacity in communities; responsive outreach programs

working with individuals and local communities; recognition of the need to support families who must travel to access remotely located specialist services; innovative use of technology to supplement and enhance service delivery” (p. 1564).

Outreach services can be further broken down into urban-based fly-in and community-based programs.

### **Urban-based Fly-in Program**

An urban-based fly in program relies on health professionals living in southern centres to provide itinerant fly-in, and fly-out services to selected communities in rural and remote areas. Urban-based services allow therapists to live in an urban setting and have access to professional development and support from colleagues (Roots et al., 2012; Battye & McTaggart, 2003). As therapists do not live in the community, there will be limits to the knowledge and connection built with the community, though increased visits over time and continuity of staff can overcome some of the limitations of urban-based services. Service locations are dependent on the funding structure and vary from hospitals, health centres, schools, the community, or a mix of settings based on community need. In the Kivalliq Region, an urban-based fly-in program is utilized to service the community of Sanikiluaq, as the community is located on a regularly-scheduled flight path from Winnipeg, Manitoba. Short term casual staff also provide urban-based fly-in services to cover gaps in community-based OT and PT staffing in the region.

### **Community-based Programs**

Medical rehabilitation professionals based in a remote community provide additional services to the outlying communities through clinical outreach visits. Clients can access services in their home community, therefore reducing travel time and costs. Veitch (2012) refers to the ‘hub and spoke’, where outreach staff in remote locations, ‘spokes’, are supported from a regional centre ‘hub’. In the Kivalliq Region, occupational therapists and physical therapists are based in Rankin Inlet to provide community-based programming and provide outreach services to outlying communities. Therapists visit communities at various points throughout the year.

The number and duration of visits to each community varies due to funding, flight paths, and needs.

An alternative to therapists travelling to the communities from regional centres is having the clients travel to services located in a regional centre, or the “double spoke” (Veitch et al., 2012). In Nunavut, clients are considered and funded to travel for services in Iqaluit and Rankin Inlet when they present with a safety risk, have a time-limited opportunity for successful rehabilitation, or have significant functional limitations (Miller Mifflin, 2010). For example, a client who recently underwent a joint replacement may receive services in Rankin Inlet to address transfers, joint precautions, and exercise programming before returning to their home community in order to manage safety issues, address limitations and receive timely rehabilitation services.

### ***Community Based Rehabilitation (CBR)***

The World Health Organization (WHO) initiated community-based rehabilitation (CBR) as a strategy to improve access to rehabilitation services for people with disabilities in lower income countries, by utilizing local resources (World Health Organization, 2010). A common interpretation of CBR is where community workers, family members or carers with basic rehabilitation training carry out programs to provide effective rehabilitation intervention with the goal to improve the level of function for people with disabilities (Wirz & Thomas, 2002). Community workers in CBR programs are often unpaid volunteers or other health workers trained with basic rehabilitation skills (Thibeault & Forget, 1997; Boyce & Lysack, 1997). The literature also discusses and questions whether communities in high income countries should accept CBR as an acceptable method of delivery for medical rehabilitation services; CBR may be viewed as substandard care, where community workers with limited training are providing services in place of or mixed with access to medical rehabilitation professionals (Fricke, 2003; Boyce & Lysack, 1997). An alternative approach is the training and employment of paid rehabilitation assistants working under the supervision of medical rehabilitation professionals, which has occurred in parts of Nunavut, and is discussed later in this chapter.

In 2004, CBR was redefined as “a strategy within general community development for the rehabilitation, equalization of opportunities and social inclusion of all people with disabilities”, which is “implemented through the combined efforts of people with disabilities, their families and communities, and relevant government and non-government health, education, vocational, social and other services” (World Health Organization, 2004, p. 2).

Lukersmith et al. (2013) conducted a literature review of CBR monitoring and evaluation and excluded outreach or outpatient programs provided in the home, community facility or via telephone or telehealth that did not have a community development component. Community development is defined as “the process of organizing and/or supporting community groups in their identification of important concerns and issues and their ability to plan and implement strategies to mitigate their concerns and resolve their issues” (Labonte, 2005, p. 90). Applying community development principles to a CBR process would suggest that individuals with disabilities are supported in the collective identification of their issues/concerns and the development of solutions to address those issues/concerns at a community level. Community development starts with a concern that the community identifies.

Community-based programming, on the other hand, is the “process in which health professionals and/or health agencies define the health problem, develop strategies to remedy the problem, involve local community members and groups to assist in solving the problem” (Labonte, 2005, p. 90). The distinction between community-based programming and CBR is important. CBR incorporates community development as a primary strategy. The literature on CBR does not always make these distinctions clear.

Currently, medical rehabilitation therapists in Nunavut assess and treat clients with a defined health condition, and develop interventions that are transferred to the client, community members, or community groups as appropriate, which is consistent with community-based programming (Labonte, 2005). Community members that are commonly responsible for programs provided by the OT and PT are the client, family members and carers;



community personnel such as student support teachers and assistants for children and youth, and home care workers; or other community groups such as local housing authorities.

Although CBR has been reported as the model of service delivery that should be implemented in Nunavut (Rokosh, 2002), it is not clear if the author truly meant CBR with a community development approach, or community-based programming. While CBR is an important rehabilitation model, it is not utilized in Nunavut. OTs and PTs in the Kivalliq Region could have a role in community development, thereby moving into a CBR model, but this is currently not possible due to decreased per capita staffing levels, high workload, and the need to provide direct treatment; therefore, leaving limited time for a community development role in the currently funded OT and PT services in Nunavut.

### ***Cultural Safety and Decolonizing Health Care***

It has been recognized that staff working with Indigenous populations require appropriate cultural competency training (Greenstein, Lowell, & Thomas, 2016b; Truth and Reconciliation Commission of Canada, 2015). The Government of Nunavut Department of Health supports a cultural orientation program as well as cultural immersion days for staff to learn about Inuit history, societal values and cultural activities (Government of Nunavut, 2013; Government of Nunavut, 2021b). Beagan (2015) discusses a criticism of cultural competence in that it can become a list of cultural attributes, and the suggestion in these models that there is an end point, instead of a constant learning process. Cultural safety is an approach favoured in the literature in the provision of health care services, including OT and PT services (Beagan, 2015; Canadian Association of Occupational Therapists, 2011a, 2011b, 2018; Gasparelli, 2016; Greenstein, Lowell, & Thomas, 2016a; Stedman and Thomas, 2011; Watts and Carlson, 2002). The National Aboriginal Health Organization (NAHO) defines cultural safety as “what is felt or experienced by a patient when a health care provider communicates with the patient in a respectful, inclusive way, empowers the patient in decision-making and builds a health care relationship where the patient and provider work together as a team to ensure maximum effectiveness of care” (National Aboriginal Health Organization, 2008, p. 19). Cultural safety

“moves beyond sensitivity to an awareness of cultural difference to analysing power imbalances, discrimination and the lasting effects of colonization” (Beagan, 2015, p. 276). While Nunavut has established a public government to represent all people living in Nunavut, primarily Inuit, the establishment of government programs and the influx of Qalluanaat (non-Inuit) as identified by Waddell et al. (2017), has affected power balances and traditional leadership abilities of individuals to support communities. The Nunavut Land Claims Agreement calls on governments to increase Inuit participation in government employment and is reported at 50% Inuit representation in indeterminate and term public service positions, with 12% in executive, and 20% in senior management roles (Government of Nunavut, 2017).

It is acknowledged in the literature that the move to cultural safety must also move beyond the individual to the level of the institution (Bascoupe & Waters, 2009) and address the power dynamics and authority embedded in health care policies, practices, and relationships (Gerlach, 2012; Gibson, 2020). Therefore, critical to culturally safe practice is the consideration of decolonization and self-determination approaches (CAOT, 2018; Gerlach, 2018b; Gibson, 2020; Hammel, 2018). Therapists need to set aside a pre-determined approach and assumptions during therapeutic interactions that can often be based on a Western settler background. They instead need to develop collaborative partnerships, engaging in knowledge exchange with clients and communities to “facilitate improved outcomes for Indigenous clients, at an individual and/or community level” (White & Beagan, 2020, p. 206). Mackean et al. (2019) provide a framework for cultural safety as a tool for critical, systemic thinking on public policy and identified five concepts: reflexivity, dialogue, reducing power differences, decolonization and regardful care. This framework provides analysis on aspects of cultural safety and can lead to system level improvements.

A strength-based approach that recognizes Indigenous strength and resiliency has been recommended in medical rehabilitation services, as opposed to a deficit-based focus (CAOT, 2018; Gerlach, 2018a). Gibson (2020) utilizes a strength-based framework to assist individuals and organizations to facilitate the decolonizing process in OT and includes six dimensions in the framework: listen respectfully to the person; use appropriate communication skills; build

genuine relationships; critically reflect on political, social, and historical contexts as well as the professional context; apply the human rights-based approach; and evaluate processes and outcomes.

A strengths-based approach challenges the use of standardized assessment tools with Indigenous clients. Gerlach (2018b) discusses the importance of caution in using standardized assessment tools in medical rehabilitation with Indigenous children. She reports that tools can perpetuate power imbalances and marginalize parents and children, advocating instead for a focus on a child's strengths and capabilities for culturally safe assessment and building relationships as an essential part of the assessment process. The literature also discusses the need to develop assessment tools standardized to Indigenous populations, and that adaptation of the currently available standardized assessment tools is often required to be utilized with Indigenous populations (Nelson, Allison, & Copley, 2007; Rokosh, 2002; Watts & Carlson, 2002).

Medical rehabilitation programs in Nunavut have prioritized the provision of culturally relevant care as discussed in the mission statement to “deliver rehabilitation services across Nunavut that are equitable, accessible and culturally relevant, and strive to achieve excellence in quality of rehabilitation client care” (Government of Nunavut Department of Health and Social Services, 2010). Culturally relevant OT makes space for cultural differences and seeks to ensure relevance of the therapy process for the client (Beagan, 2015). Inuit Qaujimagatuqangit (IQ) refers to Inuit traditional knowledge, or the Inuit way of knowing. IQ has the following principles:

- Inuuqatigiitsiarniq (respecting others, relationships and caring for people)
- Tunnganarniq (fostering good spirit by being open, welcoming and inclusive)
- Pijitsirniq (serving and providing for family or community, or both)
- Aajiiqatigiinni (decision making through discussion and consensus)
- Pilimmaksarniq or Pijariuqsarniq (development of skills through practice, effort and action)
- Piliriqatigiinni or Ikajuqtigiinni (working together for a common cause)

- Qanuqtuurniq (being innovative and resourceful)
- Avatittinnik Kamatsiarniq (respect and care for the land, animals and the environment)

(Government of Nunavut, 2013).

The Government of Nunavut (GN) has been making efforts to integrate IQ into its operations since the creation of the territory, with the potential to reshape Nunavut institutions to be more representative of Inuit culture (Lévesque, 2014). Miller Mifflin recommended to formally evaluate the current cultural relevance and incorporation of Inuit societal values and IQ into rehabilitation programs.

### **Service Delivery Methods in Rural and Remote Practice Areas**

It is helpful to consider not only the service delivery models in rural and remote areas, but also the service delivery methods utilized. Service delivery methods depend on the location and the needs of the client. Service delivery methods will be presented from a narrow to broad focus.

#### ***Direct Client Treatment***

Direct client treatment including assessment, treatment and discharge is a more common service delivery method in the regional centre of Rankin Inlet, where therapists are based, and clients have more frequent access to therapists. Direct client treatment in outlying remote communities is interrupted by gaps in access to services between therapist visits to the community and therefore direct client care could be provided via telephone or telerehabilitation between these clinical visits, as appropriate, to determine client assessment needs, or as a follow up to review treatment recommendations. Sullivan et al. (1993) reports time lost to travel and infrequency of visits as the major limitation to providing treatment.

### ***Consultative Services***

Outreach services often include consultative services (Sullivan et al., 1993, Miller-Mifflin & Bzdell, 2010). Occupational therapists and physiotherapists conduct an assessment and determine the intervention but rely on others to carry out the program. Clients in remote communities may receive consultative OT and PT services to provide services when there is no regular access to a therapist. For example, a physiotherapist may conduct an assessment and provide recommendations for an exercise program to increase mobility; someone else (e.g. a health care attendant in a personal care home) would implement and carry out the program with the client. This model is frequently used with children in school settings where the teacher or educational assistant would implement and carry out the recommendations and with older adults in long-term care facilities where family members will implement and carry out recommendations or the facility will engage staff.

### ***Medical Rehabilitation Assistants***

Rehabilitation assistants can extend the “reach of therapists, particularly in remote locations” (Dew et al., 2013, p. 1568). Ongomiizwin Health Services initiated a feasibility study on medical rehabilitation assistants in the Kivalliq Region of Nunavut, and recommended positions in the region that would act as support personnel to the rehabilitation professionals (Driedger, 2002). The proposal envisioned training Nunavummiut community members as medical rehabilitation assistants. Being of the communities to be served, they would provide an understanding of the local area, and implement the programs that were prescribed under the supervision of medical rehabilitation professionals located in Rankin Inlet. These would be paid positions, unlike in developing countries where CBR workers are volunteers. Driedger (2002) reports that volunteerism was not well accepted in the region. Developing employment opportunities in the community is important in a region with high unemployment rates as reflected on by the Mayor in Baker Lake, Nunavut, who favoured the community rehabilitation worker as it would “build opportunities for youth and also improve the health of his

community” (Driedger, 2002, p. 16). This approach could also lead to engagement of rehabilitation assistants in OT, PT or SLP educational programs.

In response to the feasibility study, the Government of Nunavut Department of Health and the Nunavut Arctic College then launched a 16-month Community Therapy Assistant (CTA) program in 2009 to train local Nunavut community members to work as support personnel to work with all four rehabilitation disciplines (OT, PT, audiology and SLP). Bellefontaine et al. (2015) report that the CTA is an important member of their rehabilitation team and provides services in communities that itinerant professional staff cannot. The CTA facilitates communication of client needs with practitioners, understanding of clients and the community, and advocacy for rehabilitation services in their home community of Igloolik (Bellefontaine et al., 2015). The CTA training program incorporated classroom and lab components, as well as fieldwork placements. The graduates were recommended to be hired in Nunavut communities with high rehabilitation needs to “increase quantity, quality and continuity of rehabilitation care” (Miller Mifflin, 2008, p. 8). Eight CTA’s graduated and worked in Nunavut communities, including one CTA in Rankin Inlet. There are currently two CTA’s in Nunavut working in Iqaluit and Igloolik, in the Qikiqtaaluk Region of Nunavut. Although Driedger (2002) recommended rehabilitation assistants in the Kivalliq Region, the CTA position in the region was left vacant from attrition in 2011.

### ***Telerehabilitation***

Telehealth is a videoconferencing tool available in all communities in Nunavut; it has been acknowledged that this tool can improve access to services (Canadian Association of Occupational Therapists, 2011c; Canadian Alliance of Physiotherapy Regulators, 2017). Medical rehabilitation services via telehealth is referred to as telerehabilitation. This tool allows the therapist, client, and any caregiver involved in the program to avoid travel and instead meet via telerehabilitation to address new referrals and follow-up on interventions. Iacono and colleagues (2016) conducted a scoping review of ehealth (including telehealth) uptake and attitudes by health professionals (which included OT and PT) in Australia. They found

telerehabilitation has been identified in the literature as having comparable clinical outcomes, and high patient satisfaction, though therapists are still reticent to use it for service delivery; instead, they opted to use the technology for professional development (Iacono et al., 2016). The Canadian Alliance of Physiotherapy Regulators (2017) also notes the limitations of telerehabilitation in comparison to in-person such as the inability to perform hands-on examination, assessment and treatment, and therefore clinical judgement must be used to determine if telehealth is appropriate for the client.

The Government of Nunavut Department of Health has developed policies and procedures for the use of telerehabilitation by medical rehabilitation staff. Medical rehabilitation therapists in the Qikiqtaaluk Region of Nunavut use telerehabilitation regularly due to limited community clinical visits and the priority to increase services to remote communities. In 2008-2009, the Qikiqtaaluk Region reported the scheduling of 406 PT telerehabilitation appointments, and 79 OT telerehabilitation appointments (Mifflin, 2010). No-show rates can provide information to a program on client engagement with services. PT telerehabilitation “no-show” rates were reported at 34% for the region, versus 21% for face-to-face appointments, and OT regional telerehabilitation “no-show” rates were 29% versus 14% for face-to-face appointments (Mifflin, 2010). Therefore, the increased “no-show” rate for telerehabilitation should be reviewed to determine if client engagement or other issues, such as administration of the telehealth bookings, lead to the increased “no-show” rates reported.

Rokosh (2002) recommended exploring the use of telerehabilitation to increase service delivery in Nunavut, and the Nunavut Rehabilitation Services Review (2010) recommended that the Kivalliq and Kitikmeot Regions increase the use of telehealth for client care in the remote communities. In the 2014/2015 fiscal year, there were 10 PT and eight OT appointments via telehealth in the Kivalliq Region. Limited use of telehealth in Kivalliq Region is due to the high number of community outreach visits and caseload sizes. A variety of factors have limited further incorporation of telerehabilitation more fully into the service delivery model in the Kivalliq Region. These include therapist preference for in-community visits, administrative time barriers to set up telerehabilitation appointments due to limited administrative supports, and

higher reported no-show rates than in person appointments (Miller-Mifflin, 2010). Utilization of telerehabilitation as a method of service delivery was incorporated in the region during COVID-19 to provide access to services in communities during travel restrictions and staff were unable to complete community clinical visits. Telehealth has been a longstanding platform for OT and PT service delivery in Nunavut and will be further implemented into our model to improve access to effective and efficient services for outlying communities. COVID-19 has accelerated the need and use of virtual OT and PT service delivery internationally, therefore increased research to develop role of telerehabilitation will emerge (Flannery et al., 2020; Tenforde et al., 2020; Quigley et al., 2021).

### **Considerations in Medical Rehabilitation Services in Rural and Remote Locations**

To better understand OT and PT service utilization in the Kivalliq Region, one must consider the therapists scopes of practice, individual competence, and referral prioritization system. There are many challenges in delivering OT and PT services in northern/rural and remote communities. The geographical remoteness of Nunavut and fly-in only communities has a major impact on the delivery of health care services and costs, infrastructure, and access (National Aboriginal Health Organization, 2004). The following concepts are described as being significant factors in rural and remote OT and PT practice.

#### ***Skilled Generalists: Working to Full Scope and Collaborative Practice***

In northern/rural and remote locations, medical rehabilitation professionals are often sole-charge therapists providing services over vast geographic areas and managing large, diverse caseloads. This reality requires these professionals to be generalists with the ability to provide services across a broad scope of practice to meet the needs of the diverse caseloads (Pidgeon, 2015; Roots et al., 2012; Sheppard, 2001). Roots et al. (2012) discussed the concept of rural health care providers being a specialized generalist, and reported their participants felt that rural practice is a specialty in which the provider must “meet the needs of a diverse caseload and cover areas of practice that might otherwise be reserved for a specialist” (p. 10). Campbell et al. (2012) stated that having a diverse caseload was the most common positive



extrinsic incentive reported, but also reported stress that professionals felt in managing large caseloads in a remote setting.

Rural OTs and PTs in Canada and Australia described how they practice to the full extent of their scope, with roles that in other contexts would not be expected. Working to full scope is required to respond to gaps in health care services or meet the needs of clients that may otherwise wait or have to travel to access a service (Pidgeon, 2015; Roots et al., 2012). Collaboration is highlighted as essential in rural practice in order to work to full scope of practice (Roots et al., 2012).

When clients require more specialized or intensive rehabilitation services (e.g., specialized seating assessments, specialized splinting or equipment, or intensive acute rehabilitation programming such as post CVA, spinal cord, cardiac rehab), clients must be willing to travel to urban centres. Rural and urban staff must communicate and collaborate to provide continuity of care for clients when transferring between the two settings to provide effective treatment in the Nunavut context (Bellefontaine, Riopel, Maclachlan, Conrad, & McNeil, 2011).

Rokosh (2002) recommended a multidisciplinary approach to the delivery of rehabilitation services to meet service needs. A transdisciplinary approach is important in community rehabilitation where one discipline can take over for another, especially when staff can be unavailable in rural and remote settings (Eldar, 2000). An example could be the recommendation of a home assistive device by a PT that may be considered the role of the OT in other practice environments. Interdisciplinary health care teams are preferred in which goals are developed jointly (Eldar, 2000) and recommended when possible in rural communities as best practice to meet the service needs and can meet the needs of rural and remote locations (Sheppard, 2001; Veitch et al., 2012). Medical rehabilitation services in Nunavut incorporates interdisciplinary care teams as a service delivery method for orthopedics clinics, rheumatic clinics, pre-school screens and complex pediatric teams (Mifflin, 2010).

### ***Prioritization of Referrals***

OTs and PTs in the Kivalliq Region facilitate access to services by the acceptance of referrals from multiple sources, including self-referrals from clients. Roots et al. (2012) described limited resources in rural areas, in particular health human resources that can result in long waiting lists and therefore the need to prioritize workload; a common scenario in Nunavut.

In the Qikiqtaaluk Region of Nunavut, a PT prioritization tool was developed and implemented and resulted in services based on urgency and equity of PT appointments delivered to remote communities in the region and the regional centre of Iqaluit (Miller Mifflin & Bzdell, 2010). Miller Mifflin and Bzdell (2010) also report improved staff satisfaction, decreased staff stress and time for triaging referrals, increased the percentage of clients seen in high priority groups, and saw a shift to a consultative model of services for certain client populations where appropriate in which client assessment, home programs and education was provided. Prioritization tools were also developed for OT services.

A recommendation was made in the Nunavut Rehabilitation Services Review (Miller Mifflin, 2010) to establish a needs-driven service across Nunavut to ensure that clients who most urgently require rehabilitation care receive service prior to clients with lower needs throughout the territory, regardless of the clients' community of residence; specifically, to standardize a prioritization system and referral management practices in the Kivalliq Region (Miller Mifflin, 2010). Since this time, both recommendations have been implemented in OT and PT services in the Kivalliq Region utilizing the territorial prioritization tools to assist therapists in prioritizing referrals. The criteria broadly address the client's level of function, medical stability, and safety. The medical rehabilitation program in the Kivalliq Region has not conducted a review of utilization by priority level, which when considered in conjunction with service utilization in the Kivalliq Region, could provide information for the development of a service delivery model and methods to utilize in the region.

## **Program Evaluation**

“Program evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future programming” (Patton, 1997. p 23). An evaluation must set priorities and have an identified purpose, which can be judgment oriented, improvement-oriented, for accountability, monitoring, knowledge-generating, and/or developmental (Patton, 2012).

Evaluation methods are chosen to answer the evaluation questions. Quantitative data can be counted and facilitate comparisons across standardized categories and includes instruments such as questionnaires, program records, standardized instruments, and tests; whereas qualitative methods capture data that is the words and narratives and the experiences of participants from open-ended questionnaires, and interviews, and have no standardized or pre-determined categories (Patton, 2012). “It is not that one method is right and one method is wrong, but which method or combination of methods will obtain answers to the evaluation questions” (Centers for Disease Control and Prevention, 2011, p. 24). The cultural setting of the evaluation needs to be considered and methods and collaborative partnerships considered.

### ***Program Evaluation of Nunavut Medical Rehabilitation Services***

Evaluation of medical rehabilitation services in Nunavut has been highlighted as an important step in guiding and improving services (Fricke, 2003; Government of Nunavut Department of Health and Social Services, 2010; Miller Mifflin, 2010; Rokosh, 2002). There have also been recommendations for the development of a Nunavut service delivery model, in which program evaluation would have a significant role in facilitating an effective model (Miller Mifflin, 2010). As well, it is important to evaluate “processes and outcomes in programs and services to help understand the implementation of decolonising practices” (Gibson, 2020).

### ***Patient Experience and Quality of Health Care***

“Canadian Inuit face significant challenges in accessing health services, not only relating to physical access, but also the nature, quality and appropriateness of the services” (Inuit Tapiriit Kanatami, 2014. p. 31). Patient experience is a component of quality health care and considers interactions and aspects of patient care within the health care system to evaluate if they are receiving respectful and responsive health care (Agency for HealthCare Research and Quality, 2017). Questions about specific aspects of patients’ experiences are more likely to be useful for health care delivery improvements (Jenkinson, Coulter, Bruster, Richards, & Chandola, 2002). Patient experience surveys have been used to evaluate the patient experience, though research on current measurement instruments suggest “that there are none designed to address quality issues related to patient experience across a system of rehabilitative care” (McMurray et al., 2016b, p. 127).

In addition, the cultural relevance of patient experience or satisfaction surveys with Inuit could also be questioned. Narratives can be a more effective method of gathering the experiences of Inuit clients (personal communication, Gwen Healey, February 7, 2017). Surveys are also limited by non-response bias in which patients that complete the survey may be different from non-responders (Hush et al., 2011; McMurray et al., 2016b; Slade & Keating, 2010); high levels of patient satisfaction that “support the notion of a satisfaction ceiling effect that overstates the positive and is conceptually separate from negative experiences sustained during the same care encounter” (McMurray et al., 2016a, p. 105); and social desirability in which clients want to please their provider (Harding & Taylor, 2010; Hush et al., 2011). The results in surveys may not provide the information needed to make improvements to services (Harding & Taylor, 2010; Scholte, Calsbeek, Nijhuis-van der Sanden, & Braspenning, 2014). The use of open-ended questions can be more informative and acknowledge that the client is the expert in their experience providing an opportunity for meaningful information that can be used for service improvement (Harding & Taylor, 2010; McMurray et al., 2016b).

Greenstein, Lowell and Thomas (2016b) utilized a continuous quality improvement (CQI) process that was known to be successful in other areas of Indigenous health care, including a chart audit tool and systems assessment tool (SAT), as well as a qualitative component which included client and carer interviews in a community-based pediatric physiotherapy service in Northern Australia. The research identified that the CQI and interview results agreed on strengths of the PT service such as a flexible service delivery for continuity and service location; knowledge, support and advocacy, as well as the weaknesses, such as lack of access to information on disability and health resources; and lack of a child and family friendly environment. There was disagreement between the SQI results and client interviews around effective communication and client input, with clients reporting inadequate communication and disempowerment; suggesting that “service providers and service users might interpret the same service experience differently” (p. 179) and that the client involvement in the CQI process would be beneficial (Greenstein et al., 2016b). This research further developed an understanding of the patient experience including the complexity and demands of being a carer of a child with a disability, the influence of being Indigenous, and the importance of an open and caring relationship with their therapist; and effective communication was central to the patient's experience (Greenstein et al., 2016a). Greenstein (2016a) made recommendations for community-based physiotherapy service providers at the individual therapist level to develop attributes including openness, respectfulness, patience, a wholistic view, non-judgmentality, and flexibility as well as developing communication skills and cultural awareness. At the organizational level, recommendations included consistency of care and overlap of therapists during transitions, staff cultural awareness and competency training, and easy access to services.

### ***Client Journey Mapping***

Mapping the client journey can help us to understand the series of health care events and the client experience of these events. As previously discussed, clients in northern/rural remote locations have inequities in access to services, staff shortages and high turnover, as well as vast geographical areas that would contribute to complexity in client journeys. Client journey

maps can shed light on this complexity and seek to understand and make improvements along the Indigenous client's journey (Kelly, Dwyer, et al., 2015). Poor coordination of care is a common result when staff or programs focus on the care relevant to their department and not across the multiple program areas that the client travels in their complete journey; only the client sees the entire journey and is therefore in the best position to identify strengths and challenges throughout their journey (Ben-Tovim et al., 2008). Given that various rehabilitation models may be used in urban, rural and remote northern locations, journey maps also provide an opportunity to highlight strengths and limitations of the different models from the client's perspective.

The visual client journey map may reveal ease of access to services, continuity of therapists, and flexibility of service location, as recommended by Greenstein et al. (2016a); or if there were gaps and barriers within the journey. Dwyer et al. (2011) found that Aboriginal patients from rural and remote areas of Australia have complex geographical and health care journeys in which good practice occurs, but where care is often not systematically implemented and where coordination of care is often inconsistent. "When the multiplier effect of all the barriers that impede the patient journey for country [from rural and remote locations] Aboriginal people is taken into account, it is clear that complexity is predictable for this group" (Dwyer et al., 2011, p. 2).

The Managing Two Worlds Together (MTWT) Patient Journey Workbook incorporates information on the factors which affect access and quality of health care and impact the Aboriginal patient's journey, as well as recognizing the dimensions of health beyond physical health and can be used to highlight cultural safety (Kelly, Dwyer, et al., 2015). The tool has been used in Australia by renal health nurses (Kelly, Herman, et al., 2015), midwives and Aboriginal family birthing practitioners (Kelly, Medway, et al., 2015), and can be adapted and applied to other patient care journeys. The tool has not been used in medical rehabilitation, and the adaptation of this tool for medical rehabilitation services in Nunavut could create opportunities for the tool to be used in other medical rehabilitation programs in Nunavut or other Indigenous communities in Canada.

### ***Culturally Appropriate and Sensitive Evaluation***

The cultural setting of the evaluation needs to be considered and methods developed that are culturally appropriate. In a review and synthesis on conducting cross-cultural evaluation, Chouinard and Cousins (2009) reported that the majority of studies described culturally competent evaluation as collaborative and a “partnership between evaluators and community members designed to understand unique sociocultural characteristics, processes, and perspectives and incorporate strategies that acknowledge diverse ways of knowing” (p. 482). Despite the widespread use of collaborative approaches, there was significant variation in stakeholder input and collaboration was seen to be complex and challenging (Chouinard & Cousins, 2009).

“With historical mistrust from harmful and unethical research in the North, it is important in Inuit communities that research should be collaborative” (Healey & Tagak, 2014). “Planning and implementing health services that are mindful of the cultural milieu and respectful of the linguistic diversity of the North requires a deep understanding of Inuit culture” (Rokosh, 2002). An evaluation should include the cultural relevancy of the services and how Inuit Qaujimagatuqangit is incorporated into rehabilitation programs (Miller Mifflin, 2010).

Dwyer and colleagues (2011) reports that, “Patients sometimes feel that their cultural values and needs are not respected, and staff sometimes struggle to communicate across differences in cultures, worldviews and experiences” (p. 2). The MTWT Patient Journey Workbook was developed in collaboration with Australian Aboriginal patients and health care providers across urban to remote locations to reflect the patient journey and dimensions of health from the Aboriginal patient perspective (Kelly et al., 2016). The use of an adapted MTWT tool with Inuit clients could provide an opportunity to develop and implement culturally relevant approaches to evaluating client experience of medical rehabilitation services in Nunavut.

## Chapter Summary

The literature review highlighted a need for research which could provide information on the development of relevant, efficient, and effective service delivery models for medical rehabilitation in rural and remote Indigenous communities. There is a dearth of literature regarding medical rehabilitation services in remote Indigenous communities, including utilization data and research that considers the client experience. In particular, there is a gap in utilizing client journey mapping with medical rehabilitation services clients. The journey tools in the MTWT project provide a method to understand the complexities of Aboriginal/Indigenous patient journeys and their experiences of health care; to date this approach has not been used with medical rehabilitation clients nor has it been adapted for use in Inuit communities. Program utilization data services and exploring the use of the client journey mapping tools with Inuit clients receiving OT and PT services in the Kivalliq Region could provide information on clients utilizing OT and PT services, their journey, and inform the delivery of rehabilitation services in the region for program evaluation and improvement purposes.



### **Chapter Three: Research Methods**

As this research is interested in exploring client journey mapping with clients utilizing OT and PT services to inform the delivery of rehabilitation services in the Kivalliq Region for improvement purposes, a feasibility study design was adopted. As the MTWT client journey mapping tool has not been used with OT and PT programs, or with Inuit clients to our knowledge, a feasibility study was determined to be appropriate to explore implementation of the tool.

#### **Research Design – Feasibility Study**

Feasibility studies are conducted to determine the potential success of a larger study (Thabane et al., 2010; Tickle-Degnen, 2013). Thabane et al. (2010) provided definitions of feasibility that apply more broadly to test an intervention or evaluation activity such as an instrument. Tickle-Degnen (2013) modified the typology of feasibility studies developed by Thabane et al. (2010) to be suitable for medical medication interventions and includes testing the process, resources, management, and scientific basis of the study. Bowen et. al (2009) propose eight areas of focus for feasibility studies which include acceptability, demand, implementation, practicality, adaptation, integration, expansion and limited efficacy testing. Relevant areas of focus and questions proposed by Bowen et. al (2009) and Tickle-Degnen (2013) were selected as the method to determine feasibility of client journey mapping with OT and PT clients in the Kivalliq Region of Nunavut.

Prior to examining the feasibility of the client journey mapping, the student researcher reviewed and analyzed utilization data of adult OT and PT services in the Kivalliq Region of Nunavut to describe these services and identify clients with high program utilization for the journey mapping process. This feasibility study included descriptive statistics on program utilization and client journey mapping tools using qualitative interview data to provide experience of care data. Feasibility of client journey mapping with adult Inuit OT and PT clients was studied, using applicable areas of focus proposed by Bowen et. al (2009).

## Methods

This study consisted of two phases. Phase 1 describes utilization of adult OT and PT services in the Kivalliq Region using existing data answering research questions 1 and 2.

1. How are adult OT and PT services utilized in the Kivalliq Region of Nunavut over a one-year period?
2. What client groups have the highest utilization of OT and PT services, and how does the utilization of OT and PT services compare between Rankin Inlet and remote hamlets in the Kivalliq Region?

Phase 2 explores the feasibility of using existing OT and PT data to identify clients for journey mapping and focuses on feasibility of client journey mapping with adult OT and PT clients in the Kivalliq Region of Nunavut. Phase 2 answers questions 3 and 4.

3. What is the feasibility of using existing OT and PT services data to identify clients for journey mapping?
4. What is the feasibility of using client journey mapping with adult Inuit OT and PT clients with high utilization to understand the client experience and evaluate services?

Tables 1 and 2 provide an overview of the methods that were used to gather information in both phases of the study. Submissions and approval for this study was received from the University of Manitoba Health Research Ethics Board (Appendix H) and Nunavut Research Institute (Appendix I).

**Table 1:*****Feasibility Study Methods Overview***

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**Phase 1: Program Utilization of Adult OT and PT Services in the Kivalliq Region of Nunavut**

## Research Questions:

1. How are adult OT and PT services utilized in the Kivalliq Region of Nunavut over a one-year period?
2. What client groups have the highest utilization of OT and PT services, and how does the utilization of OT and PT services compare between Rankin Inlet and remote hamlets in the Kivalliq Region?

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Sample and Recruitment:

Database of OT and PT Workload statistics of adult clients seen from April 1, 2016 – March 31, 2017

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Data Collection:

Workload statistics database

Program information: staff listing data, community travel schedule

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Data Analysis:

Descriptive statistics of program utilization including client profile of clients with high utilization of OT and PT services

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Knowledge Translation:

Present program utilization findings to services providers and partners

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**Phase 2: Client Journey Mapping**

## Research questions:

3. What is the feasibility of using existing OT and PT services data to identify clients for journey mapping?
4. What is the feasibility of using client journey mapping with adult Inuit OT and PT clients with high utilization to understand the client experience and evaluate services?

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Sample and Recruitment:

Purposive Sampling: Kivalliq based PT and OT will identify previous or current clients that match client profile of high utilization of services

Recruitment: recruit client that meets inclusion criteria to participate in client journey mapping

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Knowledge Translation:

Present findings to client, service providers and partners

Share adapted journey mapping tool as appropriate

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Table 2:

*Feasibility Areas of Focus*

Areas of Focus	Aspects of Feasibility	Data Collection Methods	Data Analysis Methods
<p><b>Acceptability:</b> considers the extent to which existing data and client journey mapping is judged suitable and satisfactory.</p>	Recruitment process and retention rate	Field notes related to recruitment methods and retention of participants	Directed deductive content analysis
	Participant satisfaction	Field notes from interview	Directed deductive content analysis
		Semi-structured interview	Directed deductive content analysis
		Client journey mapping workbook	Client journey mapping analysis
	Perceived appropriateness – information to consider aspects of care	Program utilization data	Descriptive Statistics
		Client chart audit	Visual client journey map
Client journey mapping workbook		Client journey mapping analysis	
<p><b>Implementation and Practicality:</b> considers to what extent existing data and client journey mapping can be successfully used and implemented with the existing program resources.</p>	Eligibility criteria	Program utilization data	Descriptive Statistics
	Resource management	Field notes on resource management	Directed deductive content analysis

Areas of Focus	Aspects of Feasibility	Data Collection Methods	Data Analysis Methods
<b>Integration:</b> considers to what extent client journey mapping can be integrated into the program for program improvements.	Perceived fit with organizational goals to provide culturally safe care and decolonize health care systems.	Semi-structured interview  Client journey mapping workbook  Program guideline documents	Directed deductive content analysis  Client journey mapping analysis  Descriptive Statistics
<b>Adaptation:</b> considers to what extent existing data and client journey mapping performed.	Data was well-defined, easy to use, and provided necessary information.	Program utilization data  Fieldnotes	Descriptive Statistics  Directed deductive content analysis
	Questions were easily understood	Interview field notes and Semi-structured interview	Directed deductive content analysis
	Similar outcomes obtained	Adapted MTWT client journey mapping workbook  MTWT client journey mapping workbook	Client journey mapping analysis

## **Phase 1: Program Utilization of Medical Rehabilitation Services**

### ***Sample***

As Program Director and student researcher, program workload statistics data is an accessible source of data. Workload statistics, which were entered into the Filemaker software program and downloaded into Excel for April 1, 2016 to March 31, 2017 provide a snapshot of utilization of OT and PT services in one fiscal year.

### ***Data Collection***

The primary source of data collection for the utilization of medical rehabilitation services was program administrative information on staffing community visits, and the workload statistical database comprised of weekly statistics from each therapist. Table 3 provides an overview of the data collected in phase 1.

### ***Data Analysis***

The student researcher cleaned the data. When entries were missing or unclear, OT and PT regional staff assisted by referring to original paper copies of stats or reviewing chart entries to confirm reason for referral or workload entries. The data was then filtered to include only clients identified as adults and then transferred from the Filemaker program into Excel and SPSS © Version 25 for analysis.

The descriptive statistics on OT and PT services provide a description of program utilization in the period studied for further understanding of the program, including findings on client groups based on reason for referral that utilize services. As this research is interested in the feasibility of client journey mapping for program evaluation, data was analysed to determine the client groups that have the highest utilization of OT and PT program services. This client profile was used to invite individuals to participate in client journey mapping, as the high user would have the most clinical interactions with OT and PT services and therefore

greater experience of care with services to explore and inform the program. Data analysis was completed as outlined in Table 3, to report descriptive statistics for adults accessing OT and PT services in the Kivalliq Region. In addition, the feasibility areas of focus were considered throughout the process as outlined in Table 2.

**Table 3:**

***Data to be Collected in Phase 1***

Data Collection Groupings	Data (Information Calculated)
Staffing Data:	<ul style="list-style-type: none"> <li>• Staffing of OT and PT positions in region (total EFT)</li> <li>• Service in each community in Kivalliq Region (list communities) (# of Days per community)</li> </ul>
Referral Data:	<ul style="list-style-type: none"> <li>• Initial assessments of new referrals (Total #, Total #/ Community)</li> <li>• Referral source (# and % of total referrals)</li> <li>• Identified priority levels of new referrals (list priority levels, # and % of total referrals)</li> <li>• Wait times by new referral priority level (Average # of Days)</li> <li>• Reason for referral of initial assessments of new referrals (Total #)</li> </ul>
Caseload Data:	<ul style="list-style-type: none"> <li>• Active caseload in each community (list communities) (total # of clients per community and % of caseload per community)</li> <li>• Client appointments (total #)</li> <li>• Location of service (# and % of total services)</li> <li>• No-show appointments (# and % of total clients)</li> </ul>
Reason for Referral and Service Utilization Data:	<ul style="list-style-type: none"> <li>• Client care: direct and indirect care (total # of hours and % of total hours per community)</li> <li>• Average appointments per client per reason for referral category (Average #)</li> <li>• Client care time per client per reason for referral category for clients with greatest percentage of appointments and above average client care time (Average # of hours/% of total client care time)</li> </ul>

## **Phase 2: Feasibility of Client Journey Mapping**

The Managing Two Worlds Together (MTWT) patient journey mapping workbook was created in Australia for analysis, problem solving, quality improvement, and education, and can provide a comprehensive description of the client journey with Aboriginal clients (Kelly, Medway, et al., 2015). The MTWT workbook provides the process for client journey mapping which include step one: preparation to map the client journey; step two: using the tools for data gathering and data analysis; and step three: taking action on the findings (Kelly, Dwyer, et al., 2015). Appendix B includes the original patient journey mapping process from the workbook, as well as the prompt questions and related tables. The full workbook can be found on the website accessed and noted in the references (Kelly, Dwyer, et al., 2015). The student researcher implemented the components within each step of the client journey mapping process as described in the methods.

Step one, preparing to map the client journey, considers the reasons for client journey mapping, whose journey to map, and how the process will be completed. These areas are included in the methods presented in Table 1. This step also includes a review of guiding principles for respectful and collaborative engagement, which is an important aspect of using the tools as intended. Consultation and adaptation for use of the MTWT workbook with Inuit OT and PT clients was conducted as part of this step.

The original MTWT workbook tables and interview prompt questions used in this study were adapted for use with OT and PT clients, which to our knowledge has not previously been done. To use the tool with Inuit clients, the MTWT tool was further adapted in consultation with Tuttarviit, an inter-departmental group of Inuit Qaujijamajatuqangit (IQ) coordinators, to develop IQ initiatives for the Government of Nunavut. The student researcher reviewed the adapted workbook with the Director of IQ, received feedback, and modified accordingly until no further recommendations were made. The proposed interview guide in the original MTWT guidebook was felt to be unacceptably long, therefore recommendations were made to decrease the number of questions to facilitate a more conversational interview. The interview



guide was also translated into Inuktitut. Modifications for OT and PT program use, and consultation for use with Inuit clients lead to the development of the adapted MTWT workbook that was used in this study (Appendix C).

### ***Sample and Recruitment of Participants***

Based on the findings in phase 1, a client profile was identified for clients with high utilization of OT and PT services and would have an in-depth experience of care to explore the feasibility of client journey mapping. This profile was provided to the OTs and PTs working in the region to identify OT and PT clients for recruitment to the study that met the following inclusion criteria:

- 18 years of age or older
- cognitively able to participate as per OT and PT assessment of cognition
- provide consent to participate in the study (Appendix D)
- self-identify as Inuit
- match the client profile identified in phase 1 as having high service utilization of OT and PT services and are currently or have recently (within 12 months) received OT and PT services.

To further determine feasibility of the client journey map, purposive sampling was used to select information rich cases to provide insight into the phenomenon of interest (Patton, 2002). OTs and PTs used their extensive knowledge of their current and recent caseloads and identified a list of clients consistent with the profile of high utilization of services that would be able to provide a deeper understanding of experience of care and the journey map with OT and PT services.

The medical rehabilitation clerk interpreter recruited a client from the list using a telephone script (Appendix E) which informed the client of the research project and invited them to participate. This recruitment process was seen as good research practice, to address potential power differentials (University of Manitoba Faculty of Health Sciences, , 2013) as

participants may feel more comfortable being invited by the clerk interpreter than by the student researcher and Director of the program. The clerk interpreter is also fluent in Inuktitut and English, and able to recruit in the first language of the participant. Clients who agreed to participate met with the clerk interpreter to review the information and consent form. In this research, client journey mapping was conducted with one client in Rankin Inlet to determine the feasibility of client journey mapping and use of the adapted MTWT workbook. The clerk interpreter shared the participant's name with the student researcher and provided the signed consent form. The clerk also coordinated the scheduling of interviews. The participant was provided a \$50 gift card from a local store after the first semi-structured interview, and another \$50 gift card after the second interview, to compensate them for their time.

### ***Data Collection***

The next step of client journey mapping, using the tools, focuses on how to gather data. In this study, the chart audit was conducted initially, followed by the semi-structured interview. The student researcher accessed the participant's electronic health record remotely and developed a retrospective client journey of health services the client received. Kivalliq Inuit Services (KIS) is a boarding home and coordinates health care services, such as arranging of medical appointments and discharge planning for Kivalliq patients while in Winnipeg. The student researcher also accessed the participants KIS client chart in Winnipeg and reviewed southern based health services to map the client journey for Winnipeg-based services not available in the Kivalliq Region. The following data was collected:

- number of days from referral to OT and/or PT assessment
- referral source
- number of OT and/or PT appointments located in the Kivalliq Region, location of appointment (clinic, health centre, home, telerehabilitation, etc.), and dates
- interventions provided (exercise, equipment prescription, etc.)
- number of different OTs and PTs that provided care
- referral from OT/PT to another health professional, if applicable

- number of other health care professional appointments (ie. Nurse, physician), location and dates
- number of specialist appointments located in Kivalliq Region, location and dates (ie. Sports medicine orthopedics, orthotics)
- number of OT and PT specialty appointments in southern centre, location and dates
- number of specialist appointments located in southern centre, location, and dates

This data was analyzed to create a visual map of the client journey in the Visio software program.

The next step in data collection was conducting the participant semi-structured interview over MS Teams videoconference using the interview guide in the adapted MTWT workbook. The visual client journey map was utilized to lead discussion related to the applicable part of the client journey. The interview was audio recorded and then transcribed for use in data analysis.

### ***Data Analysis***

Another component in using client journey mapping tools is analysing the results. The chart audit of the participant's health record collected on the data collection/capture form (Appendix F) was analyzed to create the visual map of the client journey, which was used to lead discussion at the participant interview. The participant's interview was transcribed verbatim. The transcript was read several times and predetermined concepts for client journey mapping were used to analyse the data for coding the text and transferring to the tables in the client journey mapping workbook. Client journey mapping analysis was used to identify the key findings and action plan relevant to the client journey (Kelly, Medway, et al., 2015). The client journey was shared with the participant for member checking in the second interview. Efforts were taken to protect client confidentiality by removing any identifying information that could potentially identify the participant.

The last step presented in the MTWT workbook is taking action on the findings. This step considers how to share findings and take action for program improvements. The key findings and potential action plans are presented in the findings chapter.

The qualitative data collected from the interview field notes and at the interview were then analyzed using an approach consistent with directed deductive content analysis; used when there is an existing model describing the examined phenomenon (Hsieh & Shannon, 2005). For the purpose of this study, the feasibility framework was used to analyze the data with predetermined areas of focus—acceptability, implementation and practicality, integration, and adaptation (Bowen et al., 2009). Due to limited data from one participant, directed deductive content analysis was not used to generate themes, but to determine the feasibility of client journey mapping for use with a larger sample.

## Chapter 4: Findings

### Introduction

The findings are presented in the two phases that the research was conducted: phase 1- program utilization of adult OT and PT services, and phase 2 – feasibility of client journey mapping.

### Phase 1: Program Utilization of Adult OT and PT Services

Phase 1 findings answered the research questions, “How are adult OT and PT services utilized in the Kivalliq Region of Nunavut over a one-year period?”, and “What client groups have the highest utilization of OT and PT services, and how does the utilization of OT and PT services compare between Rankin Inlet and remote hamlets in the Kivalliq Region?”

### *Staffing Data Findings*

Annual report program data was reviewed and identified that OT and PT positions in the Kivalliq Region were fully staffed during the 2016-2017 fiscal year with 2 full time OTs and 2 full time PTs based in Rankin Inlet. OTs and PTs provide services to both adult and pediatric clients in the region.

One OT employee is a full-time clinical OT, and 1 employee is a clinical OT and Team Leader. The team leader position includes approximately 25% administrative team lead tasks, therefore 75% is clinical OT duties. Another 0.08 Equivalent Full-Time (EFT) OT provides services to the community of Sanikiluaq as a casual employee based in Winnipeg, for a total of 1.83 EFT OTs employed to provide clinical services in the Kivalliq Region of Nunavut during the fiscal year reviewed.

Both full time PT employees are based in Rankin Inlet and a 0.1 PT casual employee is based in Winnipeg, providing services to Sanikiluaq. Another 0.1 PT casual employee based in

Kivalliq Region provided additional coverage in the 2016-17 fiscal year, for a total of 2.2 clinical PTs in the fiscal year reviewed.

Staff based in Rankin Inlet also provide services to the outlying communities, or hamlets. Arviat, Baker Lake and Sanikiluaq are funded to receive four OT clinical visits per year, and five PT clinical visits per year. The remaining communities in the Kivalliq Region are funded three OT and four PT clinical visits per year. All funded clinical visits were provided to the communities in this fiscal year. Table 4 reports on the number of trips to each community, total days in community, and approximate travel times to fly in and out of the community.

**Table 4:**

***Community Days of Service (OT/PT) and Travel Time***

Community	Occupational Therapy		Physiotherapy		Travel Time
	Trips	Total # of Days	Trips	Total # of Days	Approximate trip flight duration
Arviat	4	20	5	25	2 hours
Baker Lake	4	20	5	25	2 hours
Chesterfield Inlet	3	15	4	20	35 minutes
Coral Harbour	3	15	4	20	3 hours
Naujaat	3	15	4	20	1.5 hours
Sanikiluaq	4	20	5	25	3.5 hours
Whale Cove	3	15	4	20	30 minutes

Clients in the Region can move between communities and continue to access consistent OT and PT program services. A review of community services revealed that 97.3% of OT clients were seen in one community, 2.2% in two communities, 0.4% were seen in three or more communities for OT services. For PT, 97.4 % of clients were seen in 1 community, 2.5% in two communities, and 0.1% were seen in three or more communities for PT services.

The same PT provided services to 93% of clients in the region, and only seven percent of clients accessed two PTs for all services received. Ninety-six percent of clients saw the same OT for all services received and only 4% of clients saw two OTs for all services received. This data

provides strong evidence of continuity of care in terms of OT and PT providers during the 2016-2017 fiscal year.

### ***Referral Data Findings***

For adult clients who were newly referred, OTs performed 88 initial assessments, while PTs performed 467 adult initial assessments in the 2016-2017 fiscal year. The number of initial assessments only includes those completed in the fiscal year and does not include new referrals received in that year that did not receive assessments. Nor are pediatric referrals included in the total data cited.

The majority of new referrals to OT and PT services were from the GN Department of Health, followed by self-referral for PT, and out-of-territory for OT. All referral sources for OT and PT are reported in Table 5.

**Table 5:**

#### ***Referral Source for OT and PT initial assessments***

Referral Source	OT	PT
Dept of Health	77	406
Other	3	4
Out of Territory	4	1
Physiotherapy	1	0
Self	3	44
Occupational Therapy	0	1
missing	0	11
Totals:	88	467

New referrals are prioritized at intake with the OT and PT Nunavut prioritization tool (Appendix G). Table 6 reports on OT referral prioritization findings for clients who had initial assessments. OTs provided the highest number of initial assessments to OT 2 priority level clients who waited an average of 47 days for assessment, followed by OT 1, OT 3, and OT 4 clients. Average wait times are presented as workdays from referral to initial assessment. The

average wait times for OT assessments were shorter in Rankin Inlet than in the outlying hamlet communities for all priority levels.

**Table 6:**

***New OT Referral Prioritization Findings***

Priority Level	Number of Initial Assessments	Percentage of Assessments	Average Wait Times Kivalliq Region (Workdays)	Average Wait Times- Rankin Inlet (Workdays)	Average Wait Times- Hamlets (Workdays)
1	26	30%	49	2	44.75
2	38	43%	47	5	78.86
3	20	23%	52	14	59.2
4	4	4%	105	15	192

*Note.* OT Prioritization Description: 1. Occupational performance significantly impacted; 2. Occupational performance moderately impacted; 3. Occupational performance mildly impacted; 4. Client is not satisfied with level of occupational performance

Table 7 reports on PT referral prioritization findings for clients who had initial assessments. PTs provided the highest number of initial assessments to PT 4 priority level clients who waited an average of 61 workdays for assessment, followed by PT 5, PT 6, PT 2 and PT 3. Physiotherapists did not report any PT 1 priority level referrals received this fiscal year. Average wait times are presented as workdays from referral to initial assessment. Physiotherapy client wait times differed for clients in Rankin than the outlying hamlet communities, with Rankin Inlet having shorter wait times for all priority levels except PT 5.

Reasons for referral were grouped together in larger categories as presented in Table 8. Reasons for referral that were not easily grouped into an existing category were reviewed, and those with under 5 were grouped into the category, "other". Table 8 reports on reasons for referral for all clients with an initial assessment in the fiscal year.



**Table 7:*****New PT Referral Prioritization Findings***

Priority Level	Number of Initial Assessments	Percentage of Assessments	Average Wait Times by Region (Workdays)	Average Wait Times- Rankin Inlet (Workdays)	Average Wait Times- Hamlets (Workdays)
1	0	n/a	n/a	n/a	n/a
2	40	9%	23	14	28
3 *	7	2%	63	1	40
4	252	56%	61	41	63
5	78	17%	119	117	105
6	73	16%	63	66	154
Missing	17	4%	10	unknown	unknown

*Note:* PT prioritization description: 1. Hospital (health centre) inpatients requiring assessment and treatment for mobility and discharge planning; 2. Falls Risk; 3. Pediatric clients with chronic conditions; 4. Clients with urgent conditions; 5. Clients with semi-urgent conditions; 6. Clients with non-urgent conditions

\*Program utilization data was filtered to those identified as “adults” in workload statistics. These clients were recorded as priority 3 (pediatric clients with chronic conditions) by intake therapists as most appropriate priority level but reason for this is not known.

**Caseload Data Findings**

Clients who received an initial assessment or follow up appointments in the fiscal year were included as clients on OT and PT caseload. Slightly more than 800, (802) adult clients were on the PT teams caseloads, and 223 adult clients were on the OT team’s caseloads.

OTs’ and PTs’ scopes of practice in the Kivalliq Region includes both adult and pediatric clients (19 and under). Pediatrics client appointments were 57.5% of total OT appointments (437 appointments), and 21% of total PT appointments (329 appointments). Pediatric OT and PT services were not the focus of the current study, and therefore this data on pediatric clients was not further analysed.

**Table 8:*****Reason for Referral and Number of OT and PT Initial Assessments***

Collapsed Reasons for Referral Categories:	Number of OT Initial Assessments	Number of PT Initial Assessments
Activities of Daily Living (ADL)'s and Home Safety: Includes ADL issues, bathroom safety, fall risk, home modifications	18	3
Cardiovascular Conditions	2	1
Developmental Delay: includes developmental delay, down's syndrome, global developmental delay	3	3
Ergonomics Assessment	3	0
Geriatrics	2	1
Hand Therapy: includes carpal tunnel syndrome, hand injury, splinting	18	2
Mental Health	1	0
Mobility Devices and Wheelchair Seating	19	3
Musculoskeletal Conditions: includes back pain, fracture, general musculoskeletal conditions	8	406
Neurological Conditions: Cerebral palsy, CVA, Head Injury, other neurological conditions, Dementia/Cognitive Decline	9	10
Other: reasons for referral unable to fit into another category and less than 5 in the data. Includes screening consult, fine motor delay, compression stockings, behavior management	3	2
Respiratory conditions	0	1
Rheumatological Conditions: includes rheumatoid arthritis and other rheumatological conditions	1	7
Surgical	1	28
<b>TOTAL</b>	<b>88</b>	<b>467</b>

For the 223 adult OT clients, there were 323 OT appointments reported; 27% of the appointments were initial assessments. Two hundred and three appointments were in the regions' hamlet communities and 120 in the regional centre of Rankin Inlet, as presented in table 9.

**Table 9:*****OT Client Appointments***

	# OT follow-up appointments	# OT initial assessments	Total OT Appointments
Arviat	37	12	49
Baker Lake	31	35	66
Chesterfield	8	2	13
Coral Harbour	7	3	10
Naujaat	9	3	12
Whale Cove	17	4	21
Sani	23	12	35
COMMUNITIES TOTAL	132	71	203
Rankin Inlet (Regional Centre)	103	17	120
Total	235	88	323

For the 802 adult PT clients, there were 1222 PT appointments reported; 38% of the appointments were initial assessments. Six hundred and nineteen appointments were in the regions' communities and 603 in the regional centre of Rankin Inlet. PT appointments by community are presented in table 10.

**Table 10:*****PT Client Appointments***

	# PT follow up appointments	# PT initial assessments of new referrals	Total PT Appointments
Arviat	79	79	158
Baker Lake	47	61	108
Chesterfield	22	29	51
Coral Harbour	17	50	67
Naujaat	43	10	53
Whale Cove	29	33	62
Sanikiluaq	69	51	120
COMMUNITIES TOTAL	306	313	619
Rankin Inlet (Regional Centre)	449	154	603
TOTAL	755	467	1222

OTs and PTs provide services in the location that best meets the client's needs. Each community has a health centre in which health care services are provided, including OT and PT clinical visits. Rankin Inlet has a regional health centre which provides primary care health care services in Rankin and includes a 10-bed in-patient unit, though OT and PT services are provided in Rankin Inlet from the Wellness Centre which also houses Home Care, Public Health and Midwifery programs. Regional elders' centres include a long-term elder care facility in Arviat and a Seniors assisted living centre in Baker Lake. In Rankin Inlet, a long-term care facility is planned for 2023.

OTs provided the most appointments while on home visits, with 128 appointments in the region, followed by 102 appointments in community health centres, and then in Rankin Inlet, at the Wellness Centre, in which 49 appointments took place. Table 11 describes the location of all adult OT appointments.

**Table 11:**  
***Location of OT Appointments***

Location of Service	Arviat	Baker Lake	Chesterfield	Coral Harbour	Naujaat	Whale Cove	Sani	Hamlets TOTAL	Rankin Inlet	Kivalliq Region Total
Health Centre	23	29	6	6	5	20	13	102	n/a	102
Home Visits	14	23	3	3	4	0	18	65	63	128
Elder's centre	5	4	0	0	0	0	0	9	0	9
Wellness Centre	4	2	0	1	3	0	0	10	39	49
School	2	0	0	0	0	0	2	4	2	6
Group Home	0	0	1	0	0	0	0	1	0	1
Kivalliq Health Centre (Rankin Inlet)	0	5	0	0	0	0	0	5	12	17
Phone Consult	0	1	0	0	0	0	1	2	0	2
Telehealth	0	0	0	0	0	1	0	1	0	1
Workplace	0	2	0	0	0	0	0	2	4	6
missing	1	0	0	0	0	0	1	2	0	2
TOTAL	49	66	10	10	12	21	35	203	120	323

The location PTs provided the most appointments was the community health centres with 564 appointments. In Rankin Inlet, the PT clinic is located at the Wellness Centre in which 473 appointments took place. The PTs also provided 66 appointments via phone consult. Table 12 reports on the location of adult PT appointments.

**Table 12:**

***Location of PT Appointments***

Location of Service	Arviat	Baker Lake	Chesterfield	Coral Harbour	Naujaat	Whale Cove	Sani	Hamlets TOTAL	Rankin Inlet	Kivalliq Region Totals:
Health Centre	140	97	46	65	47	53	116	564	n/a	564
Home Visits	11	4	0	0	0	1	3	19	16	35
Elder's centre	0	0	0	0	0	0	0	0	1	1
Wellness Centre	1	0	4	1	0	0	0	6	467	473
School	2	1	0	0	0	0	0	3	0	3
Group Home	0	0	1	0	0	0	0	1	0	1
Kivalliq Health Centre	2	1	0	1	0	0	0	4	52	56
Phone Consult	1	4	0	0	4	4	0	13	53	66
Other	0	0	0	0	0	0	0	0	1	1
missing	1	1	0	0	2	4	1	9	13	22
TOTAL	158	108	51	67	53	62	120	619	603	1222

In addition to the reported number of appointments for OT and PT services, there were also no-show appointments recorded when a client booked an appointment, but did not show up, or cancelled. OTs recorded 33 no-show appointments for an average regional rate of 9%, with the highest no-show rate recorded in Coral Harbour at 33%. The lowest no-show rate was in Sanikiluaq which had zero no-shows recorded, and second lowest in Rankin Inlet at 5%. PTs recorded 311 no show appointments for an average regional no-show rate of 20%, with the

highest no-show rate recorded in Whale Cove with 33%, and the lowest recorded rate in Coral Harbour at 12%.

### Service Utilization and Reason for Referral Findings

Tables 13 and 14 reports on the total number of appointments by reason for referral to OT or PT, as well as the percentage of total appointments. OTs provided the greatest number of appointments to clients with mobility devices and wheelchair seating needs, followed by hand therapy and by activities of daily living (ADLs) and home safety concerns. PTs provided the greatest number of appointments to clients with musculoskeletal and surgical conditions.

**Table 13:**

#### ***Occupational Therapy Appointments by Reason for Referral***

Reason for Referral	Total number of Appointments	Percent of Total Appointments (%)
Mobility Devices and Wheelchair Seating	100	30.96%
Hand Therapy	59	18.27%
ADLs and Home Safety	57	17.65%
Musculoskeletal Conditions	18	5.57%
Neurological Conditions	16	4.95%
Geriatrics	14	4.33%
Developmental Delay	10	3.10%
Other	8	2.48%
Ergonomics Assessment	7	2.17%
Mental Health	3	0.93%
Rheumatological Conditions	3	0.93%
Cardiovascular Conditions	2	0.62%
Surgical	1	0.31%
Missing	25	7.74%
TOTALS	323	100.00%

**Table 14:*****Physiotherapy Appointments by Reason for Referral***

Reason for Referral	Total number of Appointments	Percent of Total Appointments (%)
Musculoskeletal Conditions	980	80.20%
Surgical	81	6.63%
Neurological Conditions	23	1.88%
Rheumatological Conditions	19	1.55%
Cardiovascular Conditions	18	1.47%
Hand Therapy	14	1.15%
ADLs and Home Safety	11	0.90%
Geriatrics	9	0.74%
Developmental Delay	6	0.49%
Mobility Devices and Wheelchair Seating	5	0.41%
Other	2	0.16%
Respiratory Conditions	1	0.08%
Missing	53	4.34%
Total	1222	100.00%

Workload statistics were analyzed to determine the number of appointments per client during the time frame of the study, and findings showed that the majority of OT and PT clients, 83% and 85% respectively, received services in one or two appointments. One client received 12 OT appointments, which was the most appointments recorded in the 2016-2017 fiscal year. For PT, one client received 20 appointments, which was the highest recorded in the same fiscal year. Seventeen percent of OT clients and 15% of PT clients had three or more appointments. Therefore, in the time frame reviewed, high use of OT and PT services is defined as clients who received three or more appointments.

OTs and PTs recorded direct and indirect client care time in the workload statistics. Direct client care time is time spent working with client or caregivers and indirect client care time is time spent on activities related to the clients care when the client or the client's caregivers are not present. Table 15 and 16 reports on OT and PT client care times for clients in

which client care time was recorded during the fiscal year for adult clients in each community. There was client care time recorded for 222 OT clients, and 787 PT clients. This number of clients is slightly lower than the previously reported findings in caseload data section in which caseloads were recorded at 223 OT clients and 802 PT clients, which occurred when clients were recorded on caseloads but did not have direct time recorded due to no-shows, or no client care activity recorded in the period of time reviewed.

OTs provide a greater number of pediatric client appointments as previously noted. Therefore, total adult OT direct client care time (248 hours) is less than total adult PT direct client care time (843.25 hours), as reported in Tables 15 and 16. As reported in Table 16, OTs recorded that their indirect activities are 53.5 % of their total client care time at 285 hours. This is significantly more time for indirect activities, compared to PTs who reported 36% of client care time as indirect time at 472.50 hours in Table 16.

Previous findings reported in Table 13 were that OTs provided 323 appointments, therefore average OT total client care time is 1.65 hours per appointment, comprised of 0.88 hours per appointment of indirect client care time and 0.76 hours per appointment of direct client care time. OTs provided an average total client care time of 2.4 hours per client, comprised of 1.43 hours per client of indirect time and 1.36 hours per client of direct time.

Previous findings reported in Table 14 were that PTs provided 1222 appointments, therefore average PT total client care time is 1.08 hours per appointment, comprised of 0.39 hours per appointment of indirect client care time and 0.69 hours per appointment of direct client care time. PTs provided an average total client care time of 1.67 hours per client, comprised of 0.61 hours per client of indirect time and 1.28 hours per client of direct time.

Clients receiving services in the regional centre of Rankin Inlet, where therapists are based, accounted for 52% of the total client care time of PTs and 49% for OTs. Arviat and Baker Lake, despite having similar populations, received 11% and 10% respectively of the client care time reported by PTs, and 16% and 10% by OTs. The smaller communities of Chesterfield Inlet,



Coral Harbour, Naujaat, Whale Cove, and Sanikiluaq received between 2-8% of total client times, as presented in tables 15 and 16.

**Table 15:**

***Client Care Times - OT Services by Community***

Community	Direct Client Care Time (hours)	Indirect Client Care Time (hours)	TOTAL Client Care Time (hours)	% Total Client Care Time (%)
Arviat	33.5	54.25	87.75	16%
Baker Lake	32.75	21.75	54.5	10%
Chesterfield Inlet	6.25	6.75	13	2%
Coral Harbour	7.5	10.25	17.75	3%
Naujaat	6.25	10.25	16.5	3%
Whale Cove	17	23	40	8%
Sanikiluaq	15.25	29	44.25	8%
Communities Total	118.5	155.25	273.75	51%
Rankin Inlet (Regional Centre)	129.5	129.75	259.25	49%
Total	248	285	533	100%

**Table 16:**

***Client Care Time - PT Services by Community***

Community	Direct Client Care Time (hours)	Indirect Client Care Time (hours)	TOTAL Client Care Time (hours)	% Total Client Care Time (%)
Arviat	98.5	50.25	148.75	11%
Baker Lake	80.25	46.5	126.75	10%
Chesterfield Inlet	37.5	15.5	20.5	2%
Coral Harbour	51	20.25	71.25	5%
Naujaat	46.25	25.75	72	5%
Whale Cove	35.25	27	62.25	5%
Sanikiluaq	62.25	37.25	99.5	8%
Communities Total	411	222.5	633.5	48%
Rankin Inlet (Regional Centre)	432.25	250	682.25	52%
TOTAL	843.25	472.50	1315.75	100%

The data was then analysed to determine the client profile for clients with high use of OT and PT services by reviewing data for clients that received the greatest number of OT and PT appointments and received greater than average client care time. The previous findings in service utilization and reason for referral section reported that clients with the most OT and PT appointments were those with three or more appointments. Findings also report average client care time per client is 2.4 hours for OT, and 1.67 hours for PT. Therefore, clients with three or more appointments and higher than average client care times of 2.4 hours of OT client care time or 1.67 hours of PT client care time were identified in the data, as a high user of OT and PT services, and the findings for these clients are presented in Tables 17 and 18.

**Table 17:**

***Occupational Therapy Client Care Time and Appointments for Clients with 3 or more Appointments and More Than 2.4 hours Client Care Time***

Reason for Referral to Occupational Therapy	Number of Clients	Number of OT appts	Average number of appts	Client Care Time (Total hours)	Average Client Care Time per Client (hours)	Percentage of Total Client Care Time
Mobility Devices and Wheelchair Seating	12	55	4.58	134	11.17	48.03%
ADL and Home Safety	10	47	4.70	91.25	9.13	32.71%
Ergonomic assessment	2	6	3.00	16	8	5.73%
Surgical	1	3	3.00	4.5	4.5	1.61%
Developmental Delay	1	3	3.00	4	4	1.43%
Mental Health	1	3	3.00	3.75	3.75	1.34%
Geriatrics	3	9	3.00	11	3.67	3.94%
Musculoskeletal Conditions	1	3	3.00	3	3	1.08%
Hand Therapy	4	15	3.75	11.5	2.88	4.12%
Total	35	144	3.88	279	6.3	100%

Thirty-five OT clients, which is 16% of the 223 clients on OT caseloads were in this data set of the high OT services user with three or more appointments and greater than 2.4 hours of client care time. One hundred and forty-three OT appointments were provided to this group of clients, making up 44% of all adult OT appointments. Clients with mobility devices and wheelchair seating issues were the greatest in number (12 clients) and received the greatest percentage of total OT client care time in this group at 48% and made up 25% of all client care time reported in the fiscal year. Clients with ADL and home safety concerns followed with 10 clients making up with 32.71% of total OT client care time in this group and 17% of all client care time reported in the fiscal year. Therefore, OTs provided over 80% of the total client care time with these two client groups within the high user data set.

**Table 18:**

***Physiotherapy Client Care Time and Appointments for Clients with 3 or More Appointments and More Than 2 hours of Client Care Time***

Reason for Referral to Physiotherapy	Number of Clients	Number of PT appts	Average Number of Appts	Client Care Time (total hours)	Average Client Care Time per Client (hours)	Percentage of Total Client Care Time
Musculoskeletal Conditions	122	500	4.1	539.75	4.42	79.23%
Surgical	15	72	4.8	73.5	4.90	10.79%
Cardiovascular	1	20	20	15.25	15.25	2.24%
ADLs and Home Safety	2	15	7.5	14.75	7.38	2.17%
Neurological Conditions	4	10	2.5	11.25	3.50	1.65%
Rheumatological Conditions	3	7	2.33	9	3.00	1.32%
Hand Therapy	1	7	7	8.75	8.75	1.28%
Geriatrics	1	3	3	3.5	3.50	0.51%
Respiratory Conditions	1	3	3	3	3.00	0.44%
Mobility Devices and Wheelchair Seating	1	3	3	2.5	2.50	0.37%
<b>Total</b>	<b>151</b>	<b>640</b>	<b>5.72</b>	<b>681.25</b>	<b>7.03</b>	<b>100%</b>

One hundred and fifty-one clients, which is 19% of the 802 clients on PT caseloads were in the data set of the high PT services user with three or more appointments and greater than 1.67 hours of client care time. Six hundred and thirty-eight PT appointments were provided to this group of clients, making up 52% of all adult PT appointments. Clients with musculoskeletal conditions were the greatest in number (122 clients) and received the greatest percentage of total PT client care time in this group at 79.23% and made up 41% of all client care time reported in the fiscal year. Clients with surgical conditions followed with 15 clients making up 10.79% of total PT client care time in this group and 5.58% of all client care time reported in the fiscal year. Therefore, PTs provided over 90% of the total client care time with these two client groups within the high user data set.

There were a limited number of clients who received greater than the average number of 3 appointments reported in service utilization findings, such as clients with cardiovascular conditions (1 client received 20 appointments), ADLs and home safety issues (2 clients received and average of 7.5 appointments) and hand therapy conditions (1 client received 7 appointments) in this data set that could have been considered as a high user to participate in client journey mapping. Though, in phase 2 of this research we were interested in client journey mapping for program evaluation and potential program level improvements. Therefore, it was determined that clients that would provide the most beneficial information for program improvements would be the PT client group accessing services in the greatest numbers and with the greatest percentage of total client care time that could provide extensive client journey mapping data. Therefore, clients with musculoskeletal and surgical conditions were determined as the high PT service user.

In summary, based on the findings, the client profile of the high user of OT and PT services were clients with musculoskeletal or surgical conditions that also presented with mobility device or wheelchair seating issues, or ADL and home safety concerns, and were considered for client journey mapping in phase 2.

## **Phase 2: Feasibility of Client Journey Mapping Findings**

Phase 2 focused on client journey mapping to answer research questions, “What is the feasibility of using existing OT and PT services data to identify clients for journey mapping”? and “What is the feasibility of using client journey mapping with adult Inuit OT and PT clients with high utilization to understand the client experience and evaluate services”?

One participant who was identified in the inclusion criteria in phase 1 agreed to participate in client journey mapping. The participants client journey is presented with a narrative account, visual map and adapted MTWT client journey mapping tables, followed by the assessment of feasibility of client journey mapping to explore the client experience with OT and PT services for program improvement.

### ***Participants Client Journey***

The participant health record was audited from date of lower extremity injury in 2017 up to date of audit completion on November 27<sup>th</sup>, 2020. The data collected was analyzed and a visual map of the client journey created illustrating the health care services the client received in Rankin and out of territory in Winnipeg, as well as increased details on interventions provided by OT and PT, as this is the area of focus. This map was shared with the participant at the semi-structured interview to guide discussion and is shown in Table 19. During the interview, the participant discussed their experiences during the time of the events on the visual journey map, as well as present day experiences. A gender-neutral pronoun is used to decrease identifiable traits of the participant.

The participant is in their late 60s and lives in Rankin Inlet. While accessing specialized health care services in Winnipeg, which is approximately a 3.5-hour flight away, the participant had a fall and sustained a lower extremity injury. They were assessed in the hospital emergency department, admitted, and received surgery. The participant was discharged from hospital six days later to the Kivalliq Inuit Services medical boarding centre in Winnipeg until they were able

to travel back to Rankin Inlet approximately two weeks later. The participant had subsequent surgical hardware failure that required surgical repair, approximately a year and a half later.

During the interview, the participant revealed that pain and limited mobility were significant concerns during the post-surgical recovery period. They were unable to access the upper floor of their home, and unable to access the only washroom, therefore using a commode on the main level. The participant described relying on supports from their spouse during this time and being happy when railings were added to stairs in their home to make the washroom accessible and decrease the amount of support required from spouse.

The chart notes identified that the participant self-referred to PT services, and these services were initiated the same day. The participant reported in the interview that they received adequate amount of PT services during the post surgical recovery period, and they worked on regaining strength and mobility with direct PT interventions including strength and Range Of Motion (ROM) exercises, education on maintaining non weight bearing status, safe ambulation and managing stairs. OT services were initiated following communication with the PT to reassess equipment needs. The participant reported in the interview that OT was helpful to provide the necessary home safety equipment that was required to manage at home. The participant was prescribed a comfortable wheelchair for longer distances, a walker for each level of the home for safe ambulation, and home safety equipment including a shower chair and grab bars in the washroom.

The participant had concerns over the lack of supports during the time of the interview related to COVID-19 health care service restrictions. Due to home visits restrictions by health providers and home care services, the participant did not feel that PT follow up by phone was effective, expressing interest in direct PT services when able, but stated that both OT and PT did a good job, and the best they could with COVID-19 restrictions. When asked if a trained rehabilitation assistant would be acceptable for in-home rehabilitation, the participant was agreeable to this suggestion. COVID-19 restrictions also suspended home care cleaning services,



which the participant found very difficult, as these tasks are very challenging to complete on own.

The participants expressed at the interview feeling safe and respected during interactions with health care providers, and that the physician was concerned about their well-being. The participant also reported good communication and understanding during interactions with health care providers, as they can communicate effectively in English. They also commented that health care providers are good at letting them know about other available services from which they might benefit.

The lack of accessibility of the participant's home was a significant concern. There are nine stairs into the home and additional stairs inside to access the upper level, including the washroom. Two walkers are required to mobilize safely on each level. The participant described frequent requests over many years to the public housing authority, and letters of advocacy from both the OT and PT for a one-level home, but a more accessible housing unit has not been available. The participant acknowledged very limited availability of housing in their community and frequent follow up with the public housing authority. The participant also reported the need to store their wheelchair at the OT/PT office due to limited storage in their home.

At the interview, the participant noted that the required medical travel to access specialized health care services did not pose significant challenges, despite the number of flights noted on the visual journey map. The participant's daughter was the trusted travel escort to accompany them on out-of-territory medical appointments, and thankfully is normally available to do so. The main challenge discussed was mobility while out on medical appointments. The participant often chose not to bring their own wheelchair on medical trips as it can be challenging to travel with and not wanting their daughter to have to deal with the wheelchair. Being without the wheelchair in the city is challenging though, as often wheelchairs are unavailable to borrow, uncomfortable, or in disrepair, and the participant commented that they needed to bring their wheelchair for future appointments to manage.



The participant felt that the process to see a specialist out-of-territory involved too many local health care appointments with nurses and physicians before the referral was generated and appointments were arranged. As well, the participant felt that staff turnover in the community can be challenging, as new health care providers do not know their health situation and more time is required to build knowledge of health status and needs. Regarding access to PT and OT services in Winnipeg, the participant expressed a desire to have more PT services offered when they were in the city for health care services in order to access facilities and equipment for rehabilitation services that they felt were not available in Nunavut. Their journey map includes very limited hospital-based OT and PT services post-surgery.

The student researcher analyzed the interview data transcript for impacts on physical, psychological and emotional wellbeing for the participant and their family as outlined in Table 20. Table 21 outlines factors affecting access and quality, and Table 22 includes journey mapping from multiple perspectives.

Table 20:

*Dimensions of Health Table*

Dimensions	Experiences on the Journey
Physical or biological	<p>Following lower extremity surgery, the participant was in a lot of pain from surgery and mobility very limited with non-weight bearing status. Stairs at home were difficult to manage. Equipment provided by OT made getting around the home more manageable. PT treatment focused on range of motion and strength exercises and increasing mobility as able.</p> <p>Participant would like ongoing direct PT services to be as physically active as possible.</p> <p>Continues to have mobility limitations but tries to be as active as possible.</p>
Psychological and emotional wellbeing: personal, family, spiritual and cultural considerations	<p>Felt awkward with level of support required by spouse when unable to access the upstairs bathroom and commode was required on main floor of home. It was very important to get railings on stairs in home to access the washroom.</p> <p>The participant reported not bringing their wheelchair to medical appointments out of their home community due to not wanting their daughter to have to carry so much during the trip. This has been challenging as they then needed to find and borrow wheelchairs from the boarding home or hospital, which can be difficult to locate, are not as comfortable as their own (no leg supports) or broken. They planned to bring their wheelchair on future trips as they needed it to get around comfortably in the city.</p> <p>Participant's daughter is a trusted support person, and available as an escort for medical appointments out of community. Participant acknowledged their daughter needed to be available for these appointments, and thankfully usually is.</p> <p>Participant is frustrated with long wait for and accessible public housing unit. Current unit that has 9 stairs into home, and more inside. Unable to get an accessible housing unit despite multiple requests and letters from OT/PT as there are not enough accessible housing units available in community.</p> <p>Participant tried to be as active as could be. Felt supported when PT and OT called to check in and asked if they needed anything.</p>

**Table 21:*****Underlying Factors Affecting Access and Quality Table***

Underlying factors	Local health services	Local Physiotherapy services	Local Occupational Therapy Services	Out of Home community OT / PT Services
Location / setting (availability and amount of services, travel required, family/relationship proximity)	<p>Access to x-ray, primary care nurses, physicians, some medical specialists, home care home maker service, and in-patient unit care</p> <p>Uses a cane and a wheelchair is available at the local health centre which helps to access these appointments.</p> <p>Hard to use a walker in Rankin due to gravel roads or snow/slush/ice.</p>	<p>PT provided home visits primarily. Phone call follow ups.</p> <p>PT provided exercises during recovery from surgery. Participant felt able to access enough PT services.</p> <p>PTs provided home exercise peddling machine but found too noisy in home to use around spouse.</p> <p>Has home exercise program sheet at home; tries to do them, but would like more direct exercise opportunities, ie. part of a group for elders. Was part of a simple yoga</p>	<p>OT provided home visits primarily to address home based equipment and safety needs in relation to completion of activities of daily living.</p> <p>Phone call follow up provided to follow up.</p>	<p>Saw PT and OT one time in Winnipeg during hospital stays.</p> <p>Client wanted to see physio more in Winnipeg during their stays. Felt that Winnipeg might have a space (ie. physio gym/equipment) not available in Rankin.</p> <p>Hard to use walker in Winnipeg due to the distances required, needs wheelchair for mobility. Wheelchairs often hard to access in city or are uncomfortable.</p> <p>No noted communication between OT/PT team in</p>

Underlying factors	Local health services	Local Physiotherapy services	Local Occupational Therapy Services	Out of Home community OT / PT Services
		class for elders previously in Churchill and enjoyed this.		Winnipeg to team in Rankin.
Impact of illness and interactions with health system (chronic or complex health issues, acutely ill or injured)	<p>Very challenging to clean home. Needs to take lots of breaks.</p> <p>Home care home maker services very helpful. Since COVID-19 services stopped, and this has been very hard. They were able to come one time, which was helpful, and then restrictions were back.</p>	<p>Would like more direct exercise opportunities instead of consultative services with list of exercises provided to do at home if possible.</p> <p>PTs worked with client on exercises during recovery from surgery. This was helpful.</p> <p>Interested in a rehabilitation assistant or group class to be more active and maintain mobility levels.</p>	Client felt the OT knew what was needed for equipment and provided this to better manage at home and this was very helpful.	<p>Client felt there were lots of steps involved to see a specialist out of home community. I.e. appointment with nurses, then doctors in Rankin.</p> <p>Medical transportation from Kivalliq Inuit Services for appointments provided.</p>
Language / communication. Ease or difficulty of communication	Client feels able to communicate in English well and able to easily discuss health care services to understand services received. Is not afraid to ask questions. Feels that there is good communication.			

Underlying factors	Local health services	Local Physiotherapy services	Local Occupational Therapy Services	Out of Home community OT / PT Services
between clients and staff, access to interpreters, use of plain language)	<p>Health providers consider what other services could be provided and communicated this to participant.</p> <p>Appreciates it when the OT and PT call in to check up and see how things are.</p>			
Financial resources (Ability to meet costs of transport, treatment, health care policies, inability to work, caring duties)	<p>No financial issues accessing local health services. Able to cover expenses for items if needed.</p> <p>Lack of access to accessible public housing unit was a significant concern.</p>			<p>Daughter is trusted medical escort and sometimes depends on her availability; daughter is available.</p>
Cultural safety (Experiences of an Inuit person within a health system)	<p>Client reports they feel safe and respected during health care services and interactions with health care providers.</p> <p>Reported that physician was concerned about wellbeing.</p> <p>Participant appreciates the PT / OT calling to see if they need more assistance.</p>			

Table 22:

*Journey Mapping from Multiple Perspectives*

	Client history	Referral to OT / PT services	Follow up PT locally	Follow up OT locally	Follow up other health care team members	Trips for services out of home community- if applicable	Discharge and Trip home- if applicable
Client journey	History falls  Lower extremity injuries and surgeries  Chronic Health condition  Decreased mobility	Self referral PT in 2017 after return home from surgery.  OT reassessed per PT communication	Client felt received enough PT services during recovery.	OT knew what equipment was needed in home and provided	Home care, nurses, physician, in-patient unit care, and medical specialists available in Rankin.	Locally wheelchair right up to the plane  3.5-hour flight to Winnipeg.  Recent appt in Iqaluit due to COVID-19 isolation requirement in Winnipeg	3.5 hour flight to Rankin.  Kivalliq Inuit Services in Winnipeg support discharge planning back to Rankin
Family / carer journey	Spouse support at home					Daughter is trusted escort and available to support client for medical travel	
Client priorities,	Decreased mobility	Participant initiated PT	Satisfied with post surgery PT services.	Satisfied with post surgery OT services. OT knew	Challenging when health care provider doesn't know	Wanted to see more physio while in city.	Difficulty travelling with walker or

	Client history	Referral to OT / PT services	Follow up PT locally	Follow up OT locally	Follow up other health care team members	Trips for services out of home community- if applicable	Discharge and Trip home- if applicable
concerns & commitments	Home management  Accessible housing  Motivated to figure out ways to stay active	services by self-referral	Would like more active PT for motivation; ongoing exercises.	what intervention was needed to manage activities of daily living at home and arranged necessary equipment.	health status due to staffing turnover.  A long process to see multiple providers before being seen in Winnipeg for specialized services		wheelchair, but difficult without own wheelchair as well
Health services priorities	History of falls and chronic health condition management	Accept self-referral. Same day PT services  Communication PT/OT for OT follow up.	OT and PT interventions listed on visual map.		Home care cleaning services to support client managing at home.	Specialist health care services coordinated out of home community as required.	Kivalliq Inuit Services nurses coordinating care Winnipeg back to Rankin

	Client history	Referral to OT / PT services	Follow up PT locally	Follow up OT locally	Follow up other health care team members	Trips for services out of home community- if applicable	Discharge and Trip home- if applicable
					Communication PT / surgeon		
Service gaps	Accessible public housing not available.  Limited in community.		Exercise programming for elders, and capacity to offer this programming limited.  No local rehabilitation assistant position funded at this time.		COVID-19 disruptions to services provided in home.	Limited PT services post surgery in city	
Response to gaps	Continue to follow up with local public housing authority for accessible housing unit.		Explore funding of a local therapy assistant.  Mobility / exercise program/groups within PT services or community partnerships.		Safe initiation of home care services in accordance with COVID-19 precautions.	Explore access to publicly funded PT services during long term stay in Winnipeg.	



## Client Journey Mapping Key Findings: Issues and Potential Action Plan

The final step in the client journey mapping process is taking action on the findings. The key findings from client journey mapping data analysis along with action plan and person responsible for taking action are presented in table 23.

**Table 23:**

### *Client Journey Mapping Key Findings and Action Plan*

Key Findings and Action Items	Action Plan	Person Responsible
Access to Quality Health Care Services:		
OT Services: Satisfied with community access to client centered OT services.	<ul style="list-style-type: none"> <li>Continue to provide client centered OT services to meet clients' needs in community</li> <li>Explore access to wheelchairs for client travelling south for appointments</li> </ul>	<ul style="list-style-type: none"> <li>Occupational Therapist</li> <li>Kivalliq Inuit Services boarding home – equipment inventory review with nurses</li> </ul>
PT Services: Self-referrals accepted by program and timely access to PT services in Rankin Inlet (regional center of Kivalliq Region).  Current level of services due to COVID-19 restrictions are not meeting client needs.  Would like more active exercise opportunities to maintain mobility.	<ul style="list-style-type: none"> <li>Continue to accept self-referrals</li> <li>Ensure telehealth for timely access in other communities as appropriate.</li> <li>PT appointment to review goals and develop appropriate treatment plan for active services (as per appropriate COVID-19 public health service guidelines)</li> <li>Build capacity in the community by advocating for and exploring partnerships for community exercise program for elders.</li> </ul>	<ul style="list-style-type: none"> <li>Intake therapist accepting self-referrals</li> <li>Client and Physiotherapist-client ed care goal planning.</li> <li>Physiotherapist and Occupational Therapists.</li> <li>Hamlet programs - Elders groups</li> <li>Partnerships with other health providers in community</li> </ul>

Key Findings and Action Items	Action Plan	Person Responsible
	<ul style="list-style-type: none"> <li>Advocate for rehabilitation assistant positions to increase capacity for OT/PT program deliver by assistant (community exercise program)</li> </ul>	<ul style="list-style-type: none"> <li>Director of Medical Rehabilitation Programs</li> <li>Territorial Rehabilitation Coordinator</li> </ul>
<p>Home Care: Home Maker Services are essential for client living at home to manage with limited mobility; currently suspended due to COVID-19.</p>	<ul style="list-style-type: none"> <li>Determine when COVID-19 home care services will be resumed. Inform client.</li> </ul>	<ul style="list-style-type: none"> <li>Communication between Occupational Therapist or Physiotherapist and Home Care program.</li> </ul>
<p>Health Care Provider Retention: Challenging during staff turnover; client needs to go over health status/ needs with provider that does not know them</p>	<ul style="list-style-type: none"> <li>Rural/remote health provider retention planning</li> <li>Promote and support Indigenous student education in health care fields</li> </ul>	<ul style="list-style-type: none"> <li>Director of Medical Rehabilitation Programs</li> <li>Government of Nunavut, College of Rehabilitation Sciences and Ongomiizwin Education partnership to a pipeline project for residents of Nunavut to participate in rehabilitation programs.</li> </ul>
<p>Winnipeg Based Services: Access to more PT / OT services for Kivalliq residents while in Winnipeg for health services and recovery.</p>	<ul style="list-style-type: none"> <li>Explore options for publicly and privately funded OT / PT services for clients while in Winnipeg</li> <li>Improve communication between Winnipeg and Kivalliq OT / PT</li> </ul>	<ul style="list-style-type: none"> <li>Director of Medical Rehabilitation Programs</li> <li>Kivalliq Inuit Centre nurses</li> <li>Wpg PT/OT departments and programs</li> <li>Northern Connections clinics/student-run clinics</li> <li>Nunavut Health</li> </ul>
<p>Coordination of services, when possible, to decrease trips out-of-community.</p>	<ul style="list-style-type: none"> <li>Explore capacity building opportunities for Winnipeg based OT/PT services for Kivalliq clients</li> </ul>	<ul style="list-style-type: none"> <li>Director of Medical Rehabilitation Programs</li> <li>Kivalliq Inuit Services nurses</li> <li>Shared Health</li> <li>Nunavut Health</li> </ul>

Key Findings and Action Items	Action Plan	Person Responsible
Accessible Housing		
Lack of accessible housing for people with limited mobility. OT and PT have both provided letters advocating for need, and client continues to request more accessible housing.	<ul style="list-style-type: none"> <li>Continued advocacy with Nunavut Housing Authority</li> </ul>	<ul style="list-style-type: none"> <li>Client</li> <li>Occupational Therapist and Physiotherapist</li> </ul>
	<ul style="list-style-type: none"> <li>Advocacy at territorial / federal government level for accessible housing units</li> </ul>	<ul style="list-style-type: none"> <li>Medical Rehabilitation Professionals, coordinated by Territorial Rehabilitation Services Coordinator</li> </ul>

### **Feasibility of Client Journey Mapping**

This section presents findings on the areas of focus addressed by feasibility studies (as discussed in Chapter 3) to determine if ongoing use of journey mapping for OT and PT services in the Kivalliq Region of Nunavut is feasible to inform and improve the program.

#### ***Acceptability***

Acceptability considers the extent to which client journey mapping is judged suitable, and satisfactory to deliverers and participants.

#### **Recruitment Process**

The participant was recruited as discussed in the methods section with no changes required or recommended to the process. The clerk interpreter was essential to the recruitment process and completed recruitment tasks appropriately in communication with the student researcher for participant invitation, assistance with signing of client consent form, and scheduled the interview. Researcher field notes indicated that the clerk interpreter was supportive of assisting in the research, stating their involvement was a good experience. This showed acceptability from the current clerk interpreter perspective to participate in recruitment activities for client journey mapping.

As this feasibility study only completed client journey mapping with one participant, a retention rate cannot be reported. The first participant invited on the list of clients that met the eligibility criteria agreed to participate and continued with client journey mapping until completion of the process, therefore showing acceptability for this one experience in recruitment for client journey mapping with the high user of OT and PT services.

### **Participant Satisfaction**

The findings suggest that the participant was satisfied with client journey mapping. At the first interview the participant indicated that it felt good to talk with someone about their services, and they were looking forward to meeting for the second interview. Field notes report the participant asked the clerk to thank the student researcher for the opportunity and the time spent to meet with them. The participant confirmed in the second interview that the time involved in the entire process was acceptable and they were satisfied with the process. A \$50 gift card was provided after each interview, which may have contributed to participant satisfaction. A financial incentive may not be available to incorporate for ongoing use of client journey mapping for program evaluation, but should be considered if available in the budget, to value client knowledge and time.

The client was able to identify perceived gaps and areas for improvement from their perspective and stated it made a big difference to share this information with the student researcher. Seeking client feedback on satisfaction with health services is not often embedded into the operational components of health programs, and these results indicate that the participant valued the opportunity to share their experience of care through client journey mapping.

### **Perceived Appropriateness – Information for Program Improvements**

In this study, the amount and type of information generated in client journey mapping was perceived to be appropriate to the student researcher for the intended purpose of program evaluation and improvement. The identification of the OT and PT high user resulted in recruitment of a participant that had many interactions with program services. This program

involvement with both OT and PT resulted in data collected during client journey mapping that was appropriate for program learning and improvements.

The retrospective chart audit with visual journey map was comprehensive, identifying health care services provided to the client, and chronological timelines of these services. Interactions between the health professionals to support client care are presented in the findings showing communication between the client self-referring to PT services, PT referral to home care program, communication between PT and OT to initiate OT reassessment, as well as PT and out-of-territory surgeon communication regarding client care. Participant medical travel out-of-territory is also visualized on the map to illustrate the complexity of access to specialized health care services for clients in remote locations.

The participant interview provided rich data on the client experience of care throughout the journey which was analyzed for individual and program level improvements as presented in the key findings and action plans. Client journey mapping provides appropriate information to visualize the client journey from multiple perspectives to identify gaps and areas for improvement.

### ***Implementation and Practicality***

Implementation and practicality considers to what extent client journey mapping can be successfully delivered and carried out with the existing program resources.

### **Eligibility Criteria**

Identifying whose journey will be mapped is the first step in preparation for client journey mapping. In this research we were interested in the feasibility of client journey mapping to inform and improve program services, and therefore it was determined that the client with high utilization of adult OT and PT services would have the greatest experience of care to contribute relevant information. Implementing this eligibility criteria for the high user, as described in the methods, was found to be acceptable by the student researcher. This eligibility criteria could no longer be implemented with existing program resources due to this data set no longer being available. The Filemaker program is now inactive as the organization

discontinued using Filemaker, and therefore the downloaded Excel® files are the only accessible version of the data. We would be unable to currently implement the same methods to identify the high user, as the program workload statistics no longer include data on reason for referral or client care time. The current electronic health system workload statistical reports could identify high users based on numbers of appointments, but reason for referral or client care time would need to be manually reviewed by the therapists, making the process impractical due to the time that would be necessary for this task. Other options for identifying clients are presented in the discussion chapter.

### **Resource Management**

For client journey mapping to be successfully delivered with existing program resources, the management of required resources needs to be feasible. Client journey mapping in this study required significant time by the student researcher for planning and execution of the process as described in the methods. Preparing to client journey map and using the tools is a time intensive process on first use but would be faster with experience using the tool. This research was practical to be carried out by the student researcher but would also be practical for the Director of Medical Rehabilitation Programs position to complete client journey mapping, as the job description includes program evaluation activities. Additional revisions to decrease the time to use the tool as presented in the discussion chapter.

Tasks required to be completed by the clerk interpreter in the appropriate time frames were complicated by COVID-19. At the time of the study, COVID-19 vaccination clinics caused some delays in booking participant interviews as the clerk interpreter had a substantial role in coordinating these clinics. Depending on workload demands, time required may not be practical to expect of a busy medical rehabilitation health professional or clerk interpreter with the methods utilized in this study. As well, the participant in this study did not require language interpretation services, though this service would be required for many potential participants of client journey mapping in Nunavut. Interpretation would require additional clerk availability and time to conduct the interview.

The physical space, equipment and supplies required for client journey mapping were readily available with existing OT and PT program resources. The participant attended the interview via videoconference at the local program office, which was easily accommodated in the available space and equipment required. Physical space in the program office is typically at capacity with all workstations occupied, but due to understaffing at the time of interview, this was not a concern with a private office available. When fully staffed, participant interviews would need to be scheduled around staff office needs. Technology now available in Nunavut makes it practical to conduct participant interviews remotely, especially important in a time when travel to the territory was restricted by COVID-19. The interview scheduling was delayed as COVID-19 restrictions made the local office accessible only to clients with urgent clinical needs. Once this restriction was eased, interview space was accommodated. As well, the electronic health record system provided the ability to do chart audits remotely for the participant in Rankin Inlet. Implementation of client journey mapping was feasible and practical due to the access to electronic health records and videoconferencing platform. Physical space and staff time required considerations during implementation but were practical with the existing resources.

Data entry management for client journey mapping required knowledge and use of basic computer software for data collection and analysis in Microsoft® Word® documents making it feasible to carry out and practical for ongoing utilization. Data entry for client journey mapping into the three separate tables in the client journey mapping workbook was repetitive, requiring the same information to be entered in multiple tables, therefore increasing time for data entry. The three separate tables in the workbook may not be the most practical template to collect and analyse the data and a simplified version to ease data entry requirements is considered in the discussion chapter. Visio® software was used to create the visual client journey map, and previous knowledge of the software by the student researcher made this practical to utilize, though Microsoft® Word® could also be utilized. Other software, such as Microsoft® Excel® or Word®, that is more familiar to deliverers of client journey mapping may need to be considered to ensure data entry was practical.

As this research required ethics approval, there were additional requirements that required significant time by the student researcher. Submissions and approvals were required from the University of Manitoba Health Research Ethics Board (Appendix H), Nunavut Research Institute (Appendix I), as well as an Agreement for Access to Personal Information for Research from the Government of Nunavut Department of Health. Program evaluation requiring this level of ethics approvals would not be practical to implement at the program level due to the extensive time required. Client journey mapping for program evaluation outside the research context that does not require ethics board approvals would be practical to implement with existing program resources.

### ***Integration***

Integration considers to what extent client journey mapping can be integrated into the program for program improvements.

### **Perceived Fit with Organizational Goals**

OT and PT services are a program of Ongomiizwin - Health Services at the Indigenous Institute of Health and Healing (IIHH) at the University of Manitoba. The IIHH has an organizational mandate to support Indigenous communities by fostering engagement and relationship building and the utilization of Indigenous knowledge as best practice. As partners with the Government of Nunavut Department of Health, in which Inuit traditional knowledge is being integrated into operations, the OT and PT program has included Inuit Qaujimagatuqangit (IQ) and recommendations for working with Indigenous communities into our guiding documents and staff training. Client journey mapping findings are perceived to fit with these goals and can provide learning opportunities to meet the needs of communities and clients we serve. Clients are asked if they feel safe and respected, if there were language or cultural barriers, if they and their relevant family members were consulted and included in their health care services, and if client priorities were different from the providers they worked with. We learned in this study that our participant felt respected and that they had good communication with their health care providers. As only one participant was interviewed in this feasibility



study, we are unable to determine if cultural safety is integrated into our OT and PT program. Further client journey mapping would provide more data on experience of care to determine if we are on the appropriate journey in providing culturally safe care, and to determine how additional operational or program guidelines could be implemented. As well, integrating additional dimensions from frameworks on cultural safety and decolonization of health care services would expand the data collected for a more comprehensive look at these important areas, as discussed in the discussion section.

### ***Adaptation***

Adaptation considers to what extent client journey mapping performed in the adapted version. The MTWT client journey mapping process and adaptations to the workbook utilized in this study are reported in this section.

The MTWT workbook instructs the user to write a narrative account of the journey initially, and then develop a visual map of the client journey. In this research, we adapted the process to conduct a chart audit to develop a visual client journey map prior to the participant interview. This was done to generate rich discussion at the interview by referring to the services presented on the visual map. The visual map was referred to often during the interview, providing an opportunity to ask specific questions and generate rich information at the interview that was used to write the narrative account of the journey and fill in the tables in the tool. The visual map assisted as the original injury was years earlier and therefore provided a visual cue to refer to and guide the interview back to the timeframe and services of interest, and therefore this adaptation was found to perform well in this research.

Three tables were included in the adapted workbook. The dimensions of health table considers the whole person and what is important to the client at home, work or in the community; the underlying factors table considers the impact of factors for the client which can determine his/her engagement, interaction, and ability to carry out the client journey; and the multiple perspectives table considers the many perspectives for a complete picture of the client journey (Kelly, Dwyer, et al., 2015). The fourth table in the original MTWT workbook,

highlighting additional considerations, was not included in the adapted version used in this study. The additional consideration table was developed to be used only as required to document additional considerations, in particular when the client is not involved in the mapping. As the client was involved in this study, the table was omitted. The findings on these adaptations and use of the tool are further reported below and recommendations of additional adaptations are presented in the discussion chapter.

### **Interview Questions Easily Understood**

The questions were easily understood by the participant, who was able to respond appropriately to all questions, with limited clarification required to generate a comprehensive response. The participant was hard of hearing, which led to repetition to clarify the questions at times, but the questions were understood once heard. The interview questions were also translated for Inuktitut speaking participants, but as they were not used in this feasibility study, it is unknown if the translated versions would perform similarly. If the student researcher was uncertain if the question was understood, it was repeated and the visual map was referenced, guiding the participant to the timeframe of interest, providing a visual cue to clarify. This method provided the interview data to complete the adapted MTWT workbook.

### **Similar Outcomes Obtained**

The client journey mapping process with the adaptations completed as discussed provided similar outcomes to the examples provided in the original MTWT workbook. Data entry completed the three tables and data analysis produced key findings and action plans as presented in Table 21.

### **Limitations in the Findings**

The current findings only present on the adult population and did not include the pediatric population. As the OT and PT in the program are community therapists that provide services to all ages, the pediatric population serviced in the same time frame is not reflected in

the findings, therefore limiting the findings on overall utilization of the program and ability to implement for program improvements.

As a student researcher and program administrator, I was not a health care provider involved in the client journey. The client journey mapping tables completed related to health services priorities are based on the chart audit information only and did not have the provider perspective included in the findings. Including the health providers in the client journey mapping process would provide additional data from the health care provider perspective, and potential engagement in developing and completing the action plan items.

### **Chapter Summary**

This chapter presented the program utilization findings and the feasibility of client journey mapping with OT and PT adult services in the Kivalliq Region of Nunavut providing information on OT and PT program utilization that was previously unknown. The findings also suggested that client journey mapping was feasible for use in ongoing program evaluation in OT and PT services with use of the adapted tool. Further discussion related to these findings follows in chapter 5.

## Chapter 5: Discussion

### Introduction

In this chapter the significant findings from the program utilization data and feasibility of client journey mapping findings will be discussed.

### Health Care Staffing, Teams and Retention

Cieza et al. (2020) estimated that globally, one in every three people in the world needs rehabilitation at some point in the course of their illness or injury, and that rehabilitation services are under-resourced. Program utilization staffing levels indicate 1.83 OTs, and 2.2 PTs are employed to provide clinical services in the Kivalliq Region of Nunavut during the time period of the program utilization data. Based on population data (Statistics Canada, 2017), the Kivalliq Region of Nunavut with a population of 10,413 has a rate 21 PTs and 17.5 OTs per 100,000 residents in the region.

In 2017 a partnership was developed with Government of Nunavut Department of Education which added funding for school-based therapy positions. This funding source provided additional staffing for school-age children and increased the capacity of the existing OT and PT team to provide services to preschool and adult clients in the region. In the 2021-22 school year, this will add approximately 1.2 EFT OT services in the region, changing the rate of OTs to 29 per 100,000. An additional 0.5 EFT PT services will increase the rate of PTs to 26 per 100,000. This rate is still significantly less than the national averages reported by the Canadian Institute for Health Information (CIHI) at 68 physiotherapists for every 100,000 Canadians (CIHI, 2019a), and 51 occupational therapists (CIHI, 2019b) for every 100,000 Canadians.

In 2018, the Government of Canada introduced the Inuit Childs First Initiative (CFI) providing funding for Inuit children for health, social and educational products and services. The amount of services to the region may increase further, but this number is unknown at this time. CFI funds provided additional SLP services on an individual request basis. These services are

offered through private SLPs that live out-of-territory. Other jurisdictions received program level funding for OT, PT and SLP services through Jordan's Principle funding (Government of Canada, 2021). Staffing levels in Nunavut have been reported as far less than the average staffing levels elsewhere in Canada (Government of Nunavut Department of Health and Social Services, 2010) and recommendations have been made to conduct a comprehensive staffing needs analysis to determine the number of staff to meet the rehabilitation needs to Nunavummiut (Mifflin, 2010). Benchmarks for allied health professionals to population in rural areas is not readily available and discussions of reasonable levels of service have been discussed in the literature in order to provide equitable access to services (Battye & McTaggart, 2003; Thomas et al., 2015). Thomas et al. (2015) attempted to address the population thresholds at which resident health care providers provide primary health care services; physiotherapy and occupational therapy in remote communities were recommended in communities above 501 people. Dew et al. (2013) discussed how insufficient medical rehabilitation professionals in rural and remote areas created barriers such as client travel requirements, long wait times, and limited access to therapy past early childhood.

An environmental scan of access to physiotherapy in rural, remote and northern locations of Canada identified a need for more community-based, publicly funded physiotherapy and health promotion services, and recommended advocating for increased access for physiotherapy services in rural, remote and northern locations (Canadian Physical Therapy Association, 2016). Recommendations have been made for the development of a territorial rehabilitation service delivery model, an increase in medical rehabilitation staffing in the territory, and the provision of an adequate number of clinical visits to all communities in order to increase equitable and accessible rehabilitation services (Government of Nunavut Department of Health and Social Services, 2010). These recommendations have been limited by funding availability to support increased levels of service, and recruitment of staff to further develop and implement the recommendations.

Further evaluation and advocacy for appropriately funded staffing and access to medical rehabilitation services should continue, and program utilization statistics can provide the data

to determine level of services received and provide information for advocating for additional services. The program utilization findings show OTs and PTs caseload numbers, populations accessing services, and client care time needs differ. PTs managed larger numbers of clients on caseload and OTs reported greater appointments with pediatric clients. OTs have more indirect client care time at 53.5% of their total client care time compared to PTs who reported 36% of indirect client care time. Discipline-specific workload factors such as these should also be considered for effective staffing to meet caseload needs. The implementation of a caseload management planning tool could be helpful to determine staffing requirements for effective caseload management in the region (Canadian Association of Occupational Therapists et al., 2011) along with per capita national recommendations.

A significant barrier to the provision of health services in northern and rural Canada is the recruitment and long-term retention of health care professionals (Archibald & Grey, 2000; Canadian Physical Therapy Association, 2016). In this one-year timeframe of this research there was good retention of OT and PT professionals as in the program utilization findings most clients were seen by the same or a limited number of OTs and PTs. Based on my 20 years of experience in the region, I can confirm that there are difficulties with long term staff retention that the results in this one-year timeframe will not show. The participant confirmed in the interview that it is difficult when a health care provider is new to the region, and time is required to learn about their health status and needs. Campbell et al. (2012) found that the high turnover rate of allied health professionals in remote and rural areas is likely in part due to job dissatisfaction from poor access to professional development, professional isolation, and insufficient supervision as some of the disincentives. Workforce shortages may be addressed by removing these disincentives while also developing the common incentives reported by staff that work in rural and remote areas such as autonomy in caseload and scheduling decision making, connection to the community, and the satisfaction of challenging work in these areas and with Indigenous clients (Campbell, McAllister, & Eley, 2012). Other areas reported in the literature to improve recruitment and retention are rural clinical placements, mentoring and improving access to continuing professional development (Canadian Physical Therapy Association, 2016; Roots, Brown, Bainbridge, & Li, 2012). Difficulty with long term retention of

health providers in remote areas is documented in the literature (Archibald & Grey, 2000; Canadian Physical Therapy Association, 2016). Continuity of care can provide an opportunity for rapport and relationship building between therapists and clients, particularly as it relates to culturally safe care (Gibson, 2020; White and Beagan, 2020). Interdisciplinary team involvement is evident in this client journey with OT and PT conducting joint appointments and communication noted between the disciplines. The client remarked in the interview that the OT and PT worked well together, although, communication with OT and PT in the southern urban centre could be improved. Interdisciplinary health care services is seen as best practice to meet client needs in remote locations (Veitch et al., 2012). Client journey mapping can highlight interdisciplinary health care team provision and identify gaps which could be improved upon.

### **OT and PT Program Utilization and Access**

Program utilization findings show OTs and PTs accept referrals from a variety of referral sources for clients with diverse reasons for referral, and OT and PT appointments are provided in a variety of locations. Adult clients with musculoskeletal conditions received the most PT services with 980 appointments of the 1222 provided making up 80% of the appointments provided in the 2016-2017 fiscal year. Despite this focus, the PTs on the team must also provide services to clients with diverse reasons for referrals as demonstrated in the reason for referral results. The findings in this research show that Kivalliq Region OTs and PTs must be skilled generalists. Roots et al. (2012) suggested generalists were important to meet the needs of a diverse caseload and continuing education and support in building the skill set of the generalist therapist is essential when working in the region. Student researcher discussions with OTs and PTs in the region in role as manager of program align with Campbell et al.'s (2012) findings that a diverse caseload is a positive incentive for therapists that work in remote settings, but that high caseload numbers across many remote communities in which services cannot be provided regularly can be challenging to manage.

Additionally, program utilization data highlighted client groups with high use of services that can be shared with the health care team to gain an understanding of adult OT and PT use

of services in Rankin Inlet and the communities. Program development, operations, and resources should be considered for effective services delivery to meet the needs of the clients served. For example, clients with musculoskeletal and surgical conditions were 86.83% of the total PT appointments, as presented in table 14 of the program utilization findings. This client group could be considered for program development initiatives such as the development of appropriate resources or alternative models of treatment, such as group classes or tailored telehealth clinics for clients in outlying communities for efficient programming.

Findings also reported more OT and PT client care time with shorter wait times for clients in the regional centre of Rankin Inlet, where therapists are based. Despite Arviat and Baker Lake having similar populations to Rankin Inlet, clients in these communities had dramatically less access to services and waited significantly longer for assessment. High priority OT 1 clients waited an average of 49 days for assessment in outlying communities compared to 1 day in Rankin. Telehealth procedures could be utilized to decrease wait times and screen clients for the 'double spoke' model where community clients access services in Rankin to make improvements in equitable access. The findings showed that telehealth appointments in outlying hamlet communities were underutilized in the region, though telehealth has been identified as having comparable clinical outcomes, and high patient satisfaction (Iacono et al., 2016). The student researcher as Director of Medical Rehabilitation Programs has prioritized implementation of telehealth clinic usage to increase access for clients in communities outside of Rankin Inlet. Workload statistics from 2021-22 fiscal year show an increase in telehealth sessions, providing evidence that progress is being made to increase access to communities through telehealth. The COVID-19 pandemic has accelerated the increase in use of these services globally (Tenforde et al., 2020), and Nunavut is no exception. The rate of use post-pandemic remains to be seen.

Increased access to OT and PT services in the region could also be accomplished with a rehabilitation assistant funded in each community. The participant in this study confirmed in the interview they would be agreeable to work with a rehabilitation assistant. The assistant role can extend the reach of medical rehabilitation services to communities and increase



communication and understanding of clients and the community (Bellefontaine, Hurley, & Irngaut, 2015). Further evaluation of the role of the Community Therapy Assistant (CTA) in Nunavut is recommended, as this knowledge could provide new information on the benefits, limitations, and need to advocate for more CTA positions.

Client journey mapping illuminates the complexity of health care services for clients living in remote regions. Challenges in remote regions are noted on the visual map and in client interview data. The participant visual journey map shows many trips out of home community for surgical follow up appointments. OT and PT communication, as well as PT communication with relevant out-of-community service providers was required and completed for appropriate care. The participant also discussed in the interview that the OT and PT worked well together to coordinate services. The student researchers' findings and those reported in the literature would provide evidence that client journey mapping can be used for coordination of care improvements (Kelly et al., 2016); important for complex journeys where communication between local as well as out of community services providers is required. Any identified gaps in health care services or communication between out-of-territory or local service providers can be reviewed in the key findings and action plans developed to improve coordination of care for complex journeys.

### **Client Journey Mapping for Learning and Improvements**

This research looked at adult Inuit OT and PT clients with high utilization of program services to explore the feasibility of client journey mapping. Client journeys could be considered for learning and improvements at individual client or the program level as well as cultural safety and decolonization of health care.

#### ***Individual Client Service Improvements***

Based on the findings in this study, it would be feasible to conduct client journey mapping to focus on individual client service improvements if staff time was allocated to this process. Clients with complex journeys, poor health care outcomes, or dissatisfaction with

services could be considered for client journey mapping. The client journey mapping findings can be implemented into services as appropriate. There is evidence in this study that client journey map findings can provide information for individual client service improvements. The client and PT could explore further exercise options in clinic or home to meet client goals for maintaining mobility. Each individual client experience would be unique to their journey, offering opportunity for improvement. If unable to incorporate due to capacity at program service level, this could be communicated to the client, and potentially lead to further program level evaluation, such as a review of staffing levels or potential need and role for rehabilitation assistants.

### ***Program Level Improvements***

The findings in the program utilization phase of this research identified potential areas in which client journey mapping could be used for program improvement purposes based on population eligibility criteria or for cultural safety and decolonization of health care systems, which are further discussed below.

#### **OT and PT Client Sample Size and Eligibility Criteria**

Client journey mapping sample sizes should be consistent with qualitative inquiry which focuses on small samples which can provide an in-depth understanding (Patton, 2002). The journey mapping case studies in the MTWT project included samples of one to three clients in which journey mapping was conducted (Kelly, Medway, et al., 2015; Kelly, Herman, et al., 2015) and similar numbers could be used to review OT and PT client populations.

Program utilization findings or current workload statistics could be used to determine populations to consider for eligibility criteria for client journey mapping for program level improvements. The eligibility criteria in this study, the adult OT and PT client with high program level utilization, could be continued with more high user clients participating in client journey mapping, to determine if themes emerge. It would be practical to consider the high user based on number of appointments alone. The OT and PT could review the list to identify clients for

journey mapping in an approach consistent with purposive sampling. The program utilization data that identified the high user was also limited to only provide a snapshot in time during one fiscal year, and therefore the findings only reflect services within the time frame and did not follow a client throughout their time receiving OT and PT services. For clients that are on OT and PT caseloads long term, it is unknown how long clients were seen before or after the time frame reviewed. Using the current workload statistical reports would allow for the time period to be increased to gather more comprehensive view of long-term OT and PT clients.

Other client populations could also be determined for ongoing client journey mapping, such as a particular reason for referral group, if questions on this client group trigger the need to journey map. For example, cardiovascular clients could be a focus for client journey mapping, to review services provided locally and out of community for program level improvements for this client group. Journey mapping could be conducted based on this new group identified as the eligibility criteria.

This study did not include pediatric clients and therefore this population of clients accessing OT and PT services would be ideal to consider for client journey mapping. Program utilization data showed 21% of PT appointments and 57.5% of OT appointments were with pediatric clients. This population could be considered for client journey mapping to learn more about this unique experience of care and potential improvements for pediatric services.

Program utilization findings noted decreased client care time and longer wait times for clients in the outlying communities despite some communities having similar populations to the regional centre of Rankin Inlet. These findings highlight that the number of community clinical visits in the 'hub and spoke' model and telehealth service delivery is not providing equitable services across the region. Client journey mapping in this study was with a participant that lived in the regional centre. Further use of client journey mapping with a focus on outlying communities may have a different client journey and client experience of care with outreach OT and PT clinics, and use of telehealth, than a client in Rankin Inlet.

High no-show rates are also identified in some communities, and information on this would be beneficial to address issues that could lead to increased client engagement. Clients that have participated in OT and PT services and have a client journey significant enough to map, but also have high no-show rates could also be considered for journey mapping to learn more about issues for these clients. The client interview could yield additional information about barriers and enablers to attending appointments that could be implemented as appropriate.

### ***Culturally Safe Care and Decolonization of Health Care***

Client journey mapping can be used to highlight cultural safety and develop action plans for patient care improvements (Kelly, Dwyer, et al., 2015). Cultural safety is not defined by the healthcare provider, but is determined by the patient (Bryne, 2020) and this can be assessed in client journey mapping when the client is engaged in the process, as is incorporated in the adapted MTWT tool. To evaluate cultural safety, client journey mapping asks if the client felt safe and respected during their health journey, and if the client felt they and relevant family were consulted in care they received. While the answers to these questions may provide valuable information, it is limited information to advance the decolonization of health care systems and provide culturally safe care. Gibson (2020) and Mackean et al. (2019) provide frameworks to further explore these essential areas in health care practice. The Government of Nunavut (GN) has been making efforts to integrate IQ into its operations, and the opportunity to build into program evaluation at a program and systems level should be taken when appropriate.

At the program and systems level, we can use client journey mapping to evaluate if guidelines and practices are consistent with strategies to decolonize health care systems. As an OT and PT program we have incorporated practices consistent with some dimensions proposed by Gibson (2020) for a strengths-based approach by supporting time to build relationships and effective communication skills with clients, provided staff cultural awareness training opportunities, and historical trauma and trauma informed care practice education for critical

reflection. Gibson's (2020) also proposes evaluation of processes and outcomes. Client journey mapping can provide evaluation at the program level, and beyond to the system level, as it looks at the entire client journey through health services, though users of the tool need to consider this lens when viewing the entire journey.

There is a recognized importance for Inuit to become health providers in their own communities for ongoing culturally appropriate local services, and there is a need to implement community-based strategies so Inuit can acquire the skills and knowledge to be successful in health careers (Ajunnginiq centre, 2004). While more Inuit consider health professions and become health care providers in their communities, non-Inuit professionals make up the majority of health-related professionals (National Aboriginal Health Organization, 2010). Between 2007 and 2012, the Nunavut Nursing Recruitment and Retention Strategy has reduced nursing vacancy rates by 12% and increased the number of Inuit nurses by 50% (Health Council of Canada, 2013); perhaps a similar strategy can be created for other health professionals such as rehabilitation.

### **Further Adaptations to Client Journey Mapping Tools and Expansion**

The MTWT journey mapping tools were developed to be adaptable to diverse health care settings and journey types and simple to use (Kelly et al., 2016). This research has developed an adapted client journey mapping workbook for OT and PT services that can be shared with the larger health care team in the region and within Nunavut as a quality improvement practice. OT and PT health care providers in Nunavut should be involved in using the tools to gain valuable provider insight and engagement in action plan items. Other health care providers could use the tool in collaboration with OT and PT. Client journey mapping could also potentially be expanded to other OT and PT programs in Nunavut. Further review by teams in other regions of Nunavut would be required to know what additional revisions may be needed for use.

Further adaptations were presented in this research for use in PT and OT services in the Kivalliq Region of Nunavut and feasibility for ongoing use was presented in the findings. Further

revisions of the tool are being considered by the original MTWT developers to create versions of the tool for different practice settings such as busy clinicians in clinical practice, or detailed journeys for comprehensive quality improvement needs (Janet Kelly, personal communication, March 2021). A simplification of the tables in the tool is in agreement with the student researcher's findings. Duplication of data entry into the 3 separate tables was repetitive at times and increasing time for entry and analysis. One simplified table could meet the needs for data collection, analysis, key findings and taking action for more feasible program evaluation.

Components to assess culturally safe and decolonized health care was further incorporated into the client journey mapping table. These adaptations embed Inuit traditional knowledge by incorporating the IQ principles as well as the dimensions for culturally safe (Mackean et al., 2019) and decolonized OT services (Gibson, 2020) into the client journey mapping process to improve the tools use in these areas. These additions embed dimensions of cultural safety and decolonization frameworks into the tool and challenge the user to consider these aspects throughout the client journey mapping process. The adapted table is presented in Table 22.

Table 22:

**Adapted Client Journey Mapping Tool Version 2.0**

<b>Tool name:</b> OT / PT Client Journey Map		<b>Whose journey:</b>	<b>Mapped By:</b>		<b>Date:</b>	
<b>Stage 1 Preparing</b>			<b>Stage 2: Using the Tools</b>		<b>Stage 3: Sharing findings and taking action</b>	
1.1 Plan your approach: why, who, what, when, where and how 1.2 Review the principles: to ensure the process is respectful 1.3 Adapt tool as necessary 1.4 Conduct chart audit (see data collection tool), create visual map, and review client journey visual of services with client			2.1 Collect information (data gathering) 2.2 Interpret information (data analysis) what does it mean?	2.3 Summarise findings (key points/ results)	3.1 Determine who the findings will (and will not) be shared with, when, how and why. 3.2 Identify actions that can inform, change and/or improve the situation 3.3 Take action and review effectiveness.	
Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
How has this (illness/injury/ diagnoses)	<b>Physical and biological</b>	• Physical health impacted how?				

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
impacted your life?	<b>Psychological and emotional wellbeing:</b> personal, family, spiritual and cultural considerations	<ul style="list-style-type: none"> <li>• <b>Pijitsirniq</b> (serving and providing for family or community, or both): Considered personal, spiritual or cultural impacts if relevant for client (role in community, participation in spiritual or cultural activities)</li> <li>• Providers considered clients culture and practices; suspended judgement; and took a holistic approach to services?</li> </ul>				



Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
		<ul style="list-style-type: none"> <li>• Impact on family/carers?</li> </ul>				
<p>What was your experience with the services you received?</p> <p>Is there anything that you feel could or should have been done differently related to your experience, or the services you received?</p>	<p><b>Local Health Services:</b> services received from visual map that come up in discussion (nurses, doctors, specialists, home care, etc.)</p> <p><b>Out-of-Community Health Services:</b> travel out-of-community and discharge home</p>	<ul style="list-style-type: none"> <li>• Language barriers (client's first language used by staff, access to interpreters)?</li> <li>• <b>Tunnganarniq</b> (fostering good spirit by being open, welcoming and inclusive):</li> </ul> <p>Appropriate communication with providers (able to talk to and understood what was happening at</p>				

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
Is there anything else you would like to share about the overall experience you had as pictured on the visual journey map and/or specifically related to the physiotherapy or occupational therapy services?	<b>Local Physiotherapy Services:</b>	each stage, plain language used instead of medical jargon)? Inclusive language used? Providers listened respectfully to the client? Providers understand what deficit-based communication looks like compared to strength-based. <ul style="list-style-type: none"> <li>• Priorities of client, family/carers and health providers. Were priorities similar or different?</li> <li>• Access to services (timely access to services in a suitable</li> </ul>				
	<b>Local Occupational Therapy Services:</b>					

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
		location; was telehealth an option; travel requirements; able to receive suitable amount of local health, OT, PT and specialist services, interest / availability in working with a local person that is trained in OT/PT services to have more access to these services <ul style="list-style-type: none"> <li>• Financial barriers?</li> <li>• Policies that improved access or caused barriers (medical escort,</li> </ul>				

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
		medical travel policies)?  • <b>Piliriqatigiinniq or Ikajuqtiinniq</b> (working together for a common cause): Are Inuit and Qallunaat leaders working together? Are leaders and policy makers empowered? Are communities included in the control of service delivery? Is capacity building implemented?				

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
Did you feel safe and respected?	<b>Cultural Safety</b>	<ul style="list-style-type: none"> <li>• <b>Inuuqatigiitsiarniq</b> (respecting others, relationships and caring for people): Client felt safe and respected? Providers spend time building genuine relationship with client and family. Understand how power imbalances may manifest in relationships and how colonization continues to influence relationships</li> </ul>				

Client Questions:	Consider / recognize and discuss the different aspects of <i>holistic health and wellbeing</i>	Use prompt questions as appropriate for client and health providers:	Write in answers and identify aspects that are impacting on this person:	Summarize key points and service gaps:	<b>Qanuqtuurniq</b> (being innovative and resourceful), and <b>Pilimmaksarniq or Pijariuqsarniq</b> (development of skills through practice, effort and action). Using the principles above, Create action plans for client journey and program improvements:	Who is responsible for actions items; how to share information ?
<b>Qujannamiik. Thank you for your time and sharing your experience.</b>		<ul style="list-style-type: none"> <li>• <b>Ajiiqatigiinniq</b> (decision making through discussion and consensus): Was client and relevant family consulted and included in health assessment and treatment planning?</li> </ul>				

## Chapter 6: Conclusion

This study is the first to document program utilization of adult OT and PT services to predominantly Inuit clients in a northern, remote region of Canada. The significance of the research findings on utilization data and feasibility of client journey mapping provides insight and opportunities for evaluation and service delivery improvements. The adapted client journey mapping tool was found to be feasible. Further adaptations were suggested to incorporate Inuit traditional knowledge and aspects of cultural safety and decolonization frameworks. This tool should be used for ongoing program evaluation to determine if the adaptations suggested provide greater information related to cultural safety. Time and resources should be allocated to implement action plan items. Use of the tool should also be considered for use in other regions of Nunavut. There is still much to be learned about the delivery of rehabilitation services for Indigenous populations. Client journey mapping offers a method to generate greater improvements.

Ongoing efforts towards implementation of a Nunavut service delivery model are still warranted. Determining appropriate OT and PT staffing levels and service delivery methods including use of telehealth and OT/PT assistants warrant ongoing evaluation. Client journey mapping with a focus on clients accessing OT and PT services in the remote hamlet communities, via telehealth, and accessing services with a Community Therapy Assistant (CTA) would provide data to further recommendations for a territorial service delivery model. The CTA position should be further evaluated to determine if the training program can be offered again, and be reimagined for training Inuit OTs and PTs with credentials that ladder to an OT or PT university degree.

Knowledge translation is an important next step. The findings of the research will be reviewed with Kivalliq Region OTs and PTs, as well as other health providers, to discuss the ongoing use of client journey mapping for service improvements. Involving health care providers in client journey mapping would provide information from the health care provider perspective, and engagement in key findings and action plan items. Health care provider knowledge gained from journey mapping is also envisioned to be implemented outside of

journey mapping, incorporating cultural safety recommendations in clinical practice. OT and PT students could also benefit from exposure to client journey mapping as part of their ongoing preparation for practice with Indigenous communities.

Gibson (2020) proposes we continue the hard work of “walking together”; for non-Indigenous and Indigenous people to be partners in decolonization, which will “result in transforming the way we work together, transforming the way we practice as a profession, and transforming our identities, both personal and professional” (p. 18). Client journey mapping with the adapted tool is a step we can take in walking together.



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## Appendix A: Inuit Health

### Health Disparities of Canada's Indigenous People

Self-reported health is a reliable general measure of well-being and in 2012, 39% of Inuit in Nunavut age 15 and older reported excellent or very good health, which decreased from 56% in 2001; the comparable figure for the total population of Canada was 63% (Wallace, 2014). Wallace (2014) also reports that 34% of people in Nunavut lived in houses with more than one person per room compared to 3% for the total population of Canada overall, which is a measure of crowding in a dwelling; younger Inuit who lived in a crowded dwelling had a lower probability of self-reporting excellent or very good health compared to those not in a crowded dwelling, 46% versus 54% (Thomas & Thompson, 2016). Younger Inuit were more likely to have reported excellent or very good health if they had a high school education or post-secondary education, and those with strong or very strong family ties had a higher probability to be in excellent or very good health compared with those who rated their family ties as moderate, weak or very weak (Thomas & Thompson, 2016).

Residents of Inuit Nunangat have a lower life expectancy compared to the rest of Canada; this gap was 9.6 years for 1989 to 1993, and 9.3 years for 2004 to 2008 (Peters, 2013). The suicide rate among Inuit from 1999 to 2003 was 135 per 100,000 which is eleven times higher than for other Canadians; half of all deaths of young people in Inuit Nunangat were suicides, compared with approximately 10% in the rest of Canada (Inuit Tapiriit Kanatami, 2014). Forty-eight percent (48%) of respondents in the 2007-2008 Inuit Health Survey reported having thought seriously about suicide at some point in their life; the rate in the rest of Canada is 13% (Galloway & Saudny, 2012).

Mortality rate averages from 1986 to 1990 for Inuit infants were found to be 16.3 per 1000, significantly higher than non-Indigenous Canadians at 7.3 per 1000 (Macmillan, Macmillan, Offord, & Dingle, 1996). Specifically, in the Kivalliq Region, a 10 year retrospective review of mortality during 1987 and 2006 found the infant mortality rates were 32.3 per 1,000 live births, which is five times Canada's rate, and the overall age-adjusted mortality rates were

1.8 times that of Canada (Macaulay et al., 2003). Macaulay (2003) reported that the leading causes of death were cancers, circulatory disease, respiratory disease, unintentional injury and suicide. The 2007-2008 Inuit Health Survey, which is a comprehensive look at Inuit Health, found heart disease, diabetes, high blood pressure, cancer and high cholesterol were reported as health problems for parents and siblings of participants.

### **Inuit People and Disability**

The Canadian Survey of Disability (CSD) reported the age-standardized prevalence of disability of those 15 years and older in Nunavut as 11.7% vs. 13.7% in Canada (Arim, 2015). The highest reported types of disability in Nunavut, which is the same as Canada as a whole are pain, mobility, and flexibility. Nunavut's next highest reported type of disability was a hearing disability (530 people) (Bizier, Fawcett, & Gilbert, 2015; Statistics Canada, 2015b). This prevalence is a significant difference from the 1991 Aboriginal People's Survey (APS) rate which reported Inuit disability rate of 29% compared to 15% for the Canadian population (Statistics Canada, 1991). The APS used a more inclusive definition of being disabled in the survey and used the total population of Aboriginal people as the denominator; whereas the CSD disability rate is based on total Nunavut population including non-Indigenous Nunavummiut (Gary Strike, reference Librarian, personal email communication December, 2016) which is 15% of Nunavut's population (Statistics Canada, 2015a) suggesting that rates may in fact be higher than reported among the Inuit.

In 2012, 42% of Inuit aged 12 and older reported that they had been diagnosed with at least one chronic condition while the corresponding percentage for the non-Indigenous population was 53% (Statistics Canada, 2015a). It is noted that these results must be interpreted cautiously due to the limited access to health care by Inuit, and therefore a diagnosed chronic condition in the Inuit and the number actually experienced by the Inuit may differ.

In a study of disablement in Canadian Inuit communities on Qikiqtaaluk Island, Nunavut, Robison (2003) reports "Inuit people with disabilities struggle to find a new role within the

modern Inuit community” (p.108), and this role varies between communities. Accessible transportation was a significant barrier in all communities, as was the harsh climate and rugged terrain. These factors are compounded by a lack of infrastructure that limited Inuit with disabilities to participate in their community (Robison, 2003).

### **Social Determinants of Inuit Health**

In 2014, 11 key social determinants of Inuit health are reported on by Inuit Tapiriit Kanatami (ITK), the national organization of Inuit in Canada, and include quality of early childhood development, culture and language, livelihoods, income distribution, housing, personal safety and security, education, food security, availability of health services, mental wellness, and the environment; the report “highlights the need for taking a more holistic outlook on the overall health status of Inuit in contrast to commonly referenced indicators” (Inuit Tapiriit Kanatami, 2014, pg. 2). The idea of holistic rehabilitation services is also recommended in the Alberta Health Services Rehabilitation Conceptual Framework (2012) and states, “Rehabilitation services and the service delivery systems should consider and respond to the physical, psychological, social, economic, spiritual and cultural needs of the individual (health determinants)” (p.18).

The Community Well-Being (CWB) index combines data on income, education, housing and labour force activity into well-being scores for most communities in Canada that ranges from a low of zero to a high of 100. Though the average CWB score have increased in the last 30 years in Inuit communities, there are significant differences between Inuit and non-Indigenous community CWB scores. In 2011, the average CWB score for Inuit communities was 16 points lower than the average score for non-Indigenous communities, with the largest gap in housing with 65 points in Inuit communities compared to 94 points in non-Indigenous communities (Aboriginal Affairs and Northern Development Canada, 2015). In 2011, the income gap remains seven points lower, the education gap 20 points lower, and the labour force activity score eight points lower in Inuit communities compared to non-Indigenous communities (Aboriginal Affairs and Northern Development Canada, 2015).

### ***Culture and Language***

Traditionally, Inuit led a seasonally nomadic lifestyle, reliant on resources from the land, until the 1950s when the Government of Canada encouraged permanent settlement in the communities in order to provide less expensive housing, services such as health and education, and economic development (Bonesteel, 2006). Inuit have faced dramatic socio-cultural changes with the establishment of permanent settlements, and this has impacted Inuit well-being with fewer Inuit living solely off the land and an increased dependence on limited job opportunities in communities as well as on social assistance (Inuit Tapiriit Kanatami, 2014).

As a new physiotherapist working in Rankin Inlet in 2000, I had the pleasure to meet a respected elder, Mariano Aupilardjuk, to learn more about the Inuit culture. Aupilardjuk presented three rocks as a teaching tool to describe the socio-cultural changes that the Inuit have lived. This same story is described by Mike Etherington (2013), in *Aupilardjuk's Story– The Three Rocks*, on the Aboriginal Arts and Stories website. The three rocks are representative of Inuit past, present, and future. The first rock was round with a strong foundation and represents the Inuit way that Aupilardjuk was raised, on the land. The second rock was small, rough, with a small stick to support it and little foundation, and Aupilardjuk described, “this is where our youth are today. There clashing between two worlds. One of the traditional way and one of the modern way. It is jagged because it is abused, it is weathered, it is confused, and that stick shows that this has little to no foundation, it needs support. Our youth are unsure which path to take so they began to be misguided and take on things that are not healthy for them” (Etherington, 2013, para. 5). The third rock was also round but not as round as the first, but with a foundation that was supportive. Aupilardjuk explained that this is the future for Inuit. “It is the balance of these two worlds. As much as I would like to return to our traditional ways it is not practical as it is hard to survive on the land these days with all the changes. But the modern way, we cannot let the youth forget who they are, their history and where they come from. So we have to adapt and find a way to bridge these two worlds together. That I believe is the way forward, the rock is not perfect, but it will work so I see that as our future” (Etherington, 2013, para. 6).

### ***Livelihoods and Income Distribution***

The 2011 National Household Survey reports the employment rate for Inuit was 58.6% for those aged 25 to 64, while the comparable rate for non-Indigenous people is 75.8% (Statistics Canada, 2015a). The same National Household Survey reports the median household income for Inuit was \$74,021 while the median household income for the total population of Canada was \$74,777; though the median household size in Inuit Nunangat is five people compared to three in the total population of Canada, and the cost of living is significantly higher in Inuit regions (Wallace, 2014).

These factors contribute to the food security problem that are prevalent in Nunavut, in which there is not sufficient money to buy enough food, or a balanced meal, and leads to household members skipping or reducing the size of meals (Wallace, 2014). Wallace (2014) reports that the prevalence of household food insecurity was 56% in Nunavut compared with 8% of the total population of Canada.

The higher cost of living in Nunavut also impacts lower income families being able to invest in harvesting activities; Inuit livelihoods extend to include ways that families support themselves, including informal work such as country food harvesting, producing artwork and goods, and unpaid services in their community (Inuit Tapiriit Kanatami, 2014). This participation in traditional harvesting practices also has a positive impact on Inuit health outcomes; country food is nutritious and this supply means less store bought food needs to be purchased, and the harvesting practice cultivates the Inuit connection to the land and the traditional practices of country food sharing which strengthens family and community bonds as well as the “production of arts and crafts using harvested materials is an opportunity for elders to pass on skills and knowledge to younger generations and generate additional income” (Inuit Tapiriit Kanatami, 2014).

## **Education**

A substantial proportion of Canada's Inuit attended missionary operated residential schools, living hundreds to thousands of kilometers from their home; experiencing a loss of connection to family, community and cultural opportunities such as access to country foods and speaking Inuktitut, and where physical, sexual and mental abuse was not uncommon (Inuit Tapiriit Kanatami, 2014). The Inuit Tapiriit Kanatami (2014) report goes on to state that the "legacy of the residential school system is often cited as a source of 'community trauma' that continues to affect the health and mental well-being of Inuit today" (p. 15). However, "Inuit had and continue to have strong cultural values, a living language, and cultural traits such as resilience to life's challenges, survival skills and hunting, sharing of resources, and the importance of kinship and family" (Inuit Tuttarvingat, 2010, p. 5).

ITK reports that there is increasing amounts of literature that show a strong correlation between education and Inuit well-being; specifically, education is closely linked with socio-economic status and income security (Inuit Tapiriit Kanatami, 2014). In 2001, 36% of Inuit aged 25-64 had postsecondary qualifications compared to 65% of non-Indigenous people in the same age group (Statistics Canada, 2015a).

## **Availability of Health Services**

Nurses are the first point of contact in Nunavut communities, and have expanded specialized roles to practice in northern communities (Archibald & Grey, 2000). Physicians and allied health professionals are based in urban or regional centres and provide outreach visits to the smaller communities. The *Canada Health Act* states that insured persons must have reasonable access to insured health services (Canada, 1985). Realities of health care in the North differ greatly from southern Canada. Geography and low population density have meant that Inuit do not have access to services equal to southern areas of Canada (National Aboriginal Health Organization, 2004). Rural and remote areas in general, have significant challenges to

provide equitable access including lack of local services, higher costs, long distances to access services, as well as a shortage of allied health staff, and high costs of services and long distances (National Aboriginal Health Organization, 2004; Romanow, 2002; Thomas, Wakerman, & Humphreys, 2015).

Access has been described in many ways; Penchansky and Thomas (1981) defined access as a concept with the dimensions of availability (volume and type of existing services related to the clients' volume and types of needs), accessibility (the location of services related to location of clients, including travel time and distance), accommodation (how the services are organized for clients, such as appointment systems and hours of operation, and the clients' ability to accommodate to these factors and their perceptions of their appropriateness), affordability (cost of services and clients' ability to pay, as well as perhaps clients' perceptions of worth and knowledge of cost) and acceptability (attitudes of the client and providers, comfort level with each other's characteristics and includes such things as cultural and social concerns). Access is therefore the "fit" between clients and the health care system (Penchansky & Thomas, 1981). Awareness or approachability has been argued as a missing dimension (Levesque, Harris, & Russell, 2013; Saurman, 2016); a service can be more appropriate and effective if it is aware of the local context and population, and clients' needs to have awareness of a service in order to access and utilize it (Saurman, 2016).

Much of the literature on rural and remote health care is from Australia, which is similar to Canada in that it is a developed commonwealth country having some of the same challenges in the delivery of healthcare to rural and remote areas. Vietch (2012) described the impact of delays and access to allied health services which can lead to further complications creating a need for increased services and significant social and economic impacts on individuals, families and communities. There is the identified potential issue that those clients living in the outlying communities outside of the regional centres have inequitable access; as occupational therapists and physiotherapists travel to these communities less often than they are in the regional centre (Dew et al., 2012).



Of those 15 years or older, 46 % of Inuit in Nunavut saw or talked to a medical doctor about physical, emotional or mental health in the past 12 months compared to 79% percent of the total Canadian population; although, 56% percent of the Inuit saw or talked to a nurse compared to only 12% percent of Canadian population (Wallace, 2014). This is indicative of health centres with nurses as the first point of contact in most communities. In the Aboriginal Peoples Survey in 2012, 14% of Inuit, compared to 10% of total population of Canada, reported that they experienced a time when they felt they needed health care but did not receive it; among those Inuit who did not receive care, 25% reported that it was not available in the area and 15% that it was not available at the time required (Wallace, 2014). Twenty-four percent of Inuit aged 25 to 54 years that experienced a time when health care was needed but not received in the past 12 months (?) compared to 41% of those that did not report this occurrence (Thomas & Thompson, 2016).

## Appendix B: Managing Two Worlds Together Patient Journeys Workbook



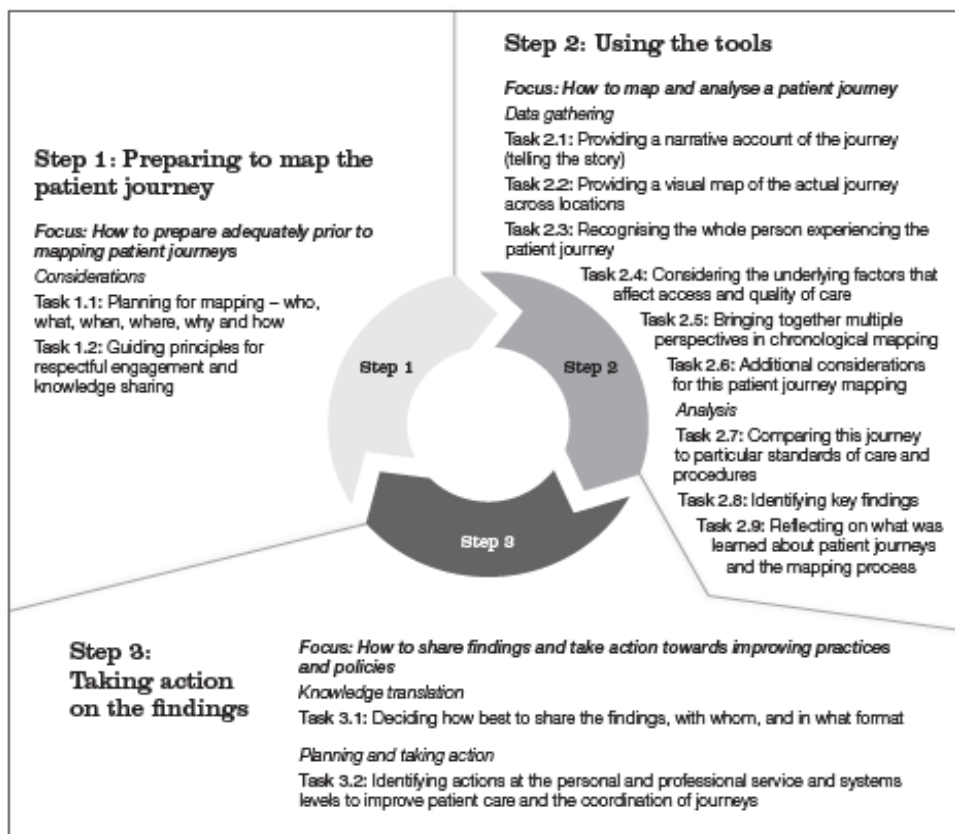
### The Patient Journey Mapping Process

The process of mapping Aboriginal patient journeys consists of three main steps:

- Step 1: Preparing to map the patient journey
- Step 2: Using the tools
- Step 3: Taking action on the findings

Each step involves a number of tasks that were developed throughout the project by pulling together the experiences of staff participants involved in testing and using the Aboriginal PJM tools. Diagram 2 (below) provides an overview of these tasks.

It is important to note that in the Case Studies not all of the tasks described here are carried out fully in every case study. This is because the case study activities occurred before the final version of the tools and tasks were developed.



**Diagram 2:** The process of using the Aboriginal PJM tools – an overview



**Task 2.3: Recognising the whole person experiencing the patient journey**

*Prompt questions*

What are the person's usual family/home arrangements?

.....  
.....

Does this person have any particular concerns?

.....  
.....

Have there been new challenges and considerations since the journey began and in each site – if so, what are they for this person?

.....  
.....

Is the person a carer for children or family members?

.....  
.....

Has the person needed to make arrangements while unwell/away?

.....  
.....

What roles does the person have in the community/workplace – e.g. cultural obligations, volunteer, health worker, interpreter, teacher?

.....  
.....

How has the person's health care journey impacted on this?

.....  
.....

Are there particular personal, spiritual or cultural considerations for the person?

.....  
.....

How is the person's physical health generally? Are there any other underlying or new health challenges?

.....  
.....

Are there new physical health issues as the journey progresses? What are they and how do they impact?

.....  
.....

*Table 1: Dimensions of health*

Dimension of health	Situation	
	Local Community	City/regional hospital
Social and emotional wellbeing		
Family and community commitments		
Personal, spiritual and cultural considerations		
Physical and biological		

Identify the key points that the patient or carers would like communicated between home and the health service/hospital.

.....  
.....

How will this make a difference to their care?

.....  
.....



**Task 2.4: Considering the underlying factors that affect access and quality of care**

*Prompt questions*

**Location/setting – rural and remote/city**

Where did the person go to receive care and why? How easy or difficult was it to get to each location?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Impact of illness**

What was the impact of the person's physical health condition at each stage and during travel?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was the person feeling ill, conscious/unconscious, tired, uncomfortable, in pain?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Language and communication**

Did the patient feel able to talk to staff and understand what was happening at each stage?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is English the person's first, second, third language?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is it the first or second language of health staff?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was an interpreter needed, offered, arranged?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was communication of concepts and ideas clear, or was confusing medical terminology used?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was there clear communication between staff and between services?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Financial resources**

What is the person's personal situation and did he or she require financial assistance?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Can the person access money/bank/support funds?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How financial are the health services and support systems?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What has it cost the person to access health care (transport, accommodation, fees, food etc.)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was PATS (transport and accommodation assistance) available?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Have any budget or government policy changes impacted (positively or negatively) on the journey?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Cultural safety – the person’s experience of health care

How did this person feel about accessing services?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Did the person feel safe and respected?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Did the person have specific needs and were they met?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Transfer your answers to Table 2

**Note:** you may not have information for every square.

If another health location was involved (e.g. rehabilitation, follow-up services, regional centre), use the third column and record what happened there, using the prompt questions.

**Table 2:** Underlying factors

Underlying factor	Impact of location and access		
	Local health services	City hospital	
<b>Rural and remote/city</b> Travel to health care, environmental, proximity of family and support networks			
<b>Impact of illness or injury</b> Chronic or complex conditions, being acutely ill or injured			
<b>Language and communication</b> Ease or difficulty of communication between patients and staff, access to interpreters, dentures, hearing devices			
<b>Financial resources</b> Ability to meet costs of transport, treatment, health care, medications, inability to work, caring duties			
<b>Cultural safety</b> Experiences of an Aboriginal person within a health system			

Reflecting on the data you have gathered, what are the five most significant underlying factors encountered in this journey?

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

**Task 2.5: Bringing together multiple perspectives in chronological mapping**

Check back to your reasons for doing the mapping and see if you need to add any rows or columns to Table 3 in this task. The information you have gathered in Tasks 2.1 to 2.4 will assist you to fill out this table. At times the process may feel repetitious, but once you finish this task, including Table 3, see if anything has become more obvious as you follow the patient's journey chronologically, and consider the different perspectives of the patient, the family and carers, and staff in the different locations.

*Prompt questions*

What happened for this person on each step of the journey?

---

---

---

---

What happened for the family and carer/s?

---

---

---

---

What was the best and the worst thing about the journey from the patient's and family's point of view?

---

---

---

---

What were the person's priorities, concerns and commitments and how were these affected at various points?

---

---

---

---

What were the health service priorities (these may be different or the same as the person's and can explain where different priorities arise)?

---

---

---

---

What service gaps occurred?

---

---

---

---

What responses to gaps were available or should/could be made available?

---

---

---

---

Use Table 3 to enter data. **Note:** you may not have information for every square.

An extra row and column have been added in case there is another specific aspect on which you wish to focus. If you wish to complete a more complex table, you can design your own using Microsoft Word or an Excel spreadsheet. (See Case Study C in the Renal Case Studies and Case Study B in the Cardiac Case Studies for examples of extended tables.)

**Table 3:** Multiple perspectives

Perspective	Patient history	Diagnosis/referral	Travel	In hospital/health care	Discharge or transfer	Follow-up	Comments
Timeline							
Patient's journey							
Family/carer journey							
Patient's priorities, concerns and commitments							
Health care/ services priorities							
Another specific aspect							
Service gaps							
Responses to gaps							

## Appendix C: Adapted Version of Managing Two Worlds Together Patient Journey Workbook

### PATIENT JOURNEYS – WORKBOOK

Kelly, J., Dwyer, J., Pekarsky, B., Mackean, T., McCabe, N., Wiseman, J. de Crespigny, C. & O'Donnell, K. (2015). *Managing Two Worlds Together. Stage 3: Improving Aboriginal Patient Journeys – Workbook (Version 1)*, The Lowitja Institute, Melbourne.

### ADAPTED INTERVIEW GUIDE AND TABLES FOR:

Adult Occupational Therapy (OT) and Physiotherapy (PT) Services in the Kivalliq Region of Nunavut: Mapping the Client Journey

## OT/PT Client Interview Outline

Introduction to participant: Hello, Thank you for talking with me today. I hope this research will improve occupational and physiotherapy services in the Kivalliq Region. You previously reviewed the participant information form and signed the consent to participate in this study. Do you agree to continue with this interview?

We are interested in what is important to you as you have been on the journey shown on the visual client journey map. Please review the overview of the services you have received on the client journey map I have put together. I invite you now to tell me more about your experience while receiving these services. We are interested in what happened at each step. You can share only what you are comfortable sharing.

I will be recording the interview so that I can review our conversation to reflect your thoughts. Please let me know if you would like me to stop recording and I will shut off the recording of the interview.

### **Interview Guideline:**

1. How has this (illness/injury/diagnoses) impacted your life?

Prompts as appropriate for the client:

- Physical health impacted how?
  - Personal, spiritual or cultural impacts if relevant for client (role in community, participation in spiritual or cultural activities)
  - Impact on family/carers?
2. What was your experience with the services you received?

Prompts as appropriate for the client:

- Language (client's first language used by staff, access to interpreters)
- Communication with health services (able to talk to staff, understood what was happening at each stage, plain language used instead of medical jargon)
- Priorities of client, family/carers and health services similar or different?
- Access to services
  - timely access to services in a suitable location
  - able to receive suitable amount of local health, OT, PT and specialist services



- interest in working with a local person that is trained in OT/PT services to have more access to these services?
  - Cultural Safety:
    - Felt safe and respected?
    - Client and relevant family was consulted and included in health assessment and treatment planning?
3. What helped you to access the services you received or made it more difficult for you to access the services?

Prompts as appropriate for the client:

- Location of services and travel requirements (was telehealth an option or of interest to client?)
  - Financial barriers?
  - Policies that improved access or caused barriers (medical escort, medical travel policies)?
  - Language or cultural barriers?
4. Is there anything that you feel could or should have been done differently related to your experience, or the services you received?
5. Is there anything else you would like to share about the overall experience you had as pictured on the visual journey map and/or specifically related to the physiotherapy or occupational therapy services?

*Salutations (Provide gift card)*

Qujannamiik. Thanks again for your time and sharing your experience. I would like to meet with you again at a later date to review my results to make sure they accurately describe your experience. Please accept this gift card as a thank you for your time. I will also provide another gift card when we meet again next as a thank you for sharing your experience.

**Table A: Dimensions of Health Table**

<b>Dimensions</b>	<b>Experiences on the Journey</b>
Physical or biological	
Psychological and emotional wellbeing: personal, family, spiritual and cultural considerations	

**Table B: Underlying Factors affecting Access and Quality Table**

Underlying factors	Local health services	Local Physiotherapy services	Local Occupational Therapy Services	City hospital or city medical rehabilitation services
Location / setting (availability and amount of services, travel required, family/relationship proximity)				
Impact of illness and interactions with health system (chronic or complex health issues, acutely ill or injured)				
Language / communication (Ease or difficulty of communication between clients and staff, access to interpreters, use of plain language)				
Financial resources (Ability to meet costs of transport, treatment, health care policies, inability to work, caring duties)				
Cultural safety (Experiences of an Inuit person within a health system)				

**Table C: Journey Mapping from Multiple Perspectives**

	Client history	Referral to OT / PT services	Follow up PT locally	Follow up OT locally	Follow up other health care team members	Trips to services in city, if applicable	Discharge and Trip home, if applicable
Client journey							
Family / carer journey							
Client priorities, concerns & commitments							
Health services priorities							
Service gaps							
Responses to gaps							

## Appendix D: Client Journey Mapping – Client Consent Form



Indigenous Institute of Health  
and Healing  
Ongomizwin - Health Services  
665-745 Bannatyne Ave  
Winnipeg, MB  
R3E 0J9

### PT / OT CLIENT PARTICIPANT INFORMATION AND CONSENT FORM

**Title of Study: Adult Occupational and Physiotherapy Services in the Kivalliq Region of Nunavut: Mapping the Client Journey**

**Principal Investigator (student researcher):** Monica Achtemichuk

665-745 Bannatyne Ave, Basic Medical Sciences Bldg, Winnipeg, MB R3E 0J9

**Supervisor:** *Dr. Leanne Leclair*

R215 Rehabilitation Bldg, 771 McDermot Avenue, Winnipeg, MB, R3E 0T6

You are being asked to participate in a research study involving a chart review and an interview in person, or on video conference or phone. Please take your time to review this consent form and discuss any questions you may have with the study staff, your friends, or family before you make your decision. Please ask the study staff to explain any words or information that you do not clearly understand.

### **Purpose of this Study**

This research study is being conducted to explore the client's journey with occupational therapy and physiotherapy services and understand the experiences of clients and service providers during the journey and how these experiences can inform the delivery of services and make improvements to occupational therapy and physical therapy services in the Kivalliq Region of Nunavut.

### **Participant Selection**

You are being asked to participate in this study because you are currently or recently have been a client of occupational therapy and/or physiotherapy services.

### **Study procedures**

- You will be asked to give permission to review your medical chart and participate in two interviews with the principal investigator.
- Your participation in this study would give the principal investigator permission to look at your medical chart and review information relevant to the health services you received including from the time you were referred to occupational therapy and/or physiotherapy to the time you were discharged, if applicable. The information collected from the chart will be used to create a visual client journey map of the services you received.
- In the first interview which will be conducted by the principal investigator, and an interpreter, if an interpreter is requested, you will be asked some questions relating to your experience with local health services, local physiotherapy and/or occupational therapy as well as any southern medical travel related to your physiotherapy and occupational therapy journey. These questions will help us to better understand your experience and will take approximately 1 to 1.5 hours. The second interview will be to review the information that you provided at the first interview and add any additional information.
- No one's name will be asked or revealed during the interview.
- The interview sessions will be audio recorded using University of Manitoba Microsoft Teams. The video for the participant and interviewer will be turned off. The audio recordings data from Teams will be stored off site in Canada (Quebec), in a secure location on the "cloud" for 30

days.

- The audio recordings will be transcribed using transcription available in Microsoft Teams software, and if needed, additional review by the Ongomiizwin – Health Services (OHS) transcriptionist in Winnipeg (include name of transcriptionist here) to ensure accurate reporting of the information that you provide.
- If OHS transcribers are involved, they will sign a form stating that they will not discuss any item on the tape with anyone other than the researchers.
- The audio recordings will be stored in password protected electronic files before and after being transcribed on a secure computer. The recordings and the transcriptions will be destroyed 5 years after the completion of this evaluation.
- Your journey map and case study report will be provided to you to review. You will then be able to inform the principal investigator if there are changes required to reflect your experience.

### **Risks and Discomforts**

There are no anticipated physical risks to participants. However, you may find talking about your experience with occupational therapy and/or physiotherapy and health services to be upsetting or emotional. You do not have to answer any question that makes you feel uncomfortable or that you find too upsetting. Should you need any additional help or support the principal investigator will refer you to the local health centre to access services or help you to find other counseling.

### **Benefits**

Being part of this research may not help you directly, nor will it impact any health services that you are provided, but information gained may help other people or family members that will be clients of occupational therapy and physiotherapy, and how they work with local health services in the future.

**Costs**

There is no cost to you to attend the interview and participate in the study.

**Payment for participation**

Following completion of the first interview, you will be given a \$50 gift card as a thank you for your participation in this research study. After the second interview you will be given another \$50 gift card.

**Confidentiality**

We will do everything possible to keep your personal information confidential. Your name will not be used at all in the study records. A list of names and addresses of participants will be kept in a secure file and linked to your participant ID so we can send you a summary of your journey map and the results of the study. If the results of this study are presented in a meeting, or published, nobody will be able to tell that you were in the study. Please note that although you will not be identified as the speaker, your words may be used to highlight a specific point. The collection and access to personal information applicable health related information will be in compliance with provincial, territorial and federal privacy legislations.

Audio recordings of the interview will be typed and used to prepare a report. The audio recordings will be kept on a password protected computer and transcriptions will be kept for 5 years following completion of the study in a secure locked file cabinet and in the principal investigator's office. Only the principal investigator and her supervisor will have access to them and know your name.

Some people or groups may need to check the study records to make sure all the information is correct. All of these people have a professional responsibility to protect your privacy.

These people or groups are:



- The Health Research Ethics Board of the University of Manitoba which is responsible for the protection of people in research and has reviewed this study for ethical acceptability
- Quality assurance staff of the University of Manitoba and who ensure the study is being conducted properly

All records will be kept in a locked secure area and only those persons identified will have access to these records. If any of your research records need to be copied to any of the above, your name and all identifying information will be removed. No information revealing any personal information such as your name, address or telephone number will leave the University of Manitoba, Ongomiizwin - Health Services, although information will need to be communicated between the Rankin site and the Winnipeg site after participant recruitment to inform the student researcher in the Winnipeg site. Participant consent forms will be sent via confidential fax and saved at the Winnipeg site.

#### **Permission to Quote:**

We may wish to quote your words directly in reports and publications resulting from this. With regards to being quoted, please check yes or no for each of the following statements:

Researchers may publish documents that contain quotations by me under the following conditions:	
<input type="checkbox"/> Yes <input type="checkbox"/> No	I agree to be quoted directly if my name is not published (I remain anonymous).
<input type="checkbox"/> Yes <input type="checkbox"/> No	I agree to be quoted directly if a made-up name (pseudonym) is used.

#### **Voluntary Participation/Withdrawal from the Study**

Your decision to take part in this study is voluntary. You may refuse to participate, or you may withdraw from the study at any time.

Your participation or your decision not to participate or to withdraw from the study will not affect your care (or services received) at the Department of Health (local health centre) or Ongomiizwin - Health Services (physiotherapy, occupational therapy, or speech language pathology) in any way.

### **Questions**

If any questions come up during or after the study contact the principal investigator and the study staff: Monica Achtemichuk at [REDACTED]. For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389.

### **Consent Signatures:**

1. I have read all of the consent form.
2. I have had a chance to ask questions and have received satisfactory answers to all of my questions.
3. I understand that by signing this consent form I have not waived any of my legal rights as a participant in this study.
4. I understand that my records, which may include identifying information, may be reviewed by the research staff working with the Principal Investigator and the agencies and organizations listed in the Confidentiality section of this document.
5. I understand that I may withdraw from the study at any time and my data may be withdrawn prior to publication.
6. I understand I will be provided with a copy of the consent form for my records.
7. I agree to participate in the study.

**Participant signature:** \_\_\_\_\_

**Date** \_\_\_\_\_

**(day/month/year)**

**Participant printed name:** \_\_\_\_\_

Witness signature: \_\_\_\_\_

Date \_\_\_\_\_

(day/month/year)

Witness printed name: \_\_\_\_\_

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent

Printed Name: \_\_\_\_\_

Date \_\_\_\_\_

(day/month/year)

Signature: \_\_\_\_\_

Role in the study: \_\_\_\_\_

Relationship (if any) to study team members: \_\_\_\_\_

## Appendix E: Medical Rehabilitation Clerk/Interpreter Telephone Script

Date of phone call:

Hello \_\_\_\_\_ (insert participant's name).

A student researcher from the University of Manitoba, Monica Achtemichuk, who is also the Director of occupational therapy and physiotherapy services in the Kivalliq Region, is conducting a study looking at the client journey and experience with occupational therapy and physiotherapy services. She would like to have a better understanding of the experiences of clients from the Kivalliq Region who receive occupational or physiotherapy services in their community, and would like to know if you would be interested in participating in the study. Monica is interested in the Inuit client experience to look at if the services are meeting the needs of Nunavummiut. Do you self-identify as Inuit?

Yes:

No:

You are being asked to participate in this study because you are currently or recently have had the services of occupational therapy and/or physiotherapy services. Your decision to take part in this study is completely voluntary.

You may choose not to participate at this time, or you may choose to stop participating at any time. Regardless of your decision, it will not change the services you receive in any way. Your participation would involve agreeing to have your medical chart and PT and or OT chart reviewed to learn more about your journey with these health services, as well as agreeing to a 1-1.5 hour video or phone interview with Monica and a short second interview to review the information.

If you would like to participate, you will receive a \$50 gift card after each interview from the Northern store as a thank you for your time to participate. Would you be interested in participating?

**Client would like to participate:**

Yes:

No:  (If no, thank client for their time and end call)

If yes, I would meet with you to review more information about the study, and then if you decide to participate, ask you to sign a consent form. Is there a date and time that we could meet? Where would you like to meet to review the information?

Date for review of participant information and consent form:

\_\_\_\_\_

Time: \_\_\_\_\_

Location decided on:

Client Home:

Wellness Centre:

Health Centre:

Other: \_\_\_\_\_

**Would you like to have an interpreter when you meet with Monica for the interview: Yes**

**No**

Clerk/Interpreter:

Signature:

## Appendix F: Chart Audit Data Collection/Capture Sheet

Participant Unique Code Number: \_\_\_\_\_1\_\_\_\_\_ (do not use a personal identifier)

### Chart Audit Data Collection/Capture Sheet

(To be used with Master List)

**Protocol Title: Adult Occupational Therapy and Physiotherapy Services in the Kivalliq Region of Nunavut: Mapping the Client Journey**

Date of Chart Audit: \_\_\_\_\_

Data to be collected on paper: Yes  No

Data to be entered directly into computer spread sheet Yes  No

#### Data Elements to be collected:

##### Demographic data and identifiers

- Age: \_\_\_\_\_
- Gender: \_Female\_\_\_\_\_
- Community: \_\_\_\_\_
- Referral Date to OT: \_\_\_\_\_
- Referral Date to PT: \_\_\_\_\_
- Referral Source: \_\_\_\_\_
- Discharge Date OT: \_\_\_\_\_
- Discharge Date PT: \_\_\_\_\_

##### Data elements from chart or database, as applicable:

- # of days from referral to OT assessment: \_\_\_\_\_
- # of days from referral to PT assessment: \_\_\_\_\_
- # of OT appointments located in the Kivalliq Region: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
- # of PT appointments located in the Kivalliq Region: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_
  - location of appointment: \_\_\_\_\_ date: \_\_\_\_\_ Therapist Name: \_\_\_\_\_

Participant Unique Code Number: \_\_\_\_\_1\_\_\_\_\_ (do not use a personal identifier)

- *List of Interventions provided by OT (exercise, equipment prescription, etc):* \_\_\_\_\_  
\_\_\_\_\_
- *List of Interventions provided by PT (exercise, equipment prescription, etc):* \_\_\_\_\_  
\_\_\_\_\_
- # of OTs that provided care: \_\_\_\_\_
- # of PTs that provided care: \_\_\_\_\_
- # of OT referrals to another source: \_\_\_\_\_ Source: \_\_\_\_\_
- # of PT referrals to another source: \_\_\_\_\_ Source: \_\_\_\_\_
- # of other health care professional appointments (*ie.* nurse, physician), location and dates:

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Health professional:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

- # of specialist appointments located in Kivalliq Region, location and dates (*ie.* sports medicine orthopedics, orthotics):

*Specialist:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Specialist:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Specialist:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Specialist:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

- # of OT and PT appointments in southern center, location and dates:

*Discipline:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Discipline:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Discipline:* \_\_\_\_\_ *Location:* \_\_\_\_\_ *Date:* \_\_\_\_\_

Participant Unique Code Number: \_\_\_\_\_1\_\_\_\_\_ (do not use a personal identifier)

Discipline: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

- # of specialist appointments located in southern center, location and dates:

Specialist: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

Specialist: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

Specialist: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

Specialist: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

Other Comments noted in chart relevant to client journey:

Data collected by (printed name and signature): \_\_\_\_\_

Date Data collected: \_\_\_\_\_



## Appendix G: OT and PT Prioritization Tools

**NUNAVUT PHYSIOTHERAPY REFERRAL PRIORITIZATION TOOL**

<b>Priority</b>	<b>Description</b>	<b>Impact of Delay</b>	<b>Examples (not exhaustive)</b>
<b>1</b> <b>Hospital inpatients</b>	Hospital inpatients requiring physiotherapy assessment and treatment for mobility and/or discharge planning	Delayed access may result in : <ul style="list-style-type: none"> <li>• Delayed discharge from hospital</li> <li>• Client's safety put at risk</li> <li>• Possible out of territory referral or placement</li> </ul>	<ul style="list-style-type: none"> <li>• Referral for bed mobility, ambulation, gait aid assessment</li> <li>• Discharge planning to ensure client's safe return to home or residential facility</li> </ul>
<b>2</b> <b>Falls risk</b>	Clients at risk for falls <ul style="list-style-type: none"> <li>• Falls risk identified by referral source</li> <li>• Referral for gait aid assessment</li> </ul>	Delayed access may result in: <ul style="list-style-type: none"> <li>• Client's safety put at risk</li> <li>• Significant cost to client, and health care system in the event of a fall</li> </ul>	<ul style="list-style-type: none"> <li>• Referral for cane, walker or other gait aid</li> <li>• Identified risk to safety due to impaired ambulation</li> <li>• Balance impairment</li> </ul>
<b>3</b> <b>Pediatric clients with chronic conditions</b>	Referrals for children 18 years and under with a chronic condition affecting gross motor performance or development	Delayed access may result in: <ul style="list-style-type: none"> <li>• Delayed gross motor development</li> <li>• Decreased independent mobility</li> <li>• Development of contractures</li> <li>• Possible out of territory referral or placement</li> </ul>	<ul style="list-style-type: none"> <li>• Developmental delay</li> <li>• Neurological condition</li> <li>• Inflammatory disease</li> </ul>
<b>4</b> <b>Clients with urgent conditions</b>	Time-sensitive referrals with potential for permanent or long-term negative sequelae	Delayed access may result in increased reliance on medical care or permanent / long-term impairments in: <ul style="list-style-type: none"> <li>• Function</li> <li>• Range of motion</li> <li>• Gross motor development</li> </ul>	<ul style="list-style-type: none"> <li>• Post surgery</li> <li>• Post fracture complications</li> <li>• Pediatric orthopedic injury</li> <li>• Severely impaired function due to pregnancy</li> <li>• Acute neurological condition</li> </ul>
<b>5</b> <b>Clients with semi-urgent conditions</b>	Adult clients whose quality of life and function is significantly impacted by their condition	Delayed access may result in: <ul style="list-style-type: none"> <li>• Impaired function</li> <li>• Impaired range of motion</li> <li>• High economic cost to individual and community</li> <li>• Possible increased reliance on current acute medical care</li> <li>• Increased risk of injury</li> </ul>	<ul style="list-style-type: none"> <li>• Peripheral neurological conditions</li> <li>• Condition is affecting client's ability to care for self</li> <li>• Unable to work due to injury (2+ weeks)</li> <li>• Acute inflammatory disease</li> </ul>
<b>6</b> <b>Clients with non-urgent conditions</b>	Adult clients whose quality of life and function is moderately impacted by their condition – stable medical status and safety not at risk	Delayed access may result in: <ul style="list-style-type: none"> <li>• Decreased independence</li> <li>• Decreased function or quality of life</li> <li>• Increased dependency on health care system</li> <li>• Impact on function or comfort</li> <li>• May hinder full return to pre-injury status</li> </ul>	<ul style="list-style-type: none"> <li>• Other orthopedic conditions</li> <li>• Chronic neurological conditions</li> <li>• Chronic inflammatory conditions</li> </ul>

### **NUNAVUT OCCUPATIONAL THERAPY REFERRAL PRIORITIZATION TOOL**

<b>Priority</b>	<b>Description</b>	<b>Impact of Delay</b>	<b>Examples (not exhaustive)</b>
<b>1</b>  <b>Occupational performance significantly impacted</b>	<p>Immediate intervention is required to prevent deterioration or exacerbation of a medical condition. Client is:</p> <ul style="list-style-type: none"> <li>• Medically fragile</li> <li>• Potentially unsafe in their home environment for any reason</li> <li>• Does not have assistance or support in their home environment</li> <li>• Unable to perform activities of daily living (ADLs)</li> <li>• Unable to attend school</li> </ul>	<p>Delayed access to occupational therapy services may result in:</p> <ul style="list-style-type: none"> <li>• Prolonged hospital stay</li> <li>• Re-admission to the hospital</li> <li>• Out of territory referral or placement</li> <li>• Deterioration or exacerbation of medical condition</li> </ul>	<ul style="list-style-type: none"> <li>• Acute swallowing/feeding assessment</li> <li>• Pressure sore management</li> <li>• Urgent home/environmental safety assessment secondary to falls risk</li> <li>• Complex discharge planning</li> <li>• Palliative care clients</li> <li>• Acute upper extremity splinting (e.g. burns, contracture prevention)</li> </ul>
<b>2</b>  <b>Occupational performance is moderately impacted</b>	<p>Urgent intervention is required in order to allow individual to function safely and independently in their environment. Client is:</p> <ul style="list-style-type: none"> <li>• Home alone or with limited support</li> <li>• Unable to perform ADLs without assistance</li> <li>• Unable to perform instrumental activities of daily living (IADLs)</li> <li>• Unable to attend work</li> <li>• Preschool child</li> </ul>	<p>Delayed access to occupational therapy services may result in:</p> <ul style="list-style-type: none"> <li>• Re-admission to hospital secondary to falls/inability to manage in home environment</li> <li>• Out of territory referral or placement</li> <li>• Loss of therapeutic window of opportunity</li> </ul>	<ul style="list-style-type: none"> <li>• Home/environmental safety assessment</li> <li>• Preschool children and transition to school</li> <li>• Wheelchair seating</li> <li>• Non-urgent feeding/swallowing</li> <li>• Functional splinting (e.g. arthritis, carpal tunnel)</li> </ul>
<b>3</b>  <b>Occupational performance is mildly impacted</b>	<p>Intervention is required to prevent deterioration in function. Client is:</p> <ul style="list-style-type: none"> <li>• Medically stable</li> <li>• Home with limited support</li> <li>• Unable to fully participate in school/work</li> </ul>	<p>Delayed access to occupational therapy services may result in:</p> <ul style="list-style-type: none"> <li>• Decreased degree of personal independence</li> <li>• Greater long-term reliance on social/health care supports</li> </ul>	<ul style="list-style-type: none"> <li>• Community mobility or accessibility assessment</li> <li>• Pain and chronic condition management</li> <li>• School health</li> </ul>
<b>4</b>  <b>Client is not satisfied with level of occupational performance</b>	<p>Intervention is intended to improve quality of life and/or function. Client is:</p> <ul style="list-style-type: none"> <li>• Not satisfied with ability to participate in meaningful activities</li> <li>• Not able to reach optimal level of occupational performance</li> </ul>	<p>Delayed access to occupational therapy services may result in:</p> <ul style="list-style-type: none"> <li>• Client not reaching his/her optimal level of occupational performance</li> <li>• Decreased quality of life</li> </ul>	<ul style="list-style-type: none"> <li>• Ergonomic assessment</li> <li>• Vocational rehabilitation</li> <li>• Community participation interventions</li> </ul>

## Appendix H: Health Research Ethics Board Approval



University  
of Manitoba

Research Ethics and Compliance

Research Ethics Bannatyne  
P126-770 Bannatyne Avenue  
Winnipeg, MB R3E 0W3  
T: 204 789 3255  
F: 204 789 3414  
bannreb@umanitoba.ca

## HEALTH RESEARCH ETHICS BOARD (HREB) CERTIFICATE OF ANNUAL APPROVAL

<b>PRINCIPAL INVESTIGATOR:</b> Monica Achtemichuk	<b>INSTITUTION/DEPARTMENT:</b> U of M/Medical Rehabilitation/ Occupational Therapy	<b>ETHICS #:</b> HS21956 (H2018:267)
<b>HREB MEETING DATE (if applicable):</b>	<b>APPROVAL DATE:</b> June 15, 2020	<b>EXPIRY DATE:</b> June 25, 2021
<b>STUDENT PRINCIPAL INVESTIGATOR SUPERVISOR (if applicable):</b> Dr. Leanne Leclair		
<b>PROTOCOL NUMBER:</b> NA	<b>PROJECT OR PROTOCOL TITLE:</b> Adult Occupational Therapy and Physiotherapy Services in the Kivalliq Region of Nunavut: Mapping the Client Journey	
<b>SPONSORING AGENCIES AND/OR COORDINATING GROUPS:</b> NA		
<b>Submission Date of Investigator Documents:</b> May 1, 2020		<b>HREB Receipt Date of Documents:</b> May 14, 2020
<b>REVIEW CATEGORY OF ANNUAL REVIEW:</b> Full Board Review <input type="checkbox"/> Delegated Review <input checked="" type="checkbox"/>		
<b>THE FOLLOWING AMENDMENT(S) and DOCUMENTS ARE APPROVED FOR USE:</b>		
<b>Document Name(if applicable)</b>	<b>Version(if applicable)</b>	<b>Date</b>

### Annual approval

Annual approval implies that the most recent **HREB approved** versions of the protocol, Investigator Brochures, advertisements, letters of initial contact or questionnaires, and recruitment methods, etc. are approved.

### Consent and Assent Form(s):

PT/OT Client Participant Information and Consent Form  
PT/OT Participant Information and Consent Form

July 11, 2018  
July 11, 2018

### CERTIFICATION

The University of Manitoba (UM) Health Research Board (HREB) has reviewed the annual study status report for the research study/project named on this **Certificate of Annual Approval** as per the category of review listed above and was found to be acceptable on ethical grounds for research involving human participants. Annual approval was granted by the Chair or Acting Chair, UM HREB, per the response to the conditions of approval outlined during the initial review (full board or delegated) of the annual study status report.

### HREB ATTESTATION

The University of Manitoba (UM) Health Research Board (HREB) is organized and operates according to Health Canada/ICH Good Clinical Practices, Tri-Council Policy Statement 2, and the applicable laws and regulations of Manitoba. In respect to clinical trials, the HREB complies with the membership requirements for Research Ethics Boards defined in Division 5 of the Food and Drug Regulations of Canada and carries out its functions in a manner consistent with Good Clinical Practices.

A unit of the office of the Vice-President (Research and International)

[umanitoba.ca/research](http://umanitoba.ca/research)

**QUALITY ASSURANCE**

The University of Manitoba Research Quality Management Office may request to review research documentation from this research study/project to demonstrate compliance with this approved protocol and the University of Manitoba Policy on the Ethics of Research Involving Humans.

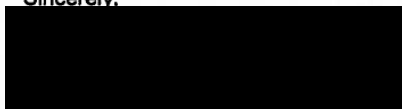
**CONFLICT OF INTEREST**

Any Principal or Co-Investigators of this study who are members of the UMHREB did not participate in the review or voting of this study.

**CONDITIONS OF APPROVAL:**

1. The study is acceptable on scientific and ethical grounds for the ethics of human use only. ***For logistics of performing the study, approval must be sought from the relevant institution(s).***
2. This research study/project is to be conducted by the local principal investigator listed on this certificate of approval.
3. The principal investigator has the responsibility for any other administrative or regulatory approvals that may pertain to the research study/project, and for ensuring that the authorized research is carried out according to governing law.
4. **This approval is valid until the expiry date noted on this certificate of annual approval. A Bannatyne Campus Annual Study Status Report** must be submitted to the REB within 15-30 days of this expiry date.
5. Any changes of the protocol (including recruitment procedures, etc.), informed consent form(s) or documents must be reported to the HREB for consideration in advance of implementation of such changes on the **Bannatyne Campus Research Amendment Form**.
6. Adverse events and unanticipated problems must be reported to the REB as per Bannatyne Campus Research Boards Standard Operating procedures.
7. The UM HREB must be notified regarding discontinuation or study/project closure on the **Bannatyne Campus Final Study Status Report**.

Sincerely,



John Arrfelt, PhD., C. Psych.  
Chair, Health Research Ethics Board  
Bannatyne Campus

## Appendix I: Nunavut Research Institute Approval

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### Nunavummi Qaujisaqtulirijikkut / Nunavut Research Institute

Box 1720, Iqaluit, NU X0A 0H0 phone:(867) 979-7279 fax: (867) 979-7109 e-mail:  
[mosha.cote@arcticcollege.ca](mailto:mosha.cote@arcticcollege.ca)

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#### SCIENTIFIC RESEARCH LICENSE

LICENSE # 03 012 20R-M

ISSUED TO: Monica Achtemichuk  
 Indigenous Institute of Health and Healing  
 University of Manitoba  
 655-745 Bannatyne Drive  
 Winnipeg, MB  
 R3E 0J9 Canada

TEAM MEMBERS: L. Leclair, M. Fricke, J. Lavioe

AFFILIATION: University of Manitoba

TITLE: Adult Occupational Therapy (OT) and Physiotherapy (PT) Service in the Kivalliq  
 Region of Nunavut: Mapping the Client Journey

#### OBJECTIVES OF RESEARCH:

The purpose of this study is to provide an overview of the utilization of adult OT and PT services and explore use of a client journey mapping tool for Inuit OT and PT clients in the Kivalliq Region of Nunavut. This study will utilize the term client journey to characterize the patients' journey across OT and PT services. This research will review program utilization of adult OT and PT services, and explore use of a tool that captures the experience of care from the point of view of the client in Rankin Inlet.

#### TERMS & CONDITIONS:

The license holder will abide by the terms and conditions imposed by the Inter-agency Health Review Panel and by all special public health protection measures imposed by Nunavut's Chief Medical Officer of Health in response to the Covid-19 Pandemic, including restrictions on non-essential travel to Nunavut. These terms and conditions will form part of this license.

#### DATA COLLECTION IN NU:

DATES: October 01, 2020-September 30, 2021

LOCATION: Rankin Inlet

Scientific Research License 03 012 20R-M expires on December 31, 2021

Issued at Iqaluit, NU on October 29, 2020



Mary Ellen Thomas  
 Science Advisor

