

The Role of the Telehealth Coordinator in Sustainable Videoconferencing Technology
Implementation & Use in Canada - A Qualitative Study

by

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B.Ad., University of Ottawa, 1989

M.Ed., University of Toronto, 2001

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Supervisory Committee

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Abstract

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Abstract (Summary)

For the purpose of this study, telehealth is the use of videoconferencing technology to provide health care information and services to populations over distance – great and small (Office of Health and the Information Highway, 2000). Telehealth Coordinator is a relatively new role in Canada’s health care delivery system. Initially, the role developed in response to the desire by governments and health care provider institutions to make health care more accessible through videoconferencing technology. An increasing number of Canadian nurses, regulated health care professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians etc.) and non-regulated workers are being called upon by health care provider institutions and provincial telehealth networks to function in this new role.

Using Role Theory concepts and building upon the work of other researchers, this qualitative exploratory study examined the Telehealth Coordinator role and its associated challenges.

Although the role of Telehealth Coordinator varied across organizations and regions in Canada, important commonalities were also found. The most important factors contributing to Canadian Telehealth Coordinators work satisfaction were: autonomy, involvement with patients and others and knowledge that they were making care more accessible. Organizational issues including a lack of resources and understanding of the Telehealth Coordinator role by senior executives provided the least satisfaction for Telehealth Coordinators. The Telehealth Coordinators who participated in this research expressed a need and desire for standards and credentialing relating to their practice – especially if it involved patient care.

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Dedication

For Lynne – my wife, companion and sounding board of 26 years. Your encouragement and support helped me through the rough spots. Thanks Lynne. I love you. Sarah, Danielle – you're never too old to learn. If I could do it, you can too!

Chapter 1 - Introduction

Background

In a systematic review, Oh, Rizzo, Murray, & Jadad, (2005) noted that the term e-Health is widely used by many individuals, academic institutions, professional bodies, and funding organizations. Equally important, depending on the user, the term e-Health may have different meanings. During the past several years, e-health has become an umbrella term for the use of a variety of technologies in the delivery of health information and services (Chouinard, 2007). In Canada, two broad areas covered by the term e-health are health informatics (managing and using health information) and telehealth (Hebert, 2008). As originally, defined by the Office of Health and the Information Highway (OHIH), telehealth is the application of telecommunications and information technology to deliver health care and health-related services and information over large and small distances (Office of Health and the Information Highway, 2000). In its early days, telehealth was typically referred to as telemedicine (Picot & Craddock, 2000). This is because its use was more narrowly focused on physician users and clinical diagnoses. Today, the term is used more broadly to denote health care information service and delivery by a variety of health practitioners using information and communications technology (Hebert, 2008). Although OHIH's broad definition of telehealth was adopted for this study, emphasis will be on clinical care delivered in real time using videoconferencing technology. A glossary of terms appears in Appendix A.

Telehealth is increasingly evident in every Canadian province and territory (Picot & Craddock, 2000) and is now coming in to its own. This view is supported by the large number of Canadians now receiving health care mediated by videoconferencing technology. In Ontario alone, 2000 health care professionals conducted 32,000 telehealth consultations at 500 sites across the province in 2007 (Ontario Telemedicine Network, 2008). Further proof of this increase in use of telemedicine technology in mainstream health care in Ontario at least is the recent integration of three separate networks in to a single entity known as the Ontario Telemedicine Network (OTN). The merger, which took place in April 2006, has made the OTN the single-largest telehealth network not only in Canada, but quite possibly, North America. For further proof that telehealth may be becoming a growth industry in health care, one needs look no further than organizations like the College of Physicians and Surgeon of Ontario (CPSO).

In a recent communiqué to its members, the College stated “... telemedicine [telehealth] will likely be one of the greatest influences on how medicine is practiced in future (College of Physicians and Surgeons of Ontario, 2007).”

Telehealth activity in Canada is coordinated by a group of individuals collectively referred to as Telehealth Coordinators. Although the literal definition of a Telehealth Coordinator might refer to an individual trained in the use of videoconferencing technology to delivery health care services and information over distances great and small, this definition does not address the importance of Telehealth Coordinators to successful technology implementation and use. In fact, as documented by Moehr (2003), successful implementation of videoconferencing technology in large provincial systems depends in large part on Telehealth (or Site) Coordinators. Similarly, the role, duties and qualifications of a Telehealth Coordinator often go beyond the obvious tasks of coordinating videoconferences or providing technical support. These roles, duties and qualifications may also vary by region and even institutions within a region. In some cases, the main duties of a Telehealth Coordinator may consist of direct patient care, for example taking patient’s vital signs, height, weight, medication history, assisting physicians etc. Some of these individuals may also be involved in patient scheduling, registration and referral management. In other instances, the Telehealth Coordinator may have primary responsibility for scheduling and coordination of only non-clinical videoconferences (e.g., educational and administrative). Some do both. Still others may be involved in the ongoing management, planning, development and evaluation of telehealth programs. Sample job description for Telehealth Coordinator from various jurisdictions in Canada appear in Appendix B. These samples are provided to show the wide range of roles, duties and qualifications of Telehealth Coordinators in Canada.

Governments and other decision making bodies have come to view technologies like videoconferencing as key to “reforming,” indeed, “transforming” health care. In Ontario, this is evidenced by the Ontario Ministry of Health and Long Term Care’s Transformation Plan for Health Care and the pivotal role that the Ministry envisions e-Health technology will play in making transforming Ontario’s health care system. Likewise, creation of the Ontario e-Health Council and an accompanying budget commitment of \$64 million for development of a renewed provincial e-Health strategy are further testimony to the Ministry’s belief in technology’s ability to make health care more responsive to the needs of citizens.

With the increased prevalence of technologies like videoconferencing, care is no longer a local phenomenon, nor is it limited to traditional health care settings — even when delivered locally (American Nurses Association, 2008). “Today’s age of technology promises innovations with few boundaries. It also reflects a political [and consumer] appetite for cost effective and quality care.” (Rice, 2003, p. 18).

As a consequence, care is moving out of expensive delivery systems such as tertiary and quaternary care into less expensive environments, for example community hospitals and the home (Rice, 2003). Moreover, telehealth is one of the most visible signs that governments are striving to make health care more accessible to entire populations. This may explain the boom in telehealth’s use during the past three years in Ontario, and why not only the Ontario Ministry of Health, but other provincial and national bodies in Canada, for example, Canada Health Infoway have come to regard telehealth as important as the electronic health record (EHR) to a revitalized health care system. Further evidence of this trend is that the Ontario Health Council now includes the number of telehealth visits per annum as one of three key indicators of accessibility to health care for Ontarians. Many politicians have come to regard telehealth as having the potential to address long-standing systemic issues in health care that so far, have resisted other approaches — for example improving First Nations and Aboriginal health.

Notwithstanding this progress, growth in the use of videoconferencing technology may not be as rapid as many had initially hoped or imagined. “Although telehealth has a long history, to date, it has played only a modest role in transforming health care. By the early 1990’s it was clear that telecommunications and information technology (IT) in general had developed apace, and enthusiasm for new technology increased. This marked the beginning of a new era for [telehealth]. Today, however, we can see clearly a contrast between enthusiastic support for [telehealth], the many pilot projects performed, and the lack of widespread diffusion and high volume of use. [Telehealth] has not been spreading like wildfire as was once expected.” (Aas, 2007, p. 379). This is especially true in primary care and Canada’s rural regions.

The Health Council of Canada’s mandate is to monitor and report on the progress of health care renewal in Canada. In its 10th Annual Health Care in Canada Survey, when respondents were asked whether access to timely, quality health care will improve “significantly” or “somewhat” over the next five years, more than twice the number of managers (69%) took an optimistic view compared with

nurses (33%). Less than 50% of the public indicated that access will improve (Health Council of Canada, 2005). Moreover, despite telehealth's remarkable advances in jurisdictions like Ontario, it is regrettable that only 15% of more than 4200 rural and remote communities in Canada are estimated to have telehealth coverage of any kind (Canadian Nurses Association, 2006). Additionally, the technology is not used as widely as it could be in primary, (Liddy et al., 2008) long term and home care.

According to the Conference Board of Canada, people and culture are an important part of a high-performing health system. The Conference Board defines innovation as the process through which social or economic value is extracted from knowledge – through the creation, diffusion, transformation and use of ideas – to produce new or significantly improved products or processes (Prada, Santaguida, & Conference Board of Canada. Centre for Health Care and Innovation., 2007). Unfortunately, in many of Canada's health care institutions, technological innovation is not always accompanied by organizational innovation. And yet, if technology is to be successfully implemented and used, more often than not, it simultaneously requires innovation at the level of the organization. This means innovating at the level of people and processes — not just technology (Kaplan, Brennan, Dowling, Friedman, & Peel, 2001). At the same time, Canada is facing a shortage of not only health providers, for example nurses, but also knowledge workers to assist with innovation (Prada et al., 2007). If videoconferencing technology implementation and use is to continue increasing in Canada then it essential that we learn more about the role of Telehealth Coordinators in successful innovation both at the level of technology and organizations. Implementing telehealth applications represents a substantial investment of resources, which is one reason why success is of great interest (Hebert, 2001).

Purpose

Telehealth Coordinator is a relatively new role in Canada's health care delivery system. Initially, the role developed in response to the desire by governments and health care provider institutions to make health care more accessible through videoconferencing technology. An increasing number of Canadian nurses, other regulated health care professionals (e.g., physiotherapists, occupational therapists, dieticians etc.) and non-regulated workers are being called upon by health care provider institutions and provincial telehealth networks to function in this new role. More recently, the rasion d'etre for this new role has been revised to help “transform” health care service delivery through the use of videoconferencing technology.

This qualitative exploratory study has two aims:

The first is to learn more about how nurses and other regulated health care professionals (e.g., physiotherapists, occupational therapists, dieticians etc.) are involved in the implementation and use of videoconferencing technology to support health care delivery.

The study will seek to gain a greater understanding of not only the demographics of this group, but also their reported experiences as Telehealth Coordinators.

A secondary aim is to gain a better understanding of the demographics and role that unregulated personnel, for example, information technology personnel and secretaries are playing in the implementation and use of this technology to support health care delivery. It is important to include this group of individuals in this research because there is strong anecdotal evidence suggesting that many provider organizations in Canada, especially smaller ones, are using this category of workers as Telehealth Coordinators.

Given the important role that nurses, regulated health professionals other than nurses and unregulated workers play in increasing accessibility to care through videoconferencing, this research has the potential to lead to new insights and opportunities to use this technology to transform health care.

Significance

Following its nearly ten-year struggle to make telehealth a valid service delivery channel in mainstream health care, the inroads made by the telehealth community in Canada are remarkable. While this increased use of videoconferencing technology is no doubt due in part to the efforts of forward thinking politicians, senior executives, physicians and technology vendors, there is strong anecdotal evidence that those working at the front lines of health care are playing a pivotal role in successful videoconferencing technology implementation and use. Unfortunately, little is known about these individuals. Not only is there a paucity of information about who they are (e.g., exact numbers, education level, experience and qualifications etc.) equally important, there is no clear picture of the role that they play in successful videoconferencing technology implementation and use in Canada.

Similarly, very little is known about the impact that videoconferencing may be having on these individuals as professionals including the quality of their work lives. It is particularly important to learn more about telehealth's impact, both positive and negative, on the regulated health professionals who also perform the role of Telehealth Coordinator. Because regulated health professionals, especially nurses, are currently in short supply in Canada and the growth in telehealth shows no sign of slowing, it is essential that we obtain this knowledge. Otherwise, governments, professional colleges and regulating bodies will have no choice but to continue making important decisions about the allocation of scarce resources without the requisite evidence to support those decisions.

Chapter 2 – Review of Literature

Introduction

In this chapter, a summary of the current state of knowledge regarding the development of telehealth in Canada and the relationship of technological innovation to organizational innovation as it pertains to development of the Telehealth Coordinator role are discussed. Prior to conducting this research, an English language search of CINAHL (1982 – 2008) and PubMed (1982 – 2008) was conducted. The search strategy was telehealth OR telemedicine OR videoconferencing OR videoconferencing OR video conferencing OR telenursing OR Nursing Informatics OR role theory and Nursing Informatics scope and standards of practice. In addition to the American Nurses Associations (ANA's) Scope and Standards of Practice for Nursing Informatics, findings from the literature search included published reports and systematic reviews. Using the terms: telemedicine and telehealth, a non health sciences literature database was also searched (i.e., Business Source Complete).

In addition to CINAHL, PubMed, and Business Source Complete, and English language search of ProQuest's Database of Dissertations and Theses (1960 – 2007) was conducted using the keywords telehealth. This search yielded 55 citations of which five documents had high relevance to this work (see below). The search was re-run using the term "telemedicine". This yielded 139 citations. Several of the citations found in the "telehealth" search also appeared in "telemedicine" search. The search was re-run- using the term "videoconferencing." This yielded 186 citations. When re-ran using the word form "video conferencing", 238 citations were found. Finally, when re-ran using the word form "video-conferencing," 408 citations were found. Few of the published theses and dissertations found were randomized control trial (RCT) designs. Many of the published dissertations and theses had different interpretations of the word telehealth. That is, the term telehealth represented various types of service delivery using different technologies including remote monitoring, telemetry, telephone, Internet and videoconferencing. A majority of publications pertained to the North American experience (i.e., United States and Canada) with telehealth (telemedicine) technology.

Videoconferencing Technology Implementation and Use in Canada

Telehealth employs cameras, microphones and other medical devices connected by a telecommunications network to evaluate, treat and diagnose patients in remote locations (Nagy, 2006). Images captured by cameras can be relayed synchronously in either real-time or asynchronously using a store and forward (i.e., archive approach).

In Canada, the majority of telehealth service delivery takes place using secure broadband or Internet Protocol (IP)-based networks. In most provinces and territories in Canada, a provincial telehealth network usually works in conjunction with health care provider institutions to facilitate the use of these networks to deliver clinical services and/or educational content. With the exception of Ontario, in many jurisdictions in Canada, regional health authorities and telehealth networks share a similar governance structure. In Ontario, the situation is slightly different. That is because the health care provider institutions, telehealth network and telecommunications service provider do not share the same governance structure. That is, although all three of these organizations may be considered an extension of the Ontario Ministry of Health and Long Term Care, each has differing reporting relationships and funding mechanisms within the Ministry.

Most telehealth activity in Ontario takes place in real time (synchronously) over a secure broadband network called the Smart Systems for Health Agency (SSHA). The Ontario Telemedicine Network (OTN) is the provincial telehealth network in Ontario. The OTN is an independent, not-for-profit organization that is funded by the Government of Ontario (Ontario Telemedicine Network, 2008). Thanks to the efforts of the OTN and SSHA, the majority of Ontario's tertiary and quaternary health care provider institutions have adopted the synchronous or real-time model of telehealth. In other regions of Canada, telehealth networks and providers are using asynchronous or store and forward approaches to telehealth — primarily because it consumes less bandwidth. Less bandwidth eventually translates in to lower operating costs. This practice is common in the medical specialties of Radiology and Dermatology where images, for example, x-rays or photographs, are digitally stored and forwarded between health care providers (Chouinard, 2007). In rural and remote areas of Canada where the information technology infrastructure is less developed, both asynchronous and low bandwidth approaches to videoconferencing in real time are used — especially for the provision of home and community-based care. In fact, in many telehomecare projects in Canada, “POTs” or plain old

telephone service remains the only available option to deliver appropriate and timely levels of health care service. The common denominator between the synchronous higher bandwidth approach to telehealth and the asynchronous lower bandwidth one is that both technologies are aimed at increasing accessibility to health care information and services.

Confusion over Terminology

In many Canadian jurisdictions, confusion exists about what the term “telehealth” actually means. To many in Ontario, “telehealth” is the toll-free, confidential telephone service developed and run by the Ontario Ministry of Health and Long Term Care. Using this definition, “telehealth” is the telephone number that one dials to get advice or general health information from a Registered Nurse by phone. However, to others, including members of Ontario’s public and the health professions, “telehealth” may represent technology, educational videoconferencing, clinical services delivered through videoconferencing and/or health-related information on the World Wide Web. Still others see telehealth as non-institutionally based care delivered to patient’s homes using asynchronous and low bandwidth approaches to videoconferencing in real time. For many of Canada’s regulated health professionals other than physicians, a team approach to delivering care through videoconferencing technology is preferred over focusing on physicians alone.

In an attempt to clear up confusion about the meaning of the word “telehealth” and because videoconferencing in Ontario primarily involves physicians, both the Ontario Ministry of Health and Long Term Care and Ontario Telemedicine Network (OTN) recently mandated that delivery of health care services in real time through videoconferencing technology be referred to as “telemedicine” rather than “telehealth.” However, many non-physician members of interdisciplinary care teams in Ontario are opposed to this change. This is because the word “telemedicine” implies a physician-centric approach to health care delivery. Telehealth practitioners from outside the province have also voiced concern about the potential confusion caused by Ontario re-adopting the term “telemedicine.”

If the word “telehealth” has many different interpretations and meanings in Ontario, so too do the words “Telehealth” or “Telemedicine” Coordinator. For many, a Telehealth Coordinator in Ontario is any individual who coordinates videoconferences be they educational, administrative or clinical in nature. As such, the underlying assumption is that a Telehealth Coordinator’s job duties could range anywhere from scheduling patients, assisting physicians and transporting videoconferencing equipment

through to organizing educational videoconferences. For others, Telehealth Coordinators are nurses working in advance practice roles performing physical assessments on patients for specialist physicians located at distant sites. And still others view the Telehealth Coordinator as a technician responsible for the maintenance and troubleshooting of videoconferencing equipment and networks. Consequently, in Ontario and possibly other regions of Canada, the role of Telehealth Coordinator is poorly understood by not only the public, but also within nursing and the health care community. Research regarding professional roles for Telehealth Coordinators is minimal to non-existent.

Roles and Job Descriptions in Telehealth

Also included in the review was a search of unpublished and grey literature on telehealth. The Canadian Society of Telehealth (CST) is widely regarded as the national voice of telehealth in Canada. The Society's stated mission is to lead the transformation of health care through information and communication technology by providing a forum for advocacy, communication and sharing of resources among our communities of interest (Canadian Society of Telehealth, 2008). On its World Wide Web site, CST maintains an electronic discussion forum for Canada's Telehealth Coordinator Community of Practice (also known as the CST NTC SIG). There, 42 different job descriptions for Telehealth Coordinator were located. Several sample job descriptions appear in Appendix B. The documents varied from descriptions of entry level jobs for telehealth "technicians" requiring Grade 12 education through to job descriptions for professionals with advanced education and regulated health professional certification. Others specified training and experience in program planning, development and evaluation. Despite the significant differences in role, responsibilities and requisite education and experience, most of the job descriptions referred to the incumbent as a Telehealth Coordinator. One implication is that there is both a need and opportunity to more clearly articulate the emerging role of the Telehealth Coordinator at the entry, mid-level and advanced practice level.

Nurses, Work Satisfaction and the Nursing Shortage

More than 321,590 nurses work in our health care system, providing care to Canadians on a daily basis (Canadian Institute for Health Information, 2006). Nurses are the largest group of professionals working at the front lines of health care delivery. As such, they are the backbone of our health care delivery system. Yet, Canada is facing a crisis when it comes to nurses. There are not going to be

enough of them to meet the health needs of aging baby boomers. The average age of a Registered Nurse in Canada is 44.7 compared to 41 in 1994 (Canadian Nurses Association, 2007). The Canadian Nurse Association (CNA) is projecting a shortage of 78,000 Registered Nurses by 2011 and 113,000 by 2016. This trend represents a simultaneous aging and associated 40% decrease in the nursing work force (Canadian Nurses Association, 2007). Of note, this problem was documented eight years ago when federal, provincial and territorial Ministers of Health first directed their ministries to address the problem through creation of the Canadian Nursing Advisory Committee (CNAC). At a time when the largest segment of our population is aging and the prevalence and incidence of chronic diseases is rapidly increasing, this situation is already creating challenges for Canada's health care system.

Simultaneous with the shortage of health care professional is a shortage of health care professionals with training and experience in health informatics. In 2004, Canada Health Infoway estimated that "there will be a need for an additional 1,500-2,000 technology, health informatics and change management personnel until 2010 as Infoway's investments are realized. Similarly, the American Medical Informatics Association (AMIA) estimated the need to train 10,000 health professionals in applied health informatics by 2010 to lead and facilitate EHR implementation efforts in the United States (Lau 2006)."

The National Survey of the Work and Health of Nurses (NSWHN) is a comprehensive survey done jointly by Statistics Canada, the Canadian Institute for Health Information and Health Canada. In this survey, 19,000 of Canada's nurses were asked about their working conditions, on-the-job challenges, mental and physical well-being on a regular basis. The December release of this report told the story of a worn-down work force (Canadian Institute for Health Information, 2006).

In the wake of the NSWHN report and the realization that nurses play a vital role in the provision of health care services, there has been a renewed call for unions, employers and governments to work together to create supportive environments for nurses. Several governmental and professional organizations in Canada are now developing ways to promote and recognize healthy workplaces in the health sector (Health Council of Canada, 2005). Through new initiatives like *Healthy Work Environments Best Practice Guidelines*, professional nursing organizations like the Registered Nurses Association of Ontario (RNAO) are helping put recommendations to improve the working lives of nurses into action (Registered Nurses Association of Ontario, 2007).

Since 1999, the Canadian Council on Health Services Accreditation (CCHSA) has had standards relating to workplace quality (Canadian Council on Health Services Accreditation, 2007). Researchers, with the assistance of organizations like the Canadian Health Service Research Foundation (CHSRF), continue studying organizational factors that contribute to burnout in the nursing profession and possible solutions to this challenge. Several other professional organizations and think tanks have issued a call for more public reporting of measurable results from healthy workplace initiatives. At the same time, there is a call for development of structures and processes that empower nurses and allow them to exercise more control over the scope and standards of their practice.

In addition the quality of work life issues that they face, nurses are also being asked by governments and provider institutions to take on more of the leadership and workload relating to new projects and initiatives in e-Health including telehealth. With 144,000 Registered Nurses (RNs) and Registered Practical Nurses (RPNs), the province of Ontario constitutes largest provincial nursing workforce in Canada (Ontario Ministry of Health and Long-Term Care, 1999). There is strong anecdotal evidence to suggest that a significant percentage of clinical telehealth consultations in Ontario and quite possibly other regions in Canada are coordinated by nurses followed by other regulated health professionals. This makes these individuals key players in sustainable videoconferencing technology implementation and use. Despite this fact, there is a dearth of research on the impact of videoconferencing technology on the professional practice of nurses and other health care professionals.

The literature shows that effective technology transfer often requires adaptation of work practices, invention, reorientation, and organizational change far beyond what was initially expected (Southton, Sauer, & Dampney, 1997). Several authors have noted that the organizational problems resulting from the implementation of telehealth often includes changes in the division of work, more centralization of specialized care, more centralization of 24-hour services, and more difficult management of hospitals (Aas, 2007; Southton et al., 1997). One needs only extend these impacts from the level of an organization to the role of the practicing nurse or other regulated health professional to understand the importance of conducting more research in this area.

The College of Nurses of Ontario is the organization that regulates nursing in the province of Ontario. Although the College has developed a set of guidelines for TelePractice, (College of Nurses of Ontario, 2003) the landscape of telehealth is changing so quickly in Ontario that the guidelines provide

only limited advice. Plus, as discussed earlier, because the word telehealth has different interpretations in Ontario, even at this level confusion remains about telehealth practice as it relates to the dispensing of advice using the telephone versus delivery of health care services using videoconferencing technology.

Simultaneously, while the National Initiative for Telehealth (NIFTE) Guidelines (2003) (Richard Ivey Foundation, 2003) and more recently, the Canadian Council of Health Services Accreditation's (CCHSA's) supplementary criteria for telehealth accreditation (Canadian Council on Health Services Accreditation, 2007) provide excellent advice for telehealth networks and health care provider organizations on implementation and use of videoconferencing technology. Unfortunately, neither provides specific advice for the practicing nurse on their evolving role in relation to telehealth.

Equally important, the practice of telehealth may be creating potential new liabilities for not only physicians but all regulated health professionals including nurses. Regulated health professionals (e.g., nurses, physiotherapists, occupational therapists, dieticians etc.) are expected to comply with certain standards of professional practice. These standards are set out in various statutes and legislation in Canada. At the 2007 annual general meeting of the Canadian Society of Telehealth, at least one expert in a panel discussion hinted that although telehealth has been in use for 25 years, new forms of liability and layers of risk could be lurking around its virtual corners. Delivery of health care mediated by a technology potentially widens the net of liability beyond a single patient and a single caregiver to many individuals.

In addition, new information technologies like videoconferencing raise the potential scale of problems should they occur, for example, privacy breaches. This raises several questions for nurses and other regulated health professionals in relation to health care transformation using telehealth, for example: Does telehealth constitute a specialty practice in nursing? Does telehealth constitute a specialty practice in any of the other regulated health professions? If yes, is there a need for certification of nurses and other regulated health professionals working in telehealth? Are the current standards and guidelines good enough for certification or do new ones need to be developed? If telehealth does not constitute a specialty practice in nursing or other health disciplines, then where to from here?

The implication of this is that more research is required if we are to understand the impact of this technology not only on the roles but also the liability of all regulated health care professionals including nurses.

Telehealth, Care Delivery and Unregulated Workers

The term “unregulated health worker” describes the variety of health-care providers who are not licensed or regulated by any professional governmental or regulatory body. These workers assist health professionals in providing care to patients and clients in various settings (acute, long-term, rehabilitation and home or community care) and regions across Canada (Canadian Nurses Association, 2008). The increasing reliance on unlicensed and/or unregulated health workers (UHWs) in all areas of health care is related to an increase need to manage health costs, a shortage of regulated health personnel and the changing approaches to health care delivery necessary to meet the needs of an aging population (Canadian Nurses Association, 2008).” Despite this shortage and the increasingly important role that these individuals will play in future health care delivery, there is a dearth of information in the published literature documenting the impact of videoconferencing technology on this group.

Theoretical Framework

Theory or the development of a conceptual framework based on a review of literature is essential to define the unit of analysis (Chouinard, 2007). When planning this study two key points were considered. First, to support the growth of telehealth in Canada, it is important to expand our understanding of the demographics and role that individuals at the front line of health care play in the implementation and use of videoconferencing technology. Second, if videoconferencing technology is to be used by governments and other organizations to successfully transform health care, then a broad understanding of not only the demographics and role but also the role stress of the individuals involved in its successful implementation and use is vital.

Role Theory

The theoretical underpinning for this exploratory research is role theory. Additionally, because a link is often made in both Canada and the United States between the professional practice of Telehealth Coordinators and a sub-specialty in nursing known as Nursing Informatics, this section will

include a general discussion of Nursing Informatics, its associated tenets and potential relevance to the Telehealth Coordinator community of practice in Canada.

There is a significant academic literature on role theory. A systematic review of the literature on role theory is beyond the purview of this research and counter to the study's which is to better understand the demographics and role of Canadian Telehealth Coordinators. That said, in order to understand the need for this research, some of role theory's theoretical underpinnings require discussion.

The word "role" first appeared in the 1920's and is associated with a part in a play or drama (Schlachta-Fairchild, 2000). Whitten (1964) defined role as behaviour by an individual who occupies a position. Role theory is in fact a collection of concepts and hypotheses (Schlachta-Fairchild, 2000) mainly sociological in nature, positing that human behaviour is guided by expectations held both by the individual and by other people. The expectations correspond to different roles individuals perform or enact in their daily lives, for example, mother, friend, professional, etc. Hardy and Conway (1988) posited that role arises from "position specific norms that identify the attitudes, behaviours and cognitions required and anticipated for a person in a specific role." (as cited in Schlachta-Fairchild, 2000; p. 14).

Role Theory includes the following propositions:

1. People spend much of their lives participating as members of groups and organizations.
2. Within these groups, people occupy distinct positions.
3. Each of these positions entails a role, which is a set of functions performed by the person for the group.
4. Groups often formalize role expectations as norms or even codified rules, which include what rewards will result when roles are successfully performed and what punishments will result when roles are not successfully performed.
5. Individuals usually carry out their roles and perform in accordance with prevailing norms; in other words, role theory assumes that people are primarily conformists who try to live up to the norms that accompany their roles.
6. Group members check each individual's performance to determine whether it conforms with the norms; the anticipation that others will apply sanctions ensures role performance (Biddle, 1986).

In the behavioural sciences, role theory has been studied from two perspectives — structuralism and the symbolic interactionist perspective. In structuralism, the individual is viewed as having very little influence over the evolution and development of their role in society. Rather, society is viewed as the dominant force shaping or determining the role that an individual plays in that society. From this perspective, individuals are seen as having very little power over their destiny.

Symbolic-interactionists take a less deterministic view of human development. That is, role is seen as evolving from a reciprocal interaction of the individual with themselves and others in their society. Language, symbols and gestures are the mediators of the interaction between an individual and society. In this perspective, the individual has more influence over their trajectory in society. Equally important, the evolution of their role may help further shape society. The symbolic-interactionist perspective is a more dynamic view of individuals and society as systems rather than static entities each influencing the other until cause and effect become almost inextricably linked.

Hardy and Conway (1988) defined role stress as: "... a condition in which role obligations are vague, irritating, difficult, conflicting or impossible to meet." (as cited in Schlachta-Fairchild, 2000, p. 14). Because it usually arises from external obligations and expectations, most researchers view role stress as an entity that exists outside individuals. Because of this, the individual's subjective internalized experience of role stress is thought to manifest itself in the form of role strain as opposed to role stress. Schlachta-Fairchild (2000) argues that the two terms – role strain and role stress, have come to be synonymous and are sometime used interchangeably. Again, the only difference between the two is that role stress refers to stimuli external to the individual whereas role strain refers to an individual's internal perceived or felt experience of that external stress. This definition of role strain is used in this research.

As depicted in Figure 1, role strain in turn may consist of one or more of the following three components: role conflict, role ambiguity and role overload. Hardy and Conway (1988) offer the following definition of role conflict and role ambiguity: "Role conflict is the occurrence of two or more sets of pressures such that compliance with one role would make it more difficult to comply with another role. Role ambiguity is the lack of clear, consistent and accessible role information." (as cited in Schlachta-Fairchild, 2000, p. 20). At least one author describes role overload in terms of conflict

between one's personal life and their work life. This form of work–life conflict occurs when the total demands on time and energy associated with the prescribed activities of multiple roles are too great to perform the roles adequately or comfortably (Higgins, Duxbury, & Lyons, 2006). Because the role is still new and oft times does not constitute a full-time position, many of Canada's Telehealth Coordinators are required to “wear several hats” at work. That is, they must switch back and forth between a position or role in another department and their role as a Telehealth Coordinator. For the purpose of this research, Higgins definition of role overload will be adapted to take into account the multiple roles that Telehealth Coordinators may be required to play between their full-time or part-time job and coordinating telehealth activity. Family or personal life issues will not be considered in this study.

Role Strain

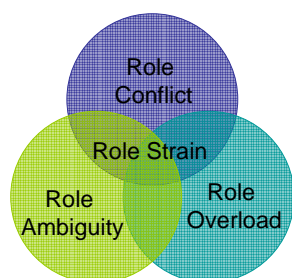


Figure 1: Components of Role Strain

Schlachta-Fairchild (2000) and others have used the symbolic-interactionist perspective of role theory and tenets of role strain to guide research on the evolving role of nurses and other health care professionals in relation to technology. To build on this work, the same tenets and perspective were adopted as the conceptual framework for this exploratory study.

An important tacit assumption in role theory and other studies that use role theory as their theoretical framework is that role strain, rather than being abnormal or undesirable, can in fact be a positive and motivating force for individuals and ultimately society. That is, individuals actually seek out challenges in an effort to gain mastery over their environment. This same assumption is made here.

One gap identified in the literature is that of role overload and the dynamic that it plays in role strain – especially in relation to the introduction of new technologies in health care. Hecht (2001) argued that “The concepts of role conflict and role overload have been used, often interchangeably, to interpret sources of gender differences in role-related mental health among men and women who combine the roles of spouse, parent, and worker. However, these types of chronic role strains actually represent two distinct concepts.” Quite often, health care professionals involved with both patients and technology simultaneously are required by their employers to perform several roles. For example, the intensive care nurse who takes care of patients, families and their caregivers while simultaneously interacting and often troubleshooting highly sophisticated patient monitoring systems and equipment. For the purpose of this study, role overload has been added to role conflict and role ambiguity as a third component of role strain. Hence, this exploratory study will examine not only role conflict and role ambiguity but also role overload in relation to the evolving role of the Telehealth Coordinator.

In both Canada and the United States, a link is often made between the work of nurses practicing as Telehealth Coordinators and the sub-specialty practice of Nursing Informatics. In the next section, the potential relevance of Nursing Informatics to the role of Telehealth Coordinators will be discussed. The discussion will include issues relating to entry to practice and ongoing professional development for nurses employed as Telehealth Coordinators.

Nursing Informatics

The sub-specialty practice of Nursing Informatics and its associated tenets were used as an additional reference point for development of this research – especially the data collection tools. The American Nurses Association (ANA) defines Nursing Informatics as:

“A specialty that integrates nursing science, computer science and information science to manage and communicate data, information, knowledge and wisdom in nursing practice. Nursing Informatics facilitates the integration of data, information and knowledge to support patients, nurses and other

providers in their decision-making in all roles and settings. This support is accomplished through the use of information structures, information processes and information technology.” (American Nurses Association, 2008, p.1).

According to the ANA, the goal of Nursing Informatics is to improve the health of populations, communities, families and individuals by optimizing information management and communication. Nursing Informatics exists as a recognized component of both the broad field of health care informatics and as a subspecialty within nursing (American Nurses Association, 2008). According to the ANA, “There are core components of informatics knowledge and skills that underpin all informatics specialties such as the use of technology, computer literacy and data management structures. Similarly, there are core components unique to each discipline such as their taxonomy.” (American Nurses Association, 2008, p. 44) Under the ANA definition, what distinguishes nurse informaticians from other informaticians is their knowledge of nursing content and process and the application of that knowledge to support patient care within the context of the nursing process.

Similarly, the emphasis on informatics concepts, tools and methods to facilitate nursing practice is what distinguishes Nursing Informatics from other specialties in nursing. That said, the ANA definition does not rely on technology to define Nursing Informatics — rather technology supports it.

Tenets of Nursing Informatics

The ANA describes eight tenets for Nursing Informatics practice:

1. “Nursing informatics is a distinct area of specialty practice within nursing. It has a unique body of knowledge, formal preparation within the specialty, and identifiable techniques and methods.
2. Nursing informatics includes both a clinical practice and non clinical area of practice
3. Nursing informatics supports the efforts of nurses to improve the quality of care and the welfare of the health consumer. Information or informatics methods alone do not improve patient care; rather, this information is used by clinicians and managers to effect improvements in care, information management and patient outcomes.
4. Although concerned with information technology, nursing informatics focuses on delivering the right information to the right person at the right time.

5. Human factors, human–computer interaction, ergonomics, and usability concepts are interwoven throughout the practice of NI.
6. Nursing Informatics’ key concerns include ensuring the confidentiality and security of health care data and information and advocating privacy.
7. Nursing Informatics promotes innovative emerging and established information technologies
8. Nursing Informatics collaborates with and is closely linked to other health-related informatics specialties.” (American Nurses Association, 2008, p.122).

The ANA distinguishes between the informatics nurse (IN) and informatics nurse specialist (INS). The term “IN” refers to the nurse who has no formal preparation in informatics but has an interest and/or experience working in the area. In contrast, the term INS refers to an RN with advanced, graduate education in Nursing Informatics or a related field such as health informatics, biomedical informatics or information management. Likewise, the ANA differentiates between nurse informaticians performing a clinical support role and those fulfilling a direct clinical practice role. Nursing Informatics is a discipline primarily fulfilling a clinical support role, as opposed to a direct clinical practice role. The ANA views telehealth as primarily a clinical practice role, with technical aspects required in order to execute delivery of care, but not as the focus. However, even the role of clinical Telehealth Coordinator can have a variety of interpretations and descriptions that resemble those of a clinical support as opposed to clinical practice role.

The ANA asserts that the scope of Nursing Informatics should be based on scope of nursing practice and nursing science as a discipline — not technology. Hence, the ANA has organized its standards of practice for the INS using a general problem-solving framework that resembles the familiar nursing meta-process of assessment, diagnosis, identification of outcomes, planning, implementation and evaluation. In the ANA model, the INS uses a structured problem solving methodology to identify and clarify issues and select, develop, implement and evaluate informatics solutions. Under this framework, the INS uses similar methodologies to inform nursing practice and practice involving technology.

The overarching standards of practice for Nursing Informatics as defined by the ANA are as follows:

“The INS:

1. Incorporates theories, principles, and concepts from appropriate sciences into informatics practice. Examples of theories could include information, systems, and change theories. Principles and concepts could include project management, implementation methods, workflow analyses, with process redesigns, organizational culture, or database structures.
2. Integrates ergonomics and human–computer interaction (HCI) principles into informatics solution design, development, selection, implementation, and evaluation.
3. Systematically determines the social, legal, regulatory and ethical impact of an informatics solution within nursing and health care.” (American Nurses Association, 2008. p. 66).

Many nurses who work in specialized areas such as intensive care, oncology or palliative care have additional education and certification beyond their basic undergraduate education. Unfortunately, currently there is no specialist certification available for Canadian nurses performing the work of a Telehealth Coordinator. This is unfortunate because many nurses performing the work of Telehealth Coordinators consider themselves to be “Nurse Informaticians” performing an expanded or advanced role in telehealth.

As a specialty certificate in nursing, Nursing Informatics holds great potential to help guide and advance the practice and status of Canada’s nursing professionals who are also functioning as Telehealth Coordinators. Given the fact that there currently, there is no such form of specialization for Telehealth Coordinators in Canada who are nurses, the American Nurses Association (ANA) definition, scope, standards and competencies for Nursing Informatics was used as the additional reference point for development of this research.

Summary

Given the rapid rise in the use of videoconferencing technology to make care more accessible and the fact that not only regulated health professionals but also unregulated workers are key to telehealth's success, these imbalances must be addressed. Otherwise, the Telehealth Coordinator community of practice in Canada will remain ill-defined and without a cohesive set of standards and scope of practice. In addition to being poorly understood, the Telehealth Coordinator work force will remain poorly utilized in health care provider organizations. For example, rather than playing roles related to patient care, Telehealth Coordinators who are also nurses may be called upon to perform administrative or technical roles, for example, organizing administrative or educational videoconferences. Clearly, this is not a wise use of an increasingly scarce human resource. In light of how nurses feel about their work, the current shortage of nurses and other regulated health professionals (especially those with training and expertise in health informatics) and growing demands arising from an aging population, more research on the role strain that Telehealth Coordinators experience in relation to videoconferencing technology implementation and use will be beneficial. Through gaps identified in the literature, the need for this research is evident. As telehealth use continues expanding rapidly in Canada, its impact on not only patients but also Telehealth Coordinators will expand meriting further study.

Research Questions

A growing number of Canadian nurses, regulated health care professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians etc.) and non-regulated workers are being called upon by health care provider institutions and telehealth networks to function in a new role. That is, the role of a Telehealth Coordinator. The rasion d'etre of this new role is to increase the implementation and use of videoconferencing technology in mainstream health care.

This study's research questions arose from the author's personal and professional experience as a Telehealth Coordinator and regulated health professional, the literature review and the questions raised in the significance section of this paper. Namely, the study was conducted to answer the following questions:

1. What are the reported demographics of individuals called Telehealth Coordinators in Canada? What role(s) are nurses playing as Telehealth Coordinators? What role(s) are regulated health professionals other than nurses and non-regulated workers playing as Telehealth Coordinators? What are their challenges and concerns? Do Telehealth Coordinators perceive any significant role strain in relation to videoconferencing technology implementation and use?
2. For regulated health professionals (e.g., nurses, physiotherapists, dieticians etc.) working as Telehealth Coordinators, what are their perceptions of how videoconferencing technology is affecting their standards and scope of professional practice — positively or negatively?

Chapter 3 - Materials and Methods

Introduction

Methodological considerations are discussed in this chapter. “Qualitative research is multi-method in focus, involving an interpretive naturalistic approach to its subjective matter.” (Denzin & Lincoln, 1994, p.2). “The research strategy [should be] driven by the nature of the research questions.” (Morse & Field, 1998, p. 15). Because this study was an attempt to capture data on the ways that specific actors understand, take action and otherwise manage their professional role(s), a qualitative exploratory design was chosen. That is, the design was exploratory and the methods used were qualitative. The main tasks were to create a description of the Telehealth Coordinator population in Canada and then explicate their role, perceptions and experiences about telehealth practice. To create the population description, survey data were collected and tabulated in the form of frequencies. To detect patterns and commonalities within the respondents’ reported experience of telehealth – both positive and negative, survey and interview data in the form of narratives were collected and analyzed. Data collected in the survey was triangulated with data collected in the interviews.

Online Survey

Development

To support data collection, an online survey was developed and made available on the Internet using Survey Monkey software. Initially, it was thought that an existing tool could be located and used in this research. However, following an exhaustive search of both the health sciences and business literature, and given the stated goals of the study, a suitable instrument was not found. For development of the online survey, a full search of CINAHL and PubMed was conducted in the area of telehealth and Nursing Informatics. The literature review included searching the published evidence in the area of role theory, Nursing Informatics scope and standards of practice. The ANA’s scope and standards of practice for nurses (American Nurses Association, 2008) and a TeleNursing Role Survey (Schlachta-Fairchild, 2000) were used as reference points for development of an inventory of potential survey questions. In addition to the American Nurses Associations (ANA’s) Scope and Standards of

Practice for Nursing Informatics and the Schlachta-Fairchild survey (2000), published reports and systematic reviews were used to inform question development. Prior to developing the survey, key informant interviews were conducted with three opinion leaders in nursing and e-Health. These opinion leaders were asked to describe what issues they believed had the highest relevance to nurses practicing as Telehealth Coordinators. In addition, recorded proceedings from the CST's National Telehealth Coordinators Special Interest Group meeting of 2007 were mined for insights and issues of relevance to future development of the Telehealth Coordinator role. Following these activities, an inventory of possible questions was generated. Using an iterative approach, potential questions from the inventory were mapped to an associated research question, thematic cluster/concept and sub-group (e.g., regulated professional, non-regulated worker etc). The final survey consisted of two sections.

Part 1: Telehealth Coordinator Roles

In Part 1 of the online survey, the goal was to acquire information from the Telehealth Coordinators on the roles that they were playing in relation to videoconferencing implementation and use and how they were dividing their time among various activities. Major themes for the first part of the survey were the role(s) that Telehealth Coordinators play in organizations to support: 1. care delivery 2. teaching and learning 3. videoconferencing technology and 4. short and long term planning and development. In addition, the first half of the survey was devoted to obtaining information from the Telehealth Coordinators about any challenges (i.e., role strain) that they may be experiencing in relation to their role(s). In this section, the Telehealth Coordinators were asked to respond to 14 items consisting of both closed and open-ended questions. These questions asked about issues, barriers and challenges that the Telehealth Coordinators may be facing in their daily practice.

Another important goal of Part 1 was to hear from the Telehealth Coordinators regarding any perceived challenges and sources of role strain that they may be experiencing. In the TeleNursing Role Study (Schlachta-Fairchild, 2000), the author cited further investigation on whether autonomy is the main cause or incentive for nurses to seek a telenursing position as a worthy future research project. To incorporate certain aspects of this research in to this study, the online survey included both open and closed questions on sources of satisfaction and dissatisfaction in the Telehealth Coordinators work lives as well as their views on more controversial issues, for example, whether Telehealth Coordinators need to be regulated health professionals. Other questions were aimed at learning whether the

Telehealth Coordinators were performing mainly operational roles at the front lines of health care delivery or whether they had other managerial type responsibilities, for example, hiring, strategic planning etc. In several questions, positive and negative statements were mixed and 5-point Likert scales were provided for the response.

Part 2: Demographics

In Part 2 of the online survey, respondents were asked to respond to 19 items concerning demographics. At the end of Part 2, several questions were asked to verify that the respondent met the inclusion criteria for the study. The only inclusion criterion was that the respondent had to be a Telehealth Coordinator practicing in a Canadian province or territory. As a final question, participants were asked if they would like to be contacted for a telephone interview. They indicated their consent by providing an e-mail address or telephone number. After submitting the survey, participants received a thank you message on their screen. The complete survey appears in Appendix D.

Pre-Testing

Three drafts of the online survey were reviewed by all members of the supervisory committee. Following that, the survey was then pre-tested with three external individuals. These individuals were known to the researcher but employed at external health care provider organizations. Two of the three also had research backgrounds. For the pre-testing these individuals were asked to provide feedback on the constructs, content, structure, readability, clarity, length and format of the survey. From the pre-testing it was determined that the survey was too long and that several questions required revision. The questions were revised and the survey was shortened. For the shortened version, it was estimated that the online survey would require approximately 20 minutes to complete. All individuals completed the same survey whether they were from the CST or OTN sample.

Sample Selection

A purposive sample was used for the online survey. Berg (2004) argues that in purposive sampling, a researcher uses specialized knowledge or expertise about a group to recruit participants. The sample for this study was identified through the knowledge and experience of the researcher as a practicing nurse and Telehealth Coordinator. Initially, the sample included only Registered Nurses (RNs), Registered Practical Nurses (RPNs) and Licensed Practice Nurses (LPNs) practicing in Ontario involved with the implementation and use of telehealth. However, to obtain a more representative sample from the target population, recruitment was expanded to include regulated health professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians) and unregulated workers and others professionals (e.g., Information Technology personnel, secretaries, etc) involved with telehealth implementation and use in Ontario.

In the early stages of this research, it was anticipated that respondents to the survey might include others not fitting the strict definition (see Glossary in Appendix A) of a Telehealth Coordinator. These individuals could still be nurses, regulated health professionals other than nurses (e.g., physiotherapists) or other types of personnel, for example, technicians. Likewise, it was anticipated that participants in the study without the formal job title of Telehealth Coordinator but still carrying telehealth-related responsibilities may participate. That is, some of the respondents who were Telehealth Coordinators could in fact have primary responsibilities and job titles in areas others than telehealth, for example, nurse educator, clinical nurse specialist, advanced practice nurse or clinical manager. In the initial contact, participants were asked to complete the online survey within one week.

Initially, the Ontario Telemedicine Network (OTN) was approached to assist with recruitment of study participants. The OTN is a voluntary non-profit organization funded by the province of Ontario. The OTN supports the use of videoconferencing technology to deliver clinical care, professional education and health-related administrative services at more than 500 urban and rural sites across the province (Ontario Telemedicine Network, 2008). The OTN maintains a list of Telehealth Coordinators and this list is believed to be highly representative of individuals involved with the implementation and use of telehealth in Ontario's health care provider organizations. The list includes regulated health care professionals, for example, nurses and physiotherapists as well as non-regulated workers and other types of personnel involved in coordinating Ontario's telehealth activity.

Immediately prior to data collection in February 2008, the researcher was advised by the OTN that because of commitments to the Ontario Ministry of Health, that data collection for this survey would have to be delayed. In April 2008, the OTN sent an initial invitation to participate in the survey via its electronic newsletter for Telehealth Coordinators called OTN Update. A reminder was sent out in May 2008. In addition, the researcher posted an invitation to participate in OTN's Telemedicine Coordinator Community of Practice electronic discussion forum. Embedded hyperlinks to the survey appeared with the invitation. The estimated circulation for the newsletter was approximately 325 individuals. Unfortunately, the response rate to the invitations was low 4% (n = 13). One possible explanation for the low response rate was that this survey was competing with other survey research being conducted simultaneously the OTN for the Ontario Ministry of Health. In response, this study was then broadened to become a national survey. The Canadian Society of Telehealth (CST) was approached to assist in recruitment of participants. The CST is a national body that assumes a leadership role in the transformation of health and healthcare delivery through Telehealth by providing a forum for advocacy, communication and sharing of resources among communities of interest (Canadian Society of Telehealth, 2008). Through its National Telehealth Coordinator (NTC) Special Interest Group (SIG), the CST extended invitations to Telehealth Coordinators practicing in various regions across Canada to participate in the survey. Targeted e-mails with embedded hyperlinks to the survey were initially sent to 95 jurisdictional leads. From there, the jurisdictional leads were encouraged to send out the invitations to participate to others. This is known as snowball sampling technique. Kish (1965) described snowball sampling as a technique for building up a list or a sample of a special population by using an initial set of its members as informants (as cited in Schlachta-Fairchild, 2000, p.44). In addition, the researcher posted an invitation to participate in the CST's National Telehealth Coordinator Community of Practice electronic discussion forum.

In the early stage of this research, it was anticipated that the data collection phase would last approximately one month (April – May 2008). With the delays, the actual data collection phase lasted four months (June – August 2008). There was also an overlap in data collection between the OTN and CST samples resulting in two separate databases having to be created in Survey Monkey. Merging the information from the two separate databases caused an additional delay for the telephone interviews, analysis and reporting phases. Due to these delays, the telephone interviews had to be re-scheduled during the summer months, which added a further delay.

Data Analysis

Based on information provided by the OTN and CST, the approximate number of individuals who received an invitation to participate in the online survey was calculated. All collected data were stored in both spreadsheet and relational database format. To facilitate analysis and reporting of the population demographics, data from the two Survey Monkey datasets (i.e., OTN and CST) were combined. Prior to combining the datasets it was anticipated that the CST NTC SIG group would be more heterogeneous than the OTN group. This was based on the author's knowledge of the Ontario Telehealth Coordinator group. Descriptive statistics and frequency tables were then generated for the demographic variables using Excel and the Survey Monkey reporting tools. Because of privacy concerns expressed by participants in Nova Scotia about Survey Monkey, two surveys were completed manually. This data was then entered into Survey Monkey by the researcher.

A qualitative iterative strategy was adopted to analyse the results of both the online survey and telephone interview data based on methods proposed by Miles and Huberman (1994). Drawing on the thematic concepts and questions developed in the early stages of this research, (see Appendix H) the first step was to read, identify and condense the data to extract general impressions based on the themes. Reading and re-reading the survey and interview transcripts to become familiar with the data allowed similarities and differences in the Telehealth Coordinators reported experiences to emerge.

Outliers and disconfirming evidence of certain themes, for example, whether a Telehealth Coordinator needed to be a regulated health professional were also sought. To assess divergence and convergence between respondents on certain questions as well as to gain an overview of selected qualitative material, for example, whether the respondents felt that a Telehealth Coordinator needed to be a regulated health care professional, frequencies were generated using the Survey Monkey reporting tools. In a second step, the data was then sorted into categories. As new data emerged, the categories were refined until saturation occurred (i.e., until the categorization process no longer yielded new insights). An attempt was made to analyse the data within the framework of role strain. As the research progressed and using MS Word, the author highlighted text and created memos and field notes summarising findings and explanations. The highlighted text, field notes and memos were subsequently used to produce the qualitative results presented in Chapter 4.

Telephone Interviews

Development of Interview Script

Under the guidance of the principal supervisor for this study, sixteen demographic and qualitative questions from the online survey were selected and asked again by the researcher in the telephone interviews. To ensure open-ended discussion, the 5-point Likert scale was used for only Question 3 and 17 from the online survey. To identify issues related to role conflict and major sources of work satisfaction and dissatisfaction, several new questions were developed and asked. Responses were recorded using paper and pencil. Immediately after, the responses were typed in to a word processing file. Several attempts were made to record the telephone interviews however the audio quality was so poor that the audiotapes could not be used. The telephone interview questions and script appears in the Appendix G.

Sample Selection

The sample for invitation to participate in the key informant interviews were all individuals who had completed the online survey and indicated in the last question that they would like to be contacted for a telephone interview. The participants indicated their consent by answering “Yes” and providing contact information.

Quality Checks

To ensure consistency in data collection, all interviewees were asked the same questions. The interviewer, who was also the researcher, recorded written responses using paper and pencil. The responses were then typed into a word processing file and sent to each respondent for review within 24 – 48 hours of completing the interview. Respondents were asked if they would like to receive the transcript by confidential fax or e-mail. All respondents were requested to check the transcript for accuracy but were also advised that the original substantive response that they provided in the telephone interview could not be changed. This review serves as a mechanism to ensure accuracy in data collection. During the study, all e-mail correspondence with participants was kept on a secure server.

Field Notes

During this research, the author kept field notes documenting the rationale for methodological choices and any insights that arose during development, data collection and analysis. To ensure rigor, the author met with supervisory committee members during critical milestones in research development, data collection and analysis. The original research proposal was reviewed several times by the Supervisory committee and final sign off was obtained in writing. Regular progress reports and updates were also provided to the supervisory committee by e-mail. The principal supervisor for this research was contacted more frequently by both e-mail and phone for advice on how to deal with methodological issues and challenges. The principal supervisor was also offered access to the dataset. Records of these discussions were kept in the form of e-mails and meeting minutes.

Human Subjects Protection

An application for Ethics Approval for Human Participant Research was submitted in September 2007 to the University of Victoria Human Ethics Review Board. The application was approved in December 2007 and a copy of the certificate of approval appears in Appendix C. A request to modify the study to include participants from the Canadian Society of Telehealth was submitted and approved by the University of Victoria Human Ethics Review Board in May 2008.

There were no known risks to the participants and researcher. Participation in this study was voluntary, and participants had the right to withdraw from the study at any time. When subjects decided to participate in the study they would indicate their consent by accessing the survey using a password supplied by the researcher. By completing the survey, consent to participate in the study was considered as implied. Participants were not required to complete the online survey. The invitation to participate (Appendix D) outlined the participant's right to withdraw. Participants in the online survey were not identifiable. The researcher treated data confidentially and surveys were submitted anonymously. No telephone interviews were recorded without consent of the participant. Where necessary, the researcher rolled the participant's information into a broader category to protect identities. All paper-based records were kept in a locked filing cabinet. Computer-based records, were stored on the researcher's computer and password protected. Participants in the telephone interviews were offered the opportunity to review their transcript by confidential fax if they preferred. All e-mail

correspondence was kept on a secure server. Original surveys along with any backups, will be destroyed (shredded, erased) within two-years of project end. Researcher field notes were used as a basis for future enquiry, but did not contain references to specific individuals.

Chapter 4 - Results

Introduction

A growing number of Canada's nurses, regulated health care professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians etc.) and non-regulated workers are being called upon by health care provider organizations and telehealth networks to function in a new role — that is, the role of a Telehealth Coordinator. The *raison d'être* of this new role is to increase the implementation and use of videoconferencing technology in mainstream health care.

Using role theory as a theoretical backdrop and the sub-specialty practice of Nursing Informatics as a reference point, a qualitative exploratory study was conducted. A survey developed for this research provides the framework for presentation of the results. In this chapter, self-reported information from Telehealth Coordinators concerning their demographics, development of their role(s) and associated expectations and challenges in telehealth implementation and use is presented in detail. To facilitate analysis and discussion, some of the qualitative results are presented both descriptively and quantitatively using percentages. For some questions, the frequency of respondents skipping a question exceeded 10%. Although this may indicate that the role or issue did not apply to the Telehealth Coordinators current practice, it may also indicate that the respondent had no opinion or did not wish to reply.

Demographics – Online Survey

To create the population description, data for the Ontario Telemedicine Network (OTN) and Canadian Society of Telehealth (CST) National Telehealth Coordinators Special Interest Group (NTC SIG) samples were merged. Participants in this research were identified using purposive and snowball sampling technique as described in detail in the Methods and Materials section of Chapter 3. Because the response rate from the OTN's Telemedicine Coordinators group was low, 4% (n = 13) of a possible 365 responses, additional participants were recruited from the CST's National Telehealth Coordinator Special Interest Group (NTC SIG). Of this second sample, 36% (n = 34) of 95 individuals completed the survey. Table 1 depicts the population and sample used for the analysis.

Sample Source	Sample Description	Population	Frequency n	Percent
OTN	“Telemedicine” Coordinators	365	13	4%
CST * Snowball sampling	NTC SIG – “Telehealth” Coordinators	95	34	36 %

Table 1: Population and Sample

Of these two populations, 47 individuals completed the online survey - 13 from OTN and 34 from CST. Of the 47 individuals who completed the survey, 16 also participated in a telephone interview. As delineated in Table 2, a majority, 75% (n = 34) individuals who completed the online survey were female. An even higher percentage 15 (94%) of the 16 individuals who participated in the telephone survey were female. Nine individuals who completed the survey provided no response to the gender question

	Female n (%)	Male n (%)	No Response n (%)	Total n (%)
Online Survey	35 (75%)	3 (6%)	9 (19%)	47 (100 %)
Telephone Interview	15 (94%)	1 (6%)	-	16 (100 %)

Table 2: Gender of Sample – Online Survey and Telephone Interview

Figure 2 shows the respondents in the online survey by geographic region in Canada. At 27% (n = 13), Ontario had the greatest proportional representation in this sample. This comes as no surprise as the research originally targeted Telehealth Coordinators in Ontario. The initial purposive sample frame for Ontario (n = 365 individuals) may have also been larger than the snowball sample frame for the CST NTC SIG (n = 95 individuals). Ontario also has the largest and busiest telehealth network in Canada and therefore quite possibly, the highest number of Telehealth Coordinators.

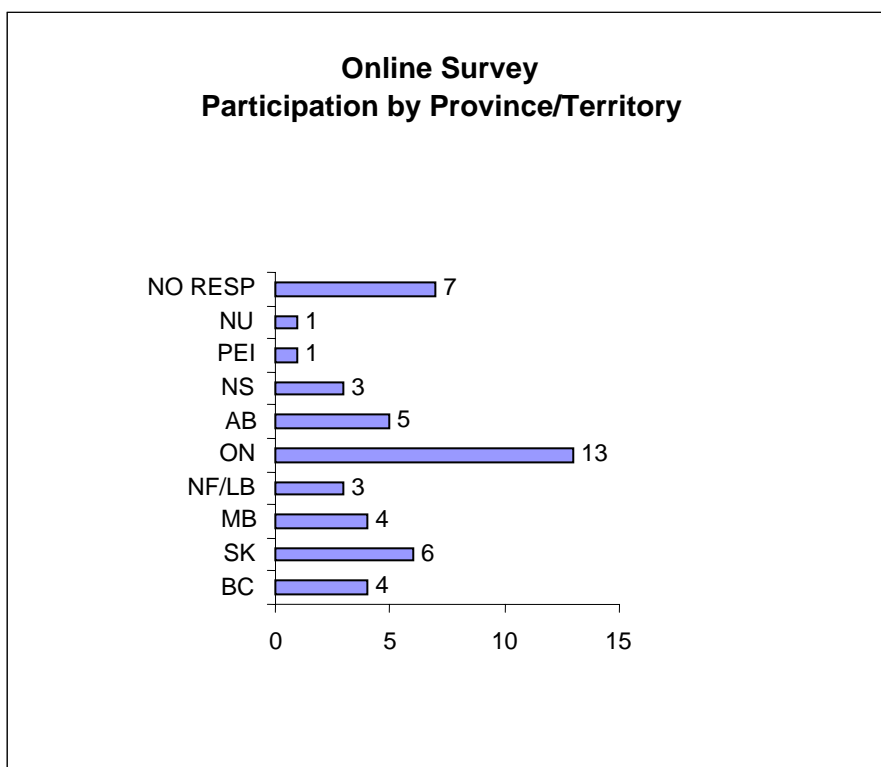


Figure 2: Online Survey - Participation by Province/Territory

As outlined in Table 3, a majority of individuals in the OTN group (69%) were nurses. When combined with the “Other regulated health professional” category, this percentage increases to 77% for the OTN group. The percentage of nurses in the OTN group (69%) was three times the percentage in the CST group (23%). The percentage of regulated health professionals (including nurses) in the OTN group (77%) was also higher than the CST group (44%). When the OTN and CST groups were combined, the largest single proportion of survey participants were nurses (36%) followed by non-regulated workers (34%).

However, when the categories of Nurse (i.e., RN, LPN etc) and “Other regulated health professional” in the combined groups are added together, the percentage of regulated health care professionals (53%) was greater than the number of non-regulated workers (34%). Thirteen percent of participants in the online survey declined to answer this question.

Profession Type	CST	CST	OTN	OTN	CST + OTN	CST + OTN
	Percent	Count	Percent	Count	Percent	Count
Nurse (i.e., RN, RPN, LPN, other)	23%	8	69%	9	36%	17
Other Regulated Health Care Professional	21%	7	8%	1	17%	8
Non-regulated worker	44%	15	8%	1	34%	16
Skipped Question	12%	4	15%	2	13%	6
Total	100%	34	100%	13	100 %	47

Table 3: Profession Type for Telehealth Coordinators

Table 4 shows the Telehealth Coordinators self-reported place of employment. It is important to note that 66% of respondents (n = 31) reported working in a health care provider organization rather than a provincial telehealth network or regional health authority. The majority of these cited their workplace as being a hospital setting (e.g., acute care, pediatric hospital etc). The Telehealth Coordinators reported working in hospitals with bed capacities that ranged from as low as 14 to as high as over 1000.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
What type of facility do you work in?		
Answer Options	Response Percent	Response Count
*** HOSPITAL ***	17 %	8
Acute Care Hospital	40 %	19
Complex Continuing Care/Rehabilitation Hospital	2 %	1
Other Hospital (e.g., Pediatric)	6 %	3
*** COMMUNITY ***		
Community Care Access Centre	4 %	2
Community Health Centre	4 %	2
*** LONG TERM CARE ***		
Long term care facility	2 %	1
*** OTHER ***		
Provincial Telehealth Network	13 %	6
College/university	2 %	1
Government/Association/Regulatory Body/Union	4 %	2
Not listed	4 %	2
	If you chose "OTHER - Not Listed", please describe your organization	0
	<i>answered question</i>	47
	<i>skipped question</i>	0

Table 4: Facility Type for Telehealth Coordinators

Table 5 shows that the Telehealth Coordinators belonged to a diversity of “home” departments in the organization where they worked. Information Technology/ Information Systems/Information Management were cited most often as a “home” department, 17% (n = 8) . This was followed by Telehealth/Telemedicine 13% (n = 6) and Ambulatory Care 9% (n = 4) respectively. Only 4% (n = 2) respondents reported belonging to a telehealth network. These results are correlated with the responses provided by the participants for type of employer. Fifteen percent (n = 7) respondents skipped this question.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA	
What is your "home" department?	
Answer Options	Response Count
	40
<i>answered question</i>	40
<i>skipped question</i>	7

Response Text	
Ambulatory Care (4)	Telehealth Network (2)
Acute Care	Regional Services Team
Site Management	Multi-Media Services
Health Educator - Community	Clinical Practice and Education Program
IS/IT/IM (8)	Neurocognitive care stream
Primary Care	ER
Telehealth/Telemedicine (6)	PACU
Health & Social Services	Organizational Development & Learning
Organizational Development	Education
Health Information Network	Regional Education, Faculty of Health Sciences
Assistive Technology Clinic	Surgical
Laboratory	Patient services

Table 5: Home Department of Telehealth Coordinators

As indicated in Table 6, the self-reported job titles for the Telehealth Coordinators were also diverse. At 15% (n = 7), the job title Telehealth Coordinator appeared most often followed by Telemedicine Coordinator at 9% (n = 4) and Regional Telehealth Coordinator 6% (n = 3). Thirteen percent (n = 6) respondents skipped this question.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA	
What is your formal job title?	
Answer Options	Response Count
	41
<i>answered question</i>	41
<i>skipped question</i>	6
Response Text	
Previously: Site TC Now: District Telehealth Coordinator Diploma RN Site Administrative Assistant Health Educator Clinical Telehealth Coordinator Regional Telehealth Coordinator (3) Computer Technician/Telehealth Coordinator Health Centre Coordinator Telehealth Technician Telehealth Program Coordinator Regional Clinical TeleStroke Coordinator Telehealth Manager Provincial Telehealth Scheduling Coordinator Registered Nurse Regional Stroke Tele Site Contact (Mainly job is "Operations Manager" at my organization) Lab Technologist/ Telehealth Coordinator	Telehealth Coordinator (7) Registered Dental Hygienist Project Manager - Telehealth Videoconferencing coordinator Manager, Multi-Media and Telehealth Services LPN/Telehealth Site Coordinator Telehealth Site Coordinator Manager Telemedicine Coordinator (4) Service nurse clinician-traumatic brain injury out-patient clinic Telehealth and Inservice Coordinator, Pharmacy Nursing Supervisor, ER Staff Nurse Registered Nurse Nurse Clinician Videoconference Coordinator Faculty of Health Sciences, Queen's University Educator

Table 6: Formal Job Title of Telehealth Coordinators

The job titles of the position(s) that the Telehealth Coordinators reported to varied a great deal again demonstrating diversity. From Table 7, it appears that the Telehealth Coordinators report to positions that span a variety of departments including information technology, clinical and administration.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA	
What is the title of the position that you report to?	
Answer Options	Response Count
	40
<i>answered question</i>	40
<i>skipped question</i>	7
Response Text	
Director of Nursing and Director of Telehealth Director of Emergency Services Site Manager, Director of Health Programs Director of Patient Services Director of Clinical Informatics and Applications Manager of Telecommunications Administrator of the hospital Public Health & Primary Care Coordinator East Director, Clinical Informatics and Applications Manager of Telehealth Director, Health Information Clinical Manager Director of Organizational Development Health Information Network Manager Regional Telehealth Manager Clinical Director Fluctuated over the years - 1. VP Clinical Support Services, 2. Director of EHealth Services, 3. VP Corporate Strategy & Development, CIO Lab Manager Regional Services Manager (3)	Telehealth Coordinator Regional Manager - Systems Management & Projects Provincial Telehealth Program Manager Telehealth Manager (2) Vice - President Management and Operations Nurse Manager (2) Manager - Ambulatory Care Medical Director of Clinical Informatics and Telehealth Manager-Clinical Practice and Education Clinical manager neurocognitive care stream Director of Patient Care Services Clinical Nurse Specialist - Research Corporate Organizational Development Manager CNO Director of Regional Education Director Surgical Program Professional Practice Leader

Table 7: Title of Position Telehealth Coordinator Reports To

As can be seen from Tables 8, 9, 10, ages of the participants in the sample varied as did their reported level of education and years of work experience. Table 8 shows the self-reported age ranges of participants in the online survey. The majority of participants 55% (n = 26) reported having an age range between 40 – 59 years. Only 25% reported being less than 40 years old. Table 9 shows that a majority of Telehealth Coordinators 43% (n = 20) reported having only 0 – 10 years of work experience.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
What is your approximate age?		
Answer Options	Response Percent	Response Count
20 – 29	6 %	3
30 – 39	19 %	9
40 – 49	25 %	12
50 – 59	30 %	14
Greater than 60	6 %	3
	<i>answered question</i>	41
	<i>skipped question</i>	6

Table 8: Ages of Telehealth Coordinators

Work Experience (Years)	Response Percent	Response
		Count
0 - 10	43%	20
10 - 20	15%	7
20 - 30	13%	6
> 30	17%	8
Skipped	13%	6
Total	100%	47

Table 9: Work Experience of Telehealth Coordinators

Table 10 shows the reported levels of education. From this table it is evident that a majority of participants in the online survey reported having either a college diploma or bachelor's degree. Thirteen percent (n = 6) reported having a Masters or Doctorate degree in either nursing or a non-nursing field. The high percentage of individuals in this sample reporting either a college or university education or both suggests the Telehealth Coordinator work force is well educated in both the health professions and other disciplines.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA			
Please state the highest level of education that you have completed within your profession or occupation:			
Answer Options	Education in Nursing	Non-Nursing Education	Response Count
Certificate	3	9	12
College Diploma	8	14	22
Bachelors Degree	4	10	14
Masters	2	3	5
Doctorate		1	1
Other		1	2
If you chose "Other Education", please describe that education			5
<i>answered question</i>			41
<i>skipped question</i>			6

Table 10: Reported Education Level of Telehealth Coordinators

NB – Some respondents reported having education in both a health and non-health discipline. Hence, the denominator may not total 47.

Table 11 shows the number and percentage of full-time workers relative to part-time workers that completed the online survey. For this study, part-time work was defined as less than 30 hours per week. Over half of the respondents 51% (n = 24) indicated that they were employed on a full-time basis in telehealth while 36% (n = 17) indicated that they worked part-time in telehealth. Thirteen percent (n = 6) of respondents declined to answer the question.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
Is your position in telehealth		
Answer Options	Response Percent	Response Count
Full Time	51 %	24
Part Time (less than 30 hours per week)	36 %	17
	<i>answered question</i>	41
	<i>skipped question</i>	6

Table 11: Employment Status of Telehealth Coordinators

Table 12 indicates that a majority of participants 55% (n = 26) reported that their job was dedicated entirely to telehealth. Thirty percent (n = 14) indicated that they had other responsibilities outside their telehealth position. These proportions approximate those reported for the question asking participants whether their job was full time or part time. Fifteen percent (n = 7) declined to answer the question.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
Is your job?		
Answer Options	Response Percent	Response Count
Dedicated entirely to telehealth	55 %	26
A shared position (i.e., you have other non-telehealth responsibilities)	30 %	14
	<i>answered question</i>	40
	<i>skipped question</i>	7

Table 12: Percentage of Job Dedicated to Telehealth

Table 13 shows whether Telehealth Coordinators were required to coordinate clinical videoconferences only, educational videoconferences only or both clinical and educational videoconferences. A significant number of the respondents 66% (n = 31) indicated that they were required to coordinate both educational and clinical videoconferences. Nineteen percent (n = 9) declined to answer the question. Of interest, 100% of the Ontario Telehealth Coordinators who replied to this question (n = 9), indicated that they were required to coordinate both clinical and educational videoconferences. Responses to this question have significance for development of the role of Telehealth Coordinator in relation to patient care.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
Do you coordinate? (please select the answer that best describes your situation)		
Answer Options	Response Percent	Response Count
Clinical videoconferences only	11 %	5
Educational videoconferences only	4 %	2
Both clinical and educational videoconferences	66 %	31
	<i>answered question</i>	38
	<i>skipped question</i>	9

Table 13: Percentage of Job Allocated to Clinical or Educational Telehealth

When asked if others were involved in coordinating telehealth activities in their organization, 53% (n = 25) responded in the affirmative. Nineteen percent (n = 9) did not answer the question (Table 14). This suggests that more than one individual may be involved in coordinating telehealth activities in organizations.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
Are there other individuals responsible for coordinating telehealth activities in your organization?		
Answer Options	Response Percent	Response Count
Yes	53 %	25
No	28 %	13
If you answered "Yes," please describe their role		26
<i>answered question</i>		38
<i>skipped question</i>		9

Table 14: Percentage of Telehealth Coordinators with Other Job Responsibilities

Table 15 shows the Telehealth Coordinators self-reports of their primary area of responsibility at work. Fifty-five percent (n = 26) indicated that their primary area of responsibility was telehealth coordination. This was followed by 11% (n = 5) for clinical practice other than telehealth. The third most frequently reported primary area of responsibility at work were education and management at 6% (n = 3) each.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
What is your primary area of responsibility at work?		
Answer Options	Response Percent	Response Count
Telehealth Coordination	55 %	26
Clinical practice other than Telehealth	11 %	5
Administrative Support/Secretarial	2 %	1
Information Technology	4 %	2
Education	6 %	3
Research	2 %	1
Management	6 %	3
Other	0.0%	0
If you chose "Other" (please specify)		0
<i>answered question</i>		41
<i>skipped question</i>		6

Table 15: Telehealth Coordinators Primary Area of Responsibility at Work

The online survey also included a question asking participants the number of hours per week that they devoted to clinical videoconferences and the number of hours per week that they devoted to educational videoconferences. Unfortunately, the Survey Monkey web site was incorrectly programmed to accept only responses in percentages rather than a whole number. Consequently, many respondents found this question confusing and either were unable to answer it, answered it incorrectly or skipped the question entirely. This is unfortunate as accurate data here would have been helpful in

understanding how the participants in this survey were dividing their time between supporting clinical versus educational videoconferences. Responses to this question were eliminated from the analysis.

Less than half (43%) of the Telehealth Coordinators reported belonging to a professional association in telehealth (Table 16). This has implications for ongoing education and professional development of the Telehealth Coordinator role especially as it applies to patient care delivery.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA		
(a) Do you belong to any professional association(s) in Telehealth?		
Answer Options	Response Percent	Response Count
Yes	43 %	20
No	45 %	21
	<i>answered question</i>	41
	<i>skipped question</i>	6

Table 16: Professional Association Membership for Telehealth Coordinators

Qualitative Results – Online Survey

In the pages that follow, qualitative results from Part 1 of the online survey are presented. As discussed in the Methods section, the major thrust of Part 1 of the online survey was to elicit information from the Telehealth Coordinators on the role(s) that they play in videoconferencing technology implementation and use in Canada. In addition, this analysis was devoted to learning what the Telehealth Coordinators perceived challenges (i.e., role strain) were. Major themes developed for this section were the role(s) that Telehealth Coordinators play in organizations to support: 1. care delivery 2. teaching and learning 3. videoconferencing technology and, 4. short and long term telehealth program planning and development.

As previously mentioned in the Methods section, due to unanticipated delays, the data were collected at slightly different times for the two groups. Because of this, the responses were stored in separate databases in Survey Monkey. Although this resulted in two samples of differing size, all participants were presented with the same online survey.

Closed Question Results – Online Survey

Using the reporting tools provided by Survey Monkey, response frequencies to the Likert scale questions were generated for each question. Frequencies that occurred with the highest incidence were located for each question and then compared between the two groups (i.e., CST and OTN). The goal of this comparative analysis was to identify similarities and differences between the two groups using the following themes: 1. roles that Telehealth Coordinators play to support care delivery. 2. roles that Telehealth Coordinators play to support teaching and learning. 3. roles that Telehealth Coordinators play to support the technology itself. 4. roles that Telehealth Coordinators play to support short and long term planning and development.

5 satisfactions 6. dissatisfactions, challenges (role strain). From this analysis, several similarities and differences emerged from the data reinforcing the author's anecdotal experience that although the role of Telehealth Coordinator may vary across organizations and regions in Canada, important commonalities are also present. These results are summarized in Table 17. Frequencies for both groups appear in Appendix E.

Theme	Similarities in Roles * (OTN versus CST Sample)	Differences in Roles * (OTN versus CST Sample)
Roles that Telehealth Coordinators play to support care delivery	<p>Both OTN and CST coordinators appear to be spending significant amounts of time teaching/training others in the use of videoconferencing technology</p> <p>Telehealth Coordinators from both groups are spending a significant amount of time communicating with telehealth networks and personnel in other organizations to arrange patient teleconsultations</p> <p>A majority of the Telehealth Coordinators in both groups reported that supervising others in the use of videoconferencing to support clinical care delivery was “Not applicable.”</p> <p>A majority of the Telehealth Coordinators in both groups reported that supporting physician reimbursement for telehealth was “Not applicable.”</p> <p>Telehealth Coordinators in both groups report having a variety of other telehealth and non-telehealth roles/duties outside those listed on</p>	<p>CST Coordinators appear more involved in clinical protocol development than OTN Coordinators</p> <p>OTN Coordinators appear to be spending a significant amount of time reviewing patient referrals and accompanying patients compared to the CST group</p>

Theme	Similarities in Roles * (OTN versus CST Sample)	Differences in Roles * (OTN versus CST Sample)
	<p>the survey</p> <p>There was agreement from both groups that if involved in patient care, the Telehealth Coordinator should be a member of a regulated health profession.</p>	
<p>Roles that Telehealth Coordinators play to support teaching and learning</p>	<p>In addition to their clinical roles, Telehealth Coordinators from both groups report spending a moderate amount of time/effort supporting other programs/department/clinical specialties to use videoconferencing technology to support teaching and learning.</p> <p>Both groups reported deriving significant satisfaction from teaching and training others in use of the technology to support education</p> <p>A majority of the Telehealth Coordinators in both groups reported that supervising others in the use of videoconferencing to support teaching and learning was “Not applicable” to them</p>	<p>The OTN group reported spending a significant amount of time setting up, taking down and transporting videoconferencing equipment</p>
<p>Roles that Telehealth Coordinators play to support videoconferencing</p>	<p>Both groups reported deriving significant satisfaction from providing technical support to others in use of the technology</p>	<p>A higher percentage of the CST group reported working with vendors than in the OTN group</p>

Theme	Similarities in Roles * (OTN versus CST Sample)	Differences in Roles * (OTN versus CST Sample)
technology	Both groups reported spending a significant amount of time/effort communicating and organizing educational videoconferences.	
Roles that Telehealth Coordinators play to support short and long term planning and development	A majority of the Telehealth Coordinators in both groups reported that recruiting/hiring others was “Not applicable” to them	OTN group appears more involved in planning and conducting CQI projects than the OTN group
Sources of Satisfaction	<p>A majority of the Telehealth Coordinators in both groups reported:</p> <ol style="list-style-type: none"> 1. Deriving a strong sense of satisfaction from contact with patients, their families and making care more accessible. A close second was teaching and supporting others in use of the technology 2. Having a feeling of control over their workload 3. Doing work that suited their values 4. Feeling very comfortable with technology and their level of expertise 5. Autonomy as important 	

Theme	Similarities in Roles * (OTN versus CST Sample)	Differences in Roles * (OTN versus CST Sample)
Sources of Dissatisfaction, Challenges (role strain)	<p>Both groups expressed the following challenges:</p> <ol style="list-style-type: none"> 1. Weak vision for telehealth in their organization 2. Role well understood within telehealth network and by immediate supervisor but not by senior managers 3. Telehealth still not well integrated within their organization 	

Table 17: Similarities and Differences in Roles – CST Versus OTN

* Based on highest frequency of responses to Likert scale questions (see Appendix E).

Data collected in the online survey were also scanned to locate a high percentage of “N/A” (i.e., Not Applicable) responses. This was done to learn more about what currently may not be part of the Telehealth Coordinator role and to detect differences between the OTN and CST group. An arbitrary cut-off point of 30% of “N/A” responses received for a question in either group was chosen. From this analysis, it appears that Telehealth Coordinators in both groups have little involvement in physician reimbursement and the hiring and supervision of other personnel. Interestingly, in response to the question that asked whether their role as Telehealth Coordinator conflicted with other roles that they were expected to play as regulated health professionals, a significant percentage in both groups (i.e., 39 % in the CST group; 46 % in the OTN group) chose “N/A.” Although questions with a high percentage of “N/A” responses may indicate that the role or issue did not apply to the Telehealth Coordinator’s current practice, for example, 71.9% (n=23) of the CST group chose “N/A” in response to the question asking whether they supported physician reimbursement for telehealth, it may also indicate that the respondent had no opinion or did not wish to answer the question.

Questions with a response of “N/A” > 30% are shown in Table 18. For this analysis it is important to recall that the absolute sizes of the samples differed (i.e., CST, n =34; OTN n =13).

Question	% (n) CST Respondents Choosing “N/A” (Not Applicable) as a Response Possible responses n = 34	% (n) OTN Respondents Choosing “N/A” (Not Applicable) as a Response Possible responses n =14
<i>Below is a list of roles that Telehealth Coordinators typically play in organizations to support care delivery. For each role, please indicate the level of time/effort that that the role requires from you in a typical month. If you do not play a role, please select ‘N/A’ for Not Applicable:</i>		
Developing protocols for telehealth clinics	27% (9)	31 % (4)
Reviewing requests for patients to be seen by videoconferencing (e.g., reviewing patient referrals for appropriateness according to set criteria	39 % (13)	23 % (3)
Supervising other personnel (e.g., program secretaries, schedulers etc.) in the scheduling of clinical videoconferences	44 % (14)	54 % (7)
Supporting physician reimbursement for telehealth	72 % (23)	54 % (7)
<i>Below is a list of roles that Telehealth Coordinators typically play in organizations to support teaching and learning. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select “N/A” for Not Applicable:</i>		
Supervising other personnel (e.g., secretaries, schedulers etc.) in the scheduling of educational videoconferences	43 % (13)	38 % (5)
<i>Below is a list of roles that Telehealth Coordinators typically play in organizations to support telehealth technology. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select “N/A” for Not Applicable:</i>		
Working with vendors of videoconferencing equipment	59 % (19)	23 % (3)
<i>Below is a list of roles that Telehealth Coordinators typically play in organizations to support short and long term planning, development and innovation in telehealth. For each role, please indicate the</i>		

Question	% (n) CST Respondents Choosing “N/A” (Not Applicable) as a Response Possible responses n = 34	% (n) OTN Respondents Choosing “N/A” (Not Applicable) as a Response Possible responses n =14
<i>level of time/effort that the role requires from you in a typical month. If you do not play a role, please select “N/A” for Not Applicable:</i>		
Recruiting and hiring telehealth personnel	64 % (20)	54 % (7)
<i>Please indicate how often each of the following situations applies to you. If the situation does not apply, please select “N/A” for Not Applicable:</i>		
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play in my organization	29.0% (9)	46 % (6)
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play as a regulated health professional	39 % (12)	46 % (6)
Scheduling and coordinating patient visits by telehealth competes with other important work that I must do	13 % (4)	31 % (4)
In my role as a Telehealth Coordinator, I use all my skills and training as a regulated health professional	35 % (11)	8 % (1)

Table 18 - Non-Applicable Roles – CST and OTN

Open-Ended Question Results – Online Survey

To assist further exploration and inquiry, responses to the open-ended questions in the online survey for both the CST and OTN sample were merged. After merging the data, the responses were then analysed for recurrent themes. Recurrent themes were identified by scanning and highlighting selected words or phrases in the text using the highlighting tool in Microsoft Word software. The coded text and phrases appear in the Appendix F. In the text that follows, the recurrent themes and results are discussed.

In relation to the open-ended question: *In your opinion, what are the ideal qualifications that a Telehealth Coordinator should possess?* and as indicated by the highlighted words and phrases in Table 20 in Appendix F, respondents made one or more references in their answer to the need for Telehealth Coordinators to possess training and experience as a regulated health care professional and/or knowledge of the health care delivery system. This suggests a general view and agreement among Telehealth Coordinators that if the role included patient care delivery, then that individual should possess training and experience as a regulated health professional.

Analysis of responses to the question, *What challenges do you face fitting telehealth in to your current role/professional practice? How have you overcome those challenges?* revealed that although the Telehealth Coordinators cited a variety of challenges, there was no singular or recurrent challenge that could be isolated in the responses. That said, there did appear to be some correlation between whether a respondent indicated experiencing challenges and whether that person's position was dedicated solely to Telehealth Coordination or split among a variety of positions or roles and responsibilities. That is, several respondents who indicated that their position was dedicated entirely to Telehealth (or only a small portion of their job involved telehealth) appeared to report challenges less often than those whose job appeared to consist of a variety of roles or positions. This fits the definition of role overload. This trend is shown by the grouping of responses in Table 21 of Appendix F by those whose role consisted mostly of telehealth coordination with those who “wore other hats.”

As indicated by the highlighted words and phrases in Table 22 in Appendix F, a recurrent theme concerning professionalization of the role of Telehealth Coordinator was the need for standards to be created with an accompanying certification process. Below are selected comments from the online survey in response to the question “What needs to happen to professionalize the role of the Telehealth Coordinator in your province?:

“Telehealth Certification training programs could be developed and delivered in partnership with regional community colleges. Online study options would be useful/critical as we increasingly need to train telehealth coordinators in rural and remote communities.”

“Linkage with a college, course development, linkage with e-health as sub category in health infomatics. Really must be driven from a national level.”

“Before that can happen [i.e., professionalization of the role] at the provincial level, the role of the TC has to be recognized on a National level as the cross-jurisdictional issues are rapidly becoming the biggest problem for all clinical activity mediated by videoconferencing.”

“I think perhaps certification would be the key. Becoming a member of a national group would be key to establish a great connection to look at trends and learn from what has been/ is being done.”

Respondents to this question also reiterated the need to clarify whether the Telehealth Coordinator would be involved in clinical telehealth activity before deciding whether the role should be performed by a member of a regulated health profession. Answers to this question may have been driven in part by whether the respondent was already a regulated health professional. Because regulated health professionals in Canada are required to engage in ongoing professional education as part of maintenance of competency and annual re-certification these individuals may have been more likely to indicate a need to develop standards or a certification process.

As indicated by the highlighted words and phrases in Table 23 in Appendix F, Telehealth Coordinators use a variety of standards and guidelines to guide their practice. While many referred to local policies and procedures developed by their employer or telehealth network, others cited the standards of a regulated health professional college or certifying body in relation to telehealth. It is possible that regulated health professionals may have made these recommendations more often than the unregulated workers. The NIFTE standards were mentioned three times and CCHSA standards twice. As indicated by one respondent, standards remain “a ‘grey’ area for Telehealth Coordinators.”

Similar to the results on what standards the Telehealth Coordinators used to guide their practice and as indicated by the highlighted text in Table 24 in Appendix F, there were a variety of opinions on who should lead development and dissemination of clinical best practice standards and guidelines. As was the case with the case with the preceding question, local organizations along with regulated health care professional colleges were often cited. Respondents also suggested that there was a role for the Canadian Society of Telehealth and provincial telehealth networks in developing clinical standards and guidelines. From the responses, it was clear that the Telehealth Coordinators wanted to be involved or have “input” in developing standards or an accreditation process.

One of the richest sources of information in this study were the responses to questions that asked individuals to describe the things that provided them with the greatest and least amount of satisfaction in their role as a Telehealth Coordinator. As indicated by the highlighted words and phrases in Table 25 in Appendix F, clearly, the greatest sources of satisfaction for Telehealth Coordinators were contact with the patients and their families, knowledge that they were making health care more accessible and teaching others how to use the technology.

The Telehealth Coordinators cited nearly an almost equal number of sources of dissatisfaction as satisfactions. As indicated by the highlighted text in Table 26 in Appendix F, the major dissatisfactions for Telehealth Coordinators appeared to be related to organizational issues including a lack of resources and time to complete their duties and a lack of understanding of the Telehealth Coordinator role by senior executives.

Demographics – Telephone Interviews

In the online survey, 20 individuals indicated their consent to be contacted for a telephone interview. These individuals were sent an e-mail thanking them for their willingness to participate and requesting that they provide a date, time and telephone number for the interview. Four individuals did not respond to this initial request. Approximately two weeks later, a follow-up e-mail was then sent to these individuals however, none responded. No further attempt was made to contact these individuals for a telephone interview. Of the 16 individuals participating in the interview, only 2 did not respond to an initial request to review the interview transcript for completeness and accuracy. Approximately two weeks later, both individuals were sent a “gentle” reminder by e-mail asking if they would like changes to their interview transcript. Neither individual responded and no further attempt was made to contact them. Of the 14 who did respond to the e-mail asking changes or corrections were required to the interview summary, only two requested minor changes and corrections. As shown in Figure 3, 37% (n = 6) of participants in the telephone interviews were from Ontario.

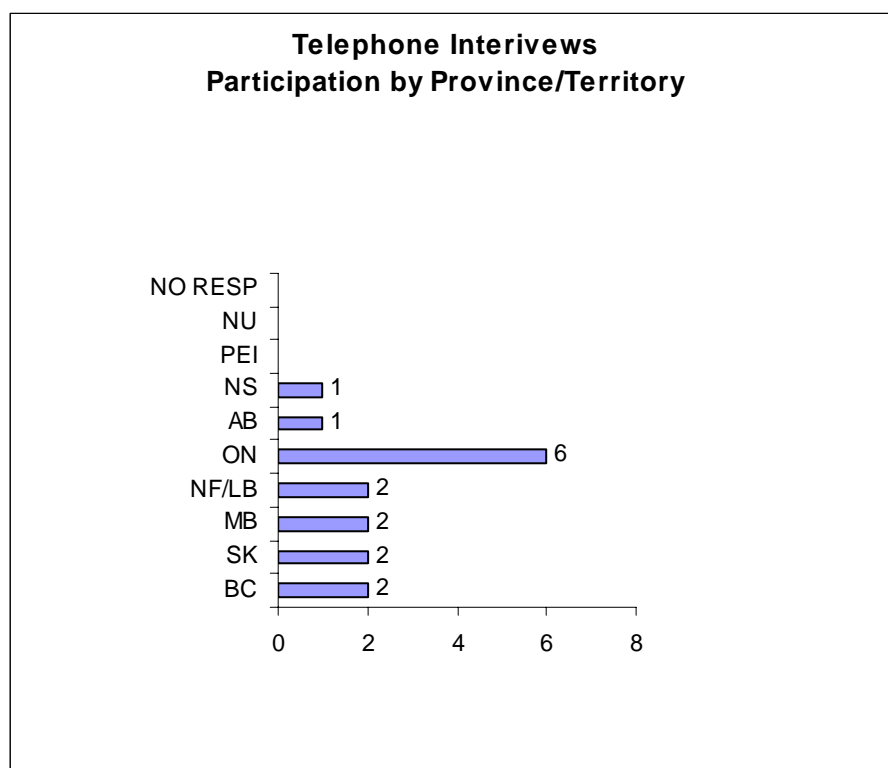


Figure 3: Telephone Interview - Participation by Province/Territory

Table 19 shows the profession type of individuals who participated in the telephone interviews. From this data, it was calculated that the largest percentage, 88% (n = 14) of participants in the telephone interviews were either nurses (i.e., RN, RPN, LPN, other) or other regulated health care professionals. In contrast, fewer, 12% (n = 2) were non-regulated workers.

Profession Type	Response Percent	Response Count
Nurse (i.e., RN, RPN, LPN, other)	56 %	9
Regulated Health Care Professional other than nurse	31 %	5
Non-regulated worker	12 %	2
Total	100 %	16

Table 19: Profession Type - Telephone Interviewees

Qualitative Results – Telephone Interviews

As a record of the telephone interviews, it was decided that field notes would be sufficient rather than verbatim transcripts. After being validated by the interviewees, field notes created during the telephone interviews were read and re-read to become familiar with the data and to identify recurrences. Outliers and disconfirming evidence of certain themes, for example, whether a Telehealth Coordinator needed to be a regulated health professional were sought and identified by highlighting words and phrases. In the section that follows, selected results from the telephone interviews are compared to those from the online survey.

Similar to the online survey, good “people and computer skills” were cited most often as a core competency and entry to practice requirement for a Telehealth Coordinator. Likewise, the telephone interviewees expressed their desire and their support for standards development and certification in telehealth. The Canadian Society of Telehealth was cited by several interviewees as a logical organization to play a leadership in this area. This may reflect the higher proportion of CST NTC SIG members in the sample. When asked what standards the Telehealth Coordinators used to guide their practice, the regulated health professionals in the group often cited their own college’s guidelines on telehealth.

The College of Nurses of Ontario's guidelines were cited several times as well, however, this may be due to the fact that a significant percentage of interviewees were Ontario nurses. The NIFTE and CCHSA standards for telehealth were cited less often or only after prompting by the interviewer.

Analogous to results in the online survey, a recurrent source of satisfaction for the Telehealth Coordinators was contact with patients and families and the knowledge that they were making care more accessible. In terms of dissatisfactions, the interviewees provided unsolicited and candid commentary about a lack of understanding about their role by senior executives in organizations where the Telehealth Coordinators were employed. Several Telehealth Coordinators went on to say that their role was better understood by colleagues in the telehealth network in their jurisdiction than within their employing organization. Apart from this issue and after scanning the field notes several times, no single or recurrent source of dissatisfaction could be identified in the telephone interview group.

Interviewees indicated the need for a Telehealth Coordinator to be a member of a regulated health profession if that person were directly involved in patient care by videoconferencing. However, most interviewees qualified their reply by saying that the person did not necessarily have to be a nurse and that the type of regulated health professional required would depend on the needs of the patient rather than an arbitrary selection of a particular health care professional. For example, in the case of diabetic patients, a registered dietician may be the most suitable individual to coordinate clinical telehealth activity.

Without exception, the telephone interviewees stated that they felt confident about their technical skills. Although several of the interviewees expressed challenges from not having enough time to do all that was expected of them and having to juggle other roles, duties and responsibilities outside their Telehealth Coordinator job, when asked the question: "Do you ever experience any role conflict/ role strain (Yes/No)?", only 19% (n = 3) interviewees replied with a definitive "Yes."

Summary of Results

For the most part, Telehealth Coordinators reported playing a significant role in supporting the implementation and use of videoconferencing technology for both clinical service delivery and teaching and learning. Equally important, while the majority of this group reported deriving significant satisfaction from their role as a Telehealth Coordinator, they also described several challenges that they were experiencing. As a group, they expressed a strong interest and desire to see standards and a certification process developed for Telehealth Coordinators. Results from this qualitative exploratory survey were helpful in gaining a better understanding of who Canada's Telehealth Coordinators are and the role that they are playing in expanding the use of telehealth in mainstream health care. In Chapter 5, comparison of these results to other relevant literature and recommendations for further investigation are made.

Chapter 5 – Discussion and Recommendations

Introduction

The intent of this qualitative exploratory study was to learn more about the demographics of Telehealth Coordinators and the role that they are playing in videoconferencing technology implementation and use in Canada. Interest in conducting this research arose from the investigator's own practice as a Registered Nurse and Telehealth Coordinator. Role Theory served as the theoretical framework and Nursing Informatics as a reference point for development of this study. Qualitative survey research methods were used to develop the instruments and collect the data.

The study was conducted to answer the following research questions:

1. What are the reported demographics of individuals called Telehealth Coordinators in Canada? What role(s) are nurses playing as Telehealth Coordinators? What role(s) are regulated health professionals other than nurses and non-regulated workers playing as Telehealth Coordinators? What are their challenges and concerns? Do Telehealth Coordinators perceive any significant role strain in relation to videoconferencing technology implementation and use?

2. For regulated health professionals (e.g., nurses, physiotherapists, dieticians etc.) working as Telehealth Coordinators, what are their perceptions of how videoconferencing technology is affecting their standards and scope of professional practice — positively or negatively?

From two identified populations – a provincial sample from Ontario and a national sample from other provinces and territories in Canada, 47 Telehealth Coordinators provided responses that could be analysed. The discussion and recommendations are based on these responses and presented within the context of Role Theory and stated research questions.

Demographic and Qualitative Summary

Unfortunately, there is no other published demographic data specific to the Telehealth Coordinator work force in Canada to which demographic results from this study can be reliably compared. That said, the fact that a majority (56%) of Telehealth Coordinators reported being aged 40 – 59 years correlates with labour force data for both the general population (Human Resources and Social Development Canada, 2007) and nursing work force in Canada (Canadian Nurses Association, 2007). According to statistics provided by the Canadian Institute for Health Information, in 2005, the average age of a nurse in Canada was 44.7 years (Canadian Nurses Association, 2007; Canadian Institute for Health Information, 2006). Age-related results from this study are correlated with data from Telenursing Role Study (Schlachta-Fairchild, 2000) where the mean age of nurses was reported as 46.37 years ($SD = 7.70$). However, because the populations may not be similar, caution must be exercised in making comparisons between this study's results and those from the TeleNursing Role Study (2000). Additionally, Schlachta-Fairchild's (2000) study focused on nurses whereas this study included other regulated health professionals and unregulated workers. Although 56% of Telehealth Coordinators in this study reported being between ages 40 – 59 years, 31% reported being above or below that age.

The higher average age of participants in this survey could mean that Telehealth Coordinators are hired because they bring life and work-related experience to the challenges of integrating videoconferencing technology in complex health care organizations. Technology skills can always be taught whereas an intimate knowledge of how our complex health care delivery system operates is acquired over several years of practice. Given that clinical Telehealth Coordinator often find themselves having to “sell” physicians and other providers on the benefits of offering patient care services, this may be the clinical Telehealth Coordinators greatest asset. In fact, knowledge of the health care delivery systems coupled with excellent communication skills may be the two most important attributes for Telehealth Coordinators charged with responsibility for getting patient care services out by videoconferencing. One could argue that these two assets could become entry to practice requirements for Coordinators operating in clinical environments.

The majority of respondents in this study were female (75%) and 36% were nurses. When the OTN and CST data were combined, the percentage of nurses and regulated health care professionals other than nurses participating in this study totalled 53%. Hospitals were cited most often as a place of employment for the Telehealth Coordinators (66%). In Ontario at least, this finding is validated by data published by the Ontario Telemedicine Network (2008). However, given that the participants outside Ontario comprised the largest percentage of the sample (i.e., 34 participants outside Ontario as opposed to 13 participants from Ontario) this result is surprising. The primary explanation for this may be that individuals in the CST group were employed in integrated health regions where the demarcation between provider organization and telehealth network is less obvious than Ontario. The high proportion of individuals who reported belonging to a health care provider organization rather than a telehealth network may be partially explained by the fact that for the Ontario sample, the majority of individuals receiving the invitation to participate were hospital employees rather than employees of the Ontario Telemedicine Network (OTN). Had OTN personnel also received the invitation to participate, the number of Telehealth Coordinators who reported belonging to a telehealth network may have been higher.

The 42 job descriptions found in the preliminary stages of this research together with the data presented are clear evidence that Canada's Telehealth Coordinators have a diversity of roles, levels of education and work experience. This plurality correlates with findings in the TeleNursing Role Study (2000). Through this study it became evident that the terms "telehealth" or Telehealth Coordinator may not mean the same thing — even within a region or set of similar health care provider institutions in Canada. Although diversity may be telehealth's greatest strength, it may also be its greatest weakness. That is because diversity presents challenges to standardization and when it comes to implementing technology on a large scale, standardization is the Holy Grail. With such a diverse work force it is a challenge to define entry to practice requirements, education, credentialing, scope of practice and standards for Telehealth Coordinators that all can agree on.

In the TeleNursing Role study, Schlachta-Fairchild (2000) listed six factors as being of high importance for telenurses. From most to least important, the factors were: autonomy, interaction, professional status, task requirements, pay and organizational policies. Schlachta-Fairchild (2000) also noted that the high degree of correlation between autonomy and telenurses's work satisfaction was supported by other research. Qualitative findings from this research demonstrated that 51.6% of

Telehealth Coordinators from the CST group and 61.5% in the OTN group Strongly Agreed that autonomy was a major source of satisfaction in their role. In addition, interaction with others, be that through the provision of care or teaching, were repeatedly cited by the Telehealth Coordinators in both the online survey and telephone interviews as important sources of satisfaction. Clearly, Canada's Telehealth Coordinators are "people" oriented.

The Telehealth Coordinator Role - Issues and Challenges for Organizations

This study's findings raise several important issues and challenges for ongoing development of the Telehealth Coordinator role, especially as it pertains to innovation at the level of organizations and not just technology. "Yet we know that technological innovation rarely occurs in isolation. It needs organizational innovation, which refers to transformed or improved production and delivery processes, and governance and organizational structures implemented either inside health systems or in organizations operating within health systems (e.g., academies of health sciences, governments, and health-care organizations) (Prada et al., 2007, p.8)." If telehealth implementation and use is to continue expanding in Canada, then organizations must find ways to re-invent themselves. Participants in this study clearly said that technological innovation alone is not enough. "Implementation of telemedicine [telehealth] has not been as rapid as was expected in the 1990s. Diffusion of technologies can be complex and is known to be influenced by many factors. Organizational problems are crucial for the future of telemedicine, but have been gravely underestimated. When a telemedicine service is established, we have a virtual organization. Internal organizational consequences of telemedicine are very common and more effective use of the technology is likely to require organizational changes (Aas, 2007, p. 380)." Several of the observations arising out of this study support the claim that successful use of technology requires innovation at the level of organizations and not just technology.

For example, despite rating their immediate supervisors high when it came to understanding their role, both groups reported that the vision for telehealth in their organization was weak. One participant said:

“[There is] a lack of a commitment and a strong advocate for telemedicine within the Senior Leadership Team of the hospital. Telemedicine is treated as the 'unwanted child'. They look at the technology first, as opposed to the services provided. There is a weak understanding of the difference between Telemedicine Services from the Hospital and the Network/Infrastructure Services provided [by the provincial telehealth network] by the Hospital Leadership Team.”

A majority of Telehealth Coordinators in both the CST and OTN group also reported having little involvement in continuous quality improvement (CQI) activities or responsibility for hiring or supervising others. While this may be indicative of a fairly autonomous role at the front lines of health care delivery, it may also be an indicator of a lack of recognition on the part of organizations about the importance of involving Telehealth Coordinators in key decisions affecting telehealth program development.

Further evidence that ongoing innovation at the level of organizations is required is supported by the fact a high percentage of participants in this study reported having a college or university education either as a regulated health professional or in another discipline. This suggests that Telehealth Coordinators are a highly educated work force. Interestingly, in the TeleNursing Role Study (2000) a high percentage (46%) of telenurses reported having a graduate degree. That said, participants in this study also indicated that they were spending a significant amount of time organizing educational videoconferences. Of note, unlike the CST cohort, the OTN group also reported spending a significant amount of time transporting, setting up and taking down videoconferencing equipment. While there is no doubt that coordinating educational videoconferences and transporting equipment are important contributions to telehealth operations, for the regulated health professionals, one must ask whether this is a wise and cost-effective use of a well educated and increasingly scarce work force. Further, if a significant portion of Telehealth Coordinators in Canada are performing administrative tasks rather than functioning in professional roles, one must question whether Telehealth Coordinators are in fact a community of “professional” practice.

Innovative organizations use their most important asset (i.e., people) wisely. The challenge here is to use nurses and other regulated health care professionals to the maximum of their skill level simultaneously in telehealth and patient care. Ironically, one respondent offered the following as a possible solution to this challenge:

“With the shortage of RNs and professionals we should have them actually as providers not [Telehealth] coordinators.”

In this research, fifty-five percent of participants reported having a job entirely dedicated to telehealth and 66% said that they coordinated both clinical and educational videoconferences. In the 2000 TeleNursing Role Study, 68% of nurses worked full-time in telehealth (Schlachta-Fairchild, 2000). Another finding was that 51 % of respondents reported working full-time. The diversity of titles, home departments and supervisors reported by the Telehealth Coordinators suggests a highly heterogeneous and perhaps, challenging practice environment – especially for the CST group. While 17% of the Telehealth Coordinators cited Information Technology/Information Systems as a home department, a significant number (66%) reported coordinating both clinical and educational videoconferences. Coordinating both types of activity implies having responsibilities and supervisors that cross traditional boundaries in health care organizations. This has implications for future development of the role including which department or departments the Telehealth Coordinator position is embedded in and to whom it reports.

Based on the author’s experience, there appears to be a steady turnover in Telehealth Coordinators within Ontario’s provider organizations. The above factors may in fact be sources of dissatisfaction and a partial explanation for this turnover. More study is required in this area. According to a recent report by the Ontario Hospital Association (OHA), after lack of financial resources, lack of qualified people is cited as the greatest barrier to further implementation of e-health technologies like telehealth (Ontario Hospital Association, 2008). Unmistakably, organizations must make an investment in human as well as technological resources if telehealth is to be a success story in Canada.

The higher average age of Telehealth Coordinators has potential implications from the perspective of the multi-generational work force in health care as well. As discussed in Chapter 3, the percentage of workers aged 40 and above is more than twice the percentage workers who reported an age of less than 40 years (i.e., 55% versus 25% respectively). Although, many of these older workers may choose to remain in the work place beyond what formally was “normal retirement age” if telehealth use is to continue growing, organizations need to begin planning now for the eventual exodus of these workers. These people are the “memory” of health care organizations. Likewise, organizations must play an active role in helping older workers adapt to the culture and work habits of younger workers and vice versa. Both generations can benefit from each others strengths. however, this probably won't happen on its own. Rather it must be formally supported by telehealth networks and provider organizations alike.

To date, a good deal of work has been done evaluating patient satisfaction with telehealth. This includes two systematic reviews of patient satisfaction (Mair & Whitten, 2000). Despite some methodological challenges, the findings are similar. That is, patients are at least as satisfied with care delivered through this technology as in person. Intuitively, a major driver of this satisfaction is that the technology makes care more accessible to patients and diminishes the hardship and expense of travel. While patient satisfaction has received a good deal of attention, less has been paid to provider satisfaction with telehealth — especially incentives and drivers to use the technology. Most of the research to date exists in the form of unpublished evaluation studies and grey literature. The dearth of published research applies to studies of not only physicians but also other providers including Telehealth Coordinators who often simultaneously perform the role of regulated health professional, scheduler and technician. Whited (2006) argues that while patient satisfaction studies have provided worthwhile data with high face validity, the telehealth community would benefit from development of “precise and valid instruments” (Whited, 2006, p. 272) that measure patient and clinician satisfaction with telehealth.

Management theorist Peter Drucker has stated that large health care organizations may be the most complex organizations in human history (Society of Cardiovascular Anaesthesiologists, 2008). In Canada and elsewhere, governments are striving to “transform” health care using videoconferencing technology (Brown & Benson, 2005). The success of this transformation depends on not just technology but also people. As governments, health care provider organizations and telehealth

networks continue increasing their reliance on nurses, other regulated health professionals and unregulated workers as a source of cost efficiencies and competitive advantage through the expert application of technology to challenges in health care, it is essential that innovation at the level of the organization take place concurrently with technological innovation. That is, if attempts to transform health care through technology are to be successful, a balance must be found between an organization's need to implement technology and peoples' need for individual autonomy, participation in decision making and job satisfaction. Achieving this balance in today's environment of seemingly unlimited demand, scarce financial resources and fierce competition for a dwindling pool of skilled knowledge workers in health care will be a challenge. However, a way must be found if Canada is going to be ready to meet the expanding health care needs of its aging population.

“Little of today's technology is proprietary. Technology is easily obtained and replicated and only levels the playing field. An organizations' valued human assets cannot be copied.”

Bill Gates

Nursing Informatics and the Professionalization of the Telehealth Coordinator Role

In this study, participants cited certification in telehealth as an important area. This correlates with findings in the TeleNursing Role study (2000) (Grady, 2007). The Canadian Nurses Association is the official body that oversees specialty certification for nurses in Canada. At the time of writing, it remains unclear whether CNA views telehealth as a specialized area of practice for nurses. The good news is that this does not appear to be slowing efforts to define and professionalize the role of nurses in relationship to telehealth technology in Canada and elsewhere. Most notably, as early as 1995, the American Nurses Association (ANA) developed a set of standards, scope of practice and specialty certificate in Nursing Informatics. The ANA definition of “informatics” includes telehealth. The ANA revised these standards in 2001 and again in May 2007. A copy of the latest draft of ANA's Scope and Standards for Nursing Informatics is available from the American Nurses Association (American Nurses Association, 2008).

In Canada, organizations like the Canadian Nursing Informatics Association (CNIA), Registered Nurses Association of Ontario (RNAO) and Ontario Nursing Informatics Group (ONIG) are helping evolve the role of Canada's nurses in relation to informatics and technology. Like the ANA, these organizations include videoconferencing in their definition of “informatics.”

Through a combination of advocacy and professional education, these organizations are helping nurses to not only learn and apply technology-related skills and experience but equally important, to gain recognition for their expertise. Given the current trend, Nursing Informatics may eventually be recognized in both Ontario and Canada as a unique community of practice — one that require specialty certification similar to oncology or critical care nursing.

Conclusion

Whited (2006, p. 272) noted that through ongoing research, “Telemedicine will best serve patients’ needs by confidently determining where it succeeds, as well as where it fails.” Hopefully this research will include ongoing investigation of Telehealth Coordinators as key contributors to successful videoconferencing technology implementation and use in the Canadian health care system. Gagnon et al (2004) have highlighted the need for more qualitative inquiry and studies using advanced quantitative techniques in telehealth to investigate telehealth adoption in a large number of hospitals across different provinces or countries. These larger studies would analyse organizational characteristics more precisely and explore their impact on telehealth adoption. One recommendation arising out of this study is to include an examination of how organizations can innovate to better support not only Telehealth Coordinators but also end users of videoconferencing technology to maximize its implementation and use. After all, it is not just about technology. Rather it is about people and technology. The provincial telehealth networks, professional colleges and Canadian Society of Telehealth are in an excellent position to lead this work. In addition to the obvious need to collect better demographics at both a provincial and national level on the Telehealth Coordinator community of practice it may also be helpful to conduct a learning needs assessment of this group – especially in view of their stated desire for ongoing education, standards and certification. The results of the learning needs assessment could inform ongoing professional development of this community of practice and to further stimulate the implementation and use of telehealth technology in Canada.

Limitations

For this research, both qualitative and demographic data were collected and analyzed to not only create a description of the population known as Telehealth Coordinators but also to detect patterns and commonalities within the respondents' reported experience of telehealth. Because this study employed qualitative techniques rather than an experimental design, generalizability of results may be limited. Lack of generalizability arises from use of a non-validated tool (e.g., measuring multiple constructs in one question) and use of snowball sampling technique (e.g., multiple responses from the same individual are possible) for data collection. The low response rates, 4% for the Ontario sample and 36% for the CST sample, may also limit generalizability of the results because the sample may not be representative of the population of Canadian Telehealth Coordinators. Use of the Internet to collect responses (multiple responses from the same individual are possible) and self-selection sampling bias is another potential limitation. For certain questions, the frequency of respondents skipping a question exceeded 10%. Although this may indicate that the role or issue did not apply to the Telehealth Coordinator's current practice, it could also mean that the respondent had no opinion or did not wish to answer the question. Questions with a large number of skipped responses had the effect of further limiting the pool of responses available for data analysis. Finally, because the sample size ($n = 34$ for the CST group and $n = 13$ for the OTN group) differed, comparisons between the two groups may be limited.

Despite the aforementioned limitations, an experimental design and use of a validated tool is not mandatory for qualitative exploratory inquiry where the results are not intended to be generalizable. In qualitative research, the intent is not to generalize but rather, to provide a rich and credible description of the phenomenon being studied (Lau, 2008) so that other researchers may build on that research.

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Appendix A - Glossary

e-Health - (also written e-health) is a relatively recent term encompassing the fields of telehealth and health informatics (Hebert, 2001). Although various definitions of the term e-Health now exist in the published literature and elsewhere, the term e-Health has become sufficiently popular in the main to now denote the use of information and communication technology in health care (Chouinard, 2007). For the purpose of this research, e-Health will mean the use of a variety of information and communication technologies to “transform” health care delivery, research and education.

Telehealth (telemedicine) – As defined by the Office of Health and Information Highway (2000) telehealth is the use of communications and information technology to deliver health and health care services and information over large and small distances. For the purpose of this study, the same broad definition of telehealth is used, however, the emphasis will be on clinical care delivered in real time. Although the terms telehealth and telemedicine are at times used interchangeably, the word telehealth has replaced the word telemedicine in most jurisdictions in Canada except Ontario. For many, “telehealth” is more representative of the interdisciplinary nature of health care delivery today. Because of this, the word telehealth will be used throughout.

Nurse - Registered Practical Nurse (RPN), Licensed Practical Nurse (LPN) Registered Nurse (RN), or Registered Nurse in the Extended Class (RN –EC). An individual registered with nursing college. “The practice of nursing is the promotion of health and the assessment of, the provision of, care for, and the treatment of, health conditions by supportive, preventive, therapeutic, palliative and rehabilitative means in order to attain or maintain optimal function.” (College of Nurses of Ontario, 2007).

Regulated Health Professional – an individual expected to comply with the guidance, directions and practice documents provided by a recognized college for the health professions. In almost all jurisdictions in Canada, regulated health professionals are expected to practice in accordance with the standards of a college or professional body and for keeping current and competent throughout their career. This is supported by legislation.

Nursing Informatics - A specialty that integrates nursing science, computer science and information science to manage and communicate data, information, knowledge and wisdom in nursing practice. Nursing Informatics facilitates the integration of data, information and knowledge to support patients, nurses and other providers in their decision-making in all roles and settings. This support is accomplished through the use of information structures, information processes and information technology.” (American Nurses Association, 2008. p. 1).

Role Ambiguity – As defined by Hardy and Conway (1988), “... vagueness, lack of clarity of role expectations.” (as cited in Schlachta-Fairchild, 2000, p. 20). For the purpose of this study, one of three components of role strain along with role conflict and role overload.

Role Conflict – As defined by Hardy and Conway (1988), “role expectations that are incompatible.” (as cited in Schlachta-Fairchild, 2000, p. 20). For the purpose of this study, one of three components of role strain along with role ambiguity and role overload.

Role Overload – As defined by Higgins et al (2006) , “... the conflict [that] occurs when the total demands on time and energy associated with the prescribed activities of multiple roles are too great to perform the roles adequately or comfortably.” For the purpose of this study, one of three components of role strain along with role ambiguity and role conflict. Family or personal life issues will not be considered in this study.

Role Strain – As defined by Hardy and Conway (1988), “The subjective internal response of the individual when exposed to the demands or pressures of external role stress.” (as cited in Schlachta-Fairchild, 2000, p. 20).

Role Stress – As defined by Hardy and Conway (1988), “An external force that may produce role strain and is part of the stress-strain dyad. Role stress manifests itself in the individual as role strain.” (as cited in Schlachta-Fairchild, 2000, p. 20).

Teleconsultation – the use of information and communications technology for the purposes of conducting a health care consultation. For the purpose of this research, teleconsultation, teleconsult, telehealth consult, telemedicine consult or video consult will refer to a consultation between one or more health care professionals (not limited to physicians) and a patient by videoconferencing link in real time

Telehealth (Telemedicine) Coordinator - an individual trained in and responsible for the facilitating the delivery of clinical health care services and/or education synchronously (i.e., in real time) or asynchronously (i.e., in non-real time) over distance - great and small using videoconferencing technology.

Unregulated Worker - the term “unregulated health worker” is used throughout this paper to describe the variety of health-care providers who are not licensed or regulated by any professional governmental or regulatory body. These workers assist health professionals in providing care to patients and clients in various settings (acute, long-term, rehabilitation and home or community care) and regions across Canada (Canadian Nurses Association, 2008).

Appendix B – Sample Telehealth Coordinator Job Descriptions

The job descriptions that appear here are reprinted with the permission of the authors. Any reproduction of this information in whole in or in part requires the express permission of the author(s). The job descriptions appear “as is” and are provided for information purposes only. No claims are made as to whether they are up-to-date.

Section: Telemedicine Readiness	Number: 25.30.G.v1
Subject: Staffing Telemedicine Coordination Functions	Associated Form Number: n/a
Effective Date: June 1, 2007	Reviewed Date: new
Revised Date: new	Next Review Date: June 2008

INTRODUCTION

The OTN Membership Agreement and Guide discuss the need for Members to assign a resource (Telehealth / Site Coordinator) to support the delivery of telemedicine services within their organization. The guide also identifies that OTN will assist Members in how best to resource their positions.

It is a common belief that telemedicine programs need to have position descriptions that clearly define roles and responsibilities; but that the diversity of telemedicine programs and their unique role in each organization require flexibility in those position descriptions (National Initiative for Telehealth, Framework of Guidelines, 2003, p. 43).

As outlined in Article 3.1 (a) of the OTN Membership Agreement (2007), the Member Obligation is to "...designate an individual as the Telehealth / Site Coordinator who shall: act as the primary OTN contact person; dedicate the time to this role as set out in Schedule A, where specified; and meet all of the responsibilities set out herein;" (p. 3 of 9).

The Membership Guide (2007) goes further to explain that "The qualifications for a Telehealth / Site Coordinator are dependent upon the type of activity he/she is engaged in. For **clinical** telemedicine services, a Telehealth / Site Coordinator should be licensed and registered with their respective regulatory body or supported by a fully licensed health care provider. **Educational and administrative** telemedicine services also require a dedicated resource, but not necessarily a health professional" (p. 10).

GUIDELINE

OTN recognizes the uniqueness of different members and the diversity of services members wish to offer and partake of. OTN offers members '**Considerations for Staffing Telemedicine Coordination Functions Within An Organization**' which provides both common descriptions of telemedicine duties as well as specific requirements to consider depending upon the type of telemedicine activity planned. This information, attached as an appendix to this guideline, can be used as a baseline description of telemedicine-specific roles and responsibilities to inform member job descriptions.

Recognizing that "telemedicine services look for individuals with personal characteristics that will facilitate the individual's involvement and advance the telemedicine program" (National Initiative for Telehealth, Framework of Guidelines, 2003, p. 46); the staffing considerations information also includes attributes and knowledge/experience that would be valuable for the Telehealth / Site Coordinator to possess.

To facilitate the delivery of high quality telemedicine services within an organization, it is recommended that each Member take the time to analyze their organizational telemedicine services or programs (clinical, educational and/or administrative) and use the staffing considerations documentation to develop the roles and responsibilities of their Telehealth / Site Coordinator position.



Guideline

REFERENCES

National Initiative for Telehealth Guidelines. (2003). National Initiative for Telehealth (NIFTE) Framework of Guidelines. Ottawa: NIFTE.
OTN Membership Agreement (2007)
OTN Membership Guide (2007)

END OF GUIDELINE



Appendix: Considerations for Staffing Telehealth Coordination Functions Within an Organization

Ontario Telemedicine Network (OTN) Member Guideline Statement: The member shall designate an individual as the Telehealth Coordinator who shall: act as the primary OTN contact person; dedicate the time to this role as set out in Schedule A, where specified; and meet all of the responsibilities set out herein" (OTN Membership Agreement (2007), Article 3.1 (a)). For clinical telemedicine services, a telehealth coordinator should be licensed and registered with their respective regulatory body or supported by a fully licensed health care provider. Educational and administrative telemedicine services also require a dedicated resource, but not necessarily a health professional" (OTN Member Guideline, 2007, p. 10).

Part A of this document presents generic considerations for all telehealth staff, regardless of the type of telehealth activity the organization is planning to engage in. Part B presents additional information to consider for specific qualifications dependent upon the type of telehealth activity.

Part A) Considerations for All Telehealth Staff

Attributes

- Self-starter with an entrepreneurial spirit, comfortable working in a rapidly changing environment
- Team player but also able to work independently
- Comfortable working within the healthcare environment and with health care partners
- Comfortable communicating with internal stakeholders, across disciplines and levels within an organization
- Customer service agent with internal stakeholders through understanding their needs and building effective working relationships
- Comfortable communicating with various levels of external stakeholders and OTN staff
- Interest in technology as applicable to the type of activity the organization is involved in (clinical, educational or administrative)
- Comfortable actively seeking opportunities for the use of telehealth and promoting the benefits

Skills, Knowledge, Experience

- Basic computer skills
- Comfortable using new technology
- Good organizational skills and ability to set priorities
- Good interpersonal skills
- Good communication skills, both verbal and in writing
- Innovative, with good problem-solving skills
- Experience working with physicians and other healthcare professionals
- Basic understanding of the field of telehealth, or a willingness to learn
- Able to troubleshoot and problem solve quickly, strategically, and creatively

Roles and Responsibilities

Service/Program Development:

- Champion the development of organizational telehealth initiatives
- Advocate for, and contribute to, the establishment of organizational structures and resources to support the development of telehealth in keeping with the direction and priorities of the organization
- Promote telehealth to healthcare professionals, patients and the community
- Translate national and/or provincial telehealth resources and adapt to organization specific processes



Appendix: Considerations for Staffing Telehealth Coordination Functions Within an Organization

- Field queries regarding organizational telehealth services
- Maintain current knowledge base with respect to the field of telehealth/telemedicine

Operational Functions:

- Act as an organizational point-of-contact for telehealth
- Responsible for the delivery of high quality telehealth services within the organization
- Be cognizant of and follow Personal Health Information Protection Act (PHIPA) guidelines in all telehealth activity
- Train others in the organization on telehealth processes and technology (as required)
- Develop internal organizational telehealth policies, procedures (as required)
- Develop expertise in the use and care of the equipment
- Prepare space for telehealth events
- Troubleshoot minor technical problems
- Prepare/oversee internal organizational requirements for telehealth activity statistics and reporting

Obligations with OTN:

- Act as a liaison/point-of-contact with OTN
- Participate in OTN training sessions(as necessary)
- Participate in OTN site readiness assessments
- Schedule use of the network through OTN's scheduling service; resolve scheduling conflicts
- Attend and participate in OTN Regional meetings
- Maintain records of telehealth utilization and submit to OTN (as negotiated with OTN)
- Comply with technical service standards as set out in the OTN Technical Service Level Agreement (TSLA)
- Maintain a printed copy of the TSLA
- Maintain up-to-date copies of OTN Policies and Procedures, abide by such, and ensure awareness of by other telehealth users
- Maintain up-to-date copies of OTN Member Guidelines and training reference guides and ensure awareness of by other telehealth users
- Receive communiqués from OTN re: updates for network, policies, contact information, etc. and disseminate internally (as necessary)
- Participate in OTN new site / new system set-up process (as required)
- Discuss new opportunities for telehealth services with OTN Regional staff



Appendix: Considerations for Staffing Telehealth Coordination Functions Within an Organization

Part B) Specific Qualifications per Type of Telehealth Activity

	Clinical Services/Programs	Educational Services/Programs	Administrative Services/Programs
Additional Skills, Knowledge, Experience	<ul style="list-style-type: none"> • Familiarity in the development of clinical services, clinical policies/procedures and clinical workflow processes • Understanding of organizational policies, procedures and protocols relevant to the provision of clinical services • Understanding of organizational systems and associated departments required to support clinical services • When performing direct patient care activity, health professionals in telehealth (as in all other clinical areas) must be fully licensed and registered with their respective regulatory/licensing body (NPEE Guidelines, 2003, p. 47) 	<ul style="list-style-type: none"> • Familiarity with adult education learning principles, practices, and resources • Comfortable with different educational delivery methods that use technology • Comfortable with educational technologies (computer, internet, webcasting, videoconferencing, etc) 	<ul style="list-style-type: none"> • Familiarity with processes for organizing and conducting meetings
Additional Roles and Responsibilities	<p>Service Development:</p> <ul style="list-style-type: none"> • Liaise with healthcare providers and / or patients in the region to identify needs for clinical services • Field queries from internal sources re clinical service opportunities • Coordinate and/or participate in internal stakeholder meetings to develop services • Collaborate with OTN Regional staff to develop services • Develop protocols for telehealth consultations in collaboration with Consultants • Act as a resource for the organization when undertaking the Canadian Council on Health Services Accreditation Telehealth accreditation program (when applicable) <p>Operational Functions:</p> <ul style="list-style-type: none"> • Understand internal policies and processes with respect to organizational support systems for clinical events, i.e., medical records, admission/registration, privacy, patient consent, etc. • Work with support organizational support systems to develop or revise processes for the integration of telehealth into clinical service delivery • Engage organizational directors for participation in telehealth services • Coordinate organizational scheduling requirements for participation in teleconsultations (space, equipment, clinicians, etc.) • Ensure information, materials and equipment required for telehealth consultations are available • Prepare space to facilitate clinical event 	<p>Service Development:</p> <ul style="list-style-type: none"> • Facilitate professional education opportunities • Plan educational sessions/series/programs in conjunction with educational organizers within the organization • Work with OTN's technical team to pilot new educational technologies as appropriate • Encourage the use of best practices as they apply to technology-enabled education <p>Operational Functions:</p> <ul style="list-style-type: none"> • Facilitate access to educational resources, as made available by presenters, to participants; this may involve downloading and printing resources or directing participants to a web-based document repository, etc. • Book studios for individuals interested in participating in educational events • Outline processes/provide supports for members wanting to participate in educational events • Provide guidance on the preparation of videoconferencing and webcasting 	<p>Service Development:</p> <ul style="list-style-type: none"> • Encourage and facilitate administrative opportunities <p>Operational Functions:</p> <ul style="list-style-type: none"> • Organize additional audiovisual equipment requirements for Chairperson (if required) • Reserve internal space and technology required for the event • Explain the videoconferencing system/process to the Chairperson and participants (including why/when/where on skills) • Ensure presentation materials are suitable for use over videoconferencing • Distribute agendas and handouts



Appendix: Considerations for Staffing Telehealth Coordination Functions Within an Organization

	<ul style="list-style-type: none"> • Prepare the patient and /or the Consultant for the clinical event • Assist with client presentation & examination (as required) • Facilitate use of equipment during clinical event <p>Obligations with OTN:</p> <ul style="list-style-type: none"> • Participate in OTN program evaluation activities (as required) • Participate in Ministry of Health and Long Term Care reporting requirements • Handle referrals for consultants from OTN 	<ul style="list-style-type: none"> • Ensure presenter's technical and presentation requirements are met (laptop, document camera, camera work, etc.) • Register students for events • Co-ordinate planning, registration, scheduling, and other related tasks for larger more complex sessions <p>Obligations with OTN:</p> <ul style="list-style-type: none"> • Handle, as based on internal organizational practices, invoicing for events that incur costs as per OTN policies; such costs could include long distance and gateway fees 	<ul style="list-style-type: none"> • Moderate events <p>Obligations with OTN:</p> <ul style="list-style-type: none"> • Handle invoicing for events that incur costs as per OTN policies
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Coordonnateur de télésanté, CHUQ

Description de tâches :

Analyser les besoins, planifier et organiser les sessions de télésanté.

- Démonstrations
- Réunions médico-administratives
- Consultations
- Formations

Assister et accompagner les médecins et les professionnels de la santé lors de téléconsultations et sessions de formation en télésanté.

- Branchement des périphériques tels que échographe, dermatoscope, ophtalmoscope.
- Changement et ajustement des sources vidéos pendant les sessions.
- Ajustement du niveau d'entrée et de sortie audio pendant les sessions.

Donner la formation aux nouveaux utilisateurs de télésanté.

Support première ligne pour tous les équipements de télésanté dans le CHUQ.

- Vérifier la connectivité des appareils de télésanté sur le réseau RTSS.
- Remplacer différents câbles défectueux.
- Contribuer au support technique avec les fournisseurs d'équipement.

Support première ligne pour les centres en région.

- Aider les utilisateurs à démarrer et effectuer leur session de télésanté.

Collaborer à la préparation des demandes de financement pour des projets de télésanté.

Collaborer aux recherches de nouvelles applications en télésanté comme par exemple;

- Téléneurologie
- Télécolposcopie
- Télédermatologie

Coordonner les modifications majeures du RTSS dans le CHUQ

- Changement du site de concentration du CHUL vers l'HDQ.
- Établir le lien entre les différents fournisseurs GTQ, Sogique, Cifra.

Rédiger le rapport annuel de toutes les activités de télésanté.

Collaborer à la planification et à l'organisation des 7 Symposiums annuels de télésanté.

- Préparer la technique des sessions de télésanté.
- Préparer la technique audio-vidéo de la salle de conférence.
- Collaborer au programme scientifique.

Répondre aux lignes directrices et procédures du secteur de télésanté du CHUQ.



JOB DESCRIPTION

JOB TITLE:	Telehealth Nurse	JOB DESCRIPTION NO.:	
CLASSIFICATION:	DC1	GRID/PAY LEVEL:	Level 1
COLLECTIVE AGREEMENT:	Nurses	HSCIS NO.:	21001
UNION:	BCNU	JOB/CLASS CODE:	252
PROGRAM/DEPARTMENT:	Information Management/Information Technology – Clinical Informatics	BENCHMARKS (if Applicable):	N/A
REPORTING TO:	Manager, Telehealth		
FACILITY/SITE:	Nanaimo, Campbell River, Comox		

JOB SUMMARY:

The nurse assesses and evaluates Telehealth patients emphasizing self-efficacy, independence and health promotion. The nurse consults and collaborates with interdisciplinary team members, other health professionals/providers across a range of practice settings, and related community care/services/resource agencies to coordinate Telehealth services for patients.

TYPICAL DUTIES AND RESPONSIBILITIES:

1. Receives necessary information from referring physicians for patients to be booked into the various Telehealth clinics.
2. Maintains scheduling models as defined by the various hospital departments to ensure the best possible patient care and optimum utilization of hospital facilities and Telehealth programs.
3. Obtains, prepares, maintains, and secures all patient documentation for Telehealth in accordance with professional and VIHA standards and policies.
4. Reviews booking procedure manuals regularly and updates as required.
5. Provides clinical support to patients during Telehealth consultations. This may include physical and psychosocial assessment and support, advocacy, and follow up as required.
6. Operates equipment (videoconference and peripherals). This includes basic technical support and troubleshooting.
7. Participates in the planning and improvement process.
8. Conducts evaluation activities as required.
9. Liaises between patients and healthcare providers
10. Facilitates the Telehealth process and consultation.

11. Maintains records in accordance with established procedures and policies and prepare/ maintain statistical data, correspondence reports and other documentation as required.
12. Participates in Program staff development and education by acting as a role model and providing guidance or demonstrating clinical skills to students as required. Evaluates own performance and identifies learning needs. Participates in continuing education in order to maintain currency in trends, practices and techniques and to provide in-services for peers.
13. Collaborates with interdisciplinary team to ensure optimum patient/family focused care with appropriate monitoring and consulting with the primary care provider around patient care, and case review meetings
14. Demonstrates continuing competencies by participating in continuing education activities with interdisciplinary team and other nursing specific activities.
15. Participates in quality improvement, program evaluation, and research initiatives in collaboration with interdisciplinary team and key community partners in order to demonstrate improvement to health outcomes of the practice population.
16. Contributes to a safe and healthy work environment by observing and promoting universal precautions and infection control procedures, removing hazards; reporting faulty equipment, accidents, injuries and near misses.
17. Acts as member of ad hoc committees dealing with issues, which relate to Telehealth.

QUALIFICATIONS:

A. Education, Training and Experience

Graduation from an accredited Nursing Program. Current practicing registration with the College of Registered Nurses of British Columbia (CRNBC).

B. Skills and Abilities

- Ability to implement and evaluate programs in areas of clinical practice.
- Ability to perform patient/family assessments, plan, implement and evaluate care for complex care situations, and guide interdisciplinary team members.
- Ability to be an effective consultant for individuals and groups.
- Ability to conceptualize research questions and collaborate with researchers to facilitate research.
- Ability to role model expert nursing practice.
- Ability to establish team-based approach to offering Telehealth-based care to existing and potential client population

Prepared By:	M. Loyola/LC
Date Prepared:	September 7, 2007
Date Revised:	



Provincial Job Description

TITLE:
(337) Telehealth Facilitator

PAY BAND:
7

FOR FACILITY USE:

SUMMARY OF DUTIES:

Coordinates the use of telehealth activities including scheduling patient consultations and educational programs.

QUALIFICATIONS:

- ◆ Office Education certificate

KNOWLEDGE, SKILLS & ABILITIES:

- ◆ Intermediate computer skills
- ◆ Communication, organizational and interpersonal skills
- ◆ Ability to work independently
- ◆ Ability to communicate in a First Nations language, where required by the job
- ◆ Valid drivers license, where required by the job

EXPERIENCE:

- ◆ Previous: No previous experience.

KEY ACTIVITIES:**A. Telehealth Operations**

- ◆ Schedules use of telehealth suite to meet needs of client/patient/resident and clinicians.
- ◆ Advertises and registers participants for telehealth sessions.
- ◆ Ensures equipment is appropriately connected (e.g., TV, VCR, laptop).
- ◆ Tests equipment prior to clinical/educational session.
- ◆ Ensures quality of audio and visual levels.
- ◆ Facilitates clinic administration and ensures that appropriate records are available during consultation.
- ◆ Provides instruction and support to clients/patients/residents and other participants (e.g., family) during consultation.
- ◆ Provides instruction and support to health care providers/users of equipment.
- ◆ Provides technical support during telehealth sessions.
- ◆ Provides input into telehealth policies and procedures.

B. Communication

- ◆ Liases with outside agencies regarding type of presentation materials (e.g., Power Point, slides).
- ◆ Collaborates with other Telehealth facilitators regarding administration, organization of educational sessions, troubleshooting, reporting and recording.
- ◆ Trains, communicates and provides operating assistance to end users (e.g., staff, physicians).

C. Related Key Work Activities

- ◆ Collects and records/reports statistical information (e.g., evaluations, utilization statistics).
- ◆ Provides routine maintenance and checks of telehealth workstation elements and peripherals.
- ◆ Troubleshoots, monitors, reports and records technical functionality.
- ◆ Arranges for refreshments at clinics/educational sessions.
- ◆ Sets up and dismantles room-equipment, as required.

Draft

The above statements reflect the general details considered necessary to describe the principal functions of the job and shall not be construed as a detailed description of all related work assignments that may be inherent to the job.

Any revisions of this document recommended by the Joint Job Evaluation Maintenance Committee must be approved by the Parties.

Validating Signatures:

CUPE:

SEIU:

SGEU:

SAHO:

Date: 2005

February 2007

Responsibilities of Telehealth Coordinator – site / program responsibilities**Goals:**

1. To ensure sites (with and without an on-site coordinator) and programs receive up-to-date information on network activities, that equipment is maintained in good working order and that integrated site users workflows are up-to-date and relevant and the users remain competent in the use of the telehealth equipment.
2. To work the integrated site philosophy into the telehealth processes, where possible.

Key Support / contact person – this will be the MBTelehealth staff person, usually a Telehealth Coordinator, who is primarily responsible for the sites and programs utilizing the network.

Responsibilities –**New Sites & Programs**

- Work with new site or program in order to develop Project Plans
- Work with new programs to in order to develop Process Reviews (BPR)
- Work with the site/program, to provide the necessary staff training, and to provide them with the necessary tools to enhance the integrated site philosophy

Existing Sites & Programs

- Conduct reviews of current BPR's, in order to support integration, to improve processes or to address concerns raised
- Work with regional and site staff on the identification of current and emerging telehealth needs
- Conduct change management initiatives, user orientation and training sessions, initial and on-going
- Update sites and programs on new processes, policies or procedures

Training & Orientation

- Ensure that sites and programs are updated and competent in the use of equipment
- Support of new end-users if required until competency is demonstrated
- Utilization of other MBTelehealth staff, as applicable, to assist with training, demos and process reviews
- Orientation of other MBTelehealth staff to the site, as required

..2

Communication

- Work with TST to ensure equipment software is up to date and any equipment maintenance or security issues are escalated appropriately
- Work with the MBTelehealth Senior Management to address any ongoing issues and/or challenges related to telehealth in that setting
- Monthly contact, either by phone or over the link, with key contacts at the integrated site (minimum standard). This excludes HSC, St. Boniface and CCMB MacCharles & Tache – as this contact will be program specific.
- Semi-annual contact with key contacts within the major programs utilizing telehealth
- Meet with relevant site members in person (yearly) and coordinate attendance of other relevant MBTelehealth staff (either in-person or via the telehealth link)
- Work with SSR's in order to address any scheduling concerns
- Meet with the site SSR's on an on-going basis, in order to ensure all end-user issues are being addressed

Support for Events

- Support selected events, as able, while ensuring the support provided is within the TC's scope of practice
- Work with the clinical staff, and respective team members, to address practice issues relating to telehealth

Quality & Statistical Data

- Review of statistical and quality data related to that site and/or program, in collaboration with the Quality Committee

Level of Authority



JOB DESCRIPTION

JOB TITLE:	Telehealth Coordinator	JOB DESCRIPTION #:	N/A
DEPARTMENT:	Information & Telecommunication Systems	FACILITY:	Corporate
LOCATION:	Prince George, B.C.	SUPERVISOR TITLE:	Regional Telehealth Manager
BARGAINING UNIT:	H.E.U. 01	CLASSIFICATION:	10510
RATE:	R23A	BENCHMARK:	N/A
DATE ESTABLISHED:	September 09, 2003	REVISED DATE:	May 30, 2005

APPROVED BY:

(DEPARTMENT HEAD TITLE)	HUMAN RESOURCES	DATE
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JOB SUMMARY:

Reporting to the Regional Telehealth Manager the Telehealth Coordinator is responsible for the coordination of the Telehealth sessions within the Northern Interior Health Service Delivery Area (HSDA) and provides regional network and technical support to the Telehealth Manager.

TYPICAL DUTIES & RESPONSIBILITIES:

- Coordination & technical set up of educational, administrative and clinical videoconferencing sessions.
- Technical Support of the web conferencing services across the region.
- Assists in data collection, inventory collection, evaluation, reporting and performance improvement activities as they apply to telehealth.
- Assures the appropriate equipment & peripherals are available and functioning.
- Ensures the appropriate maintenance of all video conferencing and telehealth equipment within the Prince George Area.
- Development and maintenance of the Telehealth Website in consultation with the NH Website Coordinator.
- Develops technical training tools and provides technical training and support to all NH users, NH Telehealth Sites Coordinators and Client Support Analysts as required.
- Provides input in the development of the NHA wide Telehealth policies and procedures (technical and coordination/scheduling).
- Chair of NH Telehealth Site Coordinator Meetings.
- Performs related duties as required.

REQUIRED EDUCATION, TRAINING AND EXPERIENCE:

- Degree in Computer Science or diploma/certificate in related discipline.
- Two (2) years recent experience relating to Information Technology.
- One (1) year experience relating to telehealth and videoconferencing.
- Valid BC Drivers License.

SKILLS AND ABILITIES:

- Type 25 w.p.m.
- Communicate both verbally and in writing.
- Deal with others.
- Must have the physical ability to carry out the duties of the position.
- Organize and prioritize work.
- Operate related equipment.
- Travel for short periods for support telehealth project and technical support.

Colchester East Hants Health Authority Position Description

Position: Telehealth Site Coordinator
Reports to: Tri-District Manager of Telehealth/Site Manager
Location: Colchester Regional Hospital

Position Summary:

The Telehealth Site Coordinator coordinates and manages site operational activities related to telehealth to ensure efficient daily operations of the program. This person is a direct employee of the district, reports to the Tri-District Manager of Telehealth Services, and works closely with the Nova Scotia Telehealth Network (NSTHN) team.

Responsibilities:

- Coordinates telehealth activities for the site.
- Consults with clinical colleagues to support appropriate equipment usage and encourage program growth.
- Works with clinicians to ensure that the telehealth system supports appropriate standards of care.
- Provides support to clients during clinical consults.
- Works with the Tri-Manager of Telehealth Services and district resources to identify areas where telehealth may be used to support client care.
- Provides input, to the Tri-District Manager of Telehealth Services in the development of policies and procedures for site programs.
- Operates and has primary responsibility for telehealth equipment at the site. This is accomplished in partnership with the NSTHN Helpdesk/ Technical support staff.
- Consults with the NSTHN Helpdesk to facilitate solutions for technical problems.
- Supports and evaluates training needs others in the use of the telehealth equipment.
- Works with the Tri-District Manager of Telehealth Services to ensure ongoing communication and planning for evaluation of the network occurs in a timely manner.
- Collects and forwards data required for the purposes of clinical and technical audits to the District Manager for Telehealth Services and the NSTHN staff.

- Works closely with the Tri-District Manager of Telehealth Services to ensure efficient and effective delivery of district telehealth services

Qualifications:

- Post Secondary Education is required.
- Clinical background to assist in the provision of clinical services required.
- Registration with professional licensing body is required.
- Demonstrated skills and experience with Windows and Microsoft applications including Word, Outlook and Explorer is required.
- Related hospital exposure in an applicable setting is required.
- Demonstrated interpersonal and communication skills; must be an effective team player.
- Ability to work flex hours is required.

Program Reporting:

- Reports to the Tri-District Manager of Telehealth Services on site activities and program concerns/issues.
- Responsible to site manager or designate re: employment issues.
- Reports program activities where required.

Salary:

Approved by:

Date



Job Reference: DM17

Generated on 2008-07-30.

Job Title: Telehealth Clinical Programs Coordinator
Organization Unit: Department of Medicine → Patient Access → Telehealth Services
Job Group: Manager

General Information

General Accountability

The Telehealth Clinical Project Manager is accountable for the overall execution of all Telehealth Clinical Project activity, in collaboration with the Telehealth Regional Manager and with close collaboration to the Project Managers from PMO and or the clinical leaders of the specific programs involved. This position provides leadership and direction for planning, coordinating, and implementing any and all clinical aspects associated with region wide Telehealth Clinical projects. This would include projects with designated grant funding or initiatives to incorporate Telehealth technology into day-to-day operations of a Clinical department. This individual is responsible to develop Privacy Impact Assessments, assist with project plan development, assignment of clinical deliverables to ensure success, and to assist with or develop project charters as needed.

This position is aware of patient safety as it relates to the roles and responsibilities of the job.

Specific Accountabilities

Project Management

- Provides guidance and direction to clinical departments engaging in Telehealth Clinical projects or new initiatives
 - Coordinates clinical projects resulting from Alberta Health and Wellness Grant Funding, including reporting and budget management
 - Collaborates with other Health Authorities and Boards on clinical projects initiated by them
 - Assists clinical departments in managing all aspects of project management, including: Development of project charters; Identification of key stakeholders; Establishment of budgets and timelines; Defining scope
 - Provides technical advice to clinical departments in the development of proposals and business plans for using Telehealth in their area of expertise
- Offers clinical support to members of Project Management Office as needed to ensure a comprehensive approach to meeting deliverables is accomplished.

Clinical Program Planning

- Influences Regional direction in use of Telehealth in clinical applications
- Promotes Telehealth as a method of clinical service delivery for health care in DTHR. Promotes adoption of Telehealth technology by physicians, health care providers and patients.
- Functions as key contact for all clinical Telehealth activity, both within region and externally
- Provides regular updates regarding clinical activity to Telehealth Regional Manager for purposes of reporting and evaluation in accordance with Alberta Health and Wellness guidelines

- Develops pertinent policies and procedures for clinical Telehealth sessions
- Assists user departments in developing their own processes
- Develops and maintains Telehealth PIAs

Budget Management

- Accountable for management of any project budgets assigned by Alberta Health and Wellness specific to the projects this individual is supporting at any given time.
- Monitors budget for any new Telehealth projects, as funded by Alberta Health and Wellness or other funding sources. Ensures the spending by the Project Coordinators of each project stays within budget provisions.
- Collaborates with DTHR Finance department to create appropriate project accounts for any new projects and maintains signing authority on said accounts.
- Completes appropriate funding reports as outlined by Alberta Health and Wellness

Clinical Program Support

- Guides Clinical Program Assistant in managing clinical Telehealth bookings.
- Acts as initial advisor on new clinical requests from external agencies to ensure these requests align with regional priorities and direction.
- Liaisons with Telehealth Regional Manager and/or Director of Patient Access in final determination of appropriateness for external bookings/requests
- Arranges clinical support for Telehealth sessions when required at the direction of clinical providers. Coordinates with site leaders or department managers to arrange for clinical support in rural sites.
- Ensures all data on the Videoconference Scheduler is entered accurately and in a timely manner in order to be utilized for reporting clinical activity
- Functions as problem solver for concerns arising from a clinical Telehealth session, either internally or externally, as identified by Program Assistant.
- Follows up with clinical providers when issue identified during a session and ensures resolution has been made.
- Customizes the current training plans and documents in use in DTHR. Ensure all documents kept current
- Utilizes a variety of teaching methods to meet learning needs keeping in mind the principles of adult learning.

Provides Direction to Telehealth Clinical Program Assistant

- Functions as final decision maker in regards to requests for clinical sessions
- Assists with clinical Telehealth session coordination (e.g. arranging clinical support)
- Ensures all data entry completed accurately and in a timely manner for reporting purposes
- Manages responsibilities of program assistant when out of office

Key Competencies

- Acumen and insight: Acquiring, retaining, and integrating a broad scope of knowledge and understanding through experience, instruction, and study.
- Budget management: Stewarding costs in accordance with budgets; estimating future possibilities, managing budget controls, and providing informed analyses.
- Initiative: Demonstrating self-motivation; effective performance is driven from within rather than being conditional on pressure from external factors.
- Relationship building: Developing and maintaining a network of contacts, both inside and outside the organization, with people who may be able to supply assistance, support, or information toward work-related goals; building and maintaining positive relationships.

Related to relationship building, DTHR's Leadership Philosophy states, As leaders, we commit together to set an example and provide opportunities for ongoing, open communication and feedback.

- Client focus: Proactively determining the needs of internal and external clients, and developing solutions to address those needs.
- Perseverance: Maintaining motivation while working through inevitable delays, setbacks, and policy shifts.
- Technical competence/utilization: Emphasizing technical resources, applying them effectively, and keeping abreast of the latest developments in new technologies to assess their possible application (and/or ensure their successful implementation) within the workplace.
- Creativity and innovation: Identifying and evaluating unique opportunities for improving the

organization (eg. cost reductions, use of resources, policies, procedures, products); generating new ideas, approaches or techniques having useful application. Related to creativity and innovation,

DTHR's Leadership Philosophy states,

As leaders, we commit together to promote innovative solutions, recognizing that every outcome provides an opportunity for learning.

- Negotiation: Demonstrating strength and competence in bargaining for proposals and/or resources (eg. budgets, people, technology) and finding "win-win" compromises.
- Writing: Communicating in writing in a clear, concise and effective manner.
- Team playing: Working with others to achieve results.

Related to team playing, DTHR's Leadership Philosophy states, As leaders, we commit together to promote teamwork, because the best results are obtained when input and responsibility is held by the team

- Forecasting and visioning: Emphasizing corporate values, mission and long-term goals rather than short-term objectives or perspectives.
- Goal setting: Setting objectives which are realistic and ambitious.
- Coordinating and scheduling: Working with and coordinating the activities of others, including those over whom the incumbent may have no direct authority; attention and energy are focused on bringing various activities together to meet timetables.
- Delegation: Effectively utilizing the skills of subordinates to accomplish work objectives; providing a degree of supervision, support and accessibility that is tailored to the subordinate's level of maturity and ability.

Related to delegation, DTHR's Leadership Philosophy states, Employees will look to their supervisor as a trusted source for support in helping them pursue their goals in the context of fiscal responsibility, stewardship and trust.

- Employee development: Counselling employees to optimize performance and motivation; determining training and development needs; reviewing and setting performance standards for work assigned; providing advice and direction for the employees career and personal development so that their potential is realized.

Related to employee development, DTHR's Leadership Philosophy states, As leaders, we commit together to provide ongoing training, support, resources, and information to promote an environment where we can maximize our potential.

- Professional conduct: Demonstrating a high standard of professional behaviour in the workplace. Related to professional conduct, DTHR's Leadership Philosophy states, Leadership will lead by example and set high standards of professional conduct to achieve excellence; everyone, everyday.

Background

The typical minimum level of education to perform this job competently is equivalent to high school graduation and completion of a two-year diploma training program at a college or technical school. The person requires an ability to understand, utilize and communicate specialized information in speech and written text. This specialized training is often formalized and recognized by a specific certificate, diploma or license.

The related work experience, representing continuous learning, required for someone to perform this job competently is six to ten years.

Ongoing work assignments typically have clearly defined goals, with minimal direction regarding what action steps to follow. The incumbent's education, training, and previous experience will help ensure that the goal of the assignment can be clearly defined and understood (even if that means just knowing what relevant questions to ask), but the required/optional approaches to achieving the goal will often remain unclear, undefined and/or untested until the work assignment is well underway.

SKILL

Practical/ Technical

In terms of using the five senses of hearing, sight, smell, touch or taste, the person performs work where no

extraordinary sensory acuity is required. Translating sensory information into a decision or action is a straightforward process.

Referring to the work aids used in performing the work, the job requires some technology training and experience to be proficient in using computer applications on a regular basis.

Interpersonal

Communication - the ability to organize thoughts in a logical and persuasive fashion and express those thoughts in conversation, writing and formal oral presentation - is an important skill requirement. Opportunities to exercise communications skills occur on a regular basis, and application of these skills contribute directly to achieving the objectives and goals of the job, as demonstrated by the following:

- Listening non-judgmentally to information presented by others is important.
- Developing and verbally explaining information to superiors, peers, and subordinates in a well thought-out, logical, and effective manner is important.
- Handling relations with the public, clients, suppliers, or others outside the organization in a way that gets the message across with tact and diplomacy is important.
- Building and using an effective network of people inside and/or outside the organization to give and receive information and to accomplish work objectives is important.
- Writing clearly and concisely to explain information in a well thought-out, logical and effective manner is important.
- Demonstrating flexibility to very quickly change communication style, format and content when presented with unanticipated information is necessary.

Interpersonal leadership - the ability to influence, convince, direct and persuade others - is an important skill requirement. Opportunities to exercise interpersonal leadership skills occur on a regular basis, and application of these skills contributes directly to achieving the objectives and goals of the job as demonstrated by the following:

- Attracting, retaining, developing others and building morale is a necessary skill.
- Getting results without formal authority over the people who do the work is necessary.
- Achieving high standards of performance from others is important.
- Contributing as a team member, where individuals work together and share equally in the exchange of ideas, concepts and process outcomes, is important.
- Building and developing team approaches to problem solving, where individual skills and abilities are 'pooled' to address and resolve issues, is important.
- Teaching, training, developing or otherwise improving the skills of others through effective coaching and guidance is important.
- The ability to determine and respond to the needs of internal and external clients is important.

Problem Solving

Creative interpretation and 'new approach' thinking are applied in the performance of a variety of routine and non-routine work, with accomplishments measured primarily in terms of timeliness of delivery and accuracy of detail.

The job's requirement for analytical and reasoning skills are such that the person selects a course of action from identified options and evaluates for accuracy and completeness.

There are occasions where it is necessary to understand what may be motivating others and what additional information may be required.

Decision-making - the ability to make practical, fair and objective decisions about the best solutions to problems affecting some part of the organization - is a required skill.

- Making decisions even with conflicting or incomplete information is necessary.
- The ability to consider the interests of a wide variety of stakeholders and factors in arriving at conclusions under a variety of situations is necessary.
- Making judgements that are time-constrained and require immediate action is necessary.
- Developing recommendations and influencing the decisions of others by identifying and bringing

forward the key variables that need to be taken into consideration is an important skill.

Management Process

Required job skills for planning and coordinating resources and activities are applied to contribute to work activities and/or elements of projects where the sequence of steps are often not readily apparent or straightforward. The person may be expected to plan his or her own work or routine and related work of others, typically up to three months in advance. The content and objective of work activities are clearly related, but there is a high volume and variety of related issues and priorities that must be managed by the job. The person may coordinate activities with other teams, departments, and outside organizations as required.

Business/social/political acumen - the ability to comprehend and respond effectively to conditions, developments and practices affecting the organization - is a necessary skill requirement. Opportunities exist to develop and apply these skills in this position, usually as demonstrated by the following:

- Shaping the organization's operations to fit external realities (e.g., client demands, government legislation, costs and budgets, competitive/community pressures) is necessary.
- Demonstrating an orientation and insight which focuses on key operational concerns of the organization (e.g., service levels, costs, and effectiveness of programs) is necessary.
- Seeing the 'big picture' (from the entire organization's perspective) and adjusting work to reflect the complex network of forces at play is necessary.
- Identifying new ideas, techniques and opportunities for improving effectiveness, performance, and productivity is necessary.
- Acquiring and translating the organization's values, objectives, strategies and priorities into practical, workable programs, projects or plans is necessary.
- Acquiring and translating the pertinent issues and agendas associated with political, social, cultural and community environments into practical, workable projects or plans is necessary.

EFFORT

Physical

The job is frequently expected to lift, carry, push or pull objects weighing more than 20 pounds.

Physical activity requiring manual dexterity (eg. keyboarding, use of small tools) is normally required.

Mental/ Sensory

On a daily basis, the work involves short periods of non-interrupted mental/sensory concentration. Concentration can be relaxed by interruptions, movement or conversation which may affect the timing of completion of the work.

Technological/ Environment

Based on the rate and complexity of change in this person's area of specialization, it is necessary to keep pace with new technological and environmental developments. There are important changes that impact the area, and the person is expected to identify, assess and integrate appropriate changes to their work practices.

RESPONSIBILITY

Dollar Impact

This position is accountable and specifically responsible for an annual capital budget or one-time funding. While this budget may also be included in the supervisor's budget, this position establishes objectives and determines deployment of resources, and is specifically accountable for the results.

Taking Action

In terms of direction and procedural guidelines, the person generally works independently in accordance with

standard practices, policies, and precedents. Supervisory direction is available when necessary.

Other

Responsibility for health and safety is important. An understanding of related policies, procedures and programs is expected to be demonstrated in the performance of duties.

In dealing with the external community, statements made and actions taken could impact on the organization's public image and/or its relationships with other organizations. Displaying awareness, tact and diplomacy is expected, while maintaining appropriate confidentiality of information related to clients, staff, and operations.

Incumbent: (Name/Signature) _____

Title: _____

Date: _____

Approved By: (Name/Signature) _____

Title: _____

Date: _____

Appendix C – Online Survey

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Invitation to Participate/Letter of Information for Implied Consent

You are invited to participate in a study on the "Implementation and Use of Telehealth Technology in Canada" that is being conducted by Jay Lynch RN, MEd. Jay Lynch is a graduate student in the School of Health Information Science at the University of Victoria and is conducting this research as part of the requirements for a MSc. in Health Information Science.

This research is being conducted under the supervision of Dr. Francis Lau, Dr. Marilynne Hebert, Dr. Sandra Jarvis-Sellinger and Dr. Ginette Rodger. Dr. Francis Lau is the principal supervisor and is affiliated with the University of Victoria. If you have questions concerning this study you may contact Mr. Lynch by telephone (613-798-5555, x 72814 or e-mail: jlynch@uvic.ca) Alternatively, you may contact Dr. Lau by telephone (250-472-5131) or e-mail: fylau@uvic.ca . You may also verify the ethical approval of this study by contacting the Research Ethics Office at the University of Victoria (250-472-4545); e-mail: ethics@uvic.ca.

PURPOSE AND OBJECTIVES:

The primary goal of this exploratory research is to learn more about the role that nurses are playing in the implementation and use of telehealth (telemedicine) technology in Canada. This study seeks to obtain knowledge on the impact of telehealth technology on the scope and standards of professional practice of Canadian nurses. A secondary aim is to gain a better understanding of the demographics and role that regulated health professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians etc) and non-regulated personnel (e.g., IT professionals, administrative assistants etc) are playing in the implementation and use of telehealth technology in Canada.

IMPORTANCE OF THIS RESEARCH

During the past five years, the use of telehealth (telemedicine) technology to deliver patient care services in Canada has grown rapidly. In Ontario alone, there are now 359 telehealth centers and in 2005-2006, approximately 23,500 telehealth clinical visits took place. Although there is strong anecdotal evidence that Canada's nurses and others are playing a key role in successful implementation and use of this technology to make health care more accessible, currently, not much else is known about this group. This includes knowledge about telehealth's impact on the nurses' role, scope and standards of professional practice. Given the body of evidence documenting a shortage of nurses - especially those with health informatics competencies, the high level of occupational stress that they are reporting and their importance to successful implementation and use of new technologies at the front lines of health care, it is vital to learn more about telehealth's impact on nurses.

This research also has the potential to lead to new insights on the demographics and role that regulated health professionals other than nurses (e.g., physiotherapists, occupational therapists, dieticians etc) and others (e.g., IT professionals, administrative assistants etc) are playing in the implementation and use of telehealth technology.

PARTICIPANT SELECTION

Your participation in this study is important because as a Telehealth Coordinator, you play an important role in the successful implementation and/or use of telehealth technology.

WHAT IS INVOLVED

If you agree to voluntarily take part in this research, your participation will include completion of an online survey. The survey will take approximately 20 minutes to complete. Additionally, you will be offered an opportunity to provide information so that you can be contacted for a telephone interview. The telephone interview will take approximately 20 minutes to complete.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Consent (Pg. 2)

INCONVENIENCE

Participation in this study may cause some inconvenience to you, including the time required to complete the online survey or participate in the optional telephone interview. The telephone interview will audio-taped to facilitate transcription and data analysis.

RISKS

There are no known or anticipated risks to you from participation in this research.

BENEFITS

The potential benefits of your participation in this research include:

- Contributing to an improved state of knowledge of the role that nurses and others are playing in the implementation and use of telehealth technology in Canada
- Creation of an up-to-date and accurate profile of the population of individuals known as "Telehealth Coordinators" in Canada
- Identification of opportunities to improve nursing standards and scope of practice in relation to telehealth technology implementation and use in Canada
- Flagging of issues and challenges that nurses, other regulated health professionals (e.g., physiotherapists, occupational therapists, dieticians etc.) and non-regulated workers (e.g., IT professionals, administrative assistants etc) may be facing in relation to telehealth implementation and use in Canada.

VOLUNTARY PARTICIPATION

Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data may be used in the analysis, however you will remain anonymous and your answers confidential.

CONSENT FOR TAPE RECORDING DURING OPTIONAL TELEPHONE INTERVIEW

If you choose to participate in a telephone interview, prior to the interview you will be asked for your consent to have your answers recorded on audiotape. No audiotaping will take place without your consent.

ANONYMITY

Your identity will be protected at all times. All information captured will remain anonymous and confidential. Write-up of results will not include any information that would identify you.

CONFIDENTIALITY

Your confidentiality and the confidentiality of the data will be protected as follows:

1. All information captured will be anonymized and kept confidential. Write-up of results will not include any information that would identify you. Any identifiers will be encrypted or stripped out.
2. Only myself and a designated member of the supervisory committee will have access to the data.
3. The electronic data will be protected against breaches in security/privacy through the use of firewalls and encryption technology.
4. Any paper-based data and audio recordings will be kept in a locked filing cabinet in a secure area.

DISSEMINATION OF RESULTS

The results of this study may be shared with others in the following ways:

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

1. Published article
2. Thesis/dissertation
3. Presentations at symposia

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Consent (Page 3)

POSSIBLE FUTURE USE OF DATA

In addition, it is possible that the information that you provide may be analyzed, now or in future, by myself or other researchers for purposes other than this research project. The information that you provide will remain anonymous and you will not be identifiable.

DISPOSAL OF DATA

Data from this study will be disposed of by August 1, 2010, by electronic shredding. Electronic data including audio tapes, backups on storage drives and other media will be electronically shredded/erased. Paper files will be shredded by mechanical means.

By completing and submitting the online survey and/or participating in the telephone interview, YOUR FREE AND INFORMED CONSENT IS IMPLIED and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(a) - Roles That Support Care Delivery

As a Telehealth Coordinator you play many roles. The following question asks about the roles that you play to support **care delivery** using videoconferencing technology.

Below is a list of roles that Telehealth Coordinators typically play in organizations to support care delivery. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A
Assisting programs/departments/clinical specialties to develop and offer patient care services through videoconferencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing protocols for telehealth clinics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reviewing requests for patients to be seen by videoconferencing (e.g., reviewing patient referrals for appropriateness according to set criteria)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching/training others in the use of videoconferencing technology to support patient care delivery	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accompanying/assessing patients during clinical telehealth sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accompanying health professionals during clinical telehealth sessions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with clinicians or their secretaries in my organization to arrange clinical videoconferences (e.g., telephone calls, e-mails etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with personnel at other health care provider sites to arrange clinical videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times; exchange IP addresses etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with personnel in my provincial telehealth network to arrange clinical videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times; exchange IP addresses etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Supervising other personnel
(e.g., program secretaries,
schedulers etc.) in the
scheduling of clinical
videoconferences

Supporting physician
reimbursement for telehealth

Are there any other roles that you play to support care delivery using videoconferencing technology not listed above? If yes, please describe the role(s) and how much time/effort it requires in any given month.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(b) - Roles that Support Education

The following question asks about the roles that you play to support **teaching and learning** using videoconferencing technology.

Below is a list of roles that Telehealth Coordinators typically play in organizations to support teaching and learning. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A
Assisting programs/departments/clinical specialties to plan, develop and offer educational videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Teaching/training others in the use of videoconferencing technology to support education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with personnel in my organization to arrange educational videoconferences (e.g., meetings, telephone calls, e-mails to schedule times for educational videoconferences)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with personnel at external sites to arrange educational videoconferences (e.g., coordinating dates/times; exchanging IP addresses etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with personnel in my provincial telehealth network to arrange educational videoconferences (e.g., coordinating dates/times; exchanging GAB/IP addresses etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Supervising other personnel (e.g., secretaries, schedulers etc.) in the scheduling of educational videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other roles that you play to support teaching and learning using videoconferencing technology not listed above? If yes, please describe the role(s) and how much time/effort it requires in any given month.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(c) - Roles That Support Technology

The following question asks about the roles that you play to support telehealth technology.

Below is a list of roles that Telehealth Coordinators typically play in organizations to support telehealth technology. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A
Setting up, taking down and transporting videoconferencing equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing front-line technical support for videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with Technical/IT/HelpDesk personnel in my organization on videoconferencing-related technical challenges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with Technical/IT/HelpDesk personnel at my provincial telehealth network on videoconferencing-related technical challenges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Working with vendors of videoconferencing equipment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing/providing telehealth technology-related reports for my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preparing/providing telehealth technology-related reports for my provincial telehealth network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other roles that you play to support telehealth technology not listed above? If yes, please describe the role(s) and how much time/effort it requires in any given month.

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Part 1(d) - Roles That Support Planning, Development & Innovation

The following question asks about the roles that you play to support short and long term planning, development and innovation in telehealth.

Below is a list of roles that Telehealth Coordinators typically play in organizations to support short and long term planning, development and innovation in telehealth. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A
Developing telehealth-related policies and procedures for my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recruiting and hiring telehealth personnel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in strategic planning for telehealth with personnel in my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participating in strategic planning for telehealth with personnel in my provincial telehealth network	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with stakeholders and key decision makers in my organization about telehealth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating with stakeholders and key decision makers outside my organization to raise awareness of telehealth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning and conducting continuous quality improvement (CQI) projects in telehealth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planning and conducting telehealth evaluations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other roles that you play to support short and long term planning, development and innovation in telehealth not listed above? If yes, please describe the role(s) and how much time/effort it requires in any given month.

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(e) - Roles

Please indicate how often each of the following situations applies to you. If the situation does not apply, please select "n/a" for not applicable.

	Rarely		Sometimes		Very often	N/A
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play in my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play as a regulated health professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The role(s) that my employer expects me to play as a Telehealth Coordinator conflict with the role(s) that external organizations expect me to play	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scheduling/coordinating patient visits by telehealth competes with other important work that I must do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scheduling/coordinating educational videoconferences competes with other important work that I must do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providing technical support for videoconferences competes with other important work that I must do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my role as Telehealth Coordinator, I use all my skills and training as a regulated health professional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my role as Telehealth Coordinator, I work to the full scope of my practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(f) - Roles

To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.

	Strongly disagree		Neither agree or disagree		Strongly agree	N/A
The major satisfaction in my role as a Telehealth Coordinator comes from dealing directly with patients and/or their families and significant others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The major satisfaction in my role as a Telehealth Coordinator comes from solving the logistical challenges of scheduling videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The major satisfaction in my role as a Telehealth Coordinator comes from providing technical support to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The major satisfaction in my role as a Telehealth Coordinator comes from teaching others how to use the technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The major satisfaction in my role as a Telehealth Coordinator comes from the autonomy that my role provides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In my role as a Telehealth Coordinator, the thing that provides the most work satisfaction for me is:

In my role as Telehealth Coordinator, the thing that provides the least work satisfaction is:

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Part 1(g) - Roles

To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.

	Strongly disagree		Neither agree or disagree		Strongly agree	N/A
The scope and standards of practice in relation to my role as a Telehealth Coordinator are well defined by my professional college/regulating body	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel confident when coordinating clinical videoconferences that involve patients or health care providers outside my health region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I devote a significant amount of time to scheduling and the clerical aspects of organizing videoconferences when I should be doing other things	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization has a clear vision for future development of telehealth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization strongly supports the use of telehealth technology for patient care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Information Technology Department in my organization has a clear understanding of my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My immediate supervisor has a clear understanding of my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My job description accurately reflects my role, responsibilities and duties as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are clear policies, procedures and guidelines governing clinical telehealth in my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My peers within my organization have a clear understanding of my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA						
Personnel at external videoconferencing sites have a clear understanding of my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personnel in my provincial telehealth network have a clear understanding of my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my organization, telehealth is still a technology rather than a care process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my organization, telehealth is provider rather than patient focused	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telehealth is well integrated with the patient scheduling and registrations systems in my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my role as a Telehealth Coordinator, I perform work that suits my values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel comfortable with my level of technical competence in the use of videoconferencing technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Before I began my role as a Telehealth Coordinator I was computer literate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a control over my workload as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am well trained to perform my role as a Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telehealth Coordinators experience more stress in their jobs than their colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Comments	<input type="text"/>					

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(h) - Roles

In your role as Telehealth Coordinator, how easy or difficult is it for you to accomplish the following tasks? If the statement does not apply to your situation, please select "n/a" for not applicable.

	Very difficult		Neither easy or difficult		Very easy	N/A
Obtain the patient-related information required for clinical videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtain the logistical information required (e.g., date, time, room, IP address etc.) to arrange videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Register patients seen through telehealth as outpatient visits at your organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtain technical support for videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obtain secretarial/administrative support for videoconferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in/attend professional development, training and educational opportunities in telehealth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 1(i) - Roles

Please indicate the extent to which you agree or disagree with each of the following statements. If the statement does not apply to your situation, please select "n/a" for not applicable.

	Strongly disagree		Neutral		Strongly agree	N/A
My role as a Telehealth Coordinator does not require the skills of a regulated health professional (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rather than dealing with the logistics of scheduling videoconferences, Telehealth Coordinators should spend their time on other roles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As part of their role, Telehealth Coordinators should provide technical support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If a Telehealth Coordinator's role involves patient care then that individual should be a member of a regulated health profession (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People responsible for clinical telehealth activities should be nurses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurses who coordinate clinical telehealth activities should be prepared at the Advanced Practice Level (i.e., APN)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In my province, there is a shortage of personnel with the necessary skills and experience to perform the role of Telehealth Coordinator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telehealth Coordinators should be certified in their speciality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA**Part 1(j) - Roles**

In your opinion, what are the ideal qualifications that a Telehealth Coordinator should possess?

What challenges do you face fitting telehealth in to your current role/professional practice? How have you overcome those challenges?

What needs to happen to professionalize the role of Telehealth Coordinators in your province?

What standard(s) do you use to guide your practice as a Telehealth Coordinator, if any?

Who should lead the development and dissemination of clinical best practice standards and guidelines for Telehealth Coordinators? Why?

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA**Part 2(a) - Please Tell Us About Yourself**

Are you a?: (please select the answer that best describes your situation)

- Registered Nurse (RN)?
- Licensed Practical Nurse (LPN)?
- Registered Practical Nurse (Ontario)?
- Registered Psychiatric Nurse (RPN)?
- Regulated health professional other than a nurse? (e.g., physiotherapist occupational therapist, dietetician etc.) Please specify below
- Unregulated professional (e.g., information technology professional, secretary, administrative assistant etc. Please specify below

If you chose "Regulated health professional other than a nurse", or "Unregulated professional," please specify:

In what province are you employed?

What is your approximate age?

- 20 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- Greater than 60

How long have you been practicing your current profession/occupation (in years)?

What is your formal job title?

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 2(b) - Please Tell Us About Yourself

Please state the highest level of education that you have completed within your profession or occupation:

	Education in Nursing	Non-Nursing Education
Certificate	<input type="checkbox"/>	<input type="checkbox"/>
College Diploma	<input type="checkbox"/>	<input type="checkbox"/>
Bachelors Degree	<input type="checkbox"/>	<input type="checkbox"/>
Masters	<input type="checkbox"/>	<input type="checkbox"/>
Doctorate	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>

If you chose "Other Education", please describe that education

Do you belong to any professional association(s) in Telehealth?

Yes

No

Please specify which professional association(s) in telehealth you belong to

Do you belong to other professional associations outside telehealth (e.g., provincial nursing association, Dietitians of Canada etc)?

Yes

No

Please specify what speciality association(s) you belong to

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 2(c) - Please Tell Us About Yourself

What type of facility do you work in?

If you chose "OTHER - Not Listed", please describe your organization

If you work in a health care provider institution, please specify approximately how many beds there are in your facility.

Is your position in telehealth

- Full Time
- Part Time (less than 30 hours per week)

Is your job?

- Dedicated entirely to telehealth
- A shared position (i.e., you have other non-telehealth responsibilities)

What is your primary area of responsibility at work?

- Telehealth Coordination
- Clinical practice other than Telehealth
- Administrative Support/Secretarial
- Information Technology
- Education
- Research
- Management
- Other

If you chose "Other" (please specify)

What is your "home" department?

What is the title of the position that you report to?

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

Part 2(d) - Please Tell Us About Yourself

Do you coordinate? (please select the answer that best describes your situation)

- Clinical videoconferences only
- Educational videoconferences only
- Both clinical and educational videoconferences

Approximately how many hours per week do you devote to:

Coordinating clinical videoconferences

Coordinating educational videoconferences

Are there other individuals responsible for coordinating telehealth activities in your organization?

- Yes
- No

If you answered "Yes," please describe their role

Are you?

- Female
- Male

Would you be willing to participate in a telephone interview?

- The interview would last approximately 15 - 20 minutes
- Please note that due to time constraints, not all person(s) may be contacted for an interview

If you would like to be contacted for a telephone interview, please provide the following information:

Name:

Email Address:

Phone Number:

Appendix D – Closed Question Results

THE IMPLEMENTATION & USE OF TELEHEALTH IN CANADA

1. Below is a list of roles that Telehealth Coordinators typically play in organizations to support care delivery. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Assisting programs/departments/clinical specialties to develop and offer patient care services through videoconferencing	15.2% (5)	6.1% (2)	39.4% (13)	24.2% (8)	15.2% (5)	2.86	33
Developing protocols for telehealth clinics	6.1% (2)	30.3% (10)	24.2% (8)	12.1% (4)	27.3% (9)	2.58	33
Reviewing requests for patients to be seen by videoconferencing (e.g., reviewing patient referrals for appropriateness according to set criteria)	15.2% (5)	30.3% (10)	12.1% (4)	3.0% (1)	39.4% (13)	2.05	33
Teaching/training others in the use of videoconferencing technology to support patient care delivery	6.3% (2)	31.3% (10)	43.8% (14)	15.6% (5)	3.1% (1)	2.71	32
Accompanying/assessing patients during clinical telehealth sessions	28.1% (9)	28.1% (9)	15.6% (5)	3.1% (1)	25.0% (8)	1.92	32
Accompanying health professionals during clinical telehealth sessions	25.8% (8)	38.7% (12)	9.7% (3)	6.5% (2)	19.4% (6)	1.96	31
Communicating with clinicians or their secretaries in my organization to arrange clinical videoconferences (e.g., telephone calls, e-mails etc)	9.4% (3)	34.4% (11)	21.9% (7)	21.9% (7)	12.5% (4)	2.64	32
Communicating with personnel at other health care provider sites to arrange clinical videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times; exchange IP addresses etc)	9.4% (3)	28.1% (9)	37.5% (12)	15.6% (5)	9.4% (3)	2.66	32
Communicating with personnel in my provincial telehealth network to arrange clinical videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times;	12.5% (4)	31.3% (10)	40.6% (13)	12.5% (4)	3.1% (1)	2.55	32

exchange IP addresses etc)								
Supervising other personnel (e.g., program secretaries, schedulers etc.) in the scheduling of clinical videoconferences	18.8% (6)	18.8% (6)	15.6% (5)	3.1% (1)	43.8% (14)	2.06	32	
Supporting physician reimbursement for telehealth	18.8% (6)	3.1% (1)	6.3% (2)	0.0% (0)	71.9% (23)	1.56	32	
					<i>answered question</i>		33	
					<i>skipped question</i>		1	

2. Below is a list of roles that Telehealth Coordinators typically play in organizations to support teaching and learning. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Assisting programs/departments/clinical specialties to plan, develop and offer educational videoconferences	12.9% (4)	25.8% (8)	32.3% (10)	9.7% (3)	19.4% (6)	2.48	31
Teaching/training others in the use of videoconferencing technology to support education	3.2% (1)	29.0% (9)	38.7% (12)	12.9% (4)	16.1% (5)	2.73	31
Communicating with personnel in my organization to arrange educational videoconferences (e.g., meetings, telephone calls, e-mails to schedule times for educational videoconferences)	9.7% (3)	9.7% (3)	51.6% (16)	12.9% (4)	16.1% (5)	2.81	31
Communicating with personnel at external sites to arrange educational videoconferences (e.g., coordinating dates/times; exchanging IP addresses etc.)	16.1% (5)	25.8% (8)	41.9% (13)	3.2% (1)	12.9% (4)	2.37	31
Communicating with personnel in my provincial telehealth network to arrange educational videoconferences (e.g., coordinating dates/times; exchanging GAB/IP addresses etc.)	16.1% (5)	19.4% (6)	41.9% (13)	6.5% (2)	16.1% (5)	2.46	31

Supervising other personnel (e.g., secretaries, schedulers etc.) in the scheduling of educational videoconferences	10.0% (3)	20.0% (6)	23.3% (7)	3.3% (1)	43.3% (13)	2.35	30
	<i>answered question</i>						31
	<i>skipped question</i>						3

3. Below is a list of roles that Telehealth Coordinators typically play in organizations to support telehealth technology. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Setting up, taking down and transporting videoconferencing equipment	18.8% (6)	28.1% (9)	28.1% (9)	15.6% (5)	9.4% (3)	2.45	32
Providing front-line technical support for videoconferences	9.4% (3)	28.1% (9)	43.8% (14)	15.6% (5)	3.1% (1)	2.68	32
Working with Technical/IT/HelpDesk personnel in my organization on videoconferencing-related technical challenges	34.4% (11)	25.0% (8)	15.6% (5)	15.6% (5)	9.4% (3)	2.14	32
Working with Technical/IT/HelpDesk personnel at my provincial telehealth network on videoconferencing-related technical challenges	15.6% (5)	46.9% (15)	18.8% (6)	6.3% (2)	12.5% (4)	2.18	32
Working with vendors of videoconferencing equipment	9.4% (3)	18.8% (6)	9.4% (3)	3.1% (1)	59.4% (19)	2.15	32
Preparing/providing telehealth technology-related reports for my organization	15.6% (5)	43.8% (14)	18.8% (6)	3.1% (1)	18.8% (6)	2.12	32
Preparing/providing telehealth technology-related reports for my provincial telehealth network	28.1% (9)	37.5% (12)	9.4% (3)	0.0% (0)	25.0% (8)	1.75	32
	<i>answered question</i>						32
	<i>skipped question</i>						2

4. Below is a list of roles that Telehealth Coordinators typically play in organizations to support short and long term planning, development and innovation in telehealth. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Developing telehealth-related policies and procedures for my organization	12.9% (4)	38.7% (12)	25.8% (8)	9.7% (3)	12.9% (4)	2.37	31
Recruiting and hiring telehealth personnel	19.4% (6)	12.9% (4)	0.0% (0)	3.2% (1)	64.5% (20)	1.64	31
Participating in strategic planning for telehealth with personnel in my organization	6.5% (2)	32.3% (10)	35.5% (11)	19.4% (6)	6.5% (2)	2.72	31
Participating in strategic planning for telehealth with personnel in my provincial telehealth network	16.1% (5)	32.3% (10)	25.8% (8)	6.5% (2)	19.4% (6)	2.28	31
Communicating with stakeholders and key decision makers in my organization about telehealth	12.9% (4)	32.3% (10)	29.0% (9)	16.1% (5)	9.7% (3)	2.54	31
Communicating with stakeholders and key decision makers outside my organization to raise awareness of telehealth	25.8% (8)	35.5% (11)	9.7% (3)	6.5% (2)	22.6% (7)	1.96	31
Planning and conducting continuous quality improvement (CQI) projects in telehealth	32.3% (10)	25.8% (8)	19.4% (6)	3.2% (1)	19.4% (6)	1.92	31
Planning and conducting telehealth evaluations	22.6% (7)	41.9% (13)	19.4% (6)	3.2% (1)	12.9% (4)	2.04	31
					<i>answered question</i>		31
					<i>skipped question</i>		3

5. Please indicate how often each of the following situations applies to you. If the situation does not apply, please select "n/a" for not applicable.

	Rarely		Sometimes		Very often	N/A	Rating Average	Response Count
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play in my organization	32.3% (10)	9.7% (3)	9.7% (3)	16.1% (5)	3.2% (1)	29.0% (9)	2.27	31
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play as a regulated health professional	35.5% (11)	6.5% (2)	9.7% (3)	9.7% (3)	0.0% (0)	38.7% (12)	1.89	31
The role(s) that my employer expects me to play as a Telehealth Coordinator conflict with the role(s) that external organizations expect me to play	41.9% (13)	0.0% (0)	9.7% (3)	6.5% (2)	6.5% (2)	35.5% (11)	2.00	31
Scheduling/coordinating patient visits by telehealth competes with other important work that I must do	48.4% (15)	12.9% (4)	16.1% (5)	6.5% (2)	3.2% (1)	12.9% (4)	1.89	31
Scheduling/coordinating educational videoconferences competes with other important work that I must do	38.7% (12)	16.1% (5)	19.4% (6)	6.5% (2)	0.0% (0)	19.4% (6)	1.92	31
Providing technical support for videoconferences competes with other important work that I must do	29.0% (9)	25.8% (8)	25.8% (8)	9.7% (3)	0.0% (0)	9.7% (3)	2.18	31
In my role as Telehealth Coordinator, I use all my skills and training as a regulated health professional	12.9% (4)	16.1% (5)	12.9% (4)	3.2% (1)	19.4% (6)	35.5% (11)	3.00	31
In my role as Telehealth Coordinator, I work to the full scope of my practice	12.9% (4)	16.1% (5)	9.7% (3)	9.7% (3)	22.6% (7)	29.0% (9)	3.18	31
							Comments	4
							<i>answered question</i>	31
							<i>skipped question</i>	3

6. To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.								
	Strongly disagree		Neither agree or disagree		Strongly agree	N/A	Rating Average	Response Count
The major satisfaction in my role as a Telehealth Coordinator comes from dealing directly with patients and/or their families and significant others	6.5% (2)	0.0% (0)	19.4% (6)	38.7% (12)	29.0% (9)	6.5% (2)	3.90	31
The major satisfaction in my role as a Telehealth Coordinator comes from solving the logistical challenges of scheduling videoconferences	6.5% (2)	12.9% (4)	29.0% (9)	25.8% (8)	22.6% (7)	3.2% (1)	3.47	31
The major satisfaction in my role as a Telehealth Coordinator comes from providing technical support to others	9.7% (3)	16.1% (5)	22.6% (7)	32.3% (10)	16.1% (5)	3.2% (1)	3.30	31
The major satisfaction in my role as a Telehealth Coordinator comes from teaching others how to use the technology	3.2% (1)	3.2% (1)	12.9% (4)	45.2% (14)	29.0% (9)	6.5% (2)	4.00	31
The major satisfaction in my role as a Telehealth Coordinator comes from the autonomy that my role provides	0.0% (0)	6.5% (2)	16.1% (5)	22.6% (7)	51.6% (16)	3.2% (1)	4.23	31
							<i>answered question</i>	31
							<i>skipped question</i>	3

7. To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.								
	Strongly disagree		Neither agree or disagree		Strongly agree	N/A	Rating Average	Response Count
The scope and standards of practice in relation to my role as a Telehealth Coordinator are well defined by my professional college/regulating body	26.7% (8)	6.7% (2)	13.3% (4)	10.0% (3)	16.7% (5)	26.7% (8)	2.77	30
I feel confident when coordinating clinical videoconferences that involve patients or health care providers outside my health region	3.3% (1)	0.0% (0)	10.0% (3)	23.3% (7)	56.7% (17)	6.7% (2)	4.39	30
I devote a significant amount of time to scheduling and the clerical aspects of organizing videoconferences when I should be doing other things	10.0% (3)	10.0% (3)	20.0% (6)	23.3% (7)	26.7% (8)	10.0% (3)	3.52	30
My organization has a clear vision for future development of telehealth	10.0% (3)	16.7% (5)	23.3% (7)	30.0% (9)	20.0% (6)	0.0% (0)	3.33	30
My organization strongly supports the use of telehealth technology for patient care	0.0% (0)	0.0% (0)	20.0% (6)	26.7% (8)	53.3% (16)	0.0% (0)	4.33	30
The Information Technology Department in my organization has a clear understanding of my role as a Telehealth Coordinator	10.0% (3)	16.7% (5)	26.7% (8)	33.3% (10)	10.0% (3)	3.3% (1)	3.17	30
My immediate supervisor has a clear understanding of my role as a Telehealth Coordinator	0.0% (0)	3.3% (1)	10.0% (3)	33.3% (10)	50.0% (15)	3.3% (1)	4.34	30
My job description accurately reflects my role, responsibilities and duties as a Telehealth Coordinator	3.3% (1)	6.7% (2)	23.3% (7)	43.3% (13)	20.0% (6)	3.3% (1)	3.72	30
There are clear policies, procedures and guidelines governing clinical telehealth in my organization	6.7% (2)	16.7% (5)	30.0% (9)	26.7% (8)	16.7% (5)	3.3% (1)	3.31	30
My peers within my organization have a clear understanding of my role as a Telehealth Coordinator	13.3% (4)	30.0% (9)	6.7% (2)	33.3% (10)	13.3% (4)	3.3% (1)	3.03	30
Personnel at external videoconferencing sites have a clear understanding of my role as a	3.3% (1)	16.7% (5)	33.3% (10)	40.0% (12)	3.3% (1)	3.3% (1)	3.24	30

Telehealth Coordinator								
Personnel in my provincial telehealth network have a clear understanding of my role as a Telehealth Coordinator	3.3% (1)	3.3% (1)	13.3% (4)	33.3% (10)	40.0% (12)	6.7% (2)	4.11	30
In my organization, telehealth is still a technology rather than a care process	0.0% (0)	10.0% (3)	30.0% (9)	30.0% (9)	26.7% (8)	3.3% (1)	3.76	30
In my organization, telehealth is provider rather than patient focused	16.7% (5)	26.7% (8)	26.7% (8)	16.7% (5)	10.0% (3)	3.3% (1)	2.76	30
Telehealth is well integrated with the patient scheduling and registrations systems in my organization	16.7% (5)	26.7% (8)	36.7% (11)	13.3% (4)	3.3% (1)	3.3% (1)	2.59	30
In my role as a Telehealth Coordinator, I perform work that suits my values	0.0% (0)	3.3% (1)	16.7% (5)	33.3% (10)	43.3% (13)	3.3% (1)	4.21	30
I feel comfortable with my level of technical competence in the use of videoconferencing technology	0.0% (0)	6.7% (2)	3.3% (1)	33.3% (10)	56.7% (17)	0.0% (0)	4.40	30
Before I began my role as a Telehealth Coordinator I was computer literate	0.0% (0)	10.0% (3)	13.3% (4)	26.7% (8)	46.7% (14)	3.3% (1)	4.14	30
I have a control over my workload as a Telehealth Coordinator	6.7% (2)	6.7% (2)	13.3% (4)	43.3% (13)	26.7% (8)	3.3% (1)	3.79	30
I am well trained to perform my role as a Telehealth Coordinator	3.3% (1)	3.3% (1)	10.0% (3)	20.0% (6)	63.3% (19)	0.0% (0)	4.37	30
Telehealth Coordinators experience more stress in their jobs than their colleagues	10.3% (3)	17.2% (5)	58.6% (17)	3.4% (1)	6.9% (2)	3.4% (1)	2.79	29
							Comments	5
							answered question	30
							skipped question	4

8. In your role as Telehealth Coordinator, how easy or difficult is it for you to accomplish the following tasks? If the statement does not apply to your situation, please select "n/a" for not applicable.

	Very difficult		Neither easy or difficult		Very easy	N/A	Rating Average	Response Count
Obtain the patient-related information required for clinical videoconferences	0.0% (0)	6.7% (2)	26.7% (8)	30.0% (9)	23.3% (7)	13.3% (4)	3.81	30
Obtain the logistical information required (e.g., date, time, room, IP address etc.) to arrange videoconferences	0.0% (0)	6.7% (2)	30.0% (9)	30.0% (9)	30.0% (9)	3.3% (1)	3.86	30
Register patients seen through telehealth as outpatient visits at your organization	0.0% (0)	10.0% (3)	26.7% (8)	20.0% (6)	26.7% (8)	16.7% (5)	3.76	30
Obtain technical support for videoconferences	3.3% (1)	10.0% (3)	3.3% (1)	40.0% (12)	36.7% (11)	6.7% (2)	4.04	30
Obtain secretarial/administrative support for videoconferences	6.9% (2)	24.1% (7)	27.6% (8)	17.2% (5)	13.8% (4)	10.3% (3)	3.08	29
Participate in/attend professional development, training and educational opportunities in telehealth	10.0% (3)	20.0% (6)	6.7% (2)	43.3% (13)	20.0% (6)	0.0% (0)	3.43	30
							Comments	3
							answered question	30
							skipped question	4

9. Please indicate the extent to which you agree or disagree with each of the following statements. If the statement does not apply to your situation, please select "n/a" for not applicable.									
	Strongly disagree		Neutral		Strongly agree		N/A	Rating Average	Response Count
My role as a Telehealth Coordinator does not require the skills of a regulated health professional (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	20.0% (6)	10.0% (3)	23.3% (7)	13.3% (4)	30.0% (9)	3.3% (1)	3.24	30	
Rather than dealing with the logistics of scheduling videoconferences, Telehealth Coordinators should spend their time on other roles	13.3% (4)	10.0% (3)	40.0% (12)	23.3% (7)	13.3% (4)	0.0% (0)	3.13	30	
As part of their role, Telehealth Coordinators should provide technical support	6.7% (2)	10.0% (3)	33.3% (10)	40.0% (12)	10.0% (3)	0.0% (0)	3.37	30	
If a Telehealth Coordinator's role involves patient care then that individual should be a member of a regulated health profession (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	13.3% (4)	13.3% (4)	3.3% (1)	20.0% (6)	50.0% (15)	0.0% (0)	3.80	30	
People responsible for clinical telehealth activities should be nurses	23.3% (7)	26.7% (8)	23.3% (7)	10.0% (3)	16.7% (5)	0.0% (0)	2.70	30	
Nurses who coordinate clinical telehealth activities should be prepared at the Advanced Practice Level (i.e., APN)	36.7% (11)	20.0% (6)	20.0% (6)	3.3% (1)	6.7% (2)	13.3% (4)	2.12	30	
In my province, there is a shortage of personnel with the necessary skills and experience to perform the role of Telehealth Coordinator	16.7% (5)	26.7% (8)	36.7% (11)	13.3% (4)	6.7% (2)	0.0% (0)	2.67	30	
Telehealth Coordinators should be certified in their specialty	13.3% (4)	20.0% (6)	30.0% (9)	23.3% (7)	13.3% (4)	0.0% (0)	3.03	30	
							Comments	7	
							answered question	30	
							skipped question	4	

THE IMPLEMENTATION & USE OF TELEHEALTH IN ONTARIO

1. Below is a list of roles that Telehealth Coordinators typically play in organizations to support care delivery. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Assisting programs/departments/clinical specialties to develop and offer patient care services through videoconferencing	0.0% (0)	23.1% (3)	30.8% (4)	30.8% (4)	15.4% (2)	3.09	13
Developing protocols for telehealth clinics	7.7% (1)	23.1% (3)	23.1% (3)	15.4% (2)	30.8% (4)	2.67	13
Reviewing requests for patients to be seen by videoconferencing (e.g., reviewing patient referrals for appropriateness according to set criteria)	0.0% (0)	7.7% (1)	61.5% (8)	7.7% (1)	23.1% (3)	3.00	13
Teaching/training others in the use of videoconferencing technology to support patient care delivery	0.0% (0)	25.0% (3)	66.7% (8)	0.0% (0)	8.3% (1)	2.73	12
Accompanying/assessing patients during clinical telehealth sessions	7.7% (1)	7.7% (1)	38.5% (5)	30.8% (4)	15.4% (2)	3.09	13
Accompanying health professionals during clinical telehealth sessions	7.7% (1)	38.5% (5)	30.8% (4)	7.7% (1)	15.4% (2)	2.45	13
Communicating with clinicians or their secretaries in my organization to arrange clinical videoconferences (e.g., telephone calls, e-mails etc)	0.0% (0)	38.5% (5)	23.1% (3)	15.4% (2)	23.1% (3)	2.70	13
Communicating with personnel at other member sites in the Ontario Telemedicine Network (OTN) member sites to arrange clinical videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times; exchange GAB/IP addresses etc)	0.0% (0)	23.1% (3)	30.8% (4)	30.8% (4)	15.4% (2)	3.09	13
Communicating with personnel at the Ontario Telemedicine Network (OTN) to arrange clinical							

videoconferences (e.g., meetings, telephone calls, e-mails to coordinate dates/times; exchange GAB/IP addresses etc)	0.0% (0)	30.8% (4)	46.2% (6)	7.7% (1)	15.4% (2)	2.73	13
Supervising other personnel (e.g., program secretaries, schedulers etc.) in the scheduling of clinical videoconferences	0.0% (0)	7.7% (1)	30.8% (4)	7.7% (1)	53.8% (7)	3.00	13
Supporting physician reimbursement for telehealth	23.1% (3)	15.4% (2)	7.7% (1)	0.0% (0)	53.8% (7)	1.67	13
<i>answered question</i>							13
<i>skipped question</i>							0

2. Below is a list of roles that Telehealth Coordinators typically play in organizations to support teaching and learning. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Assisting programs/departments/clinical specialties to plan, develop and offer educational videoconferences	7.7% (1)	7.7% (1)	46.2% (6)	23.1% (3)	15.4% (2)	3.00	13
Teaching/training others in the use of videoconferencing technology to support education	0.0% (0)	46.2% (6)	38.5% (5)	7.7% (1)	7.7% (1)	2.58	13
Communicating with others in my organization to arrange educational videoconferences (e.g., meetings, telephone calls, e-mails to schedule times for educational videoconferences)	0.0% (0)	7.7% (1)	46.2% (6)	30.8% (4)	15.4% (2)	3.27	13
Communicating with personnel at other member sites in the Ontario Telemedicine Network (OTN) to arrange educational videoconferences (e.g., coordinating dates/times; exchanging GAB/IP addresses etc.)	0.0% (0)	38.5% (5)	23.1% (3)	30.8% (4)	7.7% (1)	2.92	13
Communicating with personnel at the Ontario Telemedicine Network							

(OTN) to arrange educational videoconferences (e.g., coordinating dates/times; exchanging GAB/IP addresses etc.)	0.0% (0)	30.8% (4)	53.8% (7)	7.7% (1)	7.7% (1)	2.75	13
Supervising other personnel (e.g., secretaries, schedulers etc.) in the scheduling of educational videoconferences	0.0% (0)	30.8% (4)	23.1% (3)	7.7% (1)	38.5% (5)	2.63	13
<i>answered question</i>							13
<i>skipped question</i>							0

3. Below is a list of roles that Telehealth Coordinators typically play in organizations to support telehealth technology. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Setting up, taking down and transporting videoconferencing equipment	15.4% (2)	7.7% (1)	23.1% (3)	30.8% (4)	23.1% (3)	2.90	13
Providing front-line technical support for videoconferences	7.7% (1)	15.4% (2)	30.8% (4)	38.5% (5)	7.7% (1)	3.08	13
Working with Technical/IT/HelpDesk personnel in my organization on videoconferencing-related technical challenges	23.1% (3)	15.4% (2)	53.8% (7)	7.7% (1)	0.0% (0)	2.46	13
Working with vendors of videoconferencing equipment	46.2% (6)	15.4% (2)	7.7% (1)	7.7% (1)	23.1% (3)	1.70	13
Preparing/providing telehealth technology-related reports for my organization	7.7% (1)	30.8% (4)	23.1% (3)	23.1% (3)	15.4% (2)	2.73	13
Preparing/providing telehealth technology-related reports for the Ontario Telemedicine Network (OTN)	7.7% (1)	53.8% (7)	23.1% (3)	0.0% (0)	15.4% (2)	2.18	13
<i>answered question</i>							13
<i>skipped question</i>							0

4. Below is a list of roles that Telehealth Coordinators typically play in organizations to support short and long term planning, development and innovation in telehealth. For each role, please indicate the level of time/effort that the role requires from you in a typical month. If you do not play a role, please select "n/a" for not applicable.

	Requires almost no time/effort	Requires a little bit of time/effort	Requires a moderate amount of time/effort	Requires a great deal of time/effort	N/A	Rating Average	Response Count
Developing telehealth-related policies and procedures for my organization	30.8% (4)	23.1% (3)	38.5% (5)	7.7% (1)	0.0% (0)	2.23	13
Recruiting and hiring telehealth personnel	38.5% (5)	7.7% (1)	0.0% (0)	0.0% (0)	53.8% (7)	1.17	13
Participating in strategic planning for telehealth with personnel in my organization	23.1% (3)	38.5% (5)	23.1% (3)	15.4% (2)	0.0% (0)	2.31	13
Participating in strategic planning for telehealth with personnel in the Ontario Telemedicine Network	38.5% (5)	7.7% (1)	30.8% (4)	7.7% (1)	15.4% (2)	2.09	13
Communicating with stakeholders and key decision makers in my organization about telehealth	23.1% (3)	23.1% (3)	30.8% (4)	23.1% (3)	0.0% (0)	2.54	13
Communicating with stakeholders and key decision makers outside my organization to raise awareness of telehealth	23.1% (3)	30.8% (4)	23.1% (3)	15.4% (2)	7.7% (1)	2.33	13
Planning and conducting continuous quality improvement (CQI) projects in telehealth	23.1% (3)	23.1% (3)	7.7% (1)	23.1% (3)	23.1% (3)	2.40	13
Planning and conducting telehealth evaluations	30.8% (4)	15.4% (2)	23.1% (3)	7.7% (1)	23.1% (3)	2.10	13
						<i>answered question</i>	13
						<i>skipped question</i>	0

5. Please indicate how often each of the following situations applies to you. If the situation does not apply, please select "n/a" for not applicable.								
	Rarely		Sometimes		Very often	N/A	Rating Average	Response Count
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play in my organization	23.1% (3)	0.0% (0)	0.0% (0)	23.1% (3)	7.7% (1)	46.2% (6)	2.86	13
My role as a Telehealth Coordinator conflicts with other roles that I am expected to play as a regulated health professional	30.8% (4)	0.0% (0)	7.7% (1)	15.4% (2)	0.0% (0)	46.2% (6)	2.14	13
The role(s) that my employer expects me to play as a Telehealth Coordinator conflict with the role(s) that external organizations expect me to play	46.2% (6)	0.0% (0)	7.7% (1)	7.7% (1)	0.0% (0)	38.5% (5)	1.63	13
Scheduling/coordinating patient visits by telehealth competes with other important work that I must do	30.8% (4)	0.0% (0)	7.7% (1)	0.0% (0)	30.8% (4)	30.8% (4)	3.00	13
Scheduling/coordinating educational videoconferences competes with other important work that I must do	30.8% (4)	0.0% (0)	7.7% (1)	0.0% (0)	38.5% (5)	23.1% (3)	3.20	13
Providing technical support for videoconferences competes with other important work that I must do	30.8% (4)	7.7% (1)	0.0% (0)	15.4% (2)	38.5% (5)	7.7% (1)	3.25	13
In my role as Telehealth Coordinator, I use all my skills and training as a regulated health professional	23.1% (3)	0.0% (0)	0.0% (0)	23.1% (3)	46.2% (6)	7.7% (1)	3.75	13
In my role as Telehealth Coordinator, I work to the full scope of my practice	30.8% (4)	7.7% (1)	0.0% (0)	23.1% (3)	23.1% (3)	15.4% (2)	3.00	13
							Comments	3
							answered question	13
							skipped question	0

6. To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.								
	Strongly disagree		Neither agree or disagree		Strongly agree	N/A	Rating Average	Response Count
The major satisfaction in my role as a Telehealth Coordinator comes from dealing directly with patients and/or their families and significant others	0.0% (0)	0.0% (0)	15.4% (2)	15.4% (2)	53.8% (7)	15.4% (2)	4.45	13
The major satisfaction in my role as a Telehealth Coordinator comes from solving the logistical challenges of scheduling videoconferences	7.7% (1)	7.7% (1)	38.5% (5)	38.5% (5)	7.7% (1)	0.0% (0)	3.31	13
The major satisfaction in my role as a Telehealth Coordinator comes from providing technical support to others	15.4% (2)	15.4% (2)	38.5% (5)	23.1% (3)	7.7% (1)	0.0% (0)	2.92	13
The major satisfaction in my role as a Telehealth Coordinator comes from teaching others how to use the technology	7.7% (1)	7.7% (1)	38.5% (5)	38.5% (5)	7.7% (1)	0.0% (0)	3.31	13
The major satisfaction in my role as a Telehealth Coordinator comes from the autonomy that my role provides	0.0% (0)	0.0% (0)	0.0% (0)	30.8% (4)	61.5% (8)	7.7% (1)	4.67	13
<i>answered question</i>								13
<i>skipped question</i>								0

7. To what extent do you agree or disagree with the following statements? If the statement does not apply to your situation, please select "n/a" for not applicable.									
	Strongly disagree		Neither agree or disagree		Strongly agree		N/A	Rating Average	Response Count
The scope and standards of practice in relation to my role as a Telehealth Coordinator are well defined by my professional college/regulating body	15.4% (2)	15.4% (2)	23.1% (3)	30.8% (4)	7.7% (1)	7.7% (1)		3.00	13
I feel confident when coordinating clinical videoconferences that involve patients or health care providers outside my local health region/LHIN	7.7% (1)	7.7% (1)	7.7% (1)	30.8% (4)	38.5% (5)	7.7% (1)		3.92	13
I devote a significant amount of time to scheduling and the clerical aspects of organizing videoconferences when I should be doing other things	23.1% (3)	0.0% (0)	23.1% (3)	7.7% (1)	38.5% (5)	7.7% (1)		3.42	13
My organization has a clear vision for future development of telehealth	23.1% (3)	0.0% (0)	30.8% (4)	30.8% (4)	15.4% (2)	0.0% (0)		3.15	13
My organization strongly supports the use of telehealth technology for patient care	0.0% (0)	15.4% (2)	23.1% (3)	15.4% (2)	46.2% (6)	0.0% (0)		3.92	13
The Information Technology Department in my organization has a clear understanding of my role as a Telehealth Coordinator	30.8% (4)	23.1% (3)	23.1% (3)	7.7% (1)	15.4% (2)	0.0% (0)		2.54	13
My immediate supervisor has a clear understanding of my role as a Telehealth Coordinator	0.0% (0)	15.4% (2)	23.1% (3)	23.1% (3)	38.5% (5)	0.0% (0)		3.85	13
My job description accurately reflects my role, responsibilities and duties as a Telehealth Coordinator	7.7% (1)	30.8% (4)	15.4% (2)	15.4% (2)	30.8% (4)	0.0% (0)		3.31	13
There are clear policies, procedures and guidelines governing clinical telehealth in my organization	23.1% (3)	15.4% (2)	23.1% (3)	7.7% (1)	23.1% (3)	7.7% (1)		2.92	13
My peers within my organization have a clear understanding of my role as a Telehealth Coordinator	38.5% (5)	30.8% (4)	23.1% (3)	7.7% (1)	0.0% (0)	0.0% (0)		2.00	13
Personnel at other member sites in the Ontario Telemedicine Network		23.1%	23.1%	23.1%	23.1%				

(OTN) have a clear understanding of my role as a Telehealth Coordinator		(3)	(3)	(3)	(3)			
Personnel at the Ontario Telemedicine Network (OTN) have a clear understanding of my role as a Telehealth Coordinator	7.7% (1)	23.1% (3)	23.1% (3)	7.7% (1)	38.5% (5)	0.0% (0)	3.46	13
In my organization, telehealth is still a technology rather than a care process	7.7% (1)	15.4% (2)	23.1% (3)	23.1% (3)	23.1% (3)	7.7% (1)	3.42	13
In my organization, telehealth is provider rather than patient focused	23.1% (3)	7.7% (1)	15.4% (2)	15.4% (2)	30.8% (4)	7.7% (1)	3.25	13
Telehealth is well integrated with the patient scheduling and registrations systems in my organization	38.5% (5)	7.7% (1)	15.4% (2)	15.4% (2)	15.4% (2)	7.7% (1)	2.58	13
In my role as a Telehealth Coordinator, I perform work that suits my values	0.0% (0)	0.0% (0)	15.4% (2)	38.5% (5)	46.2% (6)	0.0% (0)	4.31	13
I feel comfortable with my level of technical competence in the use of videoconferencing technology	7.7% (1)	15.4% (2)	0.0% (0)	15.4% (2)	61.5% (8)	0.0% (0)	4.08	13
Before I began my role as a Telehealth Coordinator I was computer literate	15.4% (2)	7.7% (1)	7.7% (1)	7.7% (1)	61.5% (8)	0.0% (0)	3.92	13
I have a control over my workload as a Telehealth Coordinator	0.0% (0)	23.1% (3)	23.1% (3)	15.4% (2)	38.5% (5)	0.0% (0)	3.69	13
I am well trained to perform my role as a Telehealth Coordinator	0.0% (0)	15.4% (2)	7.7% (1)	15.4% (2)	61.5% (8)	0.0% (0)	4.23	13
Telehealth Coordinators experience more stress in their jobs than their colleagues	30.8% (4)	7.7% (1)	53.8% (7)	7.7% (1)	0.0% (0)	0.0% (0)	2.38	13
							Comments	5
							answered question	13
							skipped question	0

8. In your role as Telehealth Coordinator, how easy or difficult is it for you to accomplish the following tasks? If the statement does not apply to your situation, please select "n/a" for not applicable.

	Very difficult		Neither easy or difficult		Very easy	N/A	Rating Average	Response Count
Obtain the patient-related information required for clinical videoconferences	0.0% (0)	7.7% (1)	23.1% (3)	23.1% (3)	30.8% (4)	15.4% (2)	3.91	13
Obtain the logistical information required (e.g., date, time, room, GAB # etc.) to arrange videoconferences	0.0% (0)	8.3% (1)	8.3% (1)	50.0% (6)	25.0% (3)	8.3% (1)	4.00	12
Register patients seen through telehealth as outpatient visits at your organization	8.3% (1)	8.3% (1)	16.7% (2)	16.7% (2)	33.3% (4)	16.7% (2)	3.70	12
Obtain technical support for videoconferences	8.3% (1)	33.3% (4)	16.7% (2)	8.3% (1)	25.0% (3)	8.3% (1)	3.09	12
Obtain secretarial/administrative support for videoconferences	30.0% (3)	30.0% (3)	20.0% (2)	10.0% (1)	10.0% (1)	0.0% (0)	2.40	10
Participate in/attend professional development, training and educational opportunities in telehealth	16.7% (2)	0.0% (0)	33.3% (4)	33.3% (4)	16.7% (2)	0.0% (0)	3.33	12
							Comments	0
							answered question	13
							skipped question	0

9. Please indicate the extent to which you agree or disagree with each of the following statements. If the statement does not apply to your situation, please select "n/a" for not applicable.									
	Strongly disagree		Neutral		Strongly agree		N/A	Rating Average	Response Count
My role as a Telehealth Coordinator does not require the skills of a regulated health professional (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	66.7% (8)	8.3% (1)	8.3% (1)	8.3% (1)	8.3% (1)	8.3% (1)	0.0% (0)	1.83	12
Rather than dealing with the logistics of scheduling videoconferences, Telehealth Coordinators should spend their time on other roles	25.0% (3)	8.3% (1)	0.0% (0)	33.3% (4)	25.0% (3)	8.3% (1)	8.3% (1)	3.27	12
As part of their role, Telehealth Coordinators should provide technical support	0.0% (0)	33.3% (4)	33.3% (4)	25.0% (3)	8.3% (1)	0.0% (0)	0.0% (0)	3.08	12
If a Telehealth Coordinator's role involves patient care then that individual should be a member of a regulated health profession (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	91.7% (11)	0.0% (0)	0.0% (0)	4.67	12
People responsible for clinical telehealth activities should be nurses	16.7% (2)	0.0% (0)	0.0% (0)	25.0% (3)	58.3% (7)	0.0% (0)	0.0% (0)	4.08	12
Nurses who coordinate clinical telehealth activities should be prepared at the Advanced Practice Level (i.e., APN)	33.3% (4)	25.0% (3)	25.0% (3)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	2.33	12
In Ontario, there is a shortage of personnel with the necessary skills and experience to perform the role of Telehealth Coordinator	16.7% (2)	8.3% (1)	41.7% (5)	8.3% (1)	25.0% (3)	0.0% (0)	0.0% (0)	3.17	12
Telehealth Coordinators should be certified in their specialty	8.3% (1)	0.0% (0)	58.3% (7)	8.3% (1)	25.0% (3)	0.0% (0)	0.0% (0)	3.42	12
							Comments		3
							answered question		12
							skipped question		1

Appendix E – Open Question Results

Combined Responses to Open Ended Questions – CST & OTN

In your opinion, what are the ideal qualifications that a Telehealth Coordinator should possess?

Good communication skill oral & written computer literate time management

Health Care professional with audio visual and computer training

Education background. Emergency room experience. Proficiency with computers.

Excellent customer service strong organizational skills multitasking and flexibility efficiency and time management patience

Organization skills, clinical background,

I do believe a nursing background gives a telehealth coordinator a good background for assessing situations and problem solving the client requirements.

Strong interpersonal skills, ability to work in a ever changing working environment, comfort with technology and patient care

Our network is strengthened by the diversity of its staff. We have some nurses, and other professionals but we also have people with extensive background in IT, Biomedical Communications, Continuing Education, as well as a wide range of support services in healthcare settings. A key qualification is broad experience in coordinating services in healthcare settings. Ideally Coordinators are generalists who are comfortable in a wide range of healthcare settings.

Have some sort of health background so you can understand the standards and rules and a technical background (either classes or work experience)

Strong interpersonal skills, strong communication skills, moderate technical skills, ability to adapt, to learn new technology

Regulated Health Care Professionals - for clinical applications.

Good health care background

Medical background in the area they are working Good Communication Organization

Good organizational ability, show initiative, have some technical skills regarding video conferencing, knowledge of the health care environment, friendly personality,

Experience in various clinical settings Knowledge of program planning and evaluation Understanding of Change Management Excellent communication and organizational abilities Ability to multi - task

The Coordinator should have a clinical background in the type of Telehealth program be offered

- Excellent communicator - General understanding of how the technologies works - High level of competency with Telehealth equipment (should be a 'super user')

Strong communication skills, both verbally and written. Ability to assume leadership role with other regional supervisors in the design and delivery of Telehealth programs (e.g. Nursing, Social Work). Computer experience and/or education. Effective decision making ability.

Excellent interpersonal skills. Project management skills in a health care environment.

Knowledgeable of the overall health care management in their area; management skills; organizational skills

Have never studied the role of a telehealth coordinator, so not sure... scheduling and some clinical background would definitely be necessary though I would think.

RN and fairly good computer background

Possesses a degree in a health related discipline and registration with applicable licensing body.

I think there is a distinction between clinical telehealth coordinator and telehealth coordinator. I believe a clinical coordinator require training in a clinical area as well as with the technology.

Organizational skills, willingness to learn a new technology (if new to Telehealth), computer literate back ground in patient care in any field, computer literacy, techy tendencies.

Self directed. Knowledge & experience in the health system flexible / adaptable. committed, computer knowledge

Computer competence, knowledge of health care organization, ability to communicate, confidence, sales skills, knowledge of multidisciplinary team work (to pull in those with necessary scopes of practice needed for different clinical applications)

Clinical assessment,

technologically skilled (computer literate); good communication skills; and a nurse

Registered nurse with certification in Telemedicine technology.

I feel a Telehealth Coordinator should be a RN.

Advanced Practice Nurse (APN) with computer literacy and clinical patient care experience at the minimum unit coordination positions

Registered Nurse Certification in ability to perform role

Interesting question - definitely a nursing background is required. Emergency nursing background is a definite advantage for this telehealth coordinator.

- detailed skills for physical and psychosocial assessment of patients and their families -analytical thinking - problem solving skills -in depth knowledge of resources available -

Regulated Health Professional Possession of a high level of skill in the areas of project management, communication, organization

Table 20: Ideal Qualifications of a Telehealth Coordinator

“What challenges do you face fitting telehealth in to your current role/professional practice? How have you overcome those challenges?”

ROLE DEDICATED MOSTLY TO TELEHEALTH

My role is only a 20% as coordinator but there's something to do everyday

N/A. I am the Telehealth Program Coordinator

My position is solely for Telehealth

Telehealth role has been as a designated coordinator 4 days / week.

My role as TH Coordinator is only about 10% of my job responsibilities - no major challenges yet

ROLE SPLIT BETWEEN TELEHEALTH AND OTHER POSITIONS AND RESPONSIBILITIES

Juggling two positions as the Telehealth positions are not full time.

The biggest challenge is the change management to move and integrate into the actual clinical setting and establish processes for this. As it has an impact on workload and staffing buy in is a challenge.

Time is always a challenge. I have to keep a tight schedule and prioritize tasks.

Too much of my role is not clinical and that concerns me from a professional practice standard.

I have several roles and several background areas of training and employment, I use them all.

I run a few different clinics and due to financial restraints I do not see a full time Telemedicine coordinator position in the near future

Serious multi-tasking challenges - even on the days dedicated to "clinic" there is a requirement to cover ER and supervise the Pharmacy Department, and plan education for staff, etc.

OTHER COMMENTS

Telehealth is 90% scheduling, technical support, communication, promotion and sharing information. The challenge is using nurses and those with professional practice to the maximum of their skill level. With the shortage of RNs and professionals we should have them actually as providers not coordinators.

Funding for support ie clerical support and equipment purchases; and consideration of the time spent preparing and wrapping up the clinical consult. For example, a pre-op assessment is 1 hour, but it takes approx 30 minutes to do assessment, fax info, education patient, set up equipment, plus another 15 minutes to remind patient of appointment and notify admitting dept

The THC's I know have mostly learned on the fly and by asking people like myself questions and to give demos.

The major challenge lies with the inability of the organization to recognize ongoing commitment and education for the position

Biggest challenge is dual role working as a registered nurse in another specialty area. It is an ongoing challenging with the nursing shortage!!

I have vocalized and demonstrated the ability to provide the same level of detailed patient care as in the other clinical areas of my practice

Table 21: Challenges Fitting Telehealth in to Current Role/Practice

What needs to happen to professionalize the role of Telehealth Coordinators in your province?

Standards need to be created

It should remain nurse-based. It does not need to be an advanced practice role. You are using a camera in a room; any nurse can fulfill her medical scope of practice in telehealth.

n/a

Certification with flexibility for different needs in different regions

In our province we have a job description that I truly believe allows a professional of various disciplines to be a telehealth coordinator.

Before that can happen at the provincial level, the role of the **TC has to be recognized on a National level** as the cross-jurisdictional issues are rapidly becoming the biggest problem for all clinical activity mediated by videoconferencing

Telehealth Certification training programs could be developed and delivered in partnership with regional community colleges. Online study options would be useful/critical as we increasingly need to train telehealth coordinators in rural and remote communities.

Become a full time profession so the turn over is lower

Consistency in qualifications and remuneration.

Support from government/ministry of health

Education and certification

Organize as a specialized group to develop common practices and regular contact

I think perhaps **certification** would be the key. Becoming a member of a national group would be key to establish a great connection to look at trends and learn from what has been/ is being done

The role of Telehealth Coordinators needs to be more clearly defined. Is it more technical?? Is it more coordination (set of sessions, dates, times...etc), is it more clinical (aid in sessions, help patients get accustomed to technologies). The term Telehealth Coordinator is too vague.

More training opportunities, courses etc.

Linkage with a college, course development, linkage with ehealth as sub category in health informatics.

Really must be driven from a **national level**.

Need to clearly identify the role and qualifications of a TC. Ex. should they be RNs? If so, should they also be expected to do equipment set up, troubleshooting etc or have access to technical support from IT dept.

Telehealth coordinators scope of practice ranges from hospital to hospital; need basic entry level requirement of a nurse; more publicity--telehealth coordinators--some think you field nursing related questions via the phone, and that's what's currently offered in a certificate program.

Bachelor degree in nursing with a certification in Telemedicine.

I think a series of workshops done over videoconferencing and have each site and coordinator get involved. I find a lot of the THC's get trained then don't use the equipment for a period of time and lose confidence in their ability to run it.

Minimum qualifications set for the role as a 'registered nurse'

Standard regulation of the role must take place. The THC must present with uniform qualifications. My belief is that a registered nurse is essential to the role.

Recognition of the role and value of telemedicine as a whole, in patient care, then a certification process, or other recognized specialization for the telehealth coordinator I believe would follow. I don't believe that telemedicine has achieved credibility, as yet, among the consultant group.

-be recognized on licensing renewal forms is a start

Good question but I am not certain!

Table 22: Professionalization of the Role of Telehealth Coordinator

What standards do you use to guide your practice as a Telehealth Coordinator, if any?

NIFTE Guidelines, organizational polices and procedures, and promote the professional standards and position statements of the professional that do use telehealth.

Support from the peers

All of the **Professional Standards; in particular- Provision of Ethical Care but also Responsibility and Accountability Specialized Body of Knowledge Competent Application of Knowledge Provision of Service in the Public Interest Self-regulation**

We have a very clear and detailed staff manual and staff forum which include operational standards

I practice within my scope of practice of **my professional organization** and take full accountability of all my actions.

No specific standard to date... more of a job description.

Telehealth Network policies and standards HeSCA Code of Ethics <http://www.hesca.org/about/ethics.html> Regional Health Authority standards and policies

We have a standard of care that we follow

Those set at the training opportunities provided by the **provincial** organization

The **Ontario Telemedicine Network has created guidelines**. The various disciplines have criteria as does that hospital as a whole.

There is a Guidelines and Procedures manual developed for telehealth.

I am constantly referring to the **accreditation standards**. As well I am presently reading the **NIFTE** guidelines for 2003. I connect with a provincial program and I have had a quality assurance meeting for telehealth for my region.

I use the **Canadian Heart & Stroke, Alberta Heart & Stroke and standards** that have been developed by the **Alberta Provincial Stroke Strategy**.

According to **Telehealth Saskatchewan network**.

I follow my **professional bodies code of conduct and ethics**

CARNA competence standards

Nova Scotia Telehealth Network Canadian Council on Health Services Accreditation

Sask telehealth, a provincial approach

CCHSA, NIFTE, organizational policies and practices, professional specific telehealth standards.

CNO standards; hospital related policy and procedures

Professional nursing standards ie best practice

For THC's my feeling would be to have a certified program for them and offer updates or refresher workshops.

Many of the activities I perform are advanced practice roles and responsibilities such as decision making and are guided by any other areas of specialized nurse practice

I utilize my standards of professional practice.

CNO standards of practice - as applicable, otherwise, personal clinical judgement, and applicable hospital policies and procedures.

Personal ethics of practice Standards of Practice CNO Standards of Practice for Rehabilitation Nursing-OARN

Standards of care as outlined by my College and my organization

Table 23: Standards Used to Guide Practice

Who should lead development and dissemination of clinical best practice standards and guidelines for Telehealth Coordinators? Why?

I think a regulated clinical practitioner should lead this process

BC Telehealth Development Committee because they have the knowledge of the work

CNA has done a good job, but they want a higher level of education which makes it impossible for front line nurses that would like to work in this area, that don't have a master's degree. Doctors and nurses who use telehealth as part of their on going practice

Program and Performance Mangers of each **provincial network**, with the adequate research done with the existing telehealth coordinators.

Canadian Society of Telehealth in collaboration with the various national professional healthcare associations

Canadian Society for Telehealth in partnership with Canadian Telehealth Networks

Should be similar to a live appointment with a health care worker with some adaptations developed with the input of coordinators

The provincial organization

A combination from National, Provincial and Health Care Centre Levels.

National group that has **representation from all provinces**

Telehealth Coordinators with input from regulating bodies of professional practice

Clinical coordinators in partnership with telehealth coordinators

Professional group of telehealth coordinators and leaders from the **national** to include **representation from all the provinces and territories**

Those who have the highest use/adoption of telehealth technologies in their region or area, for they must be doing something right. :)

The **Provincial Telehealth Coordinators** with approval from the **Provincial Telehealth Committee**

Working Telehealth coordinators with professional licensure in the health sciences.

I think it should be a combination of clinical and IT input that create the guidelines

The co-ordinators, no one else in our organization has any involvement

An experienced professional trained in a medical field as well as having telehealth experience. This would ensure best standards of practice in the technical field as well as medical best practices ie universal precautions, infection control, confidentiality

Telehealth Coordinators themselves with support and information from professional bodies like **CST**.

College of Nurses since most TC are RNs?

CNO, because I think the minimum level of practice should be a nurse (RN or RPN)

Stakeholders in individual hospitals

I think it should come from the **Ministry of Health** because they are the body that sets the standards for patient care and this is no different. Telehealth coordinators at the advanced practice role

The leader should be someone who has intimate knowledge of the role, has true appreciation of the various tasks required of the co-ordinator and who will recognize that the primary client of the service is "the patient".

OTN Program Managers (I think there are such people), with input from telehealth coordinators & **CNO** -set the standards and guidelines for Ontario. Seems reasonable to come from this level so each organization can utilize the resources developed rather than recreating the wheel.

The majority of health care professionals presently involved in the role

Canadian Society of Telehealth ~ because I feel they would be the most appropriate body and would do so at a national level

Table 24: Development & Dissemination of Standards and Guidelines

In my role as a Telehealth Coordinator, the thing that provides the most work satisfaction for me is:

Showing others ways Telehealth can benefit them.

Problem solving is a big part of the role

Teaching people and patients how to use the technology and have positive sessions.

Connecting patients with loved ones over videoconferencing.

Working with people

Witnessing clients access speciality care that they would not be receiving without the use of telehealth due to the many barriers associated with the travel to see the specialists.

Increasing access to health care services in rural and remote areas of the jurisdictions through telehealth technology that may not otherwise be available without considerable inconvenience to the patient.

Developing and implementing new telehealth clinical services, introducing telehealth to people and communities, helping to establish new telehealth sites, and finding new applications for telehealth technology

Providing a service that will continue to grow and develop over time.

Being part of a new way of delivering health care. The pioneers. Convincing health care providers to apply telemedicine as a means of health care delivery. Proving to them that it is effective. The goal is to have health care providers 'think telemedicine' when considering initial or follow-up assessments.

Telehealth service delivery is integrated into the health care system.

Patient satisfaction with clinical sessions when they are provided access to > 2 physicians at the same time

The versatility of this job entailing support on all levels.

Being a part of a service that has become so beneficial to both healthcare providers as well as patients. i.e., travel reduction, cost reduction, better use of health care time due to less travel, etc

When I see the process coming together and allowing the facility to conduct quality telehealth sessions

Being able to case manage the patients that have been seen through my Telehealth clinical program

Being able to educate others on the potential/use of the technologies. Also being able to aid others in the professional and proper use of the equipment and 'making it all work' for them and their situations.

Providing opportunities to patients, staff and physicians that they would not have access to without

Telehealth - eg. clinicals, family visits, education opportunities

I'm not formally a telehealth coordinator, however I do run our videoconferencing machine and I get great satisfaction when a patient is so happy that they can have a consult (without leaving their community) with a physician who is located in another city or province.

Clinical support and education

Being able to provide health education to members of our community.

Helping patients receive quality care

Getting health programs to grasp the concept and adapt to their roles , so as to enhance quality care to rural / remote clients & health workers.

When I offer a program that a person would not be able to attend if not offered by telehealth.

In my role as a Telehealth Coordinator, the thing that provides the most work satisfaction for me is:

Regular contact with patients, their families and physicians.

The challenge of implementing a new program and "breaking ground."

Knowing that i've saved the patient valuable time and money by providing the service; educating the patient/family about the uses of OTN

I am thrilled when the connection is made in a videoconference and the further away the far site is - the more thrilled I am.

The positive response to this mode of health care delivery by the patients and families

Providing quality education teaching sessions to clerks, residents and doctors across our region.

Building the confidence of these health care providers in videoconferencing.

The combination of roles as patient care-giver and case manager for telehealth.

Direct patient interaction and support

Providing the environment and technology and being able to facilitate the best possible consultative experience for the patient.

Providing the opportunity for "seamless patient care". Integrating allied health professionals into the telehealth process.

Although I derive satisfaction from all of the above listed, the major satisfaction in my role as Telehealth Coordinator comes from the project management portion of my job~working with physicians and key stakeholders both in and outside of my organization to develop new telemedicine opportunities/applications

Table 25: Sources of Satisfaction

In my role as Telehealth Coordinator, the thing that provides me with the least work satisfaction is:

Clerical type duties.

The **lack of support** that I have in the organization

Scheduling and the **secretary work**.

Overly complex process requirements

Managing the updated schedule as there are so many changes that occur.

The **increase demands of reporting and processes** taking time away from building capacity for the program.

endless tasks related to scheduling

Not being able to use all of my time with telehealth and having to rush or short change the program due to hour restrictions

The lack of a commitment and a strong advocate for telemedicine within the Senior Leadership Team of the hospital. Telemedicine is treated as the 'unwanted child'. They look at the technology first, as opposed to the services provided. There is a **weak understanding** of the difference between Telemedicine Services from the Hospital and the Network/Infrastructure Services provided by the [provincial network] by the Hospital Leadership Team.

Support from organization

delivering equipment for video sessions

Trying to move past scheduling and get the organization to get support for this function to allow me to practice to my full scope

Data Entry

There is no formal structure for telehealth in [my province] - we could be doing so much more with this technology!

Administrative duties

When the technology fails.

The technical support which could be provided by an IT department

Organizational structure, orphan job position, multiple stakeholders with multiple interests in my work time and duties.

Completing some **administrative duties, such as statistics**.

Providing administrative support for educational and administrative events - requests to book rooms,

schedule events with OTN.

The **amount of prep work** for clinical consult ie notifying patient, notifying admitting, assembling the equipment--finding and then borrowing equipment from floor ie BP cuff, thermometer, scales

When a videoconference connection fails or peripheral equipment will not work with the videoconference equipment and I cannot find a way to fix it or to get connected.

Dealing with IT issues

Is **not having enough hours in the day** to complete all the tasks at hand. Also when we have a failed session due to technical difficulties.

Having to validate the program within the organization.

Technological glitches

Dealing with IT & scheduling issues.

The things that provide the least work satisfaction are the **administrative duties** associated with my role **~scheduling** (not solving the logistical challenges but the actual scheduling), statistics, etc...I am the only person in telemedicine and do not have any administrative or technical support, much less a back-up if I am ill. This is a source of major frustration and stress. My organization has stretched my role to the limit with **no plans of providing additional human resources in the near future.**

Table 26: Source of Dissatisfaction

Appendix F – Telephone Interview Script

Interviewee: _____

Date: _____

Time: _____

Q#	Question	Yes	No	Answer/Comments
1.	Do I have your consent to tape record this interview? The tapes will be kept under lock and key and electronically shredded by August 2010. If yes, I will now start recording.			
2.	In what province do you practice?			
3.	Are you a:? (please select the answer that best describes your situation) <input type="checkbox"/> Registered Nurse (RN)? <input type="checkbox"/> Licensed Practical Nurse (LPN)? <input type="checkbox"/> Registered Practical Nurse (Ontario)?Registered Psychiatric Nurse (RPN)? <input type="checkbox"/> Regulated health professional other than a nurse? (e.g., physiotherapist occupational therapist, dietician etc.) <input type="checkbox"/> Unregulated professional (e.g., information technology professional, secretary, administrative assistant etc. Please specify below: If you chose "Regulated health professional other than a nurse", or "Unregulated professional," please specify: _____			

Q#	Question	Yes	No	Answer/Comments
4.	What type of facility do you work in?			
5.	What is your formal job title?			
6.	Is your position in telehealth <input type="checkbox"/> Full Time <input type="checkbox"/> Part Time (less than 30 hours per week)			
7.	What is your primary area of responsibility at work?			
8.	Approximately how many hours per week do you dedicate to: <input type="checkbox"/> Clinical videoconferences <input type="checkbox"/> Educational videoconferences			
9.	In your opinion, what are the ideal qualifications/core competencies that a Telehealth Coordinator should possess?			
10.	What challenges do you face fitting telehealth in to your current role/professional practice? How have you overcome those challenges?			
11.	If a Telehealth Coordinator's role involves patient care, should that individual be a member of a regulated health profession (e.g., Nurse, Physiotherapist, Occupational Therapist, Dietician etc)?			

Q#	Question	Yes	No	Answer/Comments
	If yes, what type of regulated health professional should they be? _____			
12.	Do you feel that your role is well understood by your colleagues within your organization? Within your telemedicine network?			
13.	Do you ever feel that your role as a Telehealth Coordinator competes with other duties/duties expectations that people have of you? If yes, please elaborate.			
14.	What needs to happen to professionalize the role of Telehealth Coordinators in your province?			
15.	From what does the major satisfaction in your role as Telehealth Coordinator come from?			
16.	From what does the major dissatisfaction in your role as Telehealth Coordinator come from?			
17.	How much time/effort do you put in working with Technical/IT/HelpDesk personnel in your organization on videoconferencing-related technical challenges? <input type="checkbox"/> Requires almost no time/effort <input type="checkbox"/> Requires a little bit of time/effort <input type="checkbox"/> Requires a moderate amount of time/effort <input type="checkbox"/> Requires a great deal of time/effort <input type="checkbox"/> Not applicable			
18.	What standard(s) do you use to guide your practice as a Telehealth Coordinator?			
19.	Who should lead the development and dissemination of clinical best practice standards and guidelines for Telehealth Coordinators? Why?			
20.	As a Telehealth Coordinator do you ever experience any role conflict/role strain?			
21.	Do you have any questions for me? If not, I would like to thank you for participating in the online survey and this interview.			
22.	Would you like me to e-mail a summary of our discussion of today? That will give you an opportunity to review and clarify any responses for accuracy and completeness (basic response can't be changed)? (NOTE: IFYES, TELL INTERVIEWEE THAT IT WILL TAKE 4 – 6 WEEKS AND			

Q#	Question	Yes	No	Answer/Comments
	YOU WILL NEED A MAILING ADDRESS) MAILING ADDRESS: CLARIFY IF TO BE SENT BY E-MAIL; FAX OR MAIL			

Appendix G – Conceptual Framework

CONCEPTUAL FRAMEWORK FOR QUESTIONS FOR ONLINE SURVEY & TELEPHONE INTERVIEW

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
<p>1. (a) What role are nurses playing in the implementation and use of videoconferencing technology?</p> <p>(b) What role are other regulated health professionals (other than nurses) and other personnel playing in the</p>	<p>Intent of this section is to gather data to create a basic description of the population of interest - both qualitatively and quantitatively.</p> <p>Further analysis will be done by sub-group. For example, frequency tables will be prepared comparing responses to</p>	<p>DEMOGRAPHICS - ONLINE SURVEY</p> <p>Collect basic demographic information to describe the work force</p> <p>As far as possible in a web-based survey, qualify the respondents to verify that they are:</p>	<p>All Respondents</p> <p>1. Are you: <input type="checkbox"/> Male <input type="checkbox"/> Female</p> <p>2. In what province do you work? _____</p> <p>3. What is your approximate age? <input type="checkbox"/> 20 – 29 <input type="checkbox"/> 30 – 39 <input type="checkbox"/> 40 – 49 <input type="checkbox"/> 50 – 59 <input type="checkbox"/> Greater than 60</p>	<p>How are nurses involved in the implementation and use of videoconferencing technology in Ontario to support health care delivery?</p> <p>Are there as many nurses doing this work as we think?</p> <p>Are there more RPNs</p>	<p>How are regulated health professionals other than nurses involved in the implementation and use of videoconferencing technology in Ontario to support health care delivery?</p> <p>How many regulated health</p>	<p>How are unregulated workers involved in the implementation and use of videoconferencing technology in Ontario to support health care delivery?</p> <p>Are there more technicians than administrative assistants</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
<p>implementation and use of videoconferencing technology in Ontario?</p> <p>2. What are Ontario's nurses' perceptions of how videoconferencing technology is affecting their standards and scope of professional practice?</p>	<p>selected questions in this section of the online survey (e.g., gender, age, level of education etc. among the sub-groups)</p> <p>Questions that the researcher is interested in getting responses to in this section of the survey include:</p> <p>Who exactly is doing the work?</p> <p>What is their gender, average age, level of education? (frequency table)</p>	<p>(a) practicing telehealth in the province of Ontario</p> <p>(b) a member of one of the three target populations</p>	<p>4. Are you? (Please check all that apply)</p> <p><input type="checkbox"/> Employed in nursing?</p> <p><input type="checkbox"/> Employed in a regulated health profession other than nursing? (e.g., physiotherapy, occupational therapy, dietetics etc.) Please specify _____</p> <p><input type="checkbox"/> Employed in an unregulated profession (e.g., technician, secretary, administrative assistant etc) Please specify _____</p> <p><i>Depending on their response to Question # 4 above, respondent will now be taken to one of three possible surveys:</i></p> <p>Demographic Survey Questions For Nurses</p> <p>1. Please state the highest level of education that you have completed in nursing:</p>	<p>than RNs doing this work?</p> <p>Is there a higher percentage of other workers doing this work than either RNs or RPNs? If yes, what are the implications of this?</p> <p>How many RNs doing this work are prepared at the post-basic level in nursing? (e.g., MScN)?</p> <p>How many RNs/RPNs have education/training outside nursing ? (e.g., in</p>	<p>care professionals other than nurses are involved with telehealth?</p> <p>Is there a preponderance of one particular professional group over another ? (e.g., more physiotherapists than any other category of regulated health professional) If yes, what are the implications of this?</p> <p>How many in this category have</p>	<p>involved in this work?</p> <p>What is their level of education?</p> <p>How many in this category have extended training and/or experience outside their basic credentials?</p> <p>Does this group have more technical training relative to the other two groups? If yes, what are the implications of</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>What is the ratio of full-time to part-time staff?</p> <p>Are the majority working in larger or smaller institutions ? (influences job content and has implications for qualitative section of survey) Also has implications for content/professional development of the role of a Telehealth Coordinator</p> <p>What unique role are Telehealth Coordinators from each of the three</p>		<p><input type="checkbox"/> RPN Certificate <input type="checkbox"/> RPN Diploma <input type="checkbox"/> RN Diploma <input type="checkbox"/> RN Degree <input type="checkbox"/> RN (EC) Program <input type="checkbox"/> MScN <input type="checkbox"/> Doctorate</p> <p>2. Have you completed any education outside nursing?</p> <p><input type="checkbox"/> Yes (please specify highest level of education completed outside nursing): <input type="checkbox"/> Certificate <input type="checkbox"/> College Diploma <input type="checkbox"/> Bachelor's degree <input type="checkbox"/> Masters <input type="checkbox"/> Doctorate</p> <p>Please specify what area your other education is in _____</p> <p><input type="checkbox"/> No</p>	<p>Informatics) If yes, what are the implications of this?</p> <p>Because telehealth is a technology-intensive area, are there more males than females engaged in this type of work?</p> <p>If yes, what might be the implications of this?</p> <p>Because telehealth is a technology-intensive area, are there more younger than older nurses doing this work?</p>	<p>extended training and/or experience outside their basic training as a regulated health care professional? If yes, what are the implications of this?</p> <p>Are there more males than females in this category?</p> <p>If yes, what might be the implications of this?</p> <p>Are there more males than females in this category?</p> <p>If yes, what might be the implications of this?</p> <p>Are there more</p>	<p>this?</p> <p>Are there more males than females in this category? If yes, what might be the implications of this?</p> <p>Are there more younger workers than older workers in this category? If yes, what might be the implications of this?</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>groups playing?</p> <p>What unique contribution are Telehealth Coordinators in each of the groups making?</p> <p>Post hoc, the responses collected in This section of the online survey will be correlated with responses collected in Other Characteristics</p> <p>? other demographics and characteristics of the target population that we SHOULD be interested in ?</p>		<p>3. Please reply either "Yes" or "No" to the following questions and comment where you feel appropriate:</p> <p style="text-align: center;">Yes No Comment</p> <p>Do you belong to a professional association in Telehealth ?</p> <p>Do you belong to a professional association in Nursing Informatics?</p>	<p>If yes, what might be the implications of this?</p> <p>Does the frequency of RN to RPN vary depending on the size of the institution or type?</p> <p>Where are most of the nurses concentrated (i.e., in larger centers or smaller community hospitals? What are the implications of this?</p> <p>Are there more RPNs in the smaller community hospitals and more</p>	<p>younger workers than older workers in this category?</p> <p>If yes, what might be the implications of this?</p> <p>Are any regulated health care professionals other than nurses involved with medical directives? (e.g., titration of insulin) What might be the liability issues?</p>	<p>Do people have the right credentials for the job ? (i.e., clinical practice)</p> <p>Are any unregulated workers being asked to do the work of a regulated health professional (e.g., medical directives)? What might be the liability issues?</p> <p>Do these individuals belong to a community of</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>Are you certified in or belong to other professional associations or groups in Nursing? (e.g., Oncology, Palliative Care, Cardiac etc)</p> <p>4. How long have you been practicing nursing (in years)? _____</p> <p>5. What type of facility do you work in?</p>	<p>RNs in the larger hospitals?</p> <p>Do these individuals belong to a community of practice? (a hallmark of a profession)</p> <p>How many in this category include telephone triage as part of their job?</p>	<p>Do these individuals belong to a community of practice? (a hallmark of a profession)</p> <p>How many in this category include telephone triage as part of their job?</p>	<p>practice? (a hallmark of a profession)</p> <p>How many in this category include telephone triage as part of their job?</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>HOSPITAL</p> <ul style="list-style-type: none"> <input type="checkbox"/> Acute Care <input type="checkbox"/> Addiction & Mental Health Centre <input type="checkbox"/> Complex Continuing Care/Rehabilitation Hospital <input type="checkbox"/> Other Hospital (e.g., Pediatric) <p>Please _____ describe _____</p> <p>Please specify approximately how many beds in your hospital _____</p> <p>COMMUNITY</p> <ul style="list-style-type: none"> <input type="checkbox"/> Community Care Access Centre <input type="checkbox"/> Community Health Centre <input type="checkbox"/> Hospice <input type="checkbox"/> Nursing station (outpost or clinic) <input type="checkbox"/> Nursing/Staffing Agency 			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Physician's Office/Family Practice Unit <input type="checkbox"/> Public Health Unit/Department <input type="checkbox"/> Other Community Please describe _____ LONG TERM CARE <input type="checkbox"/> Long term care facility <input type="checkbox"/> Retirement Home <input type="checkbox"/> Other long term care facility Please describe _____ O THER <input type="checkbox"/> College/university <input type="checkbox"/> Government/Association/Regulatory Body/Union <input type="checkbox"/> Industry <input type="checkbox"/> Schools <input type="checkbox"/> Self-Employed			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Not listed (Please describe): _____ 6. Is your position in telehealth? <input type="checkbox"/> Permanent <input type="checkbox"/> Casual/On-Call <input type="checkbox"/> Temporary <input type="checkbox"/> Self-Employed <input type="checkbox"/> Other (please specify): _____ 7. Is your position? <input type="checkbox"/> Full Time <input type="checkbox"/> Part Time (less than 30 hours per week) 8. What is your primary area of responsibility at work? (Check all that apply) <input type="checkbox"/> Telehealth Coordination <input type="checkbox"/> TeleNursing (telephone triage)			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Bedside care <input type="checkbox"/> Education <input type="checkbox"/> Management <input type="checkbox"/> Research <input type="checkbox"/> Other (please specify): _____ 9. Do you coordinate (please check all that apply) ? <input type="checkbox"/> Clinical teleconsultations <input type="checkbox"/> Educational videoconferences <input type="checkbox"/> Administrative videoconferences 10. Are there other individuals responsible for coordinating telehealth activities in your organization? <input type="checkbox"/> Yes (Please specify how many and whether they are full-time or part-time) _____			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p><input type="checkbox"/> No</p> <p>Demographic Survey Questions For Regulated Health Professionals Other Than Nurses</p> <p>1. Please specify what regulated health profession you currently practice in Ontario (e.g., physiotherapy, occupational therapy, dietetics etc)? _____</p> <p>2. Please state the highest level of education that you have completed within your professional occupation: <input type="checkbox"/> Certificate <input type="checkbox"/> College Diploma <input type="checkbox"/> Bachelors Degree <input type="checkbox"/> Masters <input type="checkbox"/> Doctorate</p> <p>3. Have you completed any education</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>outside your professional occupation?</p> <p><input type="checkbox"/> Yes (please specify highest level of education completed outside your profession):</p> <p><input type="checkbox"/> Certificate</p> <p><input type="checkbox"/> College Diploma</p> <p><input type="checkbox"/> Bachelor's degree</p> <p><input type="checkbox"/> Masters</p> <p><input type="checkbox"/> Doctorate</p> <p>Please state what area your other education is in _____</p> <p><input type="checkbox"/> No</p> <p>4. Please reply either "Yes" or "No" to the following questions and comment where you feel appropriate:</p> <p style="text-align: center;">Yes No Comment</p> <p>Do you belong to a profession</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>al associatio n in Telehealth ?</p> <p>Are you certified in or belong to other profession al associatio ns?</p> <p>5. How long have you been practicing your current profession/occupation (in years)? _____</p> <p>6. What type of facility do you work in?</p> <p>HOSPITAL</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Acute Care <input type="checkbox"/> Addiction & Mental Health Centre <input type="checkbox"/> Complex Continuing Care/Rehabilitation Hospital <input type="checkbox"/> Other Hospital (e.g., Pediatric) Please _____ describe _____ Please specify approximately how many beds in your hospital _____ COMMUNITY <input type="checkbox"/> Community Care Access Centre <input type="checkbox"/> Community Health Centre <input type="checkbox"/> Hospice <input type="checkbox"/> Nursing station (outpost or clinic) <input type="checkbox"/> Nursing/Staffing Agency <input type="checkbox"/> Physician's Office/Family Practice Unit			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Public Health Unit/Department <input type="checkbox"/> Other Community Please describe _____ LONG TERM CARE <input type="checkbox"/> Long term care facility <input type="checkbox"/> Retirement Home <input type="checkbox"/> Other long term care facility Please describe _____ O THER <input type="checkbox"/> College/university <input type="checkbox"/> Government/Association/Regulatory Body/Union <input type="checkbox"/> Industry <input type="checkbox"/> Schools <input type="checkbox"/> Self-Employed <input type="checkbox"/> Not listed (Please describe):			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>_____</p> <p>7. Is your position in telehealth?</p> <p><input type="checkbox"/> Permanent</p> <p><input type="checkbox"/> Casual/On-Call</p> <p><input type="checkbox"/> Temporary</p> <p><input type="checkbox"/> Self-Employed</p> <p><input type="checkbox"/> Other (please specify):</p> <p>_____</p> <p>8. Is your position?</p> <p><input type="checkbox"/> Full Time</p> <p><input type="checkbox"/> Part Time (less than 30 hours per week)</p> <p>9. What is your primary area of responsibility at work? (Check all that apply)</p> <p><input type="checkbox"/> Telehealth Coordination</p> <p><input type="checkbox"/> Clinical practice</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Education <input type="checkbox"/> Management <input type="checkbox"/> Research <input type="checkbox"/> Other (please specify): _____ 10. Do you coordinate (please check all that apply)? <input type="checkbox"/> Clinical teleconsultations <input type="checkbox"/> Educational videoconferences <input type="checkbox"/> Administrative videoconferences 11. Are there other individuals responsible for coordinating telehealth activities in your organization? <input type="checkbox"/> Yes (Please specify how many and whether they are full-time or part-time) _____			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p style="text-align: right;">No</p> <p>Demographic Survey Questions For Unregulated Workers</p> <p>1. Please specify your primary profession or occupation _____</p> <p>2. Please state the highest level of education that you have completed within your profession or occupation:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Certificate <input type="checkbox"/> College Diploma <input type="checkbox"/> Bachelors Degree <input type="checkbox"/> Masters <input type="checkbox"/> Doctorate <p>3. Have you completed any education outside your profession or occupation occupation?</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p><input type="checkbox"/> Yes (please specify highest level of education completed outside your profession):</p> <p><input type="checkbox"/> Certificate</p> <p><input type="checkbox"/> College Diploma</p> <p><input type="checkbox"/> Bachelor's degree</p> <p><input type="checkbox"/> Masters</p> <p><input type="checkbox"/> Doctorate</p> <p>Please state what area your other education is in _____</p> <p><input type="checkbox"/> No</p> <p>4. Please reply either "Yes" or "No" to the following questions and comment where you feel appropriate:</p> <p style="text-align: center;">Yes No Comment</p> <p>Do you belong to a professional</p>			

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				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>association in Telehealth?</p> <p>Are you certified in or belong to other professional associations?</p> <p>5. How long have you been practicing your current profession/occupation (in years)? _____</p> <p>6. What type of facility do you work in?</p> <p>HOSPITAL <input type="checkbox"/> Acute Care</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Addiction & Mental Health Centre <input type="checkbox"/> Complex Continuing Care/Rehabilitation Hospital <input type="checkbox"/> Other Hospital (e.g., Pediatric) Please describe _____ Please specify approximately how many beds in your hospital _____ COMMUNITY <input type="checkbox"/> Community Care Access Centre <input type="checkbox"/> Community Health Centre <input type="checkbox"/> Hospice <input type="checkbox"/> Nursing station (outpost or clinic) <input type="checkbox"/> Nursing/Staffing Agency <input type="checkbox"/> Physician's Office/Family Practice Unit <input type="checkbox"/> Public Health Unit/Department			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Other Community Please describe _____ LONG TERM CARE <input type="checkbox"/> Long term care facility <input type="checkbox"/> Retirement Home <input type="checkbox"/> Other long term care facility Please describe _____ O THER <input type="checkbox"/> College/university <input type="checkbox"/> Government/Association/Regulatory Body/Union <input type="checkbox"/> Industry <input type="checkbox"/> Schools <input type="checkbox"/> Self-Employed <input type="checkbox"/> Not listed (Please describe):			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>7. Is your position in telehealth?</p> <p><input type="checkbox"/> Permanent</p> <p><input type="checkbox"/> Casual/On-Call</p> <p><input type="checkbox"/> Temporary</p> <p><input type="checkbox"/> Self-Employed</p> <p><input type="checkbox"/> Other (please specify): _____</p> <p>8. Is your position?</p> <p><input type="checkbox"/> Full Time</p> <p><input type="checkbox"/> Part Time (less than 30 hours per week)</p> <p>9. What is your primary area of responsibility at work? (Check all that apply)</p> <p><input type="checkbox"/> Telehealth Coordination</p> <p><input type="checkbox"/> Administrative Support/Secretarial</p> <p><input type="checkbox"/> Information Technology</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<input type="checkbox"/> Education <input type="checkbox"/> Research <input type="checkbox"/> Management <input type="checkbox"/> Other (please specify): _____ 10. Do you coordinate (please check all that apply)? <input type="checkbox"/> Clinical teleconsultations <input type="checkbox"/> Educational videoconferences <input type="checkbox"/> Administrative videoconferences 11. Are there other individuals responsible for coordinating telehealth activities in your organization? <input type="checkbox"/> Yes (Please specify how many and whether they are full-time or part-time)			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
			<p>_____</p> <p><input type="checkbox"/> No</p>			
	<p>Intent of this section of online survey is to collect data on:</p> <p>Role description/ job content of Telehealth Coordinators</p> <p>Goodness of "Fit" of telehealth with existing roles</p> <p>Issues and</p>	<p>QUALITATIVE QUESTIONS - ONLINE SURVEY</p> <p>Unlike the demographic section, mostly open-ended questions here</p>	<ol style="list-style-type: none"> 1. Please describe your current professional practice in telehealth. 2. What challenges have you faced fitting telehealth in to your current role/professional practice? 3. In your opinion, what are the ideal qualifications that a Telehealth Coordinator should possess? 4. What needs to happen to 	<p>Do they employ an evidence-based approach to practice? This is the hallmark of a profession</p> <p>Do RNs and RPNs face the similar challenges?</p> <p>Given the requirements/demands of the job as</p>	<p>Do they employ an evidence-based approach to practice? This is the hallmark of a profession</p> <p>Analyse responses for evidence of involvement in planning/decision making around e-Health</p>	<p>How would adopting ANA standards affect this group for better or worse?</p> <p>Analyse responses for evidence of involvement in planning/decision making around e-Health</p>

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>challenges that respondents have faced in relation to integrating/fitting/adapting telehealth to their current Role</p> <p>In this section of the online survey, the researcher will attempt to learn more about the following:</p> <p>How does the role of a Telehealth Coordinator vary between members of the three sub-groups? Between large and small institutions? This has implications for</p>		<p>professionalize the role of Telehealth Coordinators in Ontario?</p>	<p>described by respondents here and the responses provided in the demographic section of the online survey, do Telehealth Coordinators have the right level of training, supports, resources to succeed in their role?</p> <p>Analyse responses for evidence of involvement in planning/decision making around e-Health</p> <p>Analyse responses for level of comfort of nurses with</p>	<p>How would adopting ANA standards affect this group for better or worse?</p>	

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>development of the role</p> <p>What are the local working conditions? Local resources?</p> <p>Unique local challenges and constraints that Telehealth Coordinators have faced fitting, integrating, adapting telehealth to their current role? How are these challenges similar/different among the 3 sub-groups. (will assist OTN in planning).</p> <p>To what extent do local needs and</p>			<p>computer technology</p> <p>Do the other two categories of workers face the same challenges?</p> <p>Is the content of the RNs and RPNs job more professional (clinical telehealth) or clerical (organizing educational and administrative videoconferences)? This has implications for resource utilization</p> <p>What are the implications of this</p>		

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>resources define their roles and the content of their jobs?</p> <p>What strategies have respondents in the three sub-groups successfully employed to overcome these challenges?</p> <p>What do members of the three sub-groups believe are the ideal qualifications, competencies of a Telehealth Coordinator? How are these similar? How do they differ?</p>			for professional development of the role?		

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>How do their unique characteristics and demographics from this section I of the online survey (e.g., level of education, professional certification, membership in a community or practice) support or not support them in their role?</p> <p>What are the rewards? Sanctions? Of the various sub-groups?</p> <p>How does their level of education and fact that they are regulated (or non-regulated) affect the content of their job</p>					

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	if at all?					
			<p>Final question for all respondents in online survey:</p> <p>Would you be willing to participate in a telephone interview? The interview would last approximately 15 - 20 minutes. Please note that due to time constraints, not all person(s) may be contacted for an interview. If you are willing to participate, please provide the following information:</p> <p>Name: _____</p> <p>Telephone Number: _____</p> <p>Date/time that you would like to be contacted: _____</p>			
	Telephone interviews	TELEPHONE	1. In what province do you work?	Telephone interviews	What do regulated	What does this

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>will be used as an opportunity to document:</p> <p>(a) Perceptions from representatives of all three groups (i.e., nurses, regulated health professionals other than nurses and unregulated workers) on how videoconferencing technology is affecting their standards and scope of professional practice</p> <p>(b) Perceptions from representatives of all three groups (i.e., nurses, regulated health professionals</p>	<p>INTERVIEWS</p> <p><i>Depending on response to final question in online survey, the following categories of individuals will be contacted for a telephone interview</i></p> <p>2 – 3 nurses.</p> <p>2 – 3 regulated health professionals other than nurses (1 each from a regulated health profession)</p> <p>2 – 3 unregulated workers (1 each from an unregulated group)</p> <p><i>Participants will be sent the following material</i></p>	<p>2. Are you?</p> <p>- Jay will read choices aloud to interviewee</p> <p>a. Employed in nursing?</p> <p>b. Employed in a regulated health profession other than nursing? (e.g., physiotherapy, occupational therapy, dietetics etc.)</p> <p>Please specify which regulated health profession _____</p> <p>c. Employed in an unregulated profession (e.g., technician, secretary, administrative assistant etc)</p> <p>Please specify your occupation _____</p> <p>3. Do you coordinate any of the following? (Please say Yes or No Jay will read aloud to participant)</p>	<p>will provide an opportunity to compare responses and views of nurses with those from representatives of the other two groups (i.e., regulated health professionals other than nurses and unregulated workers)</p> <p>This data will be especially useful for analysis of some of the more contentious issues in telehealth. For example, do Telehealth Coordinators need to be nurses or a member of a regulated health</p>	<p>health professionals other than nurses think about only nurses being Telehealth Coordinators?</p> <p>Are there other scope of practice or set of competencies beside those produced by the ANA that should be adopted by the telehealth community of practice?</p>	<p>group think about only regulated health professionals (e.g., nurses, physios, OTs etc) being Telehealth Coordinators?</p> <p>Are there other scope of practice or set of competencies beside those produced by the ANA that should be adopted by the telehealth community of practice?</p>

Research Questions	Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay’s professional practice and experience as a nurse & Telehealth Coordinator	Thematic Area/Cluster	Question	Sub-Group Analysis		
				Nurses (RNs, RPNs, LPNs etc)	Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)	Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)
	<p>other than nurses and unregulated workers) on the challenges that they face implementing a scope of practice/set of ideal competencies like those produced by the ANA in their local settings.</p> <p>(d) Perceptions from representatives of all three groups (i.e., nurses, regulated health professionals other than nurses and unregulated workers) on whether the ANA Standards and Competencies are the rights ones for the telehealth community. If not,</p>	<p><i>in advance of the interview:</i></p> <p>(a) <i>Confirmation of date/time of interview</i></p> <p>(b) <i>Copy of the ANA Standards and Competencies</i></p> <p><i>In preparation for the interview, participants will be asked to review the ANA Standards and Competencies</i></p> <p><i>Pre-Interview</i></p> <p><i>Advise participants that interview will last approximately 15 – 20 minutes</i></p>	<p>a. Clinical teleconsultations</p> <p>b. Educational videoconferences</p> <p>c. Administrative videoconferences</p> <p>4. As a _____ (insert Nurse, Physiotherapist, Administrative Assistant etc) how do you feel videoconferencing technology is affecting your standards and scope of professional practice</p> <p>5. What professional qualifications and skills should a Telehealth Coordinator bring to the job?</p> <p>6. What are your comments and views about the ANA Standards & Competencies for Telehealth Nursing?</p> <p>Prompts:</p>	<p>profession? Or, are the ANA Standards the right set of competencies for Ontario’s Telehealth Community of Practice?</p> <p>A comparative analysis by sub-group will be done between the interviewees on their responses to the more contentious open-ended questions.</p>		

Research Questions	Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator	Thematic Area/Cluster	Question	Sub-Group Analysis		
				Nurses (RNs, RPNs, LPNs etc)	Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)	Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)
	<p>what other competencies should be adopted?</p> <p>(e) Perceptions from representatives of all three groups (i.e., nurses, regulated health professionals other than nurses and unregulated workers) on what qualifications a Telehealth Coordinator needs to bring to the job? Need to be members of a regulated health profession?</p> <p>(f) Clarify Job Content, Role Description, Issues and Challenges as</p>	<p><i>Request consent to audiotape</i></p> <p><i>Qualify the interviewee (i.e., working in Ontario) and ascertain which one of the three groups respondent belongs to.</i></p>	<p>Do you feel that these standards and competencies are the right ones for the telehealth community? Please elaborate.</p> <p>If interviewee answers “YES” – ANA scope of practice and standards are the right ones for the telehealth community then ask what would be required to make the ANA standards and competencies attainable in your local environment?</p> <p>If interviewee answers “NO” ANA scope of practice and standards are not the right set of scope of practice/set of standards is there a different scope of practice/set of competencies that should be adopted by Telehealth Coordinators?</p> <p>7. Did you have any other comments, questions or anything else that you would like to add?</p>			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	<p>Identified by Respondents in relation to local conditions, resources, ideal competencies, implementation,</p> <p>(g) Given the level of education provided in demographic section of the online survey, is this the right level of training given the requirements/demands of the job as described by respondent? Do RNs and RPNs face the same challenges. As other categories of workers ?</p>		Thank you for your time			

<i>Research Questions</i>	<i>Theoretical Underpinning, Key Concept, or Area of Interest based on Role Theory; ANA Standards and Competencies and Jay's professional practice and experience as a nurse & Telehealth Coordinator</i>	<i>Thematic Area/Cluster</i>	<i>Question</i>	<i>Sub-Group Analysis</i>		
				<i>Nurses (RNs, RPNs, LPNs etc)</i>	<i>Other Regulated Health Professionals (e.g., Physiotherapists, Occupational Therapists, Dieticians etc.)</i>	<i>Unregulated Workers (e.g., Technicians, Secretaries, Administrative Assistants etc.)</i>
	(h) What are the local resources and working conditions? (i) What are the unique local challenges (will assist OTN in planning)					

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