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Project Home - there is no place like home: using telehealth technology to support a proposed restorative care program in the community

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Doctoral Project

PROJECT HOME

THERE IS NO PLACE LIKE HOME: USING TELEHEALTH TECHNOLOGY TO SUPPORT A PROPOSED RESTORATIVE CARE PROGRAM IN THE COMMUNITY

by

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"Occupational Therapy is an underutilized healthcare resource in a world that desperately needs us!"

-Kathryn Wise, 2017

DEDICATION

I dedicate this project to my family – Jeremy, Charlotte, and Evelyn.

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I would like to express my deep gratitude for the support and patience from my OTD advisor Karen Jacobs and to my peers for creating such wonderful opportunities for inquiry, peer learning, and encouragement. Special thanks to all of the Boston University OTD faculty for providing the guidance and encouragement to consider the possibilities of occupational therapy. Thank you to all my friends who have provide emotional support and last minute childcare so that I can participate in classes. A warm thank you to my extended family for all of your encouragement from so far away. Finally, my warmest thank you and love to my little family. Charlotte and Evelyn – thank you for being my most important motivation and I hope that I have made you proud. And to my husband and partner on this journey. Jeremy, thank you for being my cheerleader, my rock, for all of your patience and unconditional support on this journey!

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ABSTRACT

A major challenge in today's current healthcare system is the risk of readmissions by older adults recently discharged from an acute care facility. Current evidence-based literature does not have a single contributor for the reason for the readmission following discharge, but evidence does suggest some strong indicators for risk for readmission back into hospital. The risk for readmission into the hospital following a discharge from acute care increases due to older age, multiple diseases, co-morbidities, and functional limitations (Tinetti et al., 2012; Garcia-Perez et al., 2011). One of the key risks is the fact that an older adult is physically deconditioned while staying in hospital and inadequate transition planning takes place. The older adult is quickly returned to their pre-hospital living environment and expected to resume 100% of daily living activities. Tinetti et al. (2012), suggest that enhancing functional recovery during a period of home care following an acute hospitalization may reduce the risk of readmission to hospital.

Telehealth is a service delivery method that is increasingly being used by occupational therapy to reach more clients and to provide greater access and flexibility

(AOTA, 2013). Telehealth technologies could be utilized by the OTs to help facilitate ongoing communication between the client, caregiver and the OT, as well as other health care providers to provide a cost effective model of care. The creation of a six-week program designed for older adults (over the age of 65) recently discharged from an acute care hospitalization uses telehealth to deliver the OT services but will utilize the support of an in home support worker to help deliver the restorative care program. Project Home is built upon the philosophy of targeting daily living skills that are of importance to the older adult while gradually decreasing the level of support provided to the older adult to maximize their independence.

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LIST OF ABBREVIATIONS

ADL	Activities of Daily Living
eHW	eHome Support Worker
IADL	Instrumental Activities of Daily Living
OT	Occupational Therapist

CHAPTER ONE: Introduction

Major advancement in technology has created many opportunities to develop and implement new models of service delivery within healthcare. The introduction of telehealth technologies has included the use of electronic health records to the use of mobile devices to support clinical interventions (Cason and Richmond, 2013). The field of occupational therapy (OT) is actively exploring the potential for telehealth practice through the convergence of mobile technology, changes in healthcare practice, and wireless services that will enable more innovative models of integrated service delivery (Cason and Richmond, 2013).

According to the American Occupational Therapy Association (AOTA), the use of telehealth technologies in OT has been recommended in many different areas including productive aging (AOTA, 2013). In the area of productive aging, telehealth technologies could help to support proper care transitions for seniors to be able to move along the continuum of care; and more uses are beginning to emerge. However, there are limited studies that look at the specific delivery of OT services through telehealth technology.

The introduction of the Patient Protection and Affordable Care Act (ACA, 2010) has provided an opportunity for the healthcare community to redesign, implement, and support infrastructure development in order to increase access to care (AOTA, 2011). It is estimated that Americans over the age of 65 will increase from 12.9% of the population to 19% by the year 2030 (Administration on Aging, 2010). As such, occupational therapy needs to continue to promote ways to work with the senior population within their homes or healthcare communities. For example, there are limited programs that support the transition of clients out of the hospital and focus on restoring function in the community (Ryburn, Wells, and Foremand, 2010). The programs that do exist rely too heavily on the 'dependency' model of service provision rather than focusing on activity, independence and successful aging (Baker, 2006; Ryburn et al., 2010;). Healthcare systems need to change and adapt to handle the changing demographics and unique needs of the new aging population. Throughout this doctoral project, the words "restorative care" and "reablement" will be used interchangeably. Both approaches used by Occupational Therapists use time limited approaches in the home to assist a client to re-learn skills and return to their maximal independence (Sims-Gould et al., 2017).

Occupational therapists have the opportunity to assist in the reduction of readmissions of older adults back to the hospital. Recent studies suggest that factors such as: poor follow up from acute care, lack of formal and informal supports, inadequate hospital discharge planning, medical errors, and lack of continuation of treatment goals are a causal factors for readmissions, however, no single factor has been identified (DeCoster, Ehlman, & Conners, 2013).

The purpose of the doctoral project, *Project Home* is to develop and promote the use of telehealth technologies for the delivery of occupational therapy services to assist in the successful transition of a senior from the hospital to home and to participate in a restorative care program that will assist the older adult to engage in daily occupations. *Project Home* has been created to establish a niche area of practice for OTs and to expand the use of telehealth technology in the post-acute care service delivery.

The target audience for *Project Home* are older adults that are over the age of 65 and have recently been discharged from an acute care setting. The target client for this group is an individual that has experienced an acute medical episode and only requires hospitalization for a few days and is then quickly discharged. Occupational Therapists will work with the client to develop goals to re-engage the older adult back into their daily occupations.

The following chapters will cover the theory and evidence that supports *Project Home*, current models of programming to support a recently discharged older adult, a description of the proposed program, an evaluation plan, and examples of the funding and dissemination plans.

CHAPTER TWO – Theoretical and Evidence Base to Support the Project

Overview of the Problem

Following an older adult's acute care hospitalization, there is a need to focus interventions on the participation in daily occupations in order to restore function. Older adults are at increased risk for hospitalizations and are physically deconditioned when they return home due to many unmet Activity of Daily Living (ADL) needs (Tinetti et al., 2012). As described in Figure 2-1, an older adult may experience a decline in functional status, experiences caregiver burden, have limited social supports, may have limited availability of formal and informal supports, and may not have had access the therapy services while in acute care which all contributes the two senior experiencing a decline in functional status. This may cause the senior to be at risk for readmission to hospital. Project Home will use a reablement care approach within the home environment through the use of telehealth technology. The use of a caregiver will assist the client to complete many of the tasks proposed by the occupational therapist (OT). The caregiver could be a paid support such as a personal support worker or certified occupational therapy assistant (OTA) or informal support such as a relative.

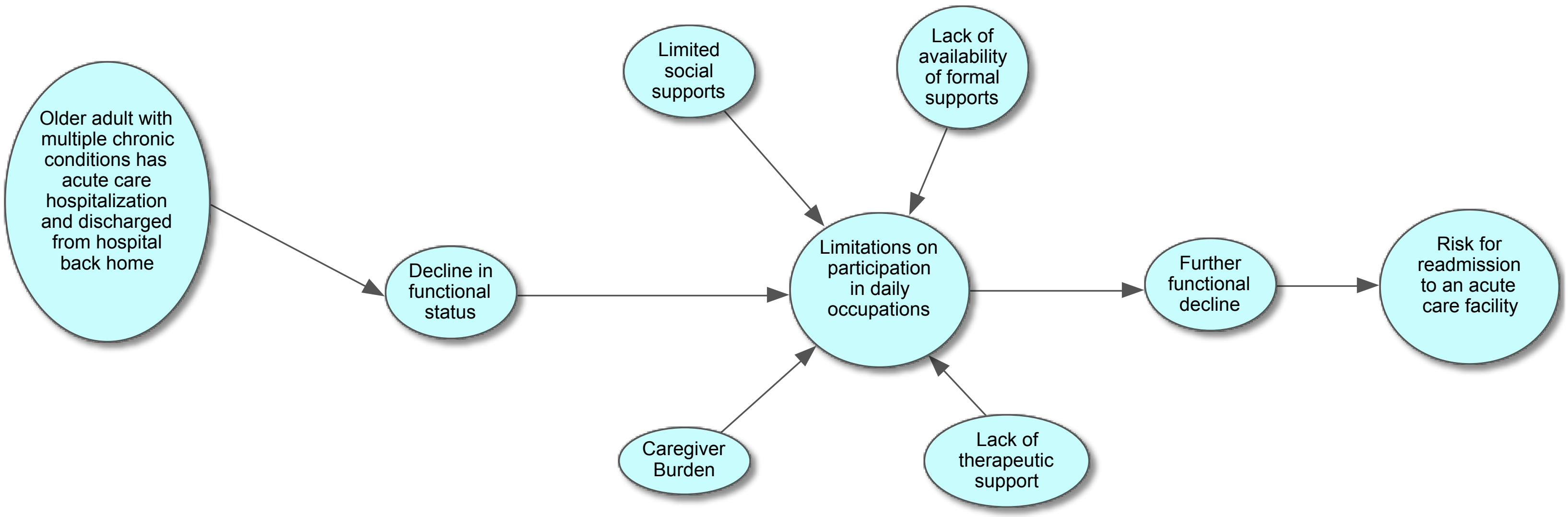

Figure 2.1: Theoretical explanation of acute care readmissions by older adults

The introduction of the Patient Protection and Affordable Care Act (ACA, 2009) has provided an opportunity for the healthcare community to redesign, implement, and support infrastructure development in order to increase access to care (Cason, 2012). It is estimated that Americans over the age of 65 will increase from 12.9% of the population to 19% by the year 2030 (Administration on Aging, 2010). As such, occupational therapy needs to continue to promote ways to work with the senior population within their homes or healthcare communities. For example, there are limited programs that support the transition of clients out of the hospital and focus on restoring function in the community (Ryburn, Wells, and Foremand, 2010). The programs that do exist rely too heavily on the 'dependency' model of service provision rather than focusing on activity, independence and successful aging (Baker, 2006; Ryburn et al., 2010;). Typical 'dependency models' are ones where the caregiver does everything for the client and there is no part of the programming that will focus on restoring function or relearning activities. Given the need to reduce readmission rates, the current healthcare system needs to change and adapt to handle the changing demographics and unique needs of the new aging population.

A major area of concern for healthcare policy makers and funders is the cost of readmissions of seniors into an acute care hospital. Contributing to the cost is ineffective patient hospital transitions and it is estimated that more than half of Medicare beneficiaries that were hospitalized are readmitted within one year of discharge (Jencks, Williams, & Coleman, 2009). A hospital readmission may be considered a care transition as it includes the movement of a client from hospital to home or other care settings

(DeCoster, Ehlman, & Conners, 2013). There is an opportunity for OTs to assist in the transition of clients out of the hospital as they can help to identify those daily occupations and tasks that the senior may have difficulty in completing.

Telehealth technologies could be utilized by the OTs to help facilitate ongoing communication between the client, caregiver and the OT, as well as other health care providers to provide a cost effective model of care. The development of an OT telehealth program to support the older adult population to safely transition from the hospital to home in an effort to reduce readmissions is leading health system change and challenging health care providers to consider new models of service delivery.

Frameworks to Understand the Problem

As indicated in the American Occupational Therapy Association's Occupational Therapy Practice Framework (OTPF) clients participate in various occupations within their daily life in many different settings (AOTA, 2014). The proposed program will provide opportunities for seniors to participate in daily occupations and help to restore function. Using telehealth as a service delivery model will provide occupational therapy practitioners with a creative opportunity to provide the option of assessment and treatment of occupations within various contexts and environments.

The Person-Environment-Occupation (PEO) model describes the interaction of the three domains for a person to obtain optimal performance (Law et al., 1996). The interaction of the older adult with their environment impacts the quality of their ability to perform their occupation that in this case may be a daily living activity.

Theory to Support the Approach

The overall problem that will be addressed focuses on the lack of active participation by older adults in occupations in order to restore function following an acute care hospitalization.

Adult Learning Theory

One theory that will be utilized in the program is the Adult Learning Theory (Andragogy) by Knowles (1989). According to Knowles (1989), there are five assumptions (originally called principles) of learning which include that adults:

- Need an explanation to know why they should learn something
- Are self-directed
- Bring life experiences and knowledge to their learning
- Are internally motivated
- Learn in a social context (in an applied environment)

The proposed program would have the client and the OT work together to establish defined goals within the parameters of a home program that would seek to identify those occupations that the client needs to relearn at home. An eHelper will help to facilitate the virtual session and to ensure carry over of the assigned therapeutic activities. An eHelper will help client in the home and facilitate the “relearning” of activities that older adult feels is important to their independence. The eHome Worker (eHW) is similar to the traditional Rehabilitation Aide but instead the focus will be on the goals identified by the virtual OT and the client. The intervention will only focus on those occupations that are meaningful to the client and will take place in a familiar environment with the senior as an active participant in their goal planning. The theory proposes that the adult learner manipulate their environment so that they experience a change in behavior or skill (Mayer-Mihalski and DeLuca, 2009). By having the client participate in a task within their natural environment, they will be more motivated to participate in the therapeutic activities or occupations. The eHelper will support the client to participate in these activities. It is the expectation that both the client and the caregiver will use technology to aide in the targeted intervention.

The principles of the Adult Learning Theory that can be nicely integrated into occupational therapy practice include the influence of self-concept on learning, readiness to learn, and methods to capitalize on previous experiences (Hopper and Holland, 2005). One of the unique features of andragogy versus the other adult learning theories is that it uses the past experiences of the learner and uses it to help build a learning plan. This is a nice compliment to an OT intervention as it naturally engages a client in the planning process and implementation of the activity. The use of telehealth technology to facilitate the OT intervention supports the use of an adult learning theory, as the senior will be in an applied environment.

Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a model that attempts to explain and predict end user acceptance of technology (Cook et al., 2016). According to Cook et al. (2016), the UTAUT suggests that adoption of the new technology by the client and professional is influenced by four factors:

- Technology will improve quality of life performance

- Ease of use
- Social influence (i.e. friends or family using the technology)
- Facilitating conditions (belief that there is enough organizational infrastructure)

The concepts of the UTAUT can be easily integrated into the proposed program, as factors influencing adoption will be critical in its design and implementation. During the implementation phase of the project, key considerations around the end user experience such as ensuring proper technology training and education take place in order to have acceptance of the technology. The key will be to ensure that the end users (i.e. clients, caregivers, and stakeholders) do not perceive therapy services to be less effective due to the virtual nature of the intervention.

Evidence for Proposed Explanatory Model of Identified Problem

In order to test the proposed explanatory model, there were two main questions that guided the search of the evidence literature on the use of restorative care programs and the use of telehealth technology in occupational therapy service delivery. The questions were:

1. Does the implementation of an occupational therapy restorative care program decrease risk of hospital readmission in seniors recently discharged from hospital following an acute care admission?
2. Does the use of telehealth technology for the implementation of an OT program in the home provide comparative effectiveness when compared to the same intervention provided in a face-to-face delivery platform?

The overall search for the evidence was challenging given the nature of the topics.

Currently, there is research being conducted in these areas, but few have been published. Using the databases PubMed, CINAHL, Ageline, and Web of Science, the following search terms were used: (1) occupational therapy and telerehabilitation (keywords: "OT", "online", "telepractice", "telehealth"), (2) occupational therapy and restorative care programs for older adults (keywords: "restorative care" and "occupational therapy"), (3) Reablement models for older adults following hospitalization (keywords: "reablement", "re-admission"). For each search, there were a few articles that were duplicated. One of the main challenges encountered on the search was that there is not mutually agreed upon nomenclature to describe occupational therapy programs and services for older adults following an acute care hospitalization.

Does the implementation of an Occupational Therapy Restorative Care Program decrease risk of hospital readmission in seniors recently discharged from hospital following an acute care admission?

Within the search parameters, there are 10 articles within the occupational therapy restorative care literature that focus on the reduction in readmission rates for seniors following an acute care hospitalization (Renda et al., 2016; Rogers et al., 2016; Whitehead et al., 2016; Whitehead et al., 2015; Legg, Gladman, Drummon, and Davidson, 2016; Pilington, 2008; Tinetti et al., 2012; Ryburn, Wells, and Foreman, 2009; DeCoster, Ehlman, and Conners, 2012; Baker, 2006). One common theme throughout the articles is the need for OT to be a leader in the solution of avoiding readmissions for older adults (Renda, Lee, Keglovis, and Somerville, 2016; Rogers, Bai, Lavin and Anderson, 2016).

Although the study did not specifically focus upon the outcome of readmission rates, Whitehead et al., (2016), designed an OT reablement service that was six weeks long and had the older adults participate in various ADLs within their home following hospitalization. Although the study provided no definitive conclusion, the non-statistical trends suggested improvement in personal activities of daily living (ADLs). The participation in ADL activities will lead to greater function and participation within the home following an acute care discharge thereby providing the opportunity for the older adult to avoid a hospital readmission.

Tinetti, Charpentier, Gottschalk, and Baker (2012), implemented a study that compared the readmissions of Medicare recipients of usual home care and matched to a group of older adults receiving a restorative care model of home care. The study demonstrated enhanced functional recovery that would present several benefits upon older adults including the readmission back into hospital and alleviation of spiraling functional decline.

One important aspect to consider when making the decision as to whether or not to implement a restorative care program is around the assessment of the older adult. Pilkington (2008), suggests that the important feature of the restorative care model is to ensure that assessment is an ongoing process versus a one-off request in a certain point of time. This has an important impact in terms of developing a model for restorative care, as the implementation requires a change in the mindset from a consultative model of support to an active model.

Although not specific to hospital readmissions, Whitehead et al. (2015), completed a systematic review to identify interventions that aim to reduce dependency in ADLs of homecare users and reviewed the effectiveness of the OT intervention. Although readmission rates were not exclusively discussed, the authors did provide some insights into ensuring that the main conclusion that homecare services include interventions that could help the older adult to begin to participate in their daily activities thereby reducing their reliance on homecare based activities.

Rogers et al. (2016), discussed the concept of post-hospitalization syndrome whereby clients sometimes have had inadequate ADL needs that are often associated with readmissions. The development of an OT intervention that could lower readmissions might include those that promote participation in various ADL activities, prescribe assistive devices, perform home safety assessments, provide cognitive and physical training for patients, and consult with physical therapy on strengthening activities. All of these activities are critical components of a restorative care model.

Does the use of telehealth technology for the implementation of an OT program in the home provide comparative effectiveness when compared to the same intervention provided in a face-to-face delivery platform?

The use of telehealth technology to deliver occupational therapy services is of interest to many health service administrators as it provides another platform to consider in the delivery of safe and reliable services. AOTA (2013), supports the use of telehealth technology especially in the area of productive aging. The use of telehealth can reduce the need for client and therapist travel, However, it will be important to consider the challenges of implementing a program through telehealth that may include issues of acceptance of technology, accessibility, convenience and cost (AOTA, 2013).

Bendixen et al. (2009), completed a retrospective matched comparison study that compared those that received a homecare program via telerehabilitation to those that received regular in-home services. The results of the study suggested no concrete findings due to limitations such as high variability within and between the study populations. There were no significant costs to providing services via telehealth compared to regular services. The most relevant findings were that the post-intervention results for the telehealth group indicate a decrease in hospital and nursing home stays.

Moffett, Tousignant, and Nadeau (2015), reported in their study of patients receiving in-home telerehabilitation after a total-knee anthroplasty that there was no difference in the quality of care to those receiving face-to-face rehabilitation visits versus those receiving telerehabilitation services.

Evidence-based literature describing the comparative effectiveness of traditional face-to-face visits with those provided by telehealth are emerging. Cason (2009), conducted one of the pioneer studies to investigate the effectiveness in the early days of telehealth technology. The results indicated that using telehealth technology for an early intervention therapy service for rural families provided the same level of service. In fact, it was more cost-effective and ameliorated many issues related to access to rehabilitation services.

Evidence Base to Support the Project:

A Synthesis of Current Approaches and Methods

Introduction

A review of the evidence-based literature was completed in order to gather information and evidence to support the creation of a restorative model of care called Project Home. The main question to guide the investigation was: Are there other models of restorative care or reablement that aim to reduce hospital readmissions? Wherever possible the terms restorative care, reablement, reactivation, and rehabilitation were used to investigate the term restorative care. Evidence was compiled to determine the best approaches to the project model that include assessments, treatment options, frequency, duration, human resources, and program goals (See Chapter 3 for full detail). As outlined in Figure 2.2 evidence-based research was conducted in some of the key features of the program model in order to identify all relevant literature.

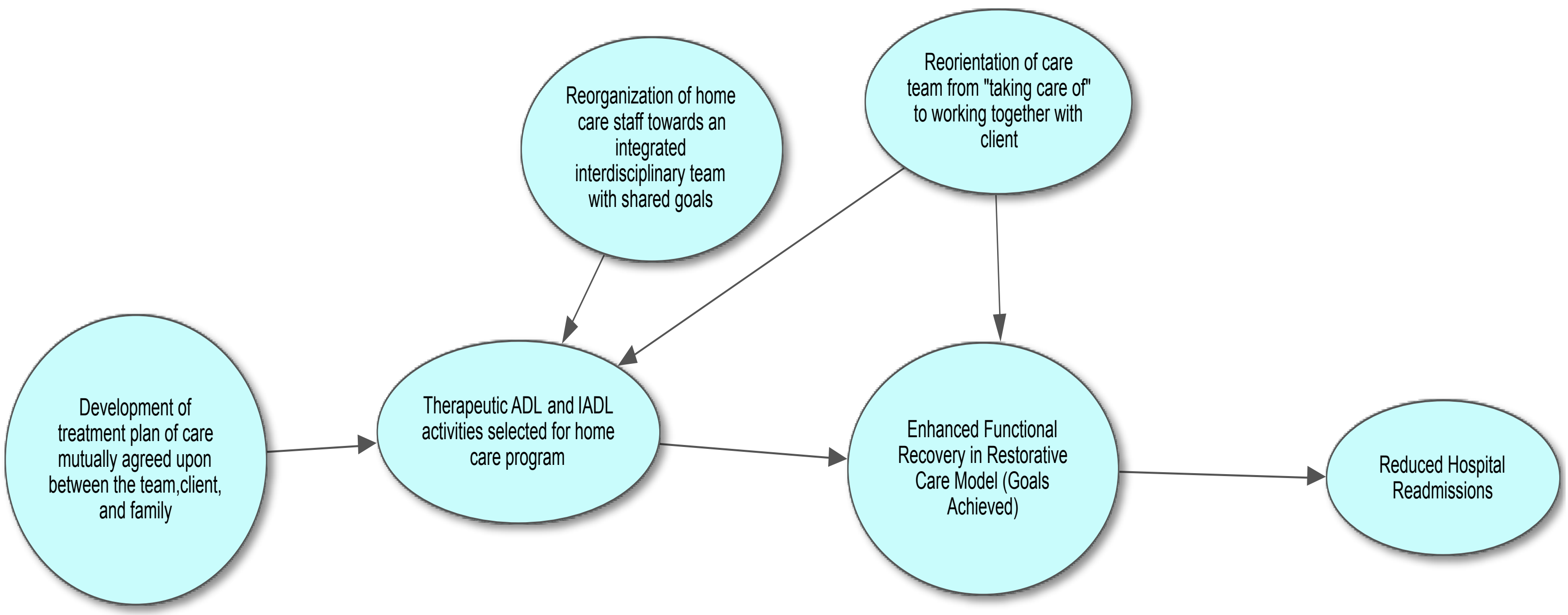

Figure 2.2: Proposed Program Rational

Search Methods

The challenge in finding evidence to support the project was compounded by the fact that there are no mutually agreed terms for the purpose of restorative care. The evidence-based literature often used the terms reablement, rehabilitation, and reactivation in describing restorative care. Although they all have slight variations within their program design, for the purpose of the evidence-based literature search they were used interchangeably. The key words “restorative care”, “seniors”, discharge”, “occupational therapy”, and “systematic review” were used to investigate the project design and methods. Keyword searches for “telerehabilitation”, “telepractice”, “telehealth”, and “occupational therapy” were used to determine approaches and effectiveness of services delivery. Searches were conducted using the search engines AgeLine, CINAHL, Medline, ERIC, and Google Scholar. Seven articles outlining the use of restorative care for older adults were retrieved and analyzed (Simms-Gould, Tong, Wallis-Mayer, & Ashe, 2017; Cunliffe, Gladman, Husbands, Miller, Dewey, & Harwoods, 2004; Lewin, De San Maguel, Knulman, Alan, Boldy et al., 2013; Parsons, Sheridan, Rouse, Robinson & Connolly, 2013; Tuntland, Aaslund, Espehaug, Forland, & Kjeken, 2015; Tinetti, Charpentier, Gottschalk, and Baker, 2012; Avlund, Jepsen, Vass, and Lundemark, 2002; Courtney, Edwards, Chang, Parker, Finlayson, Bradbury, & Nielsen, 2012).

Previous Attempts to Address the Problem

There is a need for all clinicians and policy makers to come together to recognize the issue of deconditioning of older adults following a hospitalization. Acute illness makes the older adult at high-risk for functional decline with estimated between 25%-

50% of all functioning and it is estimated that only a third of those that are discharged home recovery to full functional capacity with intervention within three months (Tinetti et al., 2002).

In terms of the actual problem, the key feature of a restorative care program found within the evidence-based literature is the collaborative goal setting and individual support plans (Lewin et al., 2013; Parsons et al., 2013; Tinetti et al., 2002; Tuntland et al., 2015; Cunliffe et al., 2004). It was found in all of these studies that the more the clients were engaged in the design of their individual programs, the better the outcomes. Current restorative care programs for older adults had various points of entry with some clients still living in the community and being referred from their primary care team (Avlund et al., 2002; Parsons et al., 2013), home care services (Kjerstad and Tuntland, 2015; Tinetti et al., 2002), or from acute care (Cunliffe et al., 2004). This highlights one of the challenges in trying to address the problem in that there is no standard for referral with some clients entering a program from the time of discharge from hospital with others being referred while they are still in a home setting.

Tinetti et al., (2002), investigated the functional status of those older adults receiving restorative care versus those receiving home care services. The main outcome measures for the study were for the older adult to remain at home and review their functional status at the end of the program. The results indicated that those older adults that received restorative care remained in their homes post discharge for a longer period of time compared to those that received regular home care. The key characteristics of the restorative care program were: 1. Training of assistants, 2. Reorganization of the home care staff from individual care to coordinated teams, and 3. Reorientation of the focus of the home care from taking care of the older adult to working together. Traditional home care would have been an individual nursing personal support session. A key characteristic of this approach is the training of support staff and ensuring that the team and client are working together.

An important characteristic of the restorative care programs is that there is an emphasis on re-engaging the client in their pre-hospital activities (Tuntland et al., 2015; Tinetti et al., 2002; Lewin et al., 2013). Tuntland et al. (2015), studied 61 home-based clients receiving home care with control and intervention groups. The reablement intervention included working with the home care aides to facilitate the program, targeted education in daily activities training, adaptations to the home environment and exercises. The control group continued with regular home based services, which varied from ad hoc home visits to home adaptations. The results indicated that those clients that received the reablement intervention had better activity performance and satisfaction.

Intervention Targeting Reduction in Readmissions

The risk for readmission into the hospital following a discharge from acute care increases due to older age, multiple diseases, co-morbidities, and functional limitations (Tinetti et al., 2012; Garcia-Perez et al., 2011). Tinetti et al. (2012), suggest that enhancing functional recovery during a period of home care following an acute hospitalization may reduce the risk of readmission to hospital. In the study by Tinetti et al. (2012), where a comparison was made between those home care recipients receiving home care and those that receive a restorative care program, the outcome suggestion that although the results were only marginally statistically significant, a restorative care program can be an effective approach to reduce the risk of readmission to hospital.

One of the key benefits identified in the evidence-based literature was that restorative care intervention has helped to reduce the need for ongoing support. There is strong evidence towards the home care reablement to reduce subsequent homecare services (which in some cases can last for up to a year) (Glenndining and Newbronner, 2008; Sims-Gould et al., 2017). This has an impact on service delivery, policy, and funding as there needs to be a shift in how current services are designed and organized.

There were challenges in identifying key studies that have short term home care services for acute period of time. Most studies that were reviewed had home care services already in place and were augmented to provide either a restorative care or reablement function (Sims-Gould et al., 2017; Tinetti et al., 2002; Parsons et al., 2012).

Limitations on Current Research

The evidence-based literature is growing with respect to regalement and restorative care, however there are significant limitations that made for a difficult search. First of all, the definition of the service was not consistent across the literature. In some case, the terms regalement and restorative care were used interchangeably however there are some unique and distinct differences (Glendinning & Newbronner, 2008; Gould-Sims et al., 2017). There were also vast differences in the referral source for each of the programs, which may impact the quality of the results. Some of the studies that were reviewed had clients already in the community versus those that were being discharged from hospital. As well, each care plan for the intervention was different. Some studies had interventions for 4-6 weeks (Avlund et al., 2002; Cunliffe et al., 2004) versus others where intervention was from 10 weeks to 6 months (Lewin et al., 2013; Parsons et al., 2013, Tinetti et al., 2002; Tinetti et al., 2012; Tuntland et al., 2015; Kjesrstad and Tuntland, 2015). Finally, the client populations were not homogenous in that in some cases only their age was a descriptive factor. Most of the participants in the study had multiple co-morbidities, however all were 65 years or older (Lewin et al., 2013; Parsons et al., 2013, Tinetti et al., 2002; Tinetti et al., 2012; Tuntland et al., 2015; Kjesrstad and Tuntland, 2015; Avlund et al., 2002).

Incorporation of Research and Theory

Overall, the evidence-based literature suggests that the use of a reablement or restorative care program following a hospitalization of an older adult shows improvements in the areas of increased physical function and satisfaction (Tinetti et al., 2002; Gould-Sims et al., 2017). Although it is difficult to suggest that this would correlate to reduce readmission to a hospital, the fact that the older adult has had an increase in their physical function contributes to the theory of more engagement leaders to more independence in function. Most of the literature focusing on restorative care is in the United States and Canada. The term reablement tends to be used more in countries such as the United Kingdom and Australia. There are some key differences between restorative care and reablement and will be discussed in more detail in Chapter 4.

Although there is limited evidence-based research focused on the direct use of telehealth to provide the restorative care program, there is evidence to suggest that the use of technology has the potential to provide comparable treatment outcomes for older adults recently discharged from hospital (Moffett et al., 2015). It is important to keep in mind that the older adult must be comfortable with the use of technology and have the supports in place (i.e. the internet) to have this level of intervention used.

Conclusion

Occupational therapy has potential to impact the root cause of the problem of readmission into hospital. As outlined in Figure 2.1, the occupational therapy restorative/reablement intervention would greatly impact the risk for deconditioning by providing targeted interventions to increase strength, teach the skills to re-learn skills necessary for daily living, provide home modifications, and link to appropriate community supports. The key of the intervention will be to ensure that the OT is partnered with a paid caregiver, family member, OT assistant personal support worker, or home care aide that will work with the client to do the tasks with them versus for them. The specifics around the intervention will be provided in Chapter 3. Ideally, the implementation of a reablement model of services in the community following a hospitalization via telehealth, will lead to greater participation in daily living influence one's overall quality of life.

CHAPTER THREE: Description of the Proposed Program

Introduction

Occupational therapy has the potential to positively impact the lives of those seniors that have recently been discharged from an acute care facility. It is estimated by the year 2030, 20% of the US population will be over the age of 65 (US. Census Bureau, 2012). The increase in chronic conditions, challenges to functioning within environments and continued independence in living will have a huge effect on the kinds of occupational therapy intervention that will be provided to the older adult population and has potential to positively impact those being discharged from the hospital. Current research supports the creation of a restorative care program to assist seniors once they are discharged from hospital (Tinetti et al., 2012; Courtney et al., 2012). The use of telehealth technology will provide greater access to clients. The proposed program, *Project Home* will aim to increase the overall functioning of the older adult through the introduction of their activities in their home environment. Although the term restorative care is used, the main focus will be on reablement principles with the approach to help people be independent rather doing it for them (Glendinning and Newbrommer, 2008; Tinetti, 2002). The other main characteristics of a reablement model is to provide assistance with self-help activities, mobility tasks, daily living activities within a time specific period (Glendinning and Newbrommer, 2008).

This chapter will focus on the program design including the modules that will be completed with the client on a weekly basis over the 6-week program. The program, delivery method, program activities, and potential barriers and challenges for implementation of the program will also be discussed in this chapter.

Program Components and Participants

Project Home is a proposed program for older adults that have recently been discharged from an acute care facility that uses a telehealth approach to reengage the older adult in daily activities within their home environment. The program will take place over a six-week period with an eHome Worker (eHw) assisting the older adult in the home while the occupational therapist conducts a session through the use of telehealth technology. The program of reablement was selected to help establish a therapeutic framework for Project Home. Traditionally, reablement models of home care are short-term interventions with the aim of reducing overall home care in the long-term (Glendinning and Newbronner, 2008). Project Home is proposing to reduce the chance of recurrence to an acute care hospital for the older adult. Previous reablement programs have focused on interventions aimed at improving overall functions for older adults, but no interventions have used a telehealth technology to deliver the services (Avlund et al., 2002; Cunliffe et al., 2004; Kjerstand and Tuntland, 2015). The age range for the participants is anyone that is over 65 years of age that have recently been discharged from an acute care setting and would benefit from some level of home care intervention. Diagnosis is not a criterion for admission into this program as the focus is on returning to function. The only exclusion criterion for a participant to this program is around those older adults with a cognitive impairment. It is the expectation that the program participant will be able to follow directions and have a working memory towards activities of daily living in the home.

The program will be divided into six-week modules with major themes guiding the OT intervention for the week. The participant will receive 10 hours of eHome Worker support a week and three hours of direct OT intervention via telehealth. One hour of OT intervention will be used for reporting and consulting with other members on the team. Table 3:1 provides a break down of the major themes to be addressed during the 6-week program.

Table 3:1: Project Home Schedule

Week	Personnel	Activity	Goals
1	OT eHW	*Assessment and Goal Setting* OT conducts COPM Reviews daily routines Mobility and Home Safety Assessment – Clinical Observations	Establish Goals for the six weeks sessions Pick one activity to reduce eHW support
2	OT eHW	*Bathroom Routine* Review goals for the week Target on gradual increase in participation in bathroom activities	Review progress to date Review doing "with" the client versus doing "for" the client Ensure equipment in place
3	OT eHW	*Kitchen Routine* Review goals for the week Observe meal preparation session and provide task analysis to complete activity where appropriate Target on activity to be completed	Review progress to date Target an activity in the kitchen to support the client to re-engage in meal preparation
4	OT eHW	*Mobility* Review goals for the week Target mobility around the home and provide strategies to ensure safety Work with community agencies to transition support for daily activities	Review mobility and make referrals to appropriate clinics where necessary Ensure referrals are in place for community agencies
5	OT eHW	*Returning to Activities* Review other activities the client would like to return to during the program	Review progress to date
6	OT eHW	*Re-assessment and Goal Setting* Review care needs for the client Review reduction in eHW plan over another 6 week period	OT re-assessment Transition eHW out of support and conduct meeting with the client, family, caregivers, and possible support for ongoing care.

The OT will meet with the client and develop a care plan (Appendix B). The eHome Worker will help to facilitate the OT sessions as they will be present in the home with the adult with the overall goal to practice and participate in everyday activities. Over the six weeks, the eHW will gradually reduce their direct therapy support and move towards observation in an attempt to have the older adult participate independently in the activities. They will continue to provide supervision to the client for the period of six weeks, but may only provide verbal coaching versus actively completing the activity with the client. The approach of working together towards goals is in line with restorative care principles (Tinetti et al., 2002).

Table 3.2: Project Home Levels of Support Definitions

Level	Definition
D	**Dependent** – Client requires 100% support for all tasks.
P	**Physical –** Client is able to plan out the task but still requires physical guidance and supervision to complete.
V	**Verbal –** Client requires verbal reminders, prompts and supervision to complete tasks.
I	**Independent** – Client is able to complete all tasks with no support.

Appendix B provides an outline of the eHW Project Home Care Assessment and Plan. Table 3.3 is an example of the eHome Worker Care Plan (Social Care Institute for Excellence, 2012). As outlined in the care plan, the goals are reviewed during all OT sessions to ensure that the eHW is changing their focus from “doing for” the client to “doing with” the client. It is the expectation that at the end of the intervention the client will either be independent in daily activities (with some modifications and use of equipment) or will be referred to another community agency for ongoing support. Once the client is referred, the OT will conduct an intake interview and complete the Canadian Occupational Performance Measure (COPM). Although reablement studies have used other performance measures such as the Barthel Index and clinical observations (Avlund et al., 2002; Donald et al., 1995) many reablement studies have used the COPM to help the older identify their self-perceived occupational limitations (Law et al., 1995; McNulty and Beplat, 2008; Tuntland et al., 2015; Kjerstad and Tuntland, 2016). The COPM has been used with the older adult population and has resulted in useful outcomes that have assisted in treatment planning and intervention (Atwal and Owen, 2003; Ward, Jagger, and Harper, 1996; McNulty and Beplat, 2008). The COPM allows the OT to assess in the areas of functional activities of daily living and the instrumental activities of daily living. This is useful to *Project Home* as it is not limited to an occupational domain, but rather looks at the older adults entire functioning within their home environment.

Table 3.3: eHome Worker Care Plan (Social Care Institute for Excellence, 2012)

Week /6 of Project Home:

Goal	Week	Level of Assist	Notes – Task Analysis
	1 2 3 4 5 6		
	1 2 3 4 5 6		
	1 2 3 4 5 6		

Level of Support: I – Independent P – Physical Cueing
D – Dependent V – Verbal Cue

In order to find appropriate participants, the program will work in partnership with acute care facilities or community home care programs. The clients will be known to the community agency and will refer to *Project Home* for post acute care services. The recruitment of the participants will focus on engaging those older adults who are motivated to regain their pre-hospital function and be independent in their community.

Delivery Method

Project Home will be delivered within the context of a hybrid model. The client will receive a face-to-face visit with the assistance of an eHome Worker (eHW). This person will support the client to complete goals as outline by the occupational therapist. Telehealth technology will be used to conduct the OT intervention in order for the client to complete their goals in a natural environment while being able to access services. The OT sessions will be completed via video-conferencing solutions in order to have face-to-face communication. As well, the client and the eHW will be using an iPad so that will assist with taking the device around to various environments within the home for the purpose of safety assessments and intervention. For the purpose of the proposed project, Adobe Connect™ has been selected due to its availability and secure network. It is critical that the telehealth platform has a secure network to maintain confidentiality for the participants (American Occupational Therapy Association, 2013). Health records will be maintained within another health information management system which will be determined based upon the organization that uses *Project Home*. If an organization determines that it would like to pursue the integration of health records with a service delivery platform, *Project Home* would lend itself to fostering that kind of relationship.

One key operational issue to consider when implementing *Project Home* is that the OT must be licensed in the state where the client resides (Cason, 2012). If the client and the OT do not live in the same state, it is critical that the OT obtain licensing to practice and supervise the intervention.

Program Personnel

Project Home has two main professionals in the program: an occupational therapist and the eHome worker. The OT will work within the professional parameters including the assessment, treatment, and reassessment of the client within the areas of self-care, productivity, and leisure (American Occupational Therapy Association, 2014). The eHome worker is a proposed role that blends Therapy Assistant with a Personal Support Worker. The overall goal is to have the eHW work with the client to obtain goals and to gradually reduce their physical support with the client. The theory of the eHW is to have them work with the OT to find strategies to work with the client versus always "doing for" the client (Tinetti et al., 2002; Glendinning and Newbronner, 2008). This may require the OT to observe tasks during the online sessions and offer strategies to encourage participation in the activities. The eHW will visit with the client over 10 hours per week. The eHW will follow the care plan as outlined in Table 3.3. Their task is to motivate the client and to constantly monitor the client's progress in goals and to work with the OT to modify tasks as needed.

The role of the eHW is to provide overall emotional and physical support to the older adult. The goal of the eHW is to work with the OT and implement the OT program to encourage maximum independence. The eHW will implement the tasks on the Project Home Care Plan and work closely with the OT to adjust the plan accordingly.

Program Activities

The principles of the reablement model what are guiding the overall program. The eHw will use the principles of "doing with" versus "doing for" throughout the program and will start within the first week of *Project Home*. The overall outcomes of the program is to have the client relearn as many of the activities they did before hospitalization with the overall goal to have the client remain in the home and with reduced levels of support (Glendinning and Newbronner, 2008). The program is tailored to the individual needs of the older adult. The program takes the client through weeks with targeted daily living tasks such as bathroom kitchen, and home mobility but all sessions will be tailored to the needs of the client. The eHW will be trained to support the client through the tasks and cue the older adult on how to participate in the activity with little to no support.

The eHW will have a set of activities to complete with the client on a daily basis. After the initial referral and OT assessment, the eHW will help the client up to 10 hours per week. The eHW will also take records of the observations and communicate the findings back to the OT through the *Project Home* Care Plan (Table 3.3).

The following case scenario about Henry provides an example of how *Project Home* can be used to help support an older adult recently discharged from an acute care hospital.

Case Scenario

Henry is an 82-year-old man that has been living on his own in an urban area. His family lives two hours away. Henry has been able to remain on his own since the passing of his wife five years ago. Three weeks ago, Henry had pneumonia and required an admission into an acute care hospital for five days. He remained in his bed most of the time during this hospitalization. While in the hospital, he completed an OT assessment and the recommendations were for ongoing OT services in the home with an emphasis on increased independence in the areas of kitchen, bathroom, and dressing activities. Henry's social worker recommended that he join the program, *Project Home* to continue to increase independence in these activities of daily living (ADLs).

Henry was discharged home and met with his eHome Worker on the day he was discharged. They reviewed his daily routine and the eHW set up his iPad to be able to meet virtually with the OT. Later in the day, the OT met with Henry and the eHW to conduct the initial OT assessment. The OT completed the assessment including clinical observations and the COPM. Based upon the assessment, it was determined that Henry will work on increasing his independence in the areas of the kitchen, bathroom, and dressing activities. Table 3.4 outlines the care plan that the OT developed with the client and the levels of assistance outlined over the six-week period.

The eHW and Henry met for a total of 10 hours a week to complete the assigned activities together. They met with the OT via telehealth technology for three hours a week. The OT guided the eHW on how to move Henry from “dependent” to “independent” by providing strategies to coach and motivate.

At the end of the six weeks, Henry was successfully participating in some of his ADLs. . Henry was independent in making himself a light meal. The overall goal for his bathroom routine was to make him independent, but by the end of the six weeks he was a verbal assist. Henry was scared of falling so he appreciated having someone there to monitor his bathing activities, but felt confident in his ability to physically complete the activity on his own. Henry was able to meet his goal of being independent by the end of the six weeks.

Overall, *Project Home* provided an opportunity for Henry to be able to relearn activities that he was able to do prior to his hospital admission. Through working with the OT and eHW, he was able to physically gain the strength and also remain happy and motivated as he was able to complete the tasks and was not relying on others.

Table 3.4: Example eHome Worker Care Plan

Client Name: Henry

Date of Session: November 7, 2017Week 2/6 of Project Home:

Goal	Activity	Week	Level of Assist	Notes – Task Analysis
1.	Kitchen Routine: To support Henry to make toast and tea for breakfast.	1 2 3 4 5 6	D-P P P-V P-V V-I I	Henry is responding well to the physical set up and assist in making a meal. He is gaining more strength so he is able to participate in small details of the activity such as walking over to put bread in the toaster. Does not demonstrate the hand strength and balance this week to pour water into the kettle.
2.	Bathroom Routine: To support Henry in bathing activities.	1 2 3 4 5 6	P P-V P-V V V-I I	Henry is responding well to activities to promote bathroom routine. He is able to now step into the bath and sit on the bath seat with no assistance. He is able to wash his face and body with verbal cueing and uses a handheld showerhead to rinse himself off.
3.	Personal Care: To support Henry in dressing activities	1 2 3 4 5 6	P P-V P-V V V-I I	Henry is able to don his pants, shoes, and socks with minor physical assistance. He still requires assistance in fastening pants or standing to pull up his pants. He requires physical assistance to don a t-shirt but he is not able to physically bring his hands overhead to support the dressing activity.

Level of Support: I – Independent P – Physical Cueing
D – Dependent V – Verbal Cueing

Barriers and Challenges to Implementation

There are several barriers and challenges to the implementation of *Project Home*, but all can be worked through with resources, proper communication, and support. First, there will be the challenge of funding. Although there is a growing need to ensure that older adults do not return to the hospital following hospitalization, the investments needs to be re-routing to encourage the development of innovative programs such as *Project Home.*

Another potential barrier is the change in practice guidelines. As the definition of who will be referred to the program is rather large, there may be some challenges to determine the exact population that is appropriate for *Project Home*. It is critical to not be too selective with respect to the clinical criteria for the admission into the program as small functional gains can have a significant impact on the older adult's quality of life (Glendinning and Newbronner, 2008). Although it may be best to refer based upon diagnosis, the population of older adults are those with multiple co-morbidities which would make it difficult to group into one larger population. To ensure that *Project Home* is treating the most appropriate population, it will be critical that there is a feedback loop in place to provide information back to the referral source to ensure that there is a mutual understanding of the population that is being targeting.

There is a distinct opportunity for OTs to be a leader in this kind of service delivery method. Health systems globally are trying to find better ways to contain costs, provide quality services, while also providing health services to meet the needs of a new generation of older adults (Sims-Gould et al., 2017). One barrier to the implementation of the reablement model by OTs is that some OTs may not be familiar with this philosophy and also some insurers may not fund this kind of service to be provided by OTs. As well, universities that offer training of occupational therapy practitioners should include reablement into their curriculum.

As mentioned previously, funding may be a potential barrier to the implementation of *Project Home*. The use of telehealth technology may pose a potential barrier as some funders may not recognize the use of telehealth as a method of service delivery (American Occupational Therapy Association, 2013). The OT will also need to ensure that they are licensed in the state or province where they are providing the service.

The use of technology in itself may be a potential barrier. Although the client will not be on their own to use the technology, the eHW will have to be aware of how to use an iPad with the teleconferencing platform. There is an expectation that the funding for the iPad and the cost of internet services will be part of the overall program costs, but there is always a risk that the equipment may not be funded. To mitigate the risk of no funding for technology, the program may consider purchasing a few iPads and apps with the expectation that they can be re-used with the participants.

Conclusion

The aim of *Project Home* is to leverage technology and innovative program delivery to support a population that desperately needs a creative solution to the challenge of readmissions to hospital. *Project Home* is a six-week program that is delivered by an OT and a support worker called an eHome Worker. It is the expectation that using reablement principles will lead to the older adult feeling engaged in the process, participate in activities, and remain at home.

CHAPTER FOUR: Evaluation Plan

In order to evaluate *Project Home*, it will be important to ensure that outcomes are gathered both at the individual level, but also at the program level. The overall outcomes for the program include: reduction in readmission rates to acute care facilities (individual and system), education of telehealth as a method of OT service delivery (program and system), and growth in restorative care services using reablement principles in the post-acute care population (system). The short-term outcomes of *Project Home* include: increase in client participation in daily living activities and meaningful occupations within the home, increase awareness of telehealth services in OT practice, and improve OT skill development in the use of telehealth technology.

The overall evaluation will be conducted in the pre-launch phase of the program. That is, a smaller scale version of the program will be trialed to review program delivery and ensure the program is meeting its target. The vision for the entire program evaluation will be to look at individual client outcomes such as increased participation in daily activities and population health outcomes such as readmission rates to hospital to determine if the program could be implemented on a large scale. The evaluation will be two-pronged in that it will focus on the restorative care program and the use of telehealth technology. The overall vision is to determine if the telehealth technology supports the use of the program delivery and if *Project Home* provides an opportunity for the senior to continue to participate in daily occupations in their community thereby reducing the chance for readmission into hospital. The intended users of this information will be the program team and the organization that will support the pre-launch phase of the program.

It is hypothesized that a community health organization or therapy company that supports telehealth will adopt the program model. As outlined in Appendix C, the Program Logic Model provides the funders and leadership team with a description of program outputs and outcomes. The program evaluation will only focus upon the short-term outcomes. The leadership team will use the outcomes of the evaluation study to determine what changes will be made in order to move on to the launch phase of the program.

The evaluation will take place at the beginning and then weekly during the 6 week program. There will be an informal "check in " at midterm to ensure that goals are appropriate. The evaluation will take place in two parts: client informal assessment of function, the Barthel Index for activities of daily living and the Canadian Occupational Performance Measure (COPM) with a focus no the Instrumental Activities of Daily Living (IADL) (Law et al., 1998).

The Barthel Index assesses the performance of 10 areas of Activities of Daily Living (ADL) skills (i.e. feeding, bathing, grooming, dressing, bowels, bladder, toilet use, transfers, mobility, and stairs) and will provide information regarding improvement in function (Mahoney and Barthel, 1965). The Barthel Index will be completed in the acute care hospital at the time of discharge and will be completed within the first 48 hours of discharge from hospital. It will then be administered once a week for the duration of the study.

The COPM will be administered with the Barthel Index to help capture self-reports from the participants around their overall feelings towards their participation in IADLs (Law, Baptiste, Carswell et al., 1998). The expectation is that there will be weekly data plots for both the COPM and the Barthel Index to help inform the eHome Worker support plan. It will be interesting to explore if the ADL performance through the Barthel experience a ceiling effect early on in the study versus the IADL performance scores as recorded on the COPM. This could indicate a critical juncture in the treatment program and the need for the OT to re-establish goals (from component to participation in occupation based).

On-line surveys will be used to collect information around the OT's and eHome Worker's experience and comfort in the use of telehealth technology. The survey will focus upon understanding the OT's and eHome Worker's use of telehealth technology. The questions will be asked on a 3-point Likert scale and will focus upon the experiences of using telehealth technology, therapeutic relationship with the client, and ability to assess client environment via telehealth technology. This information will be used to help inform program and fine tune or adjust some of the clinical standards around the delivery of the restorative care program and to develop training for the OT and the eHome Worker. The use of both quantitative and qualitative measures will be useful to delineate challenges in the program that are caused by the program concept versus program delivery (i.e. use of telehealth technology). Please refer to Appendix Dfor sample survey questions.

Data Analysis & Reporting

Once all the data has been sent in by the OT and the eHome Worker, a research assistant will be responsible for coding the data and will give the data to the program manager for review. For the qualitative data and demographic information, the research assistant will code them and then provide a summary report based upon key thematic findings. There will be repeated measures of the assessment tools therefore parametric data analysis techniques such as ANOVA will help to determine if there are statistically significant between group differences in the functional measurements scores. This will help to determine the length of the program needed to observe restorative change in the senior and if the effects of the OT intervention are present. As the program will be six weeks long, measures will be collected at baseline, midpoint, and conclusion of the program. The research assistants will also need to track admissions data on the client at monthly intervals for up to six months to determine if the client remained in their home or was transferred back to hospital. In the event that the client was readmitted back to hospital, the reason for readmission is needed to determine if it is a new medical event or a preventable event.

The reporting of the data is critical to the funding of the program in the fact that there needs to be evidence that the program will keep the older adult in their home thereby reducing readmission to hospital. The research assistants will provide the summary of the data to the program manager. The program manager will then be responsible for analyzing and interpreting the data. An executive summary will be written to identify the key findings and next steps. The executive summary can be emailed in the form of an Impact Report that will highlight how the intervention impacts the greater population. Formal presentations can be provided in person and via webinar technology. It is also important to share this information with the greater healthcare community to demonstrate the impact of an innovative program model on older adult readmissions to hospital. The findings of the program can be shared in peer reviewed journals such as the Journal of Telemedicine and Telecare, American Journal of Occupational Therapy, Canadian Journal of Occupational Therapy, Journal of the International Society of Gerontechnology, and Medical Care Research and Review. It is critical to ensure that OTs highlight their value in peer reviewed journals outside of the profession in order to promote the profession and demonstrate its value in solving challenges in population health. As important, findings should be shared with the global OT community to demonstrate how OTs can be innovative and challenge traditional models of service delivery. Poster presentations at the American Occupational Therapy Association conference and the Canadian College of Health Leaders convention will share the information to both OTs and the greater health care professional community. Finally, it is important that the findings not only reach the health professional audience, but that it is critical that policy makers are made aware of the findings to ensure that changes can be made to funding and legislation.

Conclusion

The evaluation process of *Project Home* is critical to its success in that it will help to identify what is working well in the program and what areas need to improvement. One of the unique features of Project Home is that the program can be tailored to meet the operational needs of an organization that is using its framework. A proper evaluation will help to highlight the challenges and opportunities.

CHAPTER FIVE: Funding Plan

Program Overview:

Project Home is a restorative care program for older adults following discharge from an acute care facility. The aim of the program is to have older adults return to their home environment and gradually return to activities within the home under the guidance of a virtual occupational therapist (OT). *Project Home* is designed to be in addition to other services in the home offered to the client once they are discharge from hospital. Project Home may be used by a home care program, a hospital system, or rehabilitation facility. This chapter will describe the proposed operating budget and sources of funding.

Resources Needed: Budget

Project Home is an occupational therapy reablement model with restorative care principles that will be delivered in the home to clients post acute care. To provide more access, the program will be implemented via telehealth technology. For example, a client may be in a hospital setting and a discharge plan is developed by the team to transition an older adult home. The older adult will return home and be provided the help of a therapy assistant (an eHome Worker) that will implement various aspects of the OT program to re-engage the older adult into their daily activities. The client will be provided with an iPad to access the OT via Adobe Connect. *Project Home* will be offered on a per client basis with associated expenses with providing the therapy and minimal costs for overhead versus providing the costs for an entire program. This may be appealing to a program model such as a PACE (Programs of All-inclusive Care for the Elderly) model of care where funding for their clients is based upon a bundled payment model of care. All in home and community care are provided by one agency and covered by Medicaid or Medicare (Medicare, 2017). Within the PACE model, there are some initiatives to ensure that costs per client remain low and reduce the risk of readmission into the acute care setting. The expenses per client can potentially be reduced if the program decides to purchase more than one iPad and lend it out to each client. Usually, the cost will go down with more iPads purchased. The program is around $2740 per client per six weeks program with a fixed operational cost of $1295 per year. The fixed operational cost may be reduced if a large organization chooses to implement this program and use their own secure email server and teleconferencing solution. Table 5-1 provides an overview of the expenses associated with the implementation of the Project Home on a per client basis.

Table 5-1: Proposed Project Home Expenses

Cost	Initial	COST
Personnel (contracted providers)	Therapy Assistant - 10 hours per week for 6 weeks Occupational Therapist – 4 hours per week (2 treatment sessions plus documentation) for 6 weeks Program Manager (to manage the evaluation) – 1 hour per week for 6 weeks Research Assistants (to manage evaluation) – 2 hours over 6 weeks *all positions are on a per client basis	10 hours x 20/hr. x 6= $1200 4 hours X $50/hr. x 6= $1200 6 X$50/hr = $300 2 X $20/hr = $40
Equipment	Material for the client to be able to use iPad and use of secured communication network Assessment tools Data Plan for iPad - 6GB	iPad - $600 Adobe Connect subscription $600/year ($50/month for 12 months) COPM (app version) - $10/client Data plan - $50/month=$600/year
Supplies	Home equipment will be at the discretion of the client or the program (i.e. bathroom equipment)	N/A
Communication	Use of secure email – G suite	Email - $10/user /month=$120/year
Materials for Dissemination	Brochures/printed materials	$0.15/brochure - approximately $75/year
Travel	OT – no additional cost Therapy Assistant – bill on top of therapy time	Variable
Total Expenses		$2410 – per client (eHome Worker and OT) $1995 – fixed cost (includes Adobe license, email for 2 people, iPad, and materials, Data Plan)

Potential Funding Sources

Project Home can be implemented in a variety of homecare programs or post-acute facilities when the client has returned home. The aim of *Project Home* is to support older adults to re-engage in their daily activities thereby reducing the risk for readmission back into an acute care setting. *Project Home* can be targeted to programs in the community that are looking to offer programs that will provide some level of home support. *Project Home* would have to be used by an organization and they would have to find funds to operate. A more robust financial analysis could be conducted to compare the cost of offering *Project Home* versus readmission of an older adult with 30 days of discharge from hospital. This level of analysis is not within the scope of this project but would be beneficial to showing the need for the program.

Table 5-2 lists some examples of potential funding sources that could help to support the program.

Table 5-2: Potential Funding Sources

Type of funding	Source	Requirements and Examples
Cash Prize Grant	American Association of Retired Professionals (AARP) - AARP Foundation and Rock Health 2017 Aging in Place $50 K Challenge	Prize worth up to $50,000 May have to work with an organization to implement the program (a partner agency) Pitch event to help reduce unnecessary hospitalization (AARP, 2017)
Fund	Boston University - Dudley Allen Sargent Research Fund	Up to $5,000 per project Request for any research project for students in Doctoral studies at Sargent College Purpose is to support a project whereby the funding will support the project (Sargent College, 2017).
Grant	Department of Health and Human Services	Up to $225,000 per year *Translational Research on Aging: Small Business Innovation Awards* Supports innovative research in small business to be able to change the lives of seniors living at home (U.S. Department of Health and Human Services Agency for Healthcare Research and Quality, 2017)
Grant	American Occupational Therapy Foundation	• American Occupational Therapy Foundation Intervention Research Grant • Up to $50,000 per proposal • Funding helps to lay down the groundwork to conduct larger intervention studies • Fits in the AOTF research priorities of technology and environmental supports in the home, health care experience, and client and caregiver needs (AOTF, 2017)
Crowdsourcing	Indiegogo	• A platform for individuals to bid on your idea and eventually provide enough funding to implement the program

Summary

Funding for *Project Home* is available from many external agencies. The expectation is that a larger healthcare agency such as On Lok or Kaiser Permanente may partner with the author to implement trials of the program. In the event there is no funding from a larger organization, there are grants and innovation pitch event prizes that could be used to help scale the program. Pitch events are common within the innovation community (such as Aging 2.0) where you match funders with those that are involved with innovators such as engineers and occupational therapists.

CHAPTER SIX: Dissemination Plan

The dissemination plan for *Project Home* will target three main stakeholders: participants, partner agencies, and funders/potential funders. The goal of the dissemination plan is to change the conversation about how society views the transition out of the hospital and engage with older adults once they have been discharged home from hospital. There are three key messages that should be shared with all groups. They include:

1. Participate *with* the older adult not *for* the older adult: Tinetti et al. (2002), outline the need to have support personnel work with the older adult versus for the older adult. As older adults are discharged home and have lost some of their physical conditioning in hospital, it is important that the older adult continue to participate in as many activities as possible.
2. The use of technology is to support the OT intervention and *not be the intervention.* The use of telehealth technology such as iPads will increase access to OT services, but will not replace the clinical reasoning required by the OT to make decisions about the intervention.
3. There are no pre-prescribed goals. *Project Home* is essentially client led in that the older adult and caregivers decide what is most important to them. The client will remain motivated if they participate in the activity.

Additional messages for OTs, funders, and policy makers:

4. The role of the OT is to coach the eHome Worker and caregivers on how to engage the older adult in their activities. This may require a certain level of task

analysis to provide step by step instructions on how to move a client from fully dependent to independent.

5. The goal of *Project Home* is to influence how the healthcare system conducts patient transitions from one care continuum to another. *Project Home* aims to be a disrupter to the process by providing an alternative to a Skilled Nursing Facility or an institution and have the older adult return back home with support.

Potential Participants

The potential participants will be reached through: acute care hospitals, community agencies, and caregiver support groups.

Acute Care Hospitals

The participants from the acute care setting may include the client, their family, caregivers, occupational therapists (OTs), and other health professionals. A partnership with an acute care hospital would promote the *Project Home* and may be part of a preferred referral source. Information sheets (with permission) will be shared with staff and placed throughout the hospital. A lunch and learn can be arranged with the hospital staff to provide an opportunity for them to learn more about the program.

Community Partners

Social support agencies or other home care agencies may be another source for referrals. After the completion of *Project Home*, the client will be referred to other agencies so it is important that to establish a connection to ensure an understanding and appreciation of the program. *Project Home* will provide brochures, a webinar to provide information on the program, and use a LinkedIn page to have community business members remain up-to-date around program initiatives.

Caregivers

Information about *Project Home* may be shared with the caregivers through the acute care hospital or community partners. In the event that the information about the program is not shared, it will be critical to make sure that caregivers realize that they are not along. Information brochures can be shared with primary care physicians so that they may have a conversation with caregivers.

Potential Partners

Project Home is best suited to be part of a larger organization that is already providing services to older adults. The program is of benefit to an organization that would like to augment their services. This may include a home care agency that is already providing OT and home support services or a community agency that is looking to expand services to the community. Regardless of the agency, it will be important that *Project Home's* philosophy is maintained and the importance of supporting older adults to resume their daily living activities versus completing all activities for them. In the identification of potential partners, it will be important to ensure that the organization shares the same vision and is comfortable with being a disruptor to the delivery of traditional OT services. The partner must be comfortable with technology and view the use of telehealth as a support to providing the services. Potential partners may self identify through contacting *Project Home* or the leadership in Project Home may identity an agency that would support the model.

Potential Funders

Potential funders may include an organization, venture capitalists, grant funders, community organization, technology companies, insurance company, or a hospital based organization. The key strategy with this group is to promote innovation. *Project Home* has the potential to be a disruptor to the clinical reasoning of the healthcare system. There may be some incentive for an insurance company or hospital based organization to implement the program as it may reduce the costs associated with readmissions. Regardless of the potential funder, it will be critical to meet face to face to review the program and ensure that the program goals are in line with one another. The key piece of information to share with this group is around the impact on population health. Although individual goals and outcomes are important, the key dissemination message to funders will be around how changing a service delivery method and philosophy will be accessible to more older adults while re-routing the older adult's intervention course on the continuum of care.

Potential Researchers

The last audience for the key messages around *Project Home* are researchers. Although not part of the business plan and funding, their influence on the impact of Project Home is key. Through poster and conference presentations, the identification of potential partner researchers at universities could be identified. The growth of *Project Home* is dependent upon exploring its outcomes and demonstrating the impact it has on reducing readmission rates while improving the functional outcomes of older adults.

Conclusion

The dissemination of Project Home is multi-layer with messages delivered at the client level and with messages tailored to the system level. Regardless of the audience, Project Home aims to make an impact on the performance of the healthcare system in many jurisdictions around the world while keeping the goals specific to the individual client.

CHAPTER SEVEN - Conclusion

Project Home offers a restorative care program to older adults that have recently been discharged from an acute care facility. *Project Home* is offered through telehealth with an in-home support worker. The telehealth technology used to support the use of implementation of the program includes the use of videoconferencing through the use of an iPad. The in home support worker will work with the occupational therapist and the client to design and implement a program that is tailored to the specific needs of the older adult. *Project Home* is designed according to evidence-based literature that is focused upon both restorative care and reablement principles.

The risk for readmission into the hospital following a discharge from acute care increases due to older age, multiple diseases, co-morbidities, and functional limitations (Tinetti et al., 2012; Garcia-Perez et al., 2011). *Project Home* proposes to provide an alternative to care pathways that have an older adult being discharged to a skilled nursing facility following discharge from hospital. Enhancing the opportunity for a period of home care following an acute hospitalization may reduce the risk of readmission to hospital (Tinetti et al., 2002).

Project Home provides an alternative to being discharged to another care facility in that there are targeted interventions over the 6-week period that focus upon various aspects of daily occupation. The OT will meet with the client and the eHome Worker and go through various aspects of the program to target various skill levels and support of the older adult. The overall aim is to have the older adult be able to participate in an activity to the best of their ability.

One of the unique features of *Project Home* is that the eHW to obtain goals and to gradually reduce their physical support with the client. The theory of the eHW is to have them work with the OT to find strategies to work with the client versus always “doing for” the client (Tinetti et al., 2002; Glendinning and Newbronner, 2008). By having the OT available through telehealth, the older adult will have greater access to OT services.

The terms restorative care and reablement are used interchangeably throughout the proposed doctoral project. Restorative care tends to be a term used more often in the American literature where reablement is used more frequently in the literature from the United Kingdom (Sims-Gould et al., 2017). Regardless, the underlying premise of restorative care and reablement is the aim to reduce the need for long term support by helping clients relearn skills necessary for daily living (Sims-Gould, 2017). Some of the key features common in all restorative care or reablement programs are: unified plan of care, goals established based on input from the client, family and eHome Worker, reorientation of the focus of the intervention from taking care of a older adult toward self care, and interventions support physical impairments and tasks of daily living, environment modifications and equipment, training of support staff (Tinetti et al., 2012). Project Home targets all of these components and works with the client and their caregivers to ensure that the client is able to regain most of functional skills.

In terms of the evaluation of *Project Home*, it is critical to consider that the success of the program is not entirely about having all clients reach maximum independence. Some clients may also need to have some level of support. The success of the program will be to have the client satisfied with their efforts and function and ensure that they are as independent as possible.

Occupational therapists have a unique role in order to change the course of treatment for older adults following a hospitalization. OTs must leverage the use of technology to access more clients and consider alternative models of care that are outside some of the traditional approaches to service delivery. The profession of occupational therapy must collectively promote the use of their discipline to support many of the healthcare challenges that impact the larger population. Currently, health policy and funding drive innovation and creativity of OT service delivery. *Project Home* is an example of how OT innovation and creativity can influence and impact health policy and funding.

APPENDIX A: *Project Home* detailed weekly schedule

<u>Week 1 – Assessment and Goal Setting</u>

Description:

The main focus of this week of *Project Home* will be to settle the client back in their home and introduce them to their eHome Worker. The OT and the eHome Worker will arrange a time to meet and conduct the preliminary assessment and to set goals for the next 6 weeks.

The Session:

1. The occupational therapist and eHW will ensure that the client is familiar with the use of the iPad and that there is good internet connection.
2. The OT will meet with the client with the eHW present in the home and review the purpose for the referral and begin to discuss the purpose of the program.
3. Conduct clinical observations of mobility throughout the house and use Project Home Assessment Guide.
4. Conduct COPM with client.
5. Develop 3 goals to work on over the next 6 weeks.
6. Review the eHW care plan for the week including the days that they will be present with the client.

Facilitation:

OT:

- Ensure that the client is aware of the purpose of the program. The main goal is to have the client be satisfied with how they are completing certain activities around the house.
- Ensure client has mobility and bathroom equipment in place and review the use of the equipment.
- Ensure client aware that the eHW will gradually decrease their physical support to the client.
- Ensure the eHW is aware of the use of tracking the care plan to ensure there is understanding of the goals of the program.
- OT will meet with the client and eHW three times a week with one hour for review of care plan and consultation with care team and family

eHW:

- Ensure that the client is aware of the 10 hours of support and how it relates to the overall care plan
- Constantly motivate and encourage the client by having them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.

<u>Week 2 – Bathroom Routine</u>

Description:

The main focus of this week of *Project Home* will be to review all aspects of the bathroom routine. The OT will meet with the client and the eHW via the iPad and review the use of equipment and energy conservation techniques.

The Session:

- The occupational therapist, eHW, and client will review the goals to date.
- Client will demonstrate transfers on and off the toilet and into and out of the bathroom.
- Based upon the client need, OT will provide some energy conservation techniques so that the client can begin to participate in the activities with no physical cueing.
- OT will review safety within the bathroom including removal of mats and ensuring no water on the floor (i.e. have a mop in the bathroom to quickly clean up water on the floor).

Facilitation:

OT:

- Review the goals and update.
- Review bathroom goals (if appropriate) and if the level of support can be decreased.
- Review energy conservation techniques.

- OT will meet with the client and eHW 3 times a week with 1 hour for review of care plan and consultation with care team and family

eHW:

- Meet with the OT with the client
- Constantly motivate and encourage the client to have them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.
- Special focus this week on bathroom so try and take some time outside of the routine to practice transfers etc.

<u>Week 3 – Kitchen Routine</u>

Description:

The main focus of this week of Project Home will be to review all aspects of the kitchen routine. The OT will meet with the client and the eHW via the iPad and review the use of equipment, energy conservation techniques, and meal preparation

The Session:

- The Occupational Therapist, eHW, and client will review the goals to date.
- Client will demonstrate their routine within the kitchen and make a light snack during one of the sessions

- Based upon the client need, OT will provide some energy conservation techniques so that the client can begin to participate in the activities with no physical cueing.
- OT will provide some education around meal planning and preparation, washing dishes, grocery shopping, and community supports available in the client's local area

Facilitation:

OT:

- Review the goals and update.
- Review kitchen goals (if appropriate) and if the level of support can be decreased.
- Review energy conservation techniques.
- OT will meet with the client and eHW 3 times a week with 1 hour for review of care plan and consultation with care team and family
- Review supports available to the client.

eHW:

- Meet with the OT with the client
- Constantly motivate and encourage the client by having them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.

- Special focus this week on kitchen so try and take some time outside of the routine to practice transfers etc.
- Encourage gradual participation in kitchen routine activities

<u>Week 4 – Mobility</u>

Description:

The main focus of this week of *Project Home* will be to review all aspects of the mobility around the home and the community. The OT will meet with the client and the eHW via the iPad and review the use of equipment and other mobility devices.

The Session:

- The occupational therapist, eHW, and client will review the goals to date.
- Client will demonstrate mobility around the home and outside of the home (within reasonable distance from home)
- Client will demonstrate car mobility (if appropriate) and entering the home
- Based upon the client need, OT will provide some energy conservation techniques and general safety techniques so that the client can begin to participate in the activities with no physical cueing.
- OT will discuss importance in maintaining movement

Facilitation:

OT:

- Review the goals and update.
- Review mobility and if the level of support can be decreased.

- Review energy conservation techniques.
- OT will meet with the client and eHW three times a week with one hour for review of care plan and consultation with care team and family
- Referrals to physiotherapy if appropriate

eHW:

- Meet with the OT with the client
- Constantly motivate and encourage the client by having them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.
- Special focus this week on mobility so try and take some time outside of the routine to practice transfers, go for walks, etc.

Week 5 – Returning to Activities

Description:

The main focus of this week of Project Home will be to review all aspects of the daily life including social activities. The OT will meet with the client and the eHW via the iPad and review the status of all activities of daily living and involvement in social activities.

The Session:

- The occupational therapist, eHW, and client will review the goals to date.
- OT will review which goals can begin to be completed with verbal cueing.
- OT will discuss social activities that the client would like to begin to participate in over the next few weeks

- eHW to help the client access some of the social programs to ensure safety and provide an escort if needed
- OT and client to discuss plan of care once *Project Home* is completed.

Facilitation:

OT:

- Review the goals and update.
- Review strategies to re-engage in social activities
- OT will meet with the client and eHW three times a week with one hour for review of care plan and consultation with care team and family
- Discuss with client if there will be a need for further support once discharged from Project Home.

eHW:

- Meet with the OT with the client
- Constantly motivate and encourage the client to have them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.
- Special focus this week on social activities – try to engage the client in an activity (i.e. taking transit to go shopping)

<u>Week 6 – Re-assessment and Goal Setting</u>

Description:

The main focus of this week of Project Home will be to begin to transition the client out of the program. This will include completing all re-assessments and ensuring referrals are in place to community agencies.

The Session:

- The occupational therapist, eHW, and client will review the goals to date and alter assistance as deemed necessary.
- Case meeting with the client, eHW, OT, and family to discuss next steps and referrals to other agencies for ongoing support

Facilitation:

OT:

- Review the goals and update.
- OT will meet with the client and eHW three times a week with one hour for review of care plan and consultation with care team and family

eHW:

- Meet with the OT with the client
- Constantly motivate and encourage the client to have them feel engaged in the program.
- Fill out the care plan throughout the week and follow up with the OT to determine if goals are appropriate or do they need to be revised.

APPENDIX B: *Project Home* Assessment and Care Plan

Name:

Date of Birth:

Date of Assessment:

Level of Support: I – Independent
V- Verbal Cueing
P – Physical Cueing
D - Dependent

Areas of Assessment	Activity	Level of Support	Observation
Personal Care	Dressing	I V P D	
	Toileting	I V P D	
	Bathing	I V P D	
	Brushing Teeth	I V P D	
Transfers and Mobility	Bed to Stand	I V P D	
	Bathroom	I V P D	
	Kitchen	I V P D	
	Stairs	I V P D	
	Outside	I V P D	
	Hallway	I V P D	
	Car	I V P D	
Kitchen	Meals	I V P D	
	Light Snack	I V P D	
	Meal Planning	I V P D	
	Grocery Shopping	I V P D	

Medication Management	Locates Medication Take medication on time	I V P D I V P D	
Other: Equipment			
Canadian Occupational Performance Measure		Goals:	

Project Home Care Plan:

Goal Number	Area of Need	Activity	Goal

APPENDIX C: Logic Model

Program Title: Project Home

Inputs Resources

Program Clients

Seniors (over 65) that have recently been discharged from an acute care hospital and are living back at home.

Program Resources

- Joint funding from a private telehealth agency and a healthcare organization supporting seniors
- Telehealth technology
- Health care staff
- Training for eHelpers

Problem Theory

Nature of the Problem

Seniors are hospitalized and become deconditioned during their acute care stay. They are then discharged from hospital with no services in the community, which leads to further deconditioning and putting the client at risk for hospitalization.

Program Theory

- Adult Learning Theory as it promotes teaching skills to senior clients.
- The aim is for the senior to build upon past experiences to relearn tasks such as making a meal.

Activities Outputs

Interventions and Activities

- OT services via telehealth using a restorative care approach
- Coaching to eHome Worker
- Functional measures to be completed pre and post to determine change in status.

Program Outputs

- In the system we are using, program outputs are tangible countable aspects, like number of participants, funding received, educational materials produced, surveys or measures completed.

Outcomes

Short-Term Outcomes

- Increase in awareness of the use of telehealth services in OT practice
- Increase in client participation in daily living activities and meaningful occupations within the home
- Improved OT skill development in the use of telehealth services

Intermediate Outcomes

- Development policies to support the use of telehealth in post acute care OT services daily care
- Support of the larger OT community in promoting the use of telehealth

Long-Term Outcomes

- Reduction in readmission
- Telehealth provide OT services
- Growth in restorative care services

External/Environmental Factors: (facility issues, economics, public health, politics, community resources, or laws and regulations)

Program requires investment from an organization to provide funding for telehealth equipment; Reimbursement may not include OT services that employ a telehealth approach

APPENDIX D: Evaluation Materials Examples

Occupational Therapist Questions:

a. I feel confident in using the technology to facilitate the session.

Strongly Disagree Neutral Strongly Agree

b. The use of telehealth technology has no impact on my therapeutic relationship with the client.

Strongly Disagree Neutral Strongly Agree

c. Telehealth technology has no impact on my ability to assess the client in their physical environment.

Strongly Disagree Neutral Strongly Agree

eHome Worker Questions:

d. I feel confident in using the technology to facilitate the session.

Strongly Disagree Neutral Strongly Agree

e. The use of telehealth technology has no impact on my therapeutic relationship with the client

Strongly Disagree Neutral Strongly Agree

f. Telehealth technology has no impact on my ability to work with the Occupational Therapist

Strongly Disagree Neutral Strongly Agree

APPENDIX E: Executive Summary

Background

The introduction of the Patient Protection and Affordable Care Act (ACA; 2010) has provided an opportunity for the healthcare community to redesign, implement, and support infrastructure development in order to increase access to care (AOTA, 2011). It is estimated that Americans over the age of 65 will increase from 12.9% of the population to 19% by the year 2030 (Administration on Aging, 2010). As such, occupational therapy needs to continue to promote ways to work with the older adult within their homes or healthcare communities.

One area of opportunity and a major area of concern for healthcare policy makers and funders is the cost of readmissions of older adults into an acute care hospital following a short stay. Contributing to the cost is ineffective patient hospital transitions (Jencks, Williams, & Coleman, 2009). A hospital readmission may be considered a care transition as it includes the movement of a client from hospital to home or other care settings (DeCoster, Ehlman, & Conners, 2013). There is an opportunity for OTs to assist in the transition of clients out of hospital as they can help to identify those daily occupations and tasks that the senior may have difficulty in completing.

The Problem

Recent studies suggest that factors such as: poor follow up from acute care, lack of formal and informal supports, inadequate hospital discharge planning, medical errors, and lack of continuation of treatment goals are causal factors for readmissions; however, no single factor has been identified (DeCoster, Ehlman, & Conners, 2013). Following an older adult's acute care hospitalization, there is a need to focus interventions on the participation in daily occupations in order to restore function. As an older adult may experience a decline in functional status while in hospital, they may also experience a caregiver burden, have limited social supports, may have limited availability of formal and informal supports, and may not have had access the therapy services while in acute care. As such, occupational therapy has the opportunity to promote ways to work with the senior population within their homes or healthcare communities. For example, there are limited programs that support the transition of clients out of the hospital and focus on restoring function in the community (Ryburn, Wells, and Foremand, 2010). The programs that do exist rely too heavily on the 'dependency' model of service provision rather than focusing on activity, independence and successful aging (Baker, 2006; Ryburn et al., 2010;). Healthcare systems need to change and adapt to handle the changing demographics and unique needs of the new aging population.

The use of telehealth technology to deliver occupational therapy services is of interest to many health service administrators as it provides another platform to consider the delivery of safe and reliable services. AOTA (2013), supports the use of telehealth technology especially in the area of productive aging. It is important to note that the use of telehealth can reduce the need for client and therapist travel. It is important to consider the challenges of implementing a program through telehealth that may include issues of acceptance of technology, accessibility, convenience and cost.

Framework and Theory to Understand the Problem

Occupational therapy needs to continue to promote ways to work with the older adult population within their homes or healthcare communities. For example, there are limited programs that support the transition of clients out of hospital and focus on restoring function in the community (Ryburn, Wells, and Foremand, 2010). The programs that do exist rely too heavily on the ‘dependency’ model of service provision rather than focusing on activity, independence and successful aging (Baker, 2006; Ryburn et al., 2010;). One theory that will be utilized in the *Project Home* is the Adult Learning Theory (andragogy) (Knowles, 1989). According to Knowles (1989), there are five assumptions (originally called principles) of learning which include that adults:

- Need an explanation to know why they need to learn things
- Are self-directed
- Bring life experiences and knowledge to their learning
- Are internally motivated
- Learn in a social context (in an applied environment)

Project Home uses the guiding principles of the Adult Learning Theory as the goals are individually designed and the older adult will build upon their previous life experiences.

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a theory that attempts to explain and predict end user acceptance of technology (Cook et al., 2016). According to Cook et al. (2016), the UTAUT suggests that adoption of the new technology by the client and professional is influenced by four factors:

- Technology will improve quality of life performance
- Ease of use

- Social influence
- Facilitating conditions (belief that there is enough organizational infrastructure)

In using telehealth technology to deliver the *Project Home,* it is critical to consider the level of comfort that the older adult has with technology. The use of an iPad should not prevent the client from receiving the service.

Project Overview

Project Home is a proposed program for older adults that have recently been discharged from an acute care facility. *Project Home* uses a telehealth approach to reengage the older adult in daily activities within their home environment. The program will take place over a 6-week period with an eHome Worker (eHW) assisting the older adult in the home while the occupational therapist conducts a session through the use of telehealth technology. The concept of reablement was selected (along with restorative care) to help establish a therapeutic framework for *Project Home*. Traditionally, reablement models of home care are short-term interventions with the aim of reducing overall home care in the long-term (Glendinning and Newbronner, 2008). *Project Home* is proposing to reduce the chance of recurrence to an acute care hospital for the older adult. Previous reablement programs have focused on interventions aimed at improving overall functions for older adults, but no interventions have used a telehealth technology to deliver the services (Avlund et al., 2002; Cunliffe et al., 2004; Kjerstand and Tuntland, 2015). The age range for the participants is anyone that is over 65 years of age that have recently been discharged from an acute care setting and would benefit from some level of home care intervention. Diagnosis is not a criterion for admission into *Project Home,* as the focus is on returning to function. The only exclusion criteria for a participant to this program is around those older adults with a cognitive impairment. It is the expectation that the program participant will be able to follow directions and have a working memory towards activities of daily living in the home.

Project Home, will be divided into six-week modules with major themes guiding the OT intervention for the week. The participant will receive 10 hours of eHome Worker support a week and three hours of direct OT intervention via telehealth. One hour of OT intervention will be used for reporting and consulting with other members on the team. The eHome Worker will help to facilitate the OT sessions as they will be present in the home with the clients. The other seven hours of eHW time will be used to provide support to the older adult with the overall goal to practice and participate in everyday activities. Over the six weeks, the eHW will gradually reduce their direct therapy support and move towards observation in an attempt to have the older adult participate independently in the activities. They will continue to provide supervision to the client for the period of six weeks, but may only provide verbal coaching versus actively completing the activity with the client. The approach of working together towards goals is in line with restorative care principles (Tinetti et al., 2002).

Project Home will be delivered within the context of a hybrid model. The client will receive a face-to-face visit with the assistance of an eHome Worker (eHW). This person will support the client to complete goals as outline by the occupational therapist. Telehealth technology will be used to conduct the OT intervention in order for the client to complete their goals in a natural environment while being able to access services. The OT sessions will be completed via video-conferencing solutions in order to have face-to-face communication. As well, the client and the eHW will be using an iPad so that will assist with taking the device around to various environments within the home for the purpose of safety assessments and intervention. For the purpose of the proposed project, Adobe Connect has been selected due to its availability and secure network. It is critical that the telehealth platform has a secure network to maintain confidentiality for the participants (American Occupational Therapy Association, 2013). The overall cost per client is estimated to be around $2,740 that includes the OT and the eHome Worker. There is an additional fixed operational cost of $1,900.

The overall intent of *Project Home* is to support larger efforts in managing the healthcare system and resources. Occupational therapists are a valuable resource and can help influence significant changes that need to occur to ensure a sustainable healthcare system regardless of the jurisdiction or geography. The use of telehealth technology will allow greater access to clients while providing an innovative solution to a complex healthcare need.

APPENDIX F: Fact Sheet

BOSTON UNIVERSITY

Project Home

There is No Place Like Home: Using Telehealth Technology to Support a Proposed Restorative Care Program in the Community

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"Occupational Therapy is an underutilized healthcare resource in a world that desperately needs us!"

-Kathryn Wise, 2017

The Current Situation

Transitions out of the hospital can be challenging for older adults. Most older adults are at an increased risk for hospitalizations and are physically deconditioned when they return home (Jencks et al., 2009; Tinetti et al., 2012).

The Problem

Older adults are discharged from the hospital where they have not participated in therapeutic activities that promote functional independence. This leads to an overall decline in their function. This may include a decline in both their cognitive and physical status (Tinetti et al., 2012).

The Result

The lack of an organized home program that will increase the older adult's ability to participate in daily occupations will increase his/her risk or readmission into acute care (DeCoster, Ehlman, & Conners, 2013).

Image Credit: www.nextavenue.org

The Solution: Project Home

- Provide a "catch" program in the community following acute care hospitalization
- Program proposes to be OT led and have an eHome Worker (eHW) with the client in the home focusing on resumption of daily living skills thereby reducing risk of readmission
- Goal for the eHW is to work with the client versus doing for the client
- OT's role is to meet with the client virtually and assess the home environment, provide programming around the resumption of daily activities, monitor progress, modify program, and to gradually transition client to community programs available on a longer term basis

The Approach

Focus on the Client

Collaborative goals will be established with the client using OT principles and based in adult learning theory and restorative care principles (Knowles, 1989; Lewin et al., 2013).

Occupational Therapy

OT will encourage participation in activities and work with the client and eHW on breaking down the tasks into smaller more manageable tasks.

eHome Worker

Will be working with the client in the home and be coached by the OT on how to transition support from dependent to independent.

Technology

The use of iPads is not the intervention, but a way to access the client.

Short Term Goals:

- Increase client participation in daily activities
- Increase awareness of telehealth services in OT practice
- Improve OT skill development in the use of telehealth technology

Long Term Goals:

- Reduce readmission rates to hospital (Individual and system)
- Growth of restorative care services using reablement principles

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