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BEYOND ADOPTION:
EXPLORING THE UTILIZATION AND INTEGRATION OF RAI-HC

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Dedication

I attribute my desire for knowledge and lifelong learning to my parents. Mom, while I miss you deeply your legacy is profound. Dad, you are an inspiration and bring joy to my life. I thank you both for my foundation, and I dedicate this thesis to you.

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Abstract

Meeting the health needs of the community client has been theoretically improved by home care's adoption of an electronic client assessment and information system known as Resident Assessment Instrument-Home Care (RAI-HC).Valid and reliable client outcome data and algorithms are generated from a completed RAI-HC, and available to home care and its assessor coordinators to support clinical and program decisions. However, adopting RAI-HC is one thing, understanding and utilizing it successfully is another. In order to realize the benefits of RAI-HC, user comprehension and application of this system in totality is central. The researcher in this interpretive description gathered data through semi structured interviews, and considered normalisation process theory in order to foster an understanding of the factors that promote or inhibit the successful implementation, utilization, and embedding of RAI-HC within home care practice. The findings suggest encumbered utilization, opportunities to empower utilization, and the factors that influence both.

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Chapter I

INTRODUCTION

Worldwide, the population of persons over the age of 65 is growing, and in most developed countries the increase is most striking in those aged 80 and older. (Canadian Institute for Health Information [CIHI], 2010; Kwan, Chi, Lam, Lam, & Chou, 2000). Accordingly, the ability to respond to the health needs of older persons in a clinically (professional) and fiscally responsible manner is a critical challenge of the current health care system (CIHI, 2010; Hirdes, Ljunggren, et al., 2008; Kwan et al., 2000). As stated by Leung, Liu, Chow, and Chi (2004) “even though aging is not synonymous with frailty, elderly people are major consumers of health care” (p. 71). Moreover, Bernabei, Landi, Onder, Liperoti, and Gambassi (2008) and Hirdes, Ljunggren, et al. (2008) suggest that health care systems are increasingly confronted with older patients who are: a) affected by complex interactions of physical, social, medical, and environmental factors; b) receiving multiple and frequently interacting medications and treatments for an array of clinical conditions; and c) often limited in terms of financial resources and support systems to meet increasing health needs. Bernabei et al. (2008) also argue that even though current health systems have evolved to provide sophisticated acute care, these systems continue to be challenged by complex geriatric patients with chronic medical, psychological, and social needs. What's more, the shift away from institutional care challenges conventional approaches to care and assessment as home care plays an increasingly prominent role in the health care system with the aim of minimizing inappropriate hospitalizations and/or admissions into long term care (L.C. Gray et al., 2009; Hirdes, Poss, & Curtin-Telegdi, 2008).

Indeed the Commission on the Future of Health Care in Canada (Romanow, 2002) advocated for a strengthening of the Canadian health care system by inclusion of post-acute care, palliative care, and mental health home care services to be included under a revised Canada Health Act – that these services should be within the auspices of Medicare. In turn, Shamian (2007) is unequivocal in her statement:

> If policy makers are serious about ensuring the sustainability and quality of our health care system they must turn their attention to the role that home and community care plays. Failing to do so will result in a fragmented, weakened health care system (p. 296).

In a press release announcing its latest publication 'Portraits of Home Care 2013', the Canadian Home Care Association highlights the importance of home care to Canadians and the vital role it plays in our ever changing health care system:

> In 2011, 1.4 million Canadians received home care, a 55 percent increase from 2008. Nationally, one in every six seniors is receiving home care services, and with our aging population the demand for home care will surely escalate. Home care helps frail seniors live independently, offers cost effective alternatives to hospital and long term facility based care, and is a critical part of chronic disease management (Longwoods, 2013).

The heightened and now fundamental role of home care in the provision of health care is prevalent across Canada, and meeting the potentially comprehensive needs of the elderly in the community is a critical component. In view of this, Resident Assessment Instrument-Home Care (RAI-HC), an electronic client assessment and information system that evaluates physical, cognitive, and emotional functioning, and informs and guides the establishment of comprehensive care plans and services in the community has been incorporated in many countries around the world (CIHI, 2010). Over the past seven years, RAI-HC has been implemented within all Regional Health Authority (RHA) home care programs in Saskatchewan. RAI-HC is utilized by assessor coordinators (often referred to in the literature as case managers), a diverse group of professionals consisting mostly of Registered Nurses (RN), Social Workers (SW), and Licensed Practical Nurses (LPN).

RAI-HC replaces the Saskatchewan Client Information Profile (SCIP), a non-electronic questionnaire addressing a client's physical health and functional abilities. The SCIP was utilized in home care as the first step in the client care management process, and once completed with the client and support persons (if in attendance), a care plan inclusive of client goals was developed by considering the strengths and needs of the client, based on the information obtained. In Saskatchewan, it is identified by policy that the client care plan in home care is developed by the assessor coordinator in conjunction with the client and their support persons as appropriate in order to optimize a client centred plan of care (Saskatchewan Ministry of Health, 2010). The care plan must outline the client service provision details, individualized client goals, the role of the client in self-care, and the role of the family in support of that self-care (Saskatchewan

Ministry of Health, 2010). Van Houdt and De Lepeleire (2010) studied the use of care plans in terms of improving the quality of home care. These authors concluded that even though the formulation and evaluation of care goals, and communication between health care professionals and clients in the care planning process was critical and beneficial in the provision of adequate home care, the care planning process studied did little to change hospitalization rates, client satisfaction, and perceived general health of the client.

Ultimately, home care programs in Saskatchewan have undergone a fundamental shift – the move from a paper based client assessment guide that captures client information for care planning and service provision purposes, to an electronic client assessment and information system using client data inputs to generate meaningful client data outputs to support clinically comprehensive care planning and service provision. Assessment and information systems hold substantial potential for assisting with clinical decision making (Egan et al., 2009). Moreover, utilization of these systems could lead to "major benefits for the health, quality of life, and independence of older persons receiving home care, and also provide system benefits through decreased costs, more appropriate resource use, and avoided institutional placements" (Stolee, Steeves, Glenny, & Filsinger, 2010, p. 168).

However, implementing an electronic client assessment and information system is one thing, understanding and utilizing it as intended is another. In order to realize the benefits of RAI-HC with respect to clinical decision making and indeed client and population health outcomes, user understanding and application of this system as a whole, inclusive of the client and population data outputs is critical. The value of RAI-HC is maximized when the outcome measures and assessment protocols generated are used to inform care planning and client outcome evaluation (Coles, Demunnick, & Masesar, 2008).

Statement of Problem

Optimal care of the community client, including those considered senior or elderly has become a critical consideration of the Canadian health care system. The comprehensive utilization of RAI-HC has been deemed a valid, reliable, and useful client information and assessment method in terms of understanding health needs and potentiating optimal health outcomes for community clients and populations. Nonetheless, even though RAI-HC has been adopted in Saskatchewan home care programs, how well it is understood, and successfully utilized and integrated within day to day clinical practice and delivery of care, and indeed home care programming, is not known.

Key Definitions

RAI-HC/MDS-HC: Internationally researched electronic client assessment and information system that informs and guides comprehensive planning of care and services in community-based settings around the world (CIHI, 2010). The RAI-HC system consists of the RAI-HC assessment form and the Clinical Assessment Protocols (CAPS) (CIHI, 2010). The formal term for this system is Resident Assessment Instrument-Home Care (RAI-HC) (CIHI, 2010). However, the term Minimum Data Set-Home Care (MDS-HC) has been used interchangeably with

RAI-HC – the term MDS-HC is often seen in the literature when referring to this system.

Electronic client assessment and information system: An electronic client assessment system that utilizes client data inputs to generate individual client and population data outputs that inform clinical decision making, care planning, and program development.

Implementation/adoption: The social organization of accepting and bringing a practice or practices into action (May et al., 2009, p. 2).

Utilization: The comprehensive or full use of the practice or intervention – used to capacity or used as intended.

Embedding: The processes through which a practice or practices become, or do not become routinely incorporated into the everyday work of individuals and groups (May et al., 2009, p. 2).

Integration: The processes by which a practice or practices are reproduced and sustained among the social matrices of an organization or institution (May et al., 2009, p. 2).

Normalisation: When practices are routinely embedded and integrated (May et al., 2009, p. 2).

Assessor coordinator/case manager: Health care professionals such as Registered Nurses, Licensed Practical Nurses, and Social Workers in Saskatchewan, who assess, plan, implement, and evaluate comprehensive client care in the community and who utilize RAI-HC.

Case management: The activities of the assessor coordinators/case managers working with community clients who are in need of comprehensive health and functional assessment and care coordination in order to address unmet client needs and/or areas of client health risk.

Population centre: Area with a population of at least 1,000 and no fewer than 400 persons per square kilometer. The term population centre replaces the terms rural and urban area. Population centres are classified into three groups, depending on the size of their population: a) small population centres, with a population between 1,000 and 29,999; b) medium population centres, with a population between 30,000 and 99,999; and c) large urban population centres, with a population of 100,000 or more (Statistics Canada, 2011).

Chapter II

REVIEW OF THE LITERATURE

The literature review begins by providing a general overview of the suite of assessments that are within the umbrella of interRAI in order to establish the context for the reliability, validity, and the overall usefulness of these electronic client assessment and information systems. The overview is followed by a comprehensive synopsis of RAI-HC as it relates to clinical practice for the individual client, population programming, and as well the use of RAI-HC and best practice implications. Further, the implementation and intended utilization of RAI-HC is reflected upon, along with the challenges faced by two jurisdictions as they implement interRAI systems. To conclude the literature review, client assessment and information systems and home care in general are discussed. Through this discussion, I demonstrate that the perceptions of clinicians themselves with respect to facilitators and barriers in the utilization of these systems are inconclusive, and thus there is a gap in the literature.

interRAI: A Suite of Assessments

To begin, what is interRAI, and what does it do? "interRAI is an international collaborative of researchers working in more than 30 countries" (CIHI, 2010, p. vii). interRAI has developed a suite of assessment instruments that use common concepts and measures across the health care continuum for post-acute care, long term care, home care, mental health care, and palliative care – each instrument developed for a specific population but designed to work together to form an integrated health information system (CIHI, 2012; Hirdes, Mitchell, Maxwell, & White, 2011)

The interRAI system of assessments undergoes continuous testing to evaluate and refine their reliability and validity, outcome measures, assessment protocols, case mix algorithms, and quality indicators (CIHI, 2012; Hirdes et al., 2011). One such study, ‘Reliability of the interRAI suite of assessment instruments: A 12-country study of an integrated health information system’, examined the reliability of the items from five instruments supporting home care, long term care, mental health, palliative care, and post-acute care, concluding with compelling reliability results (Hirdes, Ljunggren, et al., 2008). In this study, all interRAI items tested “met or exceeded standard cut-offs for acceptable reliability, and a substantial proportion of items showed excellent reliability” (p. 284). Further, the results demonstrated that: a) motivated, appropriately trained staff can obtain high quality assessment results as part of normal clinical practice; and b) the inter-rater reliability using the interRAI integrated system of assessments shows that most of the items in the instruments work well in multiple service settings, providing clinicians, administrators, policy makers, and researchers considerable confidence in the data obtained for different populations receiving services across the continuum (Hirdes, Ljunggren, et al., 2008). L.C. Gray et al. (2009) also conclude that the interRAI instruments have “sound psychometric properties, established through extensive field testing and revision of poorly performing items” (p. 74), and “with moderate levels of training of health professionals (typically 2 or 3 days), high levels of reliability and validity are assured" (p. 74).

As clinical assessments, interRAI assessments are built into software for point-of-care capture. Critical information about a person's health status, progress, and risks is available in real-time reports supporting the clinician's immediate development of person centred care plans (CIHI, 2012; Hirdes et al., 2011).

In terms of understanding populations, interRAI assessments also generate decision-support outputs that aggregate the client data to: a) cluster populations with similar clinical characteristics and care needs associated with similar resource use (Resource Utilization Grouping Scales [RUGS]); and b) provide information about trends, variation in care needs or at-risk populations (quality indicators) (CIHI, 2012). The data from these outputs are exported to the various Ministries of Health and the Canadian Institute for Health Information (CIHI) for aggregation, and in turn provided to the health authorities as population data (CIHI, 2012).

The interRAI assessment instruments have been introduced in over 30 countries; interRAI databases house thousands of assessments that constitute a substantive resource for research; and the research literature includes hundreds of interRAI related studies (Carpenter, 2006). However, Bernabei et al. (2008) argue that while the interRAI assessment systems have "produced the first scientific, standardized methodology in the approach to geriatric care" (p. 308), there is concern relating to the quality of data and the training of personnel. The instruments are often perceived by the clinicians as too long and taking away from daily service provision activities – Bernabei et al. (2008) hypothesize that this negative attitude impacts data entry.

Resident Assessment Instrument-Home Care (RAI-HC)

About RAI-HC. RAI-HC is one of the assessment systems within the interRAI suite of assessments. RAI-HC is designed to be a user-friendly, reliable, and person centred assessment system that informs and guides comprehensive planning of care and services to adults in home and community-based settings (CIHI, 2010). Furthermore, when RAI-HC is used on multiple occasions it provides the basis for an outcome-based assessment or an evaluation of the person's response to care or services (CIHI, 2010). interRAI released RAI-HC in an effort to provide a comprehensive assessment approach that would serve populations with post-acute care needs, those who were at risk for unmet chronic needs, and those who were at risk for long term care placement – an assessment approach that would address clients multiple key domains of function, health, social support, and service use (CIHI, 2010; Hirdes, Ljunggren, et al., 2008).

All items in the MDS-HC have been rigorously tested, therefore the data generated via the assessment can be utilized for clinical, administrative, and research purposes (Chi, Chou, Kwan, Lam, & Lam, 2007). Specific MDS-HC assessment items identify clients who could benefit from further evaluation of specific problems or risks for functional decline – these items or data, known as outcome measures and risk triggers, link the MDS-HC assessment to a series of problem oriented Clinical Assessment Protocols (CAPS) which contain general guidelines for further assessment and individualized care and services (CIHI, 2010; Chi et al., 2007). As such, the goal is to use this information to arrive at an appropriate plan of care, so clinician understanding and utilization of the client's outcome measures, risk triggers, and CAPS is central to the impact of RAI-HC with respect to the client's optimum health and functional ability in the community (CIHI, 2010). Thus, once accurate information is entered into the assessment system, health service providers of the older population should be in an ideal position to formulate an effective plan of care (Chi et al., 2007).

As with all interRAI assessment systems, in as much as the data outputs are client specific, they are also aggregated with respect to the RAI-HC assessed population resulting in an assessment system that not only generates pertinent individual data, but indeed relevant and standardized population data to inform service programming for community care (CIHI, 2010). interRAI academics took this approach because they understood that aggregated data could demonstrate the complex needs and patterns of service associated with older persons in local, national, and international milieus (Carpenter, 2006).

RAI-HC: Clinical application. Research studies have revealed the positive impact of RAI-HC when used as intended in the community setting for comprehensive client assessments. Landi et al. (2000) contend that optimal care for frail elderly clients in their home is dependent on a comprehensive assessment. These authors further conclude that MDS-HC provides a valid method for functional and cognitive assessment in frail clients, capturing individual data for beneficial care planning, as well as an overall home care population database to better target strategies to meet needs in the community.

Likewise, Hawes, Fries, James, and Guihand (2007) studied Department of Veteran Affairs (DVA) home care clients, concluding that the use of MDS-HC within the DVA system enhanced assessment and care planning, improving the clinical care for veterans who receive community-based services. Additionally, the study highlights the use of MDS-HC as a comprehensive and reliable tool that leads to an objective plan of care tailored to the client rather than one that is determined by the interpretation of the person conducting the assessment or the agency providing the service (Hawes et al., 2007). DVA incorporated MDS-HC to ensure the veterans received the right care for the right cost in the right place (Hawes et al., 2007).

Landi, Onder, Tua, et al. (2001) studied the impact of MDS-HC on function and hospitalization of homebound older persons, concluding that the utilization of MDS-HC reduced client risk of hospitalization and length of hospital stay providing a possible cost-saving approach in terms of reduced institutionalization and functional decline in the older community population. Institutional care is costly to the health system, and it is critical that an acute care admission is appropriate. As Landi, Onder, et al. (2004) assert, inappropriate hospital admissions of the elderly are a contributing factor to health care over-spending. In addition, an inappropriate hospital admission of the elderly can lead to serious cognitive and functional decline of that individual (Creditor, as cited in Landi, Onder, et al., 2004), potentiating additional health care costs that were likely preventable given comprehensive client assessment and care planning in the first place.

Moreover, Leung et al. (2001) contend CAPS and outcome measurements of MDS-HC to be sensitive in the identification of appropriate care needs for successful care planning for elderly community clients in China. However, this is conditional on the case manager aptly considering the CAPS and outcome measurements in client care planning and provision of care. As such, and outlined by Diwan, Shugarman, and Fries (2004), even though MDS-HC was utilized in home and community based services in Michigan, and the generated outcome measurements and CAPS were available to the case managers, the information was not utilized for care planning and care provision. These authors determined this could be the result of large caseloads and/or an over-reliance on the home support workers to provide information on client needs. As well, the problems least likely to be noted by the case managers in this study (but triggered by MDS-HC) were in the areas of health problems, continence, and sensory performance leading to reduced quality of life and an earlier move to a nursing home environment (Diwan et al., 2004). Correspondingly, Doran et al. (2009) suggest that understanding the risk profile of a client, such as that provided by MDS-HC, is fundamental to effective client care management.

A study comparing MDS-HC with their current community care assessments in England concluded favorably for MDS-HC. This randomized controlled trial comparing the instruments found that: a) the use of a well-developed standardized MDS-HC assessment was associated with much better coverage of key domains than that of the existing assessment instruments; b) the use of MDS-HC took no longer than existing assessments; c) assessment instruments of unproven reliability and validity may jeopardize the interests of older people; and d) the study identified the need to raise assessment standards (Carpenter, Challis, & Swift, 2005).

Nonetheless, as with other interRAI instruments, the length of MDS-HC causes resistance to implementation in daily practice (Van Houdt, De Lepeleire, Vanden Driessche, Thijs, & Buntinx, 2011). However, these authors also contend that health care professionals with experience in using MDS-HC appreciate the value added when the data from MDS-HC is used to prepare for a multidisciplinary client conference – that the data generated for more complex situations (those that typically call for a client conference) is highly pertinent, detailed, and objective client information useful for decision making with the client, family, and health professionals. Conversely, Egan et al. (2009) explored decisional process and needs of experienced home care case managers and came to understand that case managers valued their non-standard methods of questioning. Further, Egan et al. contend that continued research is necessary in order to determine if the use of universal client assessment and information systems does indeed result in data integration that supports better clinical decision making, and if so how one collects the data to include client concerns that are not embedded within the data elements.

Kwan et al. (2000) demonstrated concurrent validity of the Chinese version of MDS-HC given the high consistency between approximately one half of the MDS-HC triggered CAPS and clinical diagnosis, and that even with the remaining CAPS triggered but not consistent with clinical diagnosis, these were areas the physicians admitted to often overlooking. As such, Kwan et al. contend:

> MDS-HC was able to alert the physicians to attend to more clinical problems than they would have been able to identify otherwise. On average, MDS-HC identified more CAPS than the clinical consultation alone (p. 47).

Further, Chi et al. (2007) maintain that MDS-HC cannot substitute for clinical diagnosis, but rather it facilitates better practice in clinical settings – that MDS-HC is more appropriate for utilization in home-based health versus a primary medical care setting.

RAI-HC: Population and research data (and ultimately best practice implications for home/community care). Because interRAI systems aggregate client data in order to cluster populations with similar clinical characteristics and care needs, and to provide information about trends and at-risk populations, RAI-HC has an ever-growing data base with valuable population information relevant to managers, policy makers, and indeed researchers (CIHI, 2012; Landi, Onder, Russo, & Bernabei, 2007). For example, aggregated client data for overall population assessment outcomes (including pain, cognition, depression, falls, pressure ulcers, and urinary incontinence to name a few) portrays a relevant population picture inclusive of population risks for a particular home care program. These data provide critical information for program planning, resource allocation, and quality improvement initiatives (CIHI, 2012). As such, research studies have been undertaken, either based on RAI-HC population data, or with the intent to gather data using the RAI-HC assessment system – these studies are relevant for community care of the elderly.

To begin, falls are responsible for considerable immobility, morbidity, and mortality among elderly people (Cesari et al., 2002; Fletcher & Hirdes, 2002), and the research on the risk of falls and falls prevention utilizing RAI-HC data is prevalent in the literature. In their study to determine risk factors for fallers versus non-fallers, Fletcher and Hirdes (2002) found that one of the most significant barriers for determining risk factors for falls is the inconsistency in the tools used for research, and they concluded that utilizing a standardized assessment system such as MDS-HC would "assist researchers in making comparisons between different settings" (p. 509). In a subsequent study, Fletcher and Hirdes (2004) examined factors associated with the limitation of activity based on the fear of falling amongst the elderly receiving home care services. Their data were based on MDS-HC assessment of the participants, concluding the comprehensive nature of the MDS-HC allowed for multiple factors to be assessed and analyzed with respect to activity limitation as a result of fear of falling and that "home care professionals using this instrument will have a unique opportunity to identify and respond to problems that have an important impact on the client's quality of life" (p. 278). Moreover, Cesari et al. (2002) studied the prevalence of falls and related intrinsic and extrinsic risk factors in a community-dwelling older population, using data from MDS-HC. These authors found that because MDS-HC is able to recognize clinical, psychological, socioeconomic, and environmental conditions in this population, the study could investigate the domains of elderly status influencing the ability to walk, to balance, and to turn around. As a result, the investigators could incorporate many variables including measures of cognitive performance, functional status, and comorbidity into the study. The major finding of the Cesari et al. study was that many of the identified risk factors for falling were potentially modifiable, and in order to optimize the recognition for higher falling risk in the elderly community clients/population, home care staff and general practitioners could use the MDS-HC assessment system. In a study eight years later, Leung, Lou, Chan, Yung, and Chi (2010) concurred with the Cesari et al. findings and further concluded that the case managers could plan for and implement preventive measures according to the Clinical Assessment Protocols or CAPS – that addressing multiple factors would reduce falls in the community.

There are other areas of ‘elders in the community care’ research where RAI-HC is the primary data source, enabling investigator’s understanding of the influence different domains of elderly status can have on a variety of elderly health concerns, leading to greater understanding of the population in question in addition to optimizing evidence for best practice. Further, the studies using RAI-HC as their data source most often conclude the usefulness of RAI-HC in the community – that data can trigger or identify risk in the client and/or the population and lead the home care professional to the CAPS in order to plan for and implement interventions to reduce or even eliminate the identified risk. These studies include those that examine: a) urinary incontinence (Landi et al., 2003); b) indwelling catheters (Landi, Cesari, et al., 2004); c) pressure ulcers (Landi et al., 2007); c) functional decline and strokes (Landi et al., 2006); d) activities of daily living (ADL) disability trajectories (Li, 2005); e) pain management (Landi, Onder, Cesari, et al., 2001); f) depression (Martin et al., 2008; Russo et al., 2007); and g) functional status and breast cancer (Fletcher & Hirdes, 2001), just to name a few with respect to the frail elderly in the community.

RAI-HC: Implementation/utilization in home care. Canadian health professionals have tremendous opportunity for high quality information about home care and the clients it serves, and likewise, the recognition of the benefits of standardized information systems has led to substantive provincial support, even mandates, for the implementation of interRAI assessment systems (Hirdes, Pearson, & Curtin-Telegdi, 2003; Stolee et al., 2012). At the same time, the country faces challenges with respect to this implementation considering that "MDS, or any assessment system for that matter, will yield poor information when the instruments are not used appropriately" (Crooks et al., as cited in Hirdes et al., 2003, p. 1). Given these opportunities and challenges, Hirdes et al. (2003) counsels:

> Many factors contribute to the successful implementation of interRAI's MDS series of assessment instruments, including good information technology (IT), timely and useful feedback systems, and strong leadership at all organizational levels. However, the foundation upon which any implementation effort is built is education. Without effective education of the staff who will actually do the MDS assessments, efforts to implement the instrument and to use its data for decision making related to

> clinical practice, resource allocation, or the needs of the persons being served can be at risk for failure (p. 1).

The experience of implementation in Ontario is highlighted by Hirdes (2006). In this report, Hirdes describes factors that contribute to successful implementation of interRAI assessment systems to include strong leadership, collaboration of stakeholders, clear commitment to the systems, and the establishment of infrastructure to capture, compile, and report on the gathered data – inherent in this infrastructure is the educational requirements to work with it. Further, Hirdes outlines the important lessons learned by the Ontario implementation:

a) The introduction of an electronic standardized assessment instrument creates upset in a health system, and in order to optimize its success, effective change management processes and appropriate resources must be in place.
b) Supporting IT is a precondition to successful implementation.
c) Education of clinicians, managers, and policy makers in the use of the data these systems generate is required on an ongoing basis.
d) In as much as the data must be used to inform decision making within all levels of the health system, it is critical that the emphasis is on the assessment system's clinical application in order to sustain its use in day to day client care provision.

According to Hirdes et al. (2003), education is required upon introduction of the system and on an ongoing basis to deal with staff turnover and system updates. Indeed, there can be a temptation to trade off costs by educating a smaller number of clinicians/professionals in working with the systems, but this can compromise the integrity of the data collected and increase the risk that findings will not be incorporated into daily client care and clinical decision making (Hirdes et al., 2003). Moreover, Hirdes et al. (2003), emphasize the need for an effective, efficient, and ongoing education/utilization strategy to ensure clinically relevant data generation that supports “evidence based decision making at all levels of the organization” (p. 2). These authors also contend clinicians must learn and understand first how to *do* the assessment, followed by clinicians, managers and policy makers learning and understanding how to *use* the assessment, and that educational needs are supported in phases to achieve this. Coles et al. (2008) argue that clinicians can be overwhelmed with the amount of information and learning required to integrate RAI-HC into practice – “how to *do* the assessment and then how to *use* the assessment is complex and overwhelming” (p. 20). Coles et al. found little distinction between issues identified as clinical versus software, and when resources were not available to deal with issues, this resulted in limited clinician confidence and perceived value of RAI-HC and the clinical outputs generated. On the other hand, Coles et al. determined an overall improvement to understanding and appreciation of the benefits of RAI-HC when clinicians linked initiatives such as falls prevention or stroke strategies with the utilization of RAI-HC to inform, support, and guide clinical practice.

Although research has shown that an MDS-HC assessment can be satisfactorily completed following a four to eight hour education session, understanding and incorporating the data generated into practice requires more extensive training and ongoing practice (Bernabei, Murphy, Frijters, DuPaquier, & Gardent, 1997). The instrument and the system cannot be helpful to the clinician in terms of supporting consistent client outcomes if it is not utilized as intended. In turn, a critical limitation with the interRAI instruments is the threat on their reliability and validity when used by clinicians with a limited knowledge base of the system and motivation to use it correctly (Landi, Onder, Tua, et al., 2001). Further, Kwan et al. (2000) argue that MDS-HC assessments can be carried out by a variety of professionals, not necessarily those who are highly experienced in home care or who have a medical background, provided they are adequately trained in the application of the system.

Kraft and Scott (2007) describe the transition to MDS-HC at the Interior Health Authority (IHA) in British Columbia. While the IHA was mandated by the Ministry of Health (MOH) to implement MDS-HC, the critical motivating factor for front-line clinicians was their desire for a process that would improve standardization of care, enhance communication, and ensure equity in resource allocation (Kraft & Scott, 2007). Some of the implementation challenges summarized by Kraft and Scott include:

a) The magnitude of the transition. Clinicians needed to learn and understand the automated processes and coding directives; however, computer skills were either lacking or overestimated – both situations creating barriers to using the electronic system.

b) Lack of confidence in using MDS-HC and continuing to rely on secondary assessments rather than using the outputs generated by the RAI process.

c) The impact of the new processes and technology on professional practice standards. For example, some clinicians did not understand they are as accountable for assigned codes and computerized notations as they are for their written documentation.

d) The potential impact on the client. Nurses believed that taking the computer into the home and using the new technology while interacting with the client created a physical barrier to rapport that drew focus away from the client. Despite being a source of frustration this obstacle was expected, and while many clinicians overcame this obstacle, some remained reluctant to take the computer into the client's home.

As such, client response is a critical component to effective point-of-care technology implementation (Stricklin, Low-Phelps, & McVey, 2001). Point-of-care technology transforms the professional's clinical practice in home care – learning to work with an electronic system in the home is a challenge, complicated when the clinician worries about how the utilization of the computer to carry out a task affects the client (Stricklin et al., 2001). Further, point-of-care experienced nurses have noted significant differences between point-of-care in-home use versus other settings given longer duration of care or visits, and increased interpersonal closeness in home care – " as one nurse commented during point-of-care training ‘the laptop computer sits right there in the middle of us’” (Stricklin et al., 2001, p. 774). However, in their pilot study, Stricklin et al. (2001) concluded client/caregiver satisfaction with point-of-care technology use during the home visit provided the nurse maintains person to person interaction and attention to the client’s needs. In addition, the study showed clients to be forgiving of nurses’ awkwardness as they learned to use the computer.

Moving beyond implementation, Kraft and Scott (2007) assert that the successful and useful transformation to MDS-HC can be threatened by: a) caseloads that are too large and complex to allow clinicians to carry out the processes as intended; b) redundant processes (such as supplementary assessments when one is not confident with the data); c) lack of performance monitoring measures; and d) lack of utilization of the data at the organization/Ministry level to make operational and strategic decisions. Kraft and Scott further contend the “full use of the collected data and its integration into everyday practice is not yet a reality” (p. 31). Likewise, Stolee, Steeves, Glenny, and Filsinger (2010), and Stolee et al. (2012) suggest home care organizations have not yet fully realized MDS-HC integration, which can lead to inadequate provision of services. Further, there is limited understanding with respect to how home care administrators, case managers, and service providers view the role of health information systems, namely MDS-HC, in terms of clinical and administrative management and use of information, and/or decision making (Stolee et al., 2010; Stolee et al., 2012).

Client Information Systems and Home Care

Considering the adoption of MDS-HC requires “major investments in development, implementation, and training, it is essential to understand the factors that facilitate or hinder successful integration of this system into practice” (Stolee et al., 2012, p. 38). In a systemic literature review to identify barriers, facilitators, and recommendations for using electronic health information systems (EHIS) in home care, Stolee et al. (2010) found few studies that collected any type of empirical data directly from home care providers, and a lack of consensus within the review with respect to the barriers and facilitators. However, of the barriers identified, the most prevalent included costs (primarily at implementation and training), as well as lack of user acceptance and staff resistance (Stolee et al. 2010). In turn, the most common facilitators included portable technology, approaches to reduce data entry errors, and managerial support and user incentives (Stolee et al., 2010). Overall, Stolee et al. (2010) identified the top three recommendations as mandatory training, development of a standardized and comprehensive EHIS, and real time viewing and entering of data – the latter two, fundamental characteristics of all interRAI assessment systems.

It is important to note inconsistencies in the literature for the Stolee et al. (2010) review. To begin, there were discrepancies with respect to the definition of EHIS as many articles use the term for a system that collected data versus collecting, storing, and organizing data that would in turn inform decision making. The authors attempted to eliminate the articles of the narrower definition, and further recommend clearer terminology for effective communication within health to include organizations and research. Secondly, there was a lack of consensus with respect to the themes identified – even the most common barriers, facilitators, and recommendations were evident in less than one quarter of the articles (some in only one paper), and there was not clear consensus on which issues were experienced by home care clinicians or researchers. Stolee et al. (2010) argue it is imperative that future research on the use of EHIS in home care focuses on *credible data from home care clinicians*, and that discussions *move beyond adoption* to evaluating the value of these systems that are in place.

As such, Stolee et al. (2012), would embark on such a journey as these investigators reiterate the need to examine the comprehensive barriers and facilitators around data use in home care settings in order to establish recommendations to advance the utilization of health information. Their study engaged home care stakeholders as participants so as to understand, from their perspective, the utilization of health information in the home care setting. While the Stolee et al. (2012) findings uncovered a broad range of ideas, the following around communication and the utility of MDS-HC is relevant:

> The most prominent recommendation was recognizing the potential of MDS-HC to enhance communication in home care. It was evident that the utility of the MDS-HC is clear to health care professionals; however as this was often discussed in terms of recommendations as opposed to facilitators, this may be further indication that the benefits of the RAI are not realized in current practice (p. 50).

In comparing the findings of the study (Stolee et al., 2012) and the literature review (Stolee et al., 2010), the most prominent similarity is the recommendations for mandatory education and standardized processes, while the most remarkable difference is the lack of user acceptance and staff resistance, which is identified as barriers in the literature review only. Importantly, a particularly strong consensus between the literature review and the study is the lack of consensus in the barriers and facilitators identified – reinforcing the need for continued study in this area (Stolee et al., 2012).

Summary

As outlined in the study introduction, the heightened and now fundamental role of home care in the provision of health care is prevalent across Canada. As such, meeting community health needs, including the comprehensive needs of the ever-growing elderly population is a critical component. In view of this, Resident Assessment Instrument-Home Care (RAI-HC), one of the assessment systems within the interRAI suite of assessments has been incorporated in many countries around the world including all Regional Health Authority (RHA) home care programs in Saskatchewan. RAI-HC is an electronic client assessment and information system that evaluates physical, cognitive, and emotional functioning, and then informs and guides the establishment of comprehensive care plans and services in the community. RAI-HC replaces the Saskatchewan Client Information Profile (SCIP), a non-electronic questionnaire addressing a client’s physical health and functional abilities. This is a fundamental and critical shift for home care – the move from a paper based client assessment guide, to an electronic client assessment and information system with data inputs and outputs.

Nevertheless, with this move to RAI-HC, health professionals have tremendous opportunity for high quality information about home care and the clients it serves considering all items in the RAI-HC have been rigorously tested for validity and reliability – the data generated via the assessment tool can be utilized for clinical, administrative, and research purposes. However, RAI-HC must be implemented, understood, and utilized appropriately and consistently in order for these data to be valid and reliable.

The Ontario and British Columbia implementation challenges and *lessons learned* have been outlined, and further, it was concluded that full use of the collected data and its integration into everyday practice is not yet a reality, and there is limited understanding with respect to how home care administrators, case managers, and service providers view the role of health information systems, namely RAI-HC. Furthermore, literature reviews and subsequent studies on barriers, facilitators, and recommendations with respect to the implementation and utilization of RAI-HC have inconsistent conclusions. It was identified that future data must come directly from home care clinicians with a discussion that moves from the adoption of a client information system such as RAI-HC, to one that comprehensively evaluates the full integration and the value of these systems that are in place.

Chapter III

A THEORETICAL PERSPECTIVE

Client Information Systems and Health Care

As stated by Berg (2001), “the implementation of comprehensive information systems in health care practices has proved to be a path ridden with risks and dangers” (p. 143). Berg contends that the inadequate design of an information system and/or its poor performance will reduce the chances of its successful implementation, and that there is a deep interrelation of technical and social aspects in any systems development. “Technical problems may have organizational roots and result in organizational conflicts; a well-functioning system exemplifies a match between the functionalities of the system and the needs and working patterns of the organization” (Berg, 2001, p. 144). Berg describes the implementation of client information systems in health care to be a process, one of mutual transformation between the organization that is affected by the technology, and the technology that is in turn affected by the organizational dynamics of which it has become a part. What is more, Berg concludes if the implementation of a client information system is seen as a process of organizational development and growth, and strategically planned to transform the organization, the technology can be allowed to grow along – to gradually becoming routine or embedded within day to day activity. Inherently, in his conclusion Berg outlines a perspective that aligns with what researchers today are considering normalisation process theory.

Normalisation Process Theory

Normalisation process theory (NPT) is a middle range theory that offers a set of sociological tools that can be applied to "understand and explain the social processes through which new or modified practices of thinking, enacting, and organizing work are operationalized in health care" (May et al., 2009, p. 30). Further, the limited scope and conceptual range of a middle range theory makes it practical for analyzing practice, and in particular NPT is concerned with three core problems: a) implementation; b) embedding; and c) integration of interventions into routine work (normalisation), thus optimizing the intervention's impact on health and health care (May et al., 2009; Murray et al., 2010). NPT focuses on the work that individuals and groups do to facilitate the normalisation of a complex intervention into practice, or in other words, how research (intervention that has been proven effective) becomes embedded into practice (Murray et al., 2010). Murray et al. (2010) outline the four main components of NPT as: a) coherence (sense-making); b) cognitive participation (engagement); c) collective action (work done to enable the intervention to happen); and d) reflexive monitoring (formal and informal appraisal of the benefits and costs of the intervention). Additionally, Murray et al. (2010) explain that components such as organization, group processes, individual processes, and social norms are not linear, but rather interconnected with each other and with the intervention framework as a whole.

In their study to identify policy and practice factors affecting the integration of telecare systems for chronic disease management into day to day practice, May et al. (2011) applied an integrated analysis technique using a coding schematic that reflected the key components of NPT. This study revealed to the researchers "specific factors that promoted and inhibited the implementation and integration of telecare systems for chronic disease management in the community" (p. 134) of which they could then relate to underlying mechanisms at work. NPT underpinned the model developed for the analyzed data in this study showing collective relationships between factors that had served to inhibit the embedding and integration of new technologies into everyday services delivery (May et al., 2011). These investigators concluded that "supplying, organizing, and delivering telecare systems in practice struggle with multiple cycles of uncertainty – even in well-established and apparently integrated services" (p. 140). So even though a system had been adopted*, it's appropriate and comprehensive utilization had not been realized* – a conclusion reinforced by NPT.

Likewise, Murray et al. (2011) studied the factors which promote or inhibit successful normalisation of three separate e-health initiatives by exploring whether the collective action components of NPT provided an acceptable explanation for observed degrees of normalisation. As outlined by Murray et al. (2011) the collective action components of NPT include:

a) Interactional workability (IW) – the impact a new technology or practice has on interactions, in particular between health professionals and clients.
b) Relational integration (RI) – the impact a new technology or practice has on relations between different groups of professionals and the degree to

which it promotes trust, accountability, and responsibility within and amongst these groups.

c) Skill set workability (SSW) – the fit between the new technology or practice and existing skill sets.

d) Contextual integration (CI) – the fit between the new technology or practice and the organization as a whole.

Data analysis in the Murray et al. (2011) study was based on a framework established according to the four components described above – data were coded to those components and as well to the degree of normalisation. The Murray et al. (2011) findings suggest that NPT affords a useful framework for understanding the factors that affect the implementation, embedding, and integration of new technology or practices in e-health initiatives, and indeed an explanation for the observed variability in normalisation of the three technology interventions explored. Additionally, interventions that have a good fit with current organizational goals and staff skillsets, and those that have a positive impact on client/professional and professional/professional relationships are more likely to normalise; however, difficulties in one area should cause alert, while difficulties in all four areas require serious reconsideration of the intervention (Murray et al., 2011).

Summary

The theoretical perspective considers the value of normalisation process theory (NPT), a theory concerned with three core problems, implementation, embedding, and integration of interventions into routine work (normalisation), thus optimizing the intervention’s impact on health and health care. It is with this theory in mind, along with the literature review presented and the context of the problem provided in the introduction, that the research purpose and subsequent establishment of the research question and analytical framework evolved.

Chapter IV

DESIGN

Research Question and Study Purpose

Bearing in mind the suitability of NPT in implementing and evaluating new technology practices in health care, the research question ‘what are the factors that promote or inhibit the successful implementation, utilization, and embedding/integration of RAI-HC within home care services’ has been explored.

As such, the primary purpose of this study was to move beyond adoption of RAI-HC – to identify and to understand those factors that impact the successful implementation, utilization, and eventual embedding/integration or *normalisation* of RAI-HC within home care services’ day to day practice in Saskatchewan home care programs.

Accordingly, the inquiry: a) explored the perceptions of the impact RAI-HC has had on home care; b) explored the perceptions of the value of RAI-HC application in home care; c) explored the extent to which RAI-HC is utilized with respect to clinical decision making, care planning, and overall program planning, or in other words, explored the extent to which RAI-HC is considered embedded/integrated or a *routine aspect* of home care practice; and d) explored what promotes or inhibits this embedding/integration of RAI-HC into home care practice.

Research Paradigm and Methodology

Interpretive description (ID) is a non-categorical qualitative research method philosophically aligned with constructivist and naturalistic orientations

(Hunt, 2009; Thorne, Reimer-Kirkham, & MacDonald-Emes, 1997). As such, multiple realities are constructed through the lived experience and interactions with others, and in turn these realities are complex, contextual, subjective, and co-constructed between the researcher and the researched using an inductive process to generate the emerging of ideas to create patterns of meaning (Creswell, 2013; Thorne, Reimer-Kirkham, & O'Flynn-Magee, 2004). ID researchers explore a clinical phenomenon with the goal of identifying themes, commonalities, and patterns (believed to characterize this phenomenon) among subjective perspectives, while also accounting for inevitable variations between individuals (Hunt 2009; Thorne et al., 2004). Thorne et al. (2004) describes the product of an ID as a "coherent conceptual description" (p. 4) of what is common within a clinical phenomenon, and that has clinical application potential.

Moreover, ID departs from traditional qualitative descriptive approaches in that the investigator is not satisfied with description alone, the inquiry moves to interpreting the description in order to provide explanations for clinical implications (Thorne et al., 2004). "Simply stated, ID provides direction in the creation of an interpretive account that is generated on the basis of informed questioning, using techniques of reflective, critical examination, and which will ultimately guide and inform disciplinary thought in some manner" (Thorne et al., 2004, p. 3).

RAI-HC is an electronic client assessment and information system, clinically applied in the home care setting. ID methodology has been applied in this qualitative inquiry in order to understand the factors that promote or inhibit the successful implementation, utilization, and eventual integration or normalisation of RAI-HC within home care services day to day practice. This inquiry moved from description to interpretation through an inductive analysis of the multiple perspectives amid twelve participants.

An analytical framework was established to provide a beginning point for this study's exploration.

Analytical Framework

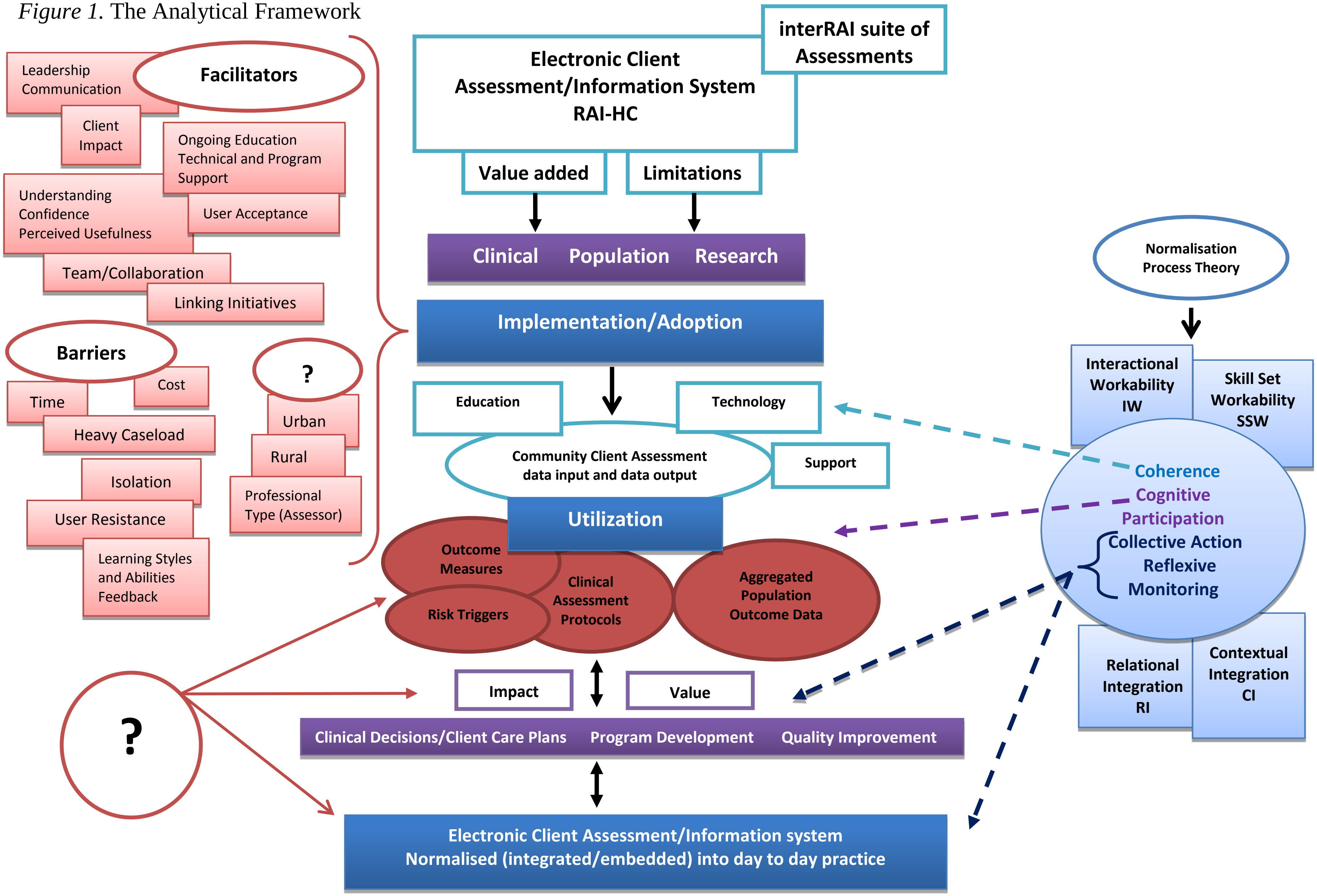
ID methodology likens the conceptual framework more to an analytical framework constructed on the basis of critical analysis of the existing knowledge which represents an "appropriate platform on which to build a qualitative design" (Thorne et al., 1997, p. 173). The framework orients the inquiry and represents a beginning point rather than an organizing structure for what is found, because it is typically challenged as the inductive analysis proceeds (Thorne et al., 1997). As such, Creswell (2013) cautions the researcher to balance what is known with potential new understandings, while Schram, as cited in Glesne (2011) also cautions the application of well-established theory on a developing inquiry – that while this provides for a well-ordered framework for the study, it "may also prematurely shut down avenues of meaningful questioning or prevent you from seeing events and relationships that don't fit the theory" (p. 36). Further, continuous journaling and discussing with colleagues to ensure researcher thinking does not become too focused by the framework – the process of reflexive analysis is emphasized (Creswell, 2013; Baxter & Jack, 2008).

The following is a description of the Analytical Framework as depicted in *Figure 1*. To begin, the four main constructs of NPT along with the collective action components of NPT provide part of the analytical framework to begin understanding what promotes and what inhibits the implementation, utilization, and integration of RAI-HC into home care practice. D. E. Gray (2009) suggests "this is not a hypothesis in the positivistic sense but a way of alerting the researcher to the possible relationships that exist" (p. 174). NPT components, their relationship to one another and as well to the implementation, utilization, and integration of RAI-HC are depicted on the right of the analytical framework graphic in blue.

In addition to NPT, the literature review addresses many variables that may promote or inhibit the implementation of RAI-HC into home care practices. Do similar variables impact utilization and integration of RAI-HC and how might they fit with NPT? The variables and their relationship to the implementation of RAI-HC are grouped as facilitators and barriers (including a question mark for unknown impact), and they are depicted on the left of the analytical framework graphic in red. In addition, the question around what variables might impact utilization and integration and how they might fit with NPT are also depicted as a question mark and in red on the left of the framework graphic.

Finally, the midsection of the framework depicts what comprises the implementation/adoption and intended utilization of RAI-HC – the heart of the inquiry with respect to understanding what promotes and/or inhibits this multifaceted process leading to its integration or normalisation into home care practice. The analytical framework is portrayed in *Figure 1*.

Figure 1. The Analytical Framework



Sampling and Recruitment

Considering the focus of this inquiry and the research paradigm and methodology chosen, purposive non-probability sampling was used to determine the participants. In purposive sampling, the researcher considers the participants with the research purpose in mind (Trochim & Donnelly, 2007; Tuckett, 2004). Further, purposive sampling is designed to enhance understandings of selected individuals or groups' experience by selecting individuals or groups that provide the greatest insight into the research questions (Frankel & Devers, 2000). With respect to ID, Thorne et al., (1997) believe that an ID that is intended to generate clinical practice knowledge requires "purposeful selection of research participants whose accounts reveal elements that are to some degree shared by others" (p. 174). Moreover, "the goal of ID is not representative sampling in order to generalize findings to a population of interest, but instead to explore, describe, and explicate possible human experience" (Lasiuk, Comeau, & Newburn-Cook, 2013, p. 2).

Accordingly, following Research Ethics Board approval (Athabasca University and the three RHA's invited), the study description and invitation was provided to home care directors within each invited RHA, with a request by the researcher to distribute this information to all assessor coordinators and program managers within the RHA's. See Appendix A: Research Description and Invitation to Participate (including participant privacy, confidentiality and data storage; participant right to withdraw; and potential study benefits and risks).

Twelve potential participants responded via email directly to the researcher. As the potential participants made their interest known, the researcher asked (via email and telephone) the research invitation questions regarding professional background and title or position, and how long the potential participants (if assessor coordinator) had been utilizing RAI-HC. All potential assessor coordinator participants met the stated criteria for the study – the utilization of RAI-HC for a minimum of six months. Further, it was the intent of the study to have a minimum of two assessor coordinators from each RHA and two program managers overall involved in the study – this condition was also met in the pool of potential participants. A variety of assessor coordinator professionals such as RN's, SW's, and LPN's was sought for participation, and while the sampling pool consisted of primarily RN's, there was also one SW and one physiotherapist (PT) in the pool, hence the condition of variety was met. All potential participants in the pool represented a range of smaller population centres. Given these characteristics, all twelve potential participants were accepted into the study by the researcher.

Data Collection

The primary data source in this study was a face to face semi structured interview with all participants. See Appendix B: Interview Questionnaire/Tool. The interviews were audio-recorded with written notes taken during the session. The interviews were conducted at the participant's place of work, and ranged from two to three and one half hours in length. Field notes were compiled following each interview, and the recordings were transcribed verbatim. The data has been managed/organized using QSR NVivo 10 qualitative software.

The interview guide was developed by considering the literature review, NPT, and the analytical framework established for this study. Furthermore, the interviews were founded in appreciative inquiry (AI), an approach that focuses on what is working well in order to bring the desired future into being (Browne, 2008). Faure (2006) frames AI as a method for positive change in which the focus is on what works rather than illuminating what does not work, and that the change effort should begin by asking what works best and what do we want more of? According to Browne (2008):

> AI is based on the simple idea that human beings move in the direction of what we ask about. When groups query human problems and conflicts, they often inadvertently magnify the very problems they had hoped to resolve. Conversely, when groups study exalted human values and achievements, like peak experiences, best practices, and worth accomplishments, these phenomena tend to flourish (p. 1).

While this cannot be confirmed, it is anticipated that taking an AI approach for the interview process supported the participants in sharing what they perceived not only as challenges in the utilization of RAI-HC, but the many opportunities to be considered as well.

The initial interview was followed by a secondary interview via email to confirm a particular emerging impression amongst the participants. See Appendix C: Secondary Questionnaire/Tool. The questions were created in order to help the researcher establish more clarity about this impression, what it meant to the participants, and whether this was consistent amongst the participants. In addition to those questions, any questions missed by the researcher in the initial interview were added to this second set of questions for a response. There was a 100% response to the secondary interview.

Data Analysis

Within ID, inductive analytical approaches are applied in order to seek understanding of clinical phenomena – the analysis will portray characteristics, patterns, and structure (Thorne et al., 2004).

As transcription of an interview was completed, key points were identified and noted on the transcription. This process invoked some additional probing at subsequent interviews and allowed insights from earlier interviews to be incorporated into the data collection as the study proceeded. Hunt (2009) describes this process as “responsive interaction between the data analysis and data making” (p. 1287).

Hunt (2009) and Thorne et al. (2004), advise analysis in the beginning stages of ID to be more of a focus on the bigger picture rather than on the details of the data – meticulous line by line coding is not applied, rather the broader questions such as ‘what is going on here?’ or ‘what am I learning about this?’ are considered. This broader view during initial analysis helps to stimulate a more coherent analytical framework than that of sorting, filing, and combining large amounts of smaller data units (Thorne et al., 1997); this author also emphasizes repeated immersion into the data prior to coding, classifying, or creating linkages.

So initially, breadth is better than precision allowing groups of data bearing similar characteristics to be considered, and then further analyzed and coded with a range of alternatives (Thorne et al., 2004).

All interview notes were reviewed prior to transcription. Once the interviews were transcribed, the recordings were listened to again and the transcriptions were re-read, all whilst memoing and making notations on the transcriptions. This process was carried out prior to initial coding in an effort to have a sound understanding and a broad view of the raw data.

Once coding began, the coding results were journaled following each interview in order to capture the progression of the inductive nature of the coding, and the evolution of the composite themes that would emerge. As the coding began, and using NVivo 10, the inductive process generated like and unlike codes (identified as nodes in NVivo 10). Coding for the first four interviews generated 254 nodes. Once seven interviews were coded, 494 nodes were generated and the nodes were developing into similar groupings. The coding for all twelve interviews inductively generated 633 nodes, and the nodes were grouped at this point into 30 groups of similar nodes or categories.

A coding example is provided in *Table 1*.

Table 1. Coding Example

Raw data **(limited to one excerpt for example)**	**3rd level node**	**2nd level node**	**Node or category**
…as far as you know…me using them to develop a care plan for somebody…no I am not using this as a tool to help me to develop what plan of action will be taken for a client.	Little or no impact on care planning practices	Care planning	Utilization of RAI-HC
…yes sometimes. I have talked families into helping me talk their loved one into accepting HC services. I guess can see how MDS can help us just to know we are doing what we should be doing with this client.	Opportunity for impact on care planning practices		
…we almost understood that it would spit out a care plan for you once you had all the information in there...but it does not work that way. Which is very disappointing.	Care planning should be built in		
…I think that RAI-HC is important because we are already trained to complete it...it is just the utilization and understanding and helping with programming…I think that is where it needs to go…we already have the foundation…we are not starting from scratch…let's get on with it.	Need to move beyond adoption	Not using to potential or as intended	
…overall I would say it is very important because it has such value. I really do like it, I like it more than the SCIP…because it gives us these outcomes …it is just that we are not using it.	System worthwhile even though not using to potential		
…does not replace your clinical judgement. For now I am using my basic nursing experience, knowledge and skills to determine the plan of care	Clinical judgement versus outcomes	Use of outcomes	
…we do see data when we are really out of whack…it is always the assumption that we are doing it wrong, not that our population has a high level of pain. We are using it because we have to use it...but we are not using it the way we should be, could be…to do anything with it.	Impact of aggregated data		

As coding is established, it is aimed at identifying categories and relationships within the data, and exploring linkages and patterns between data sources (Hunt, 2009). According to Stake (1995), “the search for meaning often is a search for patterns” (p. 78), and even though each type of data gathered is analyzed on its own, the results fit together to make an interconnected collective (Creswell, 2013). Hunt (2009) suggests attention to individual cases while seeking “inductively what is common among the experiences of the participants” (p. 1287).

Once the coding was complete and the categories of nodes established, the data was further analyzed with respect to the relationships amongst the categories of nodes. This supported additional amalgamation and re-grouping of similar nodes to 19 categories. A visual to depict these categories and their relationships was established in order to begin the narrative on the study findings. This visual was further refined and is shown in Chapter V Results, in *Figure 10* as a depiction of themes emerged from the interviews.

Data Quality and Credibility of Findings

To begin, the deliberate selection of participants potentiates study rigor and is key to good qualitative inquiry (Richards & Morse, 2013). Further, no matter how collaborative the method, it is the researcher who determines what constitutes data, which data are relevant, and how the final portrayal of the data will be structured, making the researcher as interpreter an essential element in the study findings and more specifically an element of their credibility (Thorne et al., 2004). Accordingly, Thorne (2008) emphasizes that in ID, the researcher is seeking the kind of knowledge that must be “…inductively generated from within the data, and developed within the context of that data” (p. 99).

Thorne et al. (2004) suggest disciplined reflexivity to avoid clinging to assumptions with which the researcher enters the study, and additionally to prevent premature closure with respect to making sense of the emerging concepts. Considering reflexivity, it is also important for the researcher to contemplate personal bias, values, and experiences they bring to the qualitative study – Thorne et al. (1997) suggest it is naïve to think that all bias can be eliminated.

Purposive sampling and inductive analysis have been applied in this study to potentiate data quality and study credibility. Each interview was recorded, then listened to and transcribed by the researcher. Eight of the twelve participants accepted the offer to review their initial interview transcripts for accuracy, with no feedback for inaccuracy. Memoing occurred throughout the transcriptions to help summarize key points expressed by the participant. Key points expressed within each interview were then journaled in order to optimize the individual, and indeed the collective and the distinct voice of the participants. This was reinforced by re-listening to all the recorded interviews and re-reading all transcriptions prior to coding. Once coding began, the coding results were journaled following each interview in order to capture the progression of the inductive nature of the coding, and the evolution of the composite themes that would emerge.

Considering the researcher studied an area of familiar practice, disciplined reflexivity was paramount in acknowledging researcher bias and previous assumptions, and ensuring that it was the voice/perception of the participant versus the voice/perception of the researcher in the analysis, albeit the researcher was the interpreter of the participant voice. Even though the participant voice was a critical focus within the analysis, the researcher also paid close attention to what her views and indeed inclinations were throughout the process. These were reflected upon and journaled, and thus kept in check in order to minimize any bias that may have influenced the interpretation. It was also noteworthy to reflect on the interview experience with respect to the researcher's need to be ever conscious of the role of researcher versus the role of home care manager, and reflective journaling assisted the researcher in keeping these roles distinct.

Furthermore, field notes and the use of methodological and reflective journaling are valuable tools, and should be utilized as a means of providing an audit trail for the development of abstractions, and to ensure that analytical directions are defensible (Thorne et al., 2004). Reflective and methodological journaling have been ongoing and critical tools to support such processes as inductive analysis and reflexivity for data quality and study credibility.

In order to support trustworthiness of findings Hunt (2009) describes how he provided an overview of provisional findings to his participants and then invited them to discuss how consistent these findings were with their own experiences. As such, a summary of key findings was shared with the participants with an invitation to provide feedback to the researcher if these composite findings did not resonate with the participant. See Appendix D: Preliminary Findings/Participant Response. Participant feedback indicates consistency of findings with their experiences.

Study Integrity and Ethical Considerations

Ethical approval for the study was obtained from the Athabasca University Research Ethics Board and the Research Ethics Boards of the three RHA's potentially participating. See Appendix E: Athabasca Research Ethics Board Approval and Appendix F: RHA Ethics Board Approvals. All potential participants were informed of the study purpose, the data collection format, and anticipated length of the interviews. At the outset of each interview, and just prior to signing the study consent, the participant was given the opportunity to ask questions about the study, and reminded that their participation was voluntary and that they could discontinue the interview at any time or decline to answer any questions. All participants signed the consent to participate in the study. See Appendix G: Informed Consent.

It is noted that Saskatchewan is a small province and the challenge of anonymity does exist. Richards and Morse (2013) emphasize that all written material is scrutinized from the start to ensure that participants and locations cannot be identified. As such, all participant names have been replaced with a lettered/numerical code for all study documentation. The names and contact information of the participants have been deleted following the data collection and analysis process. All data are stored in password-protected files or in a locked cabinet at the researcher's home office. Only the researcher and the research supervisor have had access to the data. The data will be retained in the password protected files or the locked cabinet for five years. The data do not have any identifiers except for the lettered/numerical code that represents the participant.

All RHA’s in the study have been identified only as Saskatchewan RHA’s throughout the entire study process.

In addition, even though individuals have been interviewed one-on-one, the analysis is presented as a composite, versus an individual (Creswell, 2007) or regional picture, and it is anticipated this will support overall anonymity with respect to participant and regional confidentiality. Ongoing participant and RHA confidentiality and respect has been central for the researcher, and the participants and all RHA’s were made aware of this.

According to the Tri Council Policy Statement (TCPS2) “Undue influence and manipulation may arise when prospective participants are recruited by individuals in a position of authority” (Canadian Institutes of Health Research, 2010, p. 28). While the researcher was in a position of authority, this was not relevant as the researcher did not recruit participants from the RHA in which she is employed. As indicated earlier, the research invitation was distributed by the home care directors of the invited RHA’s, rather than the researcher herself. Nevertheless, while the issue of authority or power was not anticipated to be relevant, the researcher disclosed herself as being a home care manager to the participants. In doing so, the researcher was transparent with respect to her professional background, experience, and interest. Moreover, even though the researcher was seeking knowledge that is relevant to her professional work, and the researcher has experience in the topic as a whole, the researcher clearly identified her role in this study as one primarily that of the learner, one who will analyze the data collected from the participants or the individuals who hold the "expertise in the subjective experience" (Thorne, 2008, p. 111).

As Thorne (2008) states:

> This two-dimensional introduction provides some clarity in both the source of interest in the question and in the expectations for engagement, and permits the researcher to make explicit that the benefit of the research will be knowledge that may help enlighten fellow professionals for the benefit of future patients (p. 111).

Furthermore, Thorne (2008) provides two general areas of influence that the researcher should be mindful of in order to maintain an ethical base and to safeguard integrity of findings. To begin, Thorne alludes to the first area of influence:

> In the world of experiential knowledge there is no way one can study a phenomenon without running the risk of changing it. Simply by being what and who we are, we will have influenced what is revealed to us and the material that we will be using when we construct our accounts of the study. We cannot completely avoid this influence, but we can be mindful of it and take steps to ensure that we are as aware as we can possibly be of the way it plays out and the meaning that our study process will have on the eventual product (p. 117).

Once again, the researcher bias and perceptions, based on prior knowledge and experience were reflected upon, and journaled. In addition, one particular conversation with a colleague is considered by the researcher to have validated mindfulness of bias. In this conversation, the researcher shared preliminary findings with her colleague. For one particular finding, the colleague had a strong bias that would not align with this finding, and prior to engagement with the participants the researcher shared that bias. However, the researcher clearly recognized this finding as imperative, overriding any bias she may have originally had. Thus, the researcher maintained a strong awareness and objectivity to her own perceptions in order to minimize their influence while focusing on the experience of the participants throughout the study.

The second dimension of influence is associated with the principle of informed consent (Thorne, 2008). Integrity is optimized when the agreed upon understanding of the scope and purpose is sustained throughout the study (Thorne, 2008). Interviews were semi structured, with a predetermined focus to ensure that discussion related to the scope and purpose of the study was sustained.

Chapter V

RESULTS

Chapter 5 presents the findings of this qualitative interpretive description. The findings have been constructed by the researcher considering the responses of the participants to the semi structured interviews carried out for the study. There were twelve participants from three separate RHA's who participated in the study. Two of the participants were program managers who did not work with RAI-HC, but had utilized the system and did oversee the staff who worked with RAI-HC. Of the participants who worked with RAI-HC directly, their roles and titles varied. For the purposes of the findings, they are referred to as assessor coordinators. The program managers are referred to as such where this distinction is required. An overview of the participants is provided in *Figures 2 – 9.*

The Participants (N = 12)

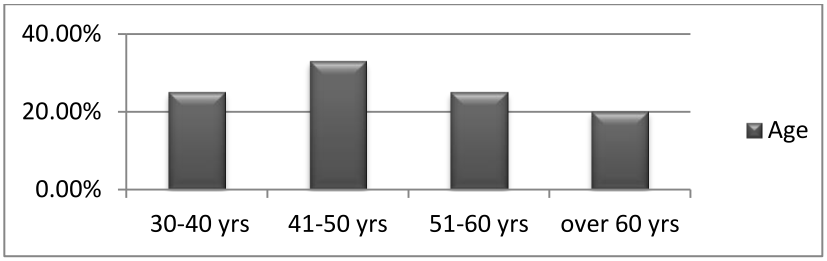


Figure 2. Age of Participants.

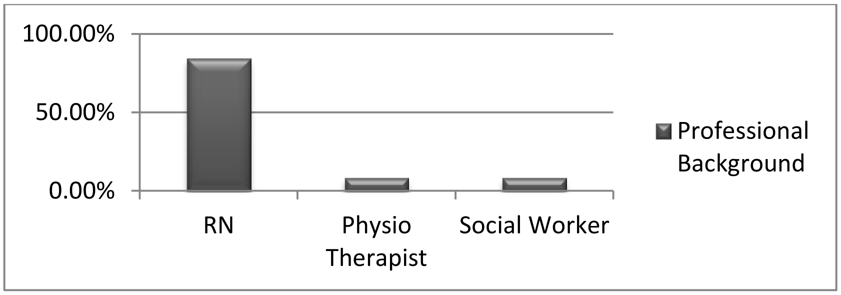


Figure 3. Professional Background of Participants.

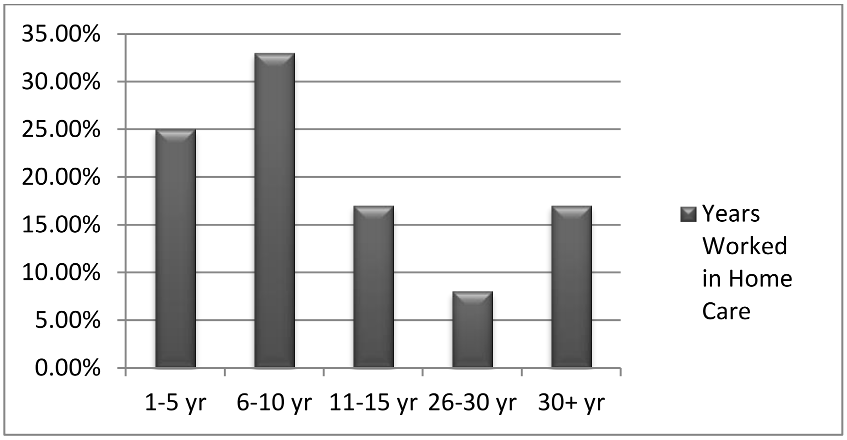


Figure 4. Number of Years Participants Worked in Home Care.

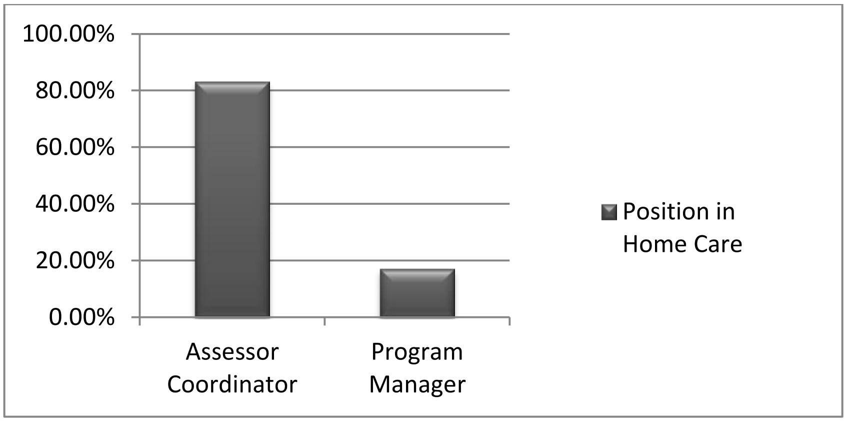


Figure 5. Participant Position in Home Care.
Note: The assessor coordinators had varying responsibilities.

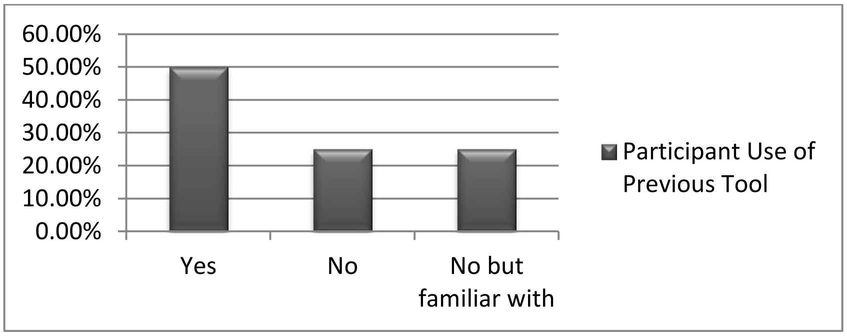


Figure 6. Participant Use of Previous Tool.

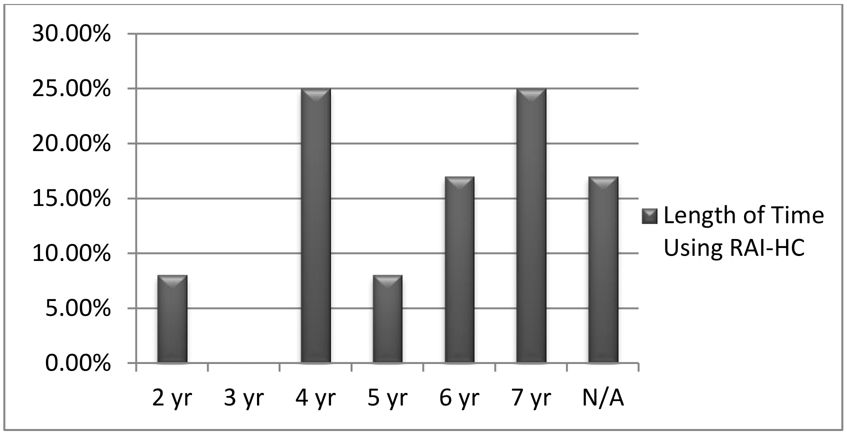


Figure 7. Number of Years Participants had Used RAI-HC.
Note: N/A = the two program managers.

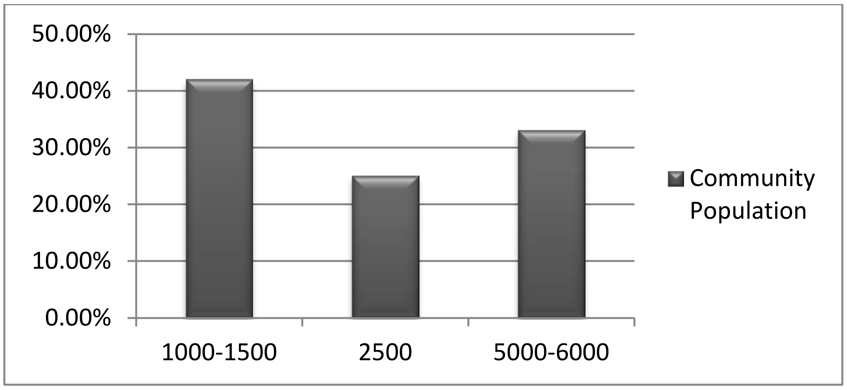


Figure 8. Population in Communities where Participants Worked.
Note: All communities are considered small population centres.

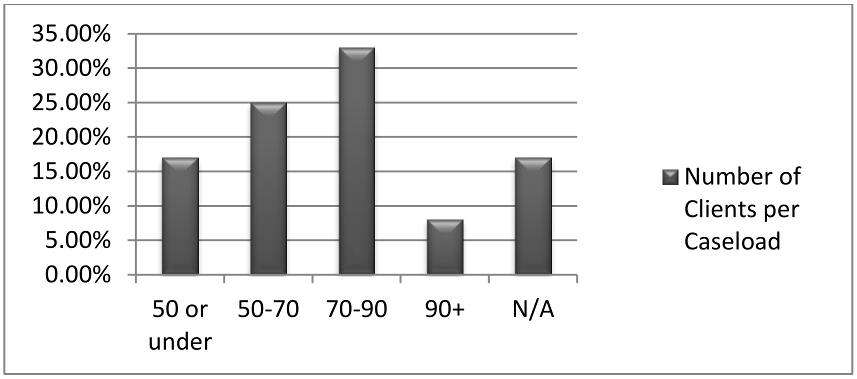


Figure 9. Number of Clients per Participant Caseload.
Note: N/A = the two program managers.

The findings are introduced by describing an account of the current state of the utilization of RAI-HC in the three RHA's involved in the study. This is followed by the thematic analysis outlining the factors that influence the utilization of RAI-HC. Additionally, the findings of considering NPT with respect to the implementation, utilization, and integration of RAI-HC within the RHA's in this study are provided.

The themes emerged from the interview/data analysis are depicted in *Figure 10*.

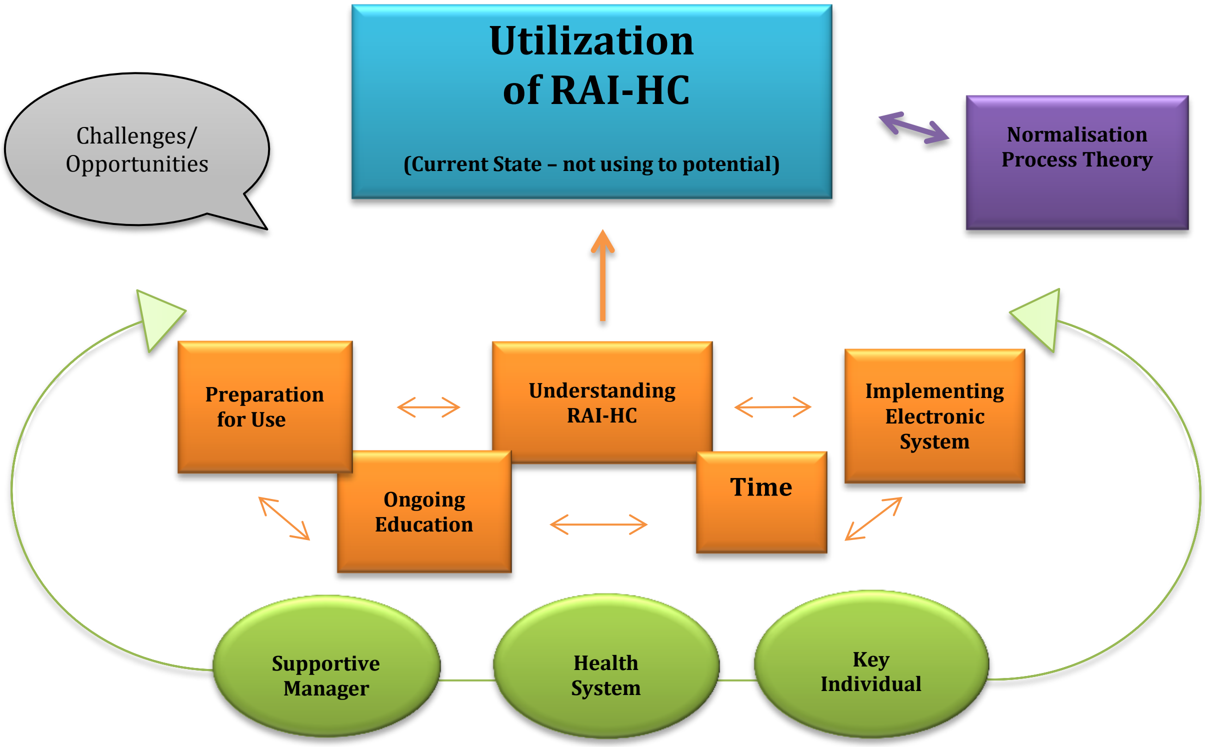


Figure 10. Themes Emerged from the Interviews

Note: As outlined in the literature review, RAI-HC has embedded decision support algorithms that summarize the client information entered electronically by the assessor coordinator. Once the assessment is completed, the algorithms (known as outcome measures, method for assigning priority levels [MAPLe], and Clinical Assessment Protocols [CAPS]) are generated by the system and their purpose is to support clinical and organizational decision making (CIHI, 2010). For the purpose of clarity in presenting the study findings, these algorithms will be noted as client outcome data. Population data is the result of aggregated algorithms at the regional and provincial level, and thus will be noted as aggregated data.

Utilization of RAI-HC – Current State

The current state of utilization of RAI-HC was discussed with the participants, and following coding and analysis of the data, the following areas of focus have been established: a) the significance of clinical judgment; b) care planning; c) impact of aggregated data; d) long term care (LTC) and RAI-HC; e) challenges identified; and f) opportunities (current and potential) identified.

Clinical judgment. Overall, participants identified their use of clinical judgment when working with clients in terms of determining needs and interventions, and for the most part, that interventions are established without the use of client outcome data. In addition to clinical judgment, some participants also identified that experience (professional and life in general) is needed in order to understand how to meet client needs. Further, even though some participants deemed the client outcome data useful, they agreed clinical judgment is desirable to augment the client outcome data in order to understand the interventions needed.

Care planning. Generally, participants expressed discontent with care planning practices in home care – that there is a lack of consistency in care planning practices; that care planning should be built in as part of the overall RAI-HC system; and/or that care planning should be linked with Procura, the other electronic information system (more of an electronic record) currently in use in home care. Some data from RAI-HC does merge with Procura electronically, but this is limited to data entered only, such as medications and client family supports.

> As BA04 articulated: We almost understood that it would spit out a care plan for you once you had all the information in there…but it does not work that way, which is very disappointing because it is a huge thing.
>
> And BA03 suggested: It should all link to Procura, in my ideal world…I could take those outcome measures and there would be a care plan that they would populate into (from RAI-HC to Procura).

Participants, those who had experience with SCIP, and even for those who had only reviewed care plans from SCIP, also agreed there has been little or no impact on care planning practices with the implementation of RAI-HC. Again, clinical judgment takes precedence over using the client outcome data to plan client interventions, or participants identified they are formulating the plan of care as they do the assessment, without any knowledge of the pending client outcome data. For the most part, care planning is based on what the client is telling them.

> BA05 reflected: Maybe using those outcomes for care planning is a great thing and I am missing out…but I certainly do not trust in my ability as a nurse to care plan for somebody with those outcomes…you know you try A and if that does not work you try B…I use my critical thinking skills to care plan, not what a book is telling me to do.
>
> As BA07 suggested: We are almost care planning as we sit with them…we have already almost made the care plan before we look at the CAPS at the end.

Some participants concluded it might be different if the individual doing the assessment was not the individual planning and implementing care, the latter then might need to rely on the client outcome data.

Participants agreed the more they utilize RAI-HC and become more familiar with the system, there is potential to consider client outcome data for client plans of care. The client outcome data could validate that appropriate services had been implemented (services matched client outcome data and clinical judgment), or the client outcome data could help the client and family understand the need for support. One participant identified her attention to client outcome data even now in the areas of nutrition, skin breakdown, and medication safety, and incorporating that data into her care planning.

Impact of aggregated data. Participants conveyed that the aggregated data is either not shared with them, or that it is shared when the data are well beyond the norm or the provincial average. When this occurs, it is most often seen as a coding issue, rather than a true indicator within their assessed population. One participant disagreed with this popular assumption, and that the data should be addressed as a true indicator.

> In the words of BA08: We do see the data when we are really out of whack as a whole and we get a call that we are not coding correctly…it is always an assumption that we are doing it wrong, not that our population has a high level of pain.

All participants indicated that the aggregated data has no impact on their day to day practice or program planning decisions including quality improvement initiatives. Participants could not articulate an awareness that the aggregated data is considered at any level in the health system, but most expressed confidence in the potential for the aggregated data to impact practice and programming with respect to: a) comparing their RHA to other RHA's; b) validation of the type and level of care that is occurring in home care; c) quality improvement initiatives (particularly in the areas of falls and skin breakdown); and d) program service and resource planning to meet population needs.

Long Term Care and RAI-HC. RAI-HC assessment and utilization of client outcome data for determining the need for long term care (LTC) is noted by all participants. One RHA utilizes the client outcome data overall in the LTC assessment and prioritization process, while the others focus primarily on the MAPLe (method for assigning priority levels) and an over view of the actual assessment to determine the client's need for LTC. While most participants agree that the use of RAI-HC client outcome data for determining LTC provides a standard for LTC decision making (if the process is applied the same within the RHA), the participants did raise issues about this process. Almost all participants expressed concern with respect to decision makers having too much faith in numbers. The participants emphasized that along with the client outcome data, the individual client and his/her circumstances must be considered.

> In congruence with this BA03 stated: I feel they look at the numbers and do not look behind the numbers…they do not look into all the things that went into making that number…people requiring LTC need more respect than just being a number.
>
> And BA05 concluded: I think the powers that be get too hung up on the outcomes rather than look at the big picture and the client's individual situation.

Other participants questioned the use of a home care assessment system being utilized for LTC decision making purposes. These participants maintain that the bigger client picture versus the snapshot in time is more appropriate when LTC is the care option being considered.

There is also an appreciation by some participants that the client outcome data can identify trends regarding clients who are placed into LTC and clients who are remaining in the community.

> BA10 conveyed: I think there are outcomes at the end that maybe we are not getting yet to use on a day to day basis, but I am hoping we are able to say…these are the people we are keeping at home and these are the people that are going into LTC.

One participating RHA involved all assessor coordinators in the development of a process to consider RAI-HC client outcome data for LTC assessment and prioritization. Most of the participants from this RHA identified how this process has helped them to become more familiar with how the items within RAI-HC are interrelated and how that impacts the client outcome data generated. Additionally, the formal process of others looking at the client outcome data and making decisions based on the client outcome data motivated the participants to ensure completion of assessments and accuracy in coding. One participant in particular imparted the desire to move forward based on the learning from this project.

> As BA09 declared: I believe we have had such a leap with using outcome measures for LTC that everybody understands it now and I think this is the perfect time to move on with it.

Challenges identified. Given there is limited utilization of client outcome data, challenges to that end were discussed and brought to the fore by the participants. To begin, most participants simply do not understand how to work with the client outcome data and do not attempt to use the data outside of LTC assessment requirements. Some participants suggest an awareness of the client outcome data, but again clinical judgment overrides and past practice of directing care without the use of client outcome data ensues. Some participants expressed time constraints with respect to really understanding how to work with the client outcome data, and as well, even if they did attempt to care plan with the client outcome data in mind, those needs identified via the data may not match what home care could provide or what the client would agree to.

> BA06 shared what her mentor in home care told her: The use of outcomes for client care was just a big waste of time.

A minimal number of participants choose to focus on two aspects of the client outcome data, the Cognitive Performance Scale (CPS) and the Depression Rating Scale (DRS), but they use these more for information purposes rather than for planning interventions for care. Another participant conveyed she may start the assessment prior to even seeing the client.

> As BA08 described: For a client that is well known to me in this small community I can start the assessment before I even see the client…I know what is going on because of living in the community, so I can get started and get data in then tweak it.

With respect to the use of Resource Utilization Grouping Scales (RUGS), all participants were only somewhat familiar with them as part of the client outcome data generated. As such, they did not consider the RUGS in day to day practice or programming other than some participants' reference to use (as supporting information) in presentations for LTC.

Trust in the client outcome data is another challenge identified by some participants. Two participants in particular conveyed that a reliance on technology is sometimes difficult when one is accustomed to relying on the nursing process (assessment, planning, implementing, and evaluating), and again, clinical judgment.

> BA06 conveyed: It is sometimes a hard step for people…that all these algorithms will actually work together to give me an accurate result…when maybe my clinical judgment is better than that.

These same participants reiterated the need for accuracy in coding for data integrity. In turn this concern leads to one of potential value:

> BA06 also conveyed: If the data you are putting in is reality and the truth, then the outcome is going to be accurate.

With respect to the complex, high need client, some participants felt that the complex client needs were not fully captured or their story was narrowed by RAI-HC.

> BA12 reflected: It showed that she had dementia and behavior problems, but it did not show how bad it was…and that is where we need to use the light bulbs.

> And BA05 reflected: People with lots of comorbidities, and lots of social issues or family dynamics…the use of an electronic tool like that really I think narrows down the perspective that you would get on a situation like that.

Others identified the RAI-HC as helpful in capturing the comprehensive needs that characterize the complex client, and that the overall picture RAI-HC provides supports the case management process that is needed when working with the complex client.

Opportunities (current and potential) identified. Almost all participants agreed that client outcome data could be noted from assessment to assessment to validate client improvement, stability or decline, and the effectiveness of service provision; that the comparison of client outcome data from one assessment to the next tells a story and provides assessment objectivity and continuity. Most participants agreed that they do not need the client outcome data to show evidence of improvement, stability, or decline in clients well known to them, but that the assessment objectivity and the resulting client outcome data can be helpful to validate this to concerned family members.

> BA07 shared: Personally, what I like on this angle is the access to objective measurements to fall back on with respect to what I am personally feeling…so sometimes I feel more confidence in saying…I feel you might benefit from this here based on what I am seeing in my assessment…it gives me confidence when talking to the family, they seem to respond in such a way that it is not just my personal opinion.
>
> BA10 suggested: Very shortly we will start using the outcome measures in our clinical practice…which means we have to have the MDS done to have the outcome measures. Right now we are focusing on justifying LTC placement…we are going to need to justify home care to say we are meeting client needs or not…here is the MDS that can prove that or not.

Another participant felt that the RAI-HC assessment should be done on discharge from home care in order to show how the services worked.

> BA11 suggested: We are getting younger and younger post op clients…if we are using it to potential, we should be showing people going from a high RAI score to a low RAI score too.

Some participants acknowledged the potential utilization of RAI-HC client outcome data for referrals to other professionals. That while the system is not well understood by most other professionals, their understanding of the system could create a useful client communication system. Other participants expressed differences with urban and rural referrals, and questioned the usefulness of the client data with professionals known to one another.

> BA09 provided an example: I think it could augment referrals. We are still relatively new in developing our falls prevention program…so for example where a more comprehensive falls assessment that PT/OT does, we could use the falls trigger to send to them…so there is great potential that we are not using.

> And BA03: I think it differs too for urban and rural…rural we all work as a close team…we know each other and we know how each other works. So my referral to Mary our mental health nurse…she knows my judgement and she knows my…she trusts my referrals because she knows how I work. But if it is just somebody that…ok, I am going to fax this off to mental health…they may not see that as a crisis or a red flag...so I think that if using those outcome measures…yes you would have the meat if you needed that to give to them it would be there.

Two participants conveyed their use of RAI-HC client outcome data for referral purposes.

> BA01: Yes, I do, they are specific, the dietician, OT, PT…those are likely the ones I use the most…and mental health I have made referrals as a result of the MDS.

> BA02: Well like I said it eliminates the repetitive questioning. I think it is quite helpful to our OT, like when the falls cap is triggered, then I will do the falls prevention protocol, and I will make a referral to her…with the RAI home care and the falls prevention assessment and she will follow up on that.

When the participants were asked what they and their colleagues valued about the client outcome data within RAI-HC, they identified the snapshot that could be seen or the story that is told of the clients.

> As BA08 described: It is the snapshot…I do look at that and I do get a pretty good idea with those numbers and notes to fill in the blanks…I can pretty much tell you what I am looking at if I see those numbers along the bottom…what I am going to find.

> And BA09 stated: The outcomes tell me a story.

For others it is the objectivity the system can offer them.

> In the words of BA10: Objectifying the subjective.

Three participants identified the potential to augment their day to day practice with the use of RAI-HC client outcome data, and in particular applying the CAPS as the next progression in their utilization of RAI-HC. These participants articulated the advantage of additional education and experience with RAI-HC as facilitating their understanding and appreciation of the system as a whole.

Underutilization of RAI-HC and/or not utilizing as intended. All participants established that RAI-HC is either underutilized, and/or not being utilized as intended, and there were a number of perspectives shared. Participants identified that RAI-HC is a good assessment tool that has so much more to offer than what is being utilized with respect to the client outcome data and the aggregated data. Some gleaned this perspective from their involvement on the Provincial RAI-HC working group, and felt that a sound understanding of the system helps one to see its potential.

> BA07 suggested: Because I have been on the provincial MDS working group, I have been convinced and I guess I can see that we are underutilizing it and what it is capable of…as far as care planning, we would find it effective, we would find it useful, we would find it time saving and we would find it makes a difference with our clients…but we are not at that point, we are doing the very minimal of the program that we possible can…I personally think…so we are not effective in how we are using the system.

Others simply trust that RAI-HC is a valid and reliable system, and its importance would be seen if used properly. These perceptions, while clear in their intent did not really help the researcher understand what underutilization of the system really meant. When asked, the participants all agreed this meant not utilizing the client outcome data to support objective clinical day to day practice in the planning and delivery of home care services required (and not just wanted). In addition, the participants indicated underutilization meant not understanding and/or considering the aggregated data at the local, regional, and provincial level in order to support objective program development for home care services presently and in the future, all in the name of quality care for the clients.

Participants also identified that as providers they are picking and choosing how to utilize the system, for example, using the client outcome data for LTC readiness and prioritization, and how they do not believe that was the original intent of this system.

> As such BA12 stated: If we are going to use it for LTC that is not good enough, we also need to use it for home care.

Others articulated that available client outcome data is helpful only if you consider it and utilize it appropriately, and what is more, participants shared that they do not truly understand the real potential that RAI-HC has with respect to the individual client and indeed the population of home care clients.

> BA10 captured this as follows: I think RAI has an opportunity to give us a lot of information about client care needs and whether we are providing quality care…there is just so much stuff that we do not know and we are not using…we do not know what we do not know – I believe the information is there, we just do not know how to interpret it or have taken the time to interpret it.

Participants also shared their frustration with not using RAI-HC to potential.

> BA03 stated: The learning about it and utilizing it is stalled and stagnant.

> BA04 maintained: What we are doing is a drop in the bucket…and no one wants to go back to the paper tool.

> While BA08's frustration leads her back to the paper tool: If you do not use it properly you might as well not use it…let's just go back to pen and paper if we are not going to use it right…it is just too time consuming.

Fundamentally, participants agree that using to potential requires adequate preparation and a solid understanding of the system; ongoing education; effective technology, devices and IT support; and notably time.

Principal Factors that Influence the Utilization of RAI-HC

As the data was coded and analyzed, five themes emerged with respect to the principal factors that influence the participants' utilization of RAI-HC and ultimately its integration into day to day practice: a) understanding RAI-HC; b) preparation for use; c) ongoing education; d) time; and e) technology and IT support.

Understanding RAI-HC. The participants identified a lack of connection with the client outcome data related to their desire to understand the detail of how the algorithms are formulated and the risks are triggered. Nevertheless, most participants conveyed their appreciation for an evidence based standard assessment system that is utilized across the province – that even though the detail of the system may not be well understood, it is objective, and all who use it share a common language. For these participants, the more they use the system the more they understand it, and trust with the tool grows with familiarity. One participant finds it difficult to see the value in a system that is not well understood.

BA05 asked: Why am I doing it?

Generally though, participants reflected on their value of the system, that the client outcome data augments their clinical judgment, and that they are not using it as much as they would like to because they do not have the background knowledge to do so.

Preparation for use. There seemed to be little in the way of standard preparation across the three RHA's involved in the study. All participants considered their orientation to RAI-HC lacking and inadequate to enable their full understanding of the system and its utilization. The orientations were described as follows: a) formal two day sessions where the participants were overwhelmed with information and technology; b) individual sessions for the new assessor coordinator with an experienced assessor coordinator; and c) self-study and independency with respect to learning how to use the system. Some participants were orientated by an individual with an IT background versus a clinical background. The participants saw this as deficient in that both areas of expertise were needed.

All participants identified being orientated in how to complete the assessment tool electronically versus completion *and* utilization of the tool.

> As BA09 conveyed: The education was focused on completing the tool and not using the system. There was no focus at all on using the system, nothing. I hope that has changed a little.

An experienced assessor coordinator participant suggested that RAI-HC orientation is lacking in the case management piece for new assessor coordinators. This was not as much of an issue with an experienced assessor coordinator, one who had been educated in case management in the past, but for a new RAI-HC user, education on just RAI-HC would not provide that case management piece. For her, case management and assessment went hand in hand.

> BA05 described her experience from a new assessor coordinator perspective: You know going into a new role, learning this whole computer system, learning how to assess people, the whole learning process and case management…it is time consuming and it is a real learning process.

Even though the participants shared their dissatisfaction with their preparation/orientation to RAI-HC, most were able to identify what they valued about their preparation. Some participants had a knowledgeable trainer for orientation with respect to the technology, understanding RAI-HC as an assessment system, and indeed overall familiarity with the home care program.

> BA03 described her trainer as: She was passionate about it and so knowledgeable about it…and had time to answer questions.

> BA04 explained: The fact that the teacher was very knowledgeable…she had used it.

Others valued their small groups and the ability to have hands on practice working with the assessment on the computer while following the corresponding RAI-HC manual. In addition, the small groups provided a safe environment to ask questions and discuss different scenarios specific to coding without feeling intimidated.

> As BA01 conveyed: It was very hands on, like you know we each had our own computer and because it was a small group, there was only two of us, it was very personable, you know you could ask questions right away and did not feel intimidated at all.

Participants suggest limiting the initial preparation to two days in order to learn and understand the completion of the assessment, followed by another two days about six months later to learn how to utilize the system – this might avoid being so overwhelmed. Since their initial orientation to RAI-HC, some of the participants have taken the RAI-HC for Beginners from CIHI, and they believe this module should be part of a new user's preparation for use.

> In the words of BA07: I have in the future advocated for new assessors coming on to take that course…the RAI-HC for Beginners from CIHI…that made a huge difference for me.

Another participant suggested personalizing the preparation with respect to the trainee's abilities.

> BA08: I think you have to take into consideration the abilities of the people more, and that you maybe cannot train everyone in one day. It is intimidating to sit there with people who are so techy…I do not want to say group by age or experience, but something along that line…because someone older may have lots of computer knowledge.

According to the participants, a solid preparation/orientation in the utilization of RAI-HC is just one critical factor related to the education component of potentiating the understanding and utilization of RAI-HC – ongoing education is the other.

Ongoing education. Participants acknowledged the deficit in ongoing education, particularly for the utilization of RAI-HC considering completion of the assessment was the emphasis in the preparation phase. One participant concluded she was just so overwhelmed.

> BA01: You know when you first start this you have so much going on in your head – to go to this two day session and then not have any follow up is huge and I have more or different questions now that I have been using it…I think it is a real deficit in how we do things.

In some instances there were plans to have ongoing education sessions that never materialized or the sessions were sporadic, and in others continuing competency is just not a consideration – there is a sense from the participants that ongoing education for RAI-HC is not a priority within their RHA's.

Depending on whether the user was new to RAI-HC or experienced, ongoing education needs were identified as refreshers for coding, or more detailed sessions on utilization of client outcome data for care planning and service interventions.

> As stated by BA04: Because after a while you wonder if you are doing it right.

> While BA03 conveyed her frustration: I know the casual assessor…she and I talk a lot about it and feel the same frustration that there is so much potential, but it is just not…the learning about it and utilizing it is stalled and stagnant.

Participants did identify the opportunity to self-educate, that seminars on line were available for them to access. However, participants found this mode of education difficult to comply with, in part related to time and competing priorities, but as well related to the lack of established standards for mandated and audited continuing competence.

> As BA07 put it: If someone were to say I was being graded for doing this I would be happy to do it…I think there are many of us like that. We need someone to set a standard or establish an expectation…just to go on for your own benefit; I do not think our group responds to that, there needs to be a push externally.

Assessment & Intelligence Systems (AIS), an online employee centred education portal that provides access to RAI web-based training and competency testing, could provide this standard for users, but it is not available or not activated in any of the RHA's in the study. For those participants who are engaging in some ongoing education, even if sporadic, they identify that ongoing education helps them to think differently, they are challenged, and it is helpful with consistency with coding. Two participants in particular believe they have a deeper understanding and appreciation for RAI-HC versus what their counterparts have, because of their exposure to so much more education with their involvement on the provincial RAI-HC group.

Ultimately, ongoing education is identified as paramount by the participants in this study. They articulate that growth and experience change educational needs – that as they use it they want more detail about it. One participant clearly identified that it was more critical than the preparation piece. Participants would go on to say that this education piece could help to illustrate to them the value and benefits of RAI-HC for the client and the community.

> As BA07 suggested: We have great potential to use a lot more than what we are…and I think it just needs a little education and then I think you would have better engagement and belief in the tool and for how it can better the client and the community with respect to the aggregated data...we have learned how to do an MDS, now let's learn how to care plan from the MDS…yes, the biggest thing that would get us over the hump is education.

And for this the participants need time.

Time. While the participants establish the need for ongoing education, they also establish there is not enough time in their day to day work schedule to engage in ongoing education. Even though online or face to face education sessions may be available, they simply cannot fit the education in. For the most part, participants convey it is time and competing priorities within their given responsibilities, whether the competing priorities are complex case management issues, or staffing issues. Some participants in the more rural areas of the RHA's have multiple roles, with assessment being only part of their responsibilities, and for them, the staffing and care coordination issues take precedence over their educational needs.

> As BA08 described: I am the only one and there is not enough of me. In the old world there were assessor coordinators and they did the assessments and someone else supervised the staff. But I do it all…staff things, assessments, rounds, discharge planning, placements…I do it all. We are the gateway to LTC and I am juggling so many balls…time is a huge issue.

In addition to time needed for engagement in education, participants also reflected on the time needed for the completion and utilization of RAI-HC – that it is a complex tool requiring sufficient time to complete, and then time to comprehend and utilize the client outcome data.

> As BA05 explained: It is a time consuming tool as you draw information from the client, the family and sometimes others…because I believe that any sort of process, such as this where you start with the data entry…you do it…you look at the outcomes…you care plan…you know you are going to need time to figure those things out.

Further, BA05 questioned the accuracy of data if the assessment is rushed. Participants agree that knowledge, experience, and time are needed in order to use RAI-HC to potential.

> As such, BA11 suggests: We do not use the system to potential by any means at this point…and sometimes you cannot sit down and look at all the things that are triggered and all that and it goes back to time.

Time constraints are also considered by the participants regarding the requirements for when and how often they are to complete the RAI-HC assessment. While the Ministry of Health in Saskatchewan outlines requirements for a comprehensive assessment in home care (with RAI-HC as the designated system), the adherence to those standards is anything but consistent within the three RHA’s studied (with the exception of the completion of RAI-HC for LTC decision making, which is consistent across all three RHA's). Because of the comprehensive nature of RAI-HC, some participants question the importance of completing it on the more stable higher functioning client. Then again, other participants suggest that even the higher functioning client may have risks that will only be identified by completing the comprehensive assessment.

> As BA03 tried to explain: I agree and I do not agree with the requirements. I explain it to the client when I am doing it…this is the tool we use on everyone to get a baseline of how you are doing in your home at this point in time that we can look back at. But, I think we see…like doing it every year sometimes is too much and then sometimes I feel it is too short a time.

Finally, the participants shared there are supplemental tools (namely the Braden Scale, the Mini Mental Exam, and any falls risk assessment tools) they continue to complete and rely upon, even though they are repetitious of information collected and then generated as client outcome data from RAI-HC. As relayed by these participants:

> BA03: If we would use the outcome measures like it is intended, we would not need the Braden…lots of stuff is so this is the way we have always done it…we are going to go all electronic, but we still need paper copies, so that is our paper copy for our skin breakdown.
>
> BA06: Specifically with the cognitive score…this is one we could use at a quick glance and I think it is probably the last place that we look. The physician or a family member is concerned with the client's memory, inability to do certain tasks anymore and you clue in that there are memory issues here. What is the first thing that we do…and an MDS has been completed…I find the first thing we got to is the Mini Mental…has anyone checked the Cognitive Performance Scale (CPS) and what that score is…no…and I, even to the point where…oh that is in there?
>
> BA08: We have a falls prevention program but we do not use the data from MDS. Every time a client falls…we have to redo the falls risk assessment for the falls program…I just do not have time for that, there is not enough of me. Further, it has not changed anything.

At the same time, one program manager participant believes there is a gradual letting go of the Mini Mental Exam as the assessors she works with consider the RAI-HC cognitive performance scale (CPS).

> In the words of BA04: The assessors are considering the CPS more often in their discussions about the clients.

Even though there were drawbacks in relation to time for the participants, some were able to consider potential efficiencies with respect to the utilization of an electronic assessment system, given it is well understood and utilized to potential. As identified by some participants, these efficiencies might include: a) automation in and of itself should save time once the user is comfortable with it; b) taking the laptop into the home eliminates the step of gathering assessment information on paper first and then transferring into the computer, again once the user is comfortable; and c) standardization.

> As BA07 stated: It is time saving that we can do and all understand this one system.

Implementing an electronic system. For the participants, implementing and utilizing RAI-HC presents issues specific to the electronic aspect of the system alone. Some participants find taking the laptop to the client is cumbersome, frustrating, and time consuming, describing the system on the laptop as difficult to sign in and sign out, whether using it in the client’s home or even in the hospital. Participants also claimed it was quicker to complete a paper copy of the assessment, return to the office and enter it into the system, and still be ahead time wise. As described by the following participants:

> BA02: They say it is supposed to save time, but now, first of all I would have to hook up somewhere downstairs where the chart is, where the hec

> would I plug in all those cords and there is no place for me to work down there…so then I end up sitting in the middle of triage and of course I have to move because someone comes into triage.
>
> BA05: I refused to use that thing (the unit she had to synch with), it was tying me down…slowing me down. I would print off a paper MDS…a blank one…go into a home…ask all the questions…enter it back here and still be an hour further ahead than if I had taken that thing in.
>
> BA11: The computer screws up every time I unplug or disconnect it and then I am on the phone with IT for two hours.

Newer devices that utilize 3G were reported as being much more effective, but not all areas had moved to that.

> As BA05 shared: I have a tablet now, no need to synch in or out as we can get directly onto the system with the 3G network. This is a brand new thing for us. We take them into the client's home, I take it up to the hospital and I can even do my dated notes while I wait…so much more efficient and far fewer problems.

Some participants perceived a lack of confidence or comfort with technology amongst their older colleagues. However, all but one participant identified that they were fairly confident and comfortable with using a computer in their day to day work. More so, these participants identified their perceptions with respect to the *client's* comfort level with technology and how that affected their decisions to utilize the laptop in the home (this is further discussed in the normalisation process theory section of the findings).

Overall, participants identified access to IT support as central to working with an electronic assessment system – that their expertise is not with technology.

> BA04 identified: IT is not always there to support us. I know one day I phoned…you got to get on this now (helping the assessor coordinator with synching out), she has to go out and do an assessment…it has been booked…we did get a call back later, but the assessor had already gone out…you cannot just sit and wait around and you do not know until you are ready to take it out.

The final matter identified by participants with respect to technology has to do with the information system Procura that is also utilized by home care across the province. Some participants believed Procura takes precedence over RAI-HC and that RAI-HC issues are not seen as critical.

Even though the participants experienced ongoing challenges with technology, they also considered the value and opportunities to be gained via an electronic assessment system. The participants talked about embracing the positive, that through continual use along with the necessary supports they have identified, RAI-HC can be better understood and more completely utilized.

> BA07 determined: I see the benefit of RAI-HC and the data available to us. I do not know if my colleagues do…but I do see them coming around a lot with and even comparing data. So again…but I guess maybe it is our job to embrace those positive things more…if that promotes buy in. In a perfect world I would like everyone to be on it or have access to it…and if we could utilize it to its full complement it would be a great fit…we need to look forward and embrace electronic tools and emphasize evidence based.
>
> And BA06 from her perspective: I will not need a constant reminder to utilize the data when it becomes habit…with repetition and doing it. Like at the beginning of doing the MDS…you struggled…it took you a long time and as you do more of it and you become more proficient at it…now it does not seem too bad.

In addition, participants gleaned an appreciation for smaller, reliable, and user/client friendly devices that they could take into the client's home or utilize in the hospital or any environment to complete their assessment directly onto in the system. Participants anticipated growing use of the client outcome data as they complete the assessment if some of the identified barriers could be addressed. Finally, most participants did appreciate that technology equates with continuity and convenience.

> BA05 conveyed: I can honestly say yes, as much as there are glitches that really annoy you and get in the way…ya…it is much more convenient, especially if you are comfortable with technology – you know if you can type and the computer is easy for you. Yes it is more convenient…you log in…you look back at all the information rather than shuffling through paper after paper and not everyone writes legibly – it is typed and you just go and you look at it. It also makes for better continuity; it is all there at the tips of your fingers if your computer and system are working properly.

> BA09 would concur and add: Everything is there, you do not have to print anything out…even facilities are starting to say…you guys have some good stuff why don't you share?

> And BA11 cited her preference with respect to doing the assessment if technology worked: To do it once…instead of doing it on paper then putting it in at the office.

This brings to a close the findings as depicted by the researcher with respect to the principal factors (themes) impacting the utilization of RAI-HC, and indeed opportunities for potential growth in utilization.

Contextual Influences on the Utilization of RAI-HC

With continued analysis of the data, there came to light three fundamental dynamics that give context to all themes described. These dynamics helped the researcher understand related influences on the utilization of RAI-HC: a) the importance of a key individual to support users; b) the importance of supervisor support for users; and c) the impact of how RAI-HC and home care itself is viewed in the overall system of health care – these results now follow.

Key individual. In addition to the IT support identified earlier, the key individual is seen as someone who could provide individual support along with devoted and regularly scheduled education and follow-up sessions for users as a group. Most participants conveyed their home care programs lacked such an individual for clinical support and discussions as a team.

> BA01 articulated: I find that I do not have a go to person to answer my questions.
>
> BA03 described: Ongoing education and support and if you had regular meetings to touch base, you would feel part of the larger…you would not feel so alone…I feel it is me and my computer…are there any concerns…is anyone having trouble…instead of just me and the email with commonly asked questions.
>
> BA04 concluded: We have lost that consistent person so that all the teaching is the exact same…the follow up.
>
> BA10 also described: Someone to lead case studies and go through together as a group and code certain sections. Did we all code it the same and why did we code this way or not… to make things crystal clear to be sure our data is reliable. I think those kinds of activities would be reassuring for me, to know that ok I am doing this the same way that any other prudent assessor would if she were at my desk looking at this client.

Some participants would go on to impart that indeed there was an individual dedicated to RAI-HC within the RHA, but in addition, that individual was responsible for the RAI assessment system for LTC and had a program supervisory role. As a result of this, the home care issues were rarely or never addressed.

> As BA04 explained: We have an MDS Coordinator but I never see her. She is an assistant director, and the MDS coordinator. She has a dual role, so the MDS portion is a ½ time job…which includes home care and 13 LTC facilities. How do you manage that for the whole RHA? It is insane, you cannot have a coordinator in the RHA that is shared by 100 employees, it is not just a ½ time job for an RHA this size.

The other scenario shared was that actual users of the system had become the key support persons, and while this was not deemed to be negative, participants also conveyed that their competing day to day priorities made it difficult for these individuals to really focus on educational and support needs for others. When asked by the researcher, a participant in this role described how she managed this responsibility:

> BA07: I was encouraged to do this when I was hired and originally it was not a whole lot. We would encourage others to take the online classes and that kind of thing. We did get the Ministry to come out and give a refresher a couple of years ago and then we do try to have education sessions with the other users to go through what we learned, but that is about all we can manage. We problem solve and trouble shoot and calm nerves about things.

Participants also identified that in addition to time, the key individual should have knowledge of and a background in home care. In particular, one RHA noticed a dramatic change when an MDS Coordinator with home care knowledge and experience left and was replaced by an MDS Coordinator with a strong LTC background. The participants expressed she had little or no connection with the client outcome data and how that data relates to home care interventions and service provision.

> BA06 described: Her focus is definitely on LTC. She does send questions out monthly to keep people up to date…different scenarios to make sure everyone is coding properly. We have some education sessions and she does present. But again, it is not things that are pertinent to home care …more pertinent to LTC; she is much more knowledgeable in LTC.

Indeed, there were many challenges expressed with respect to availability and access to that knowledgeable individual to support users in their ongoing journey with RAI-HC. Participants were appreciative of the support they were provided, yet they are aware of and impart the need for much more. Ultimately, this impacted preparation for use, ongoing education, and overall understanding of RAI-HC, all factors of influence for the optimal utilization of RAI-HC.

Manager support. Even though it was not discussed at length with the participants, the support and attention to RAI-HC by a direct supervisor or manager was believed by some participants to be central in the utilization of the system, and thus important to recognize within the results.

Some participants identified that with a change in manager came a change in priorities with respect to RAI-HC and its importance for home care. For them, their previous manager understood RAI-HC and had a substantive home care background, thus there was more emphasis for using the laptop in the home and considering the data outputs, and there was also overall support for RAI-HC ongoing education. For those participants who continue to have an involved and interested manager, they agreed that managerial support is important for all those reasons identified above, and would add that someone looking at the work and the data leads to accountability for the user.

> As BA03 conveyed: I feel my manager is very supportive. She will…just reminding…remember you can pull up reports…you can pull up reports to see our falls numbers…she…ya its…Are you doing this…remember to do this.
>
> And BA11 shared: In terms of our supervisors…they have learned it and because they understand it they support it.

The program managers who participated in the study identified that part of their responsibility was to understand, advocate for, and support their staff in the optimal utilization of RAI-HC. For them, key to that support was that they themselves had a good understanding of the system.

The system of health. The final common dynamic that emerged from analysis is more philosophical in nature and is participant perceptions of others within the health system. To begin, some participants identified their belief that home care is not understood or valued and therefore not a priority in the system, and hence nor is RAI-HC. However, RAI-HC is mandated and therefore believed to be supported in principle. For some participants, the lack of knowledge at the senior level within RHA's of what home care can and cannot do is very real. In addition to that, home care does not have the expenditures and cost to the system like LTC and acute care – the facility based services, so home care does not get the same attention. For some, their RHA is so focused on acute care to the point where funding is pulled from home care to augment facility based service. The following are excerpts from four participants:

> BA08: I do not think home care is well understood…we have a lot of facility based managers who do not really know or understand. We sort of do our thing and handle people for as long as possible, and our important job is to screen people for LTC…that is my perception and I have been doing this long enough that it is likely grounded in something. In the whole system…I am not sure home care is valued…even provincially…oh yes, aging in place, throw some money at that. I really do not think home care is valued, they are cutting the little things and people are feeling undervalued. I am not sure that anything we do in our little corner is really all that important in the region's big picture…other than making sure the people that get into LTC are the people that need to be in LTC.
>
> BA07: I am not convinced they are necessarily aware of the benefits of it (RAI-HC)…because again it was something we were told we had to do and somebody just did it because they were told. I think though if someone went to my manager and said they were canning it (RAI-HC), she would fight for it…but at the same time if they really did value it they would put more time and resources into it. That goes with the whole thing with AIS and hiring a specific clinical educator and all that they are not willing to do…they support it in principle I think.
>
> BA10: I do not think they do not value it (RAI-HC) or that it is not important. I just do not think they realize how…I think their support is in voice only and not in…I think they say they support it and believe they support it, but I do not think they realize how little their support is to those of us who are using it on a daily basis.

> BA04: We have fought for a clinical educator for example…CEO and acute care do not understand home care and that we have learning needs. We fought for the position and the funding went to LTC instead.

Some participants have multiple roles with respect to assessment of clients, planning for intervention, and then to also be the one to approve or deny anticipated service provision. For this, participants are appreciative of an objective tool in RAI-HC that can reliably generate client outcome data on required care, on the other hand, one needs the knowledge and the time to complete the assessment and utilize the system.

> As BA10 explained: I think it helps us to prioritize things...what is most important and where should we invest most of our dollars…that are limited. I mean I like the whole idea of a standard assessment...one thing I really struggle with…like not only do I assess…I am also the gatekeeper of the home care services. So I decide if you are going to get Meals on Wheels or not and I like to have that background…that assessment to validate that the Meals on Wheels are indeed needed (that accountability piece).

Further, participants acknowledged the dynamics of home care and matching care needs to actual available services – that the care needs or demands do not always match the available services and that poses a challenge for the user.

> As described by BA11: And if the outcomes by the time you do your MDS match up…I guess we are lucky…but we already, depending on what services you can offer…you know what the outcome measures show and what your program can offer could be two different things.

Given these perceptions of the participants and the additional challenges presented for the optimal utilization of RAI-HC, participants were positive and advocated the overall fit of RAI-HC within the evolving health care system that includes an emphasis on home care**.** There is a perceived effectiveness of RAI-HC as an evidence based standardized system, and the value that the home care program itself places on RAI-HC is believed to be much more than *just in principle*. The system is perceived to have potential to accompany home care into the future given it is utilized to potential and as intended. As the following participants concluded:

> BA04: I think that RAI-HC is important because we are already trained to complete it. It is just the utilization and understanding and helping with programming…I think that is where it needs to go…we already have the foundation…we are not starting from scratch – let's get on with it.
>
> BA07: We are moving toward anything that is evidence based…and there is a reason for that. Anything that is evidence based…validated…standardized…that kind of thing is a step in the right direction. In order to communicate to different professionals…electronically is the way to go. In a perfect world I would like to see everyone on it or have access to it…and if we could utilize it to its full complement…it would be a great fit…we need to look forward and embrace electronic tools and emphasize evidence based.

Normalisation Process Theory

In consideration of normalisation process theory (NPT) in developing complex interventions, the participant data were recoded to the elements of NPT as outlined by Murray et al. (2010) as follows: a) coherence (meaning and sense making by participants); b) cognitive participation (commitment and engagement by participants); c) collective action (the work the participants do to make the intervention happen); and d) reflexive monitoring (formal and informal appraisal of the benefits and costs of the intervention). Further, the data were recoded to the constructs of the collective action component of NPT as outlined by Murray et al. (2011) as follows: a) interactional workability (the impact that a new technology or practice has on interactions between health professionals and clients); b) relational integration (the impact of the new technology on relations between different groups of professionals); c) skill set workability (the fit between the new technology and existing skill sets); and d) contextual integration (the fit between the new technology and the overall organizational context). The findings with respect to the participant experience and/or perceptions of the implementation and utilization of RAI-HC and the correlation to the elements of NPT are now presented.

Coherence. Coherence or meaning and sense making of the implementation and working with RAI-HC was identified by the participants in the following areas: a) participant understanding of why RAI-HC was implemented; b) participant agreement with RAI-HC and its overall fit within home care; and c) participant perceptions of the benefits of RAI-HC.

Participant understanding of why RAI-HC was implemented. Some participants utilized the previous paper assessment tool, and for others, RAI-HC was already in place when they started working for home care. Nonetheless, participants overall had a similar understanding that RAI-HC was implemented in order to standardize the Saskatchewan home care assessment process with a tool that was comprehensive, objective, and electronic. The assessment could be done on a tablet or laptop in the home, it would save time, and it could be easily shared. As the following participants described:

> BA01: It was supposed to be clearer, more comprehensive as to what the client's needs would be in the community…it was a little more objective than subjective.

> BA03: I understood it as being a standardized tool for the province… to make it easier for those coming in and out of region…so we would have the same language…speaking the same language.

> BA05: Well, basically what I know…I have never used the paper tool…we were using RAI-HC when I started assessing…my understanding was to get everyone on the same page doing the same thing. I think to simplify things as well.

One participant provided a more detailed perspective. This participant was with home care when the implementation took place.

> BA06 explained: It was the thinking that the MDS was much more comprehensive…the algorithms that were built into it could not be manipulated and you got a much broader comprehensive picture of the client and the data that was triggered…could be used then for care planning. And it was going to be integrated throughout Canada and it was the tool that everyone was going to be using.

Another participant, who was also with home care when the implementation took place, had higher expectations of the system that did not materialize.

> BA03 identified: It was also supposed to...it has been awhile, so in my mind I remember it as being this incredible tool that we were going to use on a daily basis…bring your computer out to the home…and be able to input this and it would spit out a care plan and it would make everything lickity split...that is not the case.

One participant acknowledged her need for clarity around the purpose of implementing RAI-HC.

> BA07: I wish I would have been made more aware of its purpose…have more education on where it came from and the purpose of it.

Participant agreement with RAI-HC and its overall fit within home care.

Although there is a distinct perception of underutilization of RAI-HC as discussed earlier, almost all participants agreed with the use of RAI-HC, trusted in its value, and/or agreed that the system is a good fit for the assessment process within home care. As the following participants explained:

> BA07: I do agree with it and I see its merit...and I love anything that is sort of evidence based and has a knowledge background behind it versus every area in the province making their own stuff up…kind of thing…I like the

> idea behind it…I like that we can…if I were to move to another area I would be using the same tool.
>
> BA09: I think we would be lost without it. I just think it is such a good thing. It is comprehensive…I am huge on worldwide validation…I am huge on the fact that we trial things before we actually implement. We did this all years and years ago and now it is rolled out to the rest of the province.
>
> And BA11: Because health care is going to best practice standards…you hate to say it is just data…you like to focus on the individual...because they are human…but you know…it is what we are basing our standards on is data…statistics…so this allows us to be part of those statistics.

Participant perception of the benefits of RAI-HC. Again, even though participants clearly identified the underutilization of RAI-HC, there was an overall perception that the system is beneficial in terms of continuity of care for the client, standardized client information and communication processes, and user and system access to useful client outcome data and aggregated data that may influence care planning and allocation of resources. As the following participants conveyed:

> BA03: It would be more beneficial for the client because I know that the tool triggers things that we may not necessarily catch…so more appropriate care planning maybe. I think they would get better care…I think they would. I do not know how they couldn't, because something that has that potential and can trigger and give us red flags…this person is going down the road for bedsores or whatever…it is that whole prevention we do not have hospital beds or nursing home beds…we could save so much money.
>
> BA05: I probably cannot give a 100% honest answer…but I do see the value as far as continuity and being able to go back the next year or the next few months and do the same assessment. I do see that in the two years that I have been assessing people…when someone is in hospital I can look back and see their assessments, for one or however many years, and you can look back on those previous assessments and say ok, this has changed…this has changed…the IADL has gone from this to this…the MAPLe has gone from 3 to 5. It does tell you a lot when you see the scores changing the continuity…anyone can…you know you can go into an assessment that anyone has done and you are seeing the same comments

> and categories being assessed. So it does not matter who does the assessment…you can go in and get a pretty good picture of what is going on with that client.
>
> BA11: If you are looking at the financial and funding…the more evidence based...which this gives you. How many people do you have sitting at home with a MAPLe of 5…lots…so does that mean that HC needs funding in order to provide for these programs…yes. Like it gives you that statistical information that…should we have more money…probably…should we be expanding our programming…probably…again it validates what we do and that what we do is worthwhile.

Cognitive participation. The NPT element of cognitive participation in the utilization of RAI-HC moves the participants from making sense of the system to actually committing to and engaging in its utilization. As outlined within the general findings, the participants identified that RAI-HC is not utilized to potential for a variety of factors given the influencing themes described. Nonetheless, cognitive participation was further captured within the data as participants acknowledged the impact RAI-HC has had on them as users, and in turn their commitment to and engagement with the system.

To begin, some participants identified their frustration with respect to using a time consuming system they do not fully understand or use to capacity, and one they are mandated to use even though they do not feel the client outcome data or the aggregated data is looked at or cared about. These participants perceived the data as not being noticed or important to most, so efforts in keeping up with the assessments and using the data were not considered a priority.

> BA06 explained: Assessors who have been here a long time…it is hard to see the value in MDS and I think it is because we do not use it to potential. We are doing it because we have to, not because it is a valuable tool to help provide better care for the client. You know it is the person who is getting a bath once a week…and our policy is for the most part we require

> all of our clients to have an MDS assessment. That is where they find it very difficult…this is extremely time consuming. Or you implement the service before the MDS. Then the MDS is done just for the sake of doing it…because we have to…we have already made the judgment based on the clinical assessment here and what possible more could we glean from that assessment that took us two hours to do…no value to me…I just find that is sometimes the mindset.
>
> Further, as BA06 described: But it does not get to be daily work…it just sits there. And that is what the employees see…it just sits there and we do not do anything with it. We do it…it is in the computer so if we ever want to go look at it we can. We used to print a copy of it and put it in the vault…but that is it. We are not doing anything with it. I think that is negative because we do not understand the true potential that it has.

Other participants acknowledged their lack of confidence in their ability to understand and in turn utilize the client outcome data generated. As these participants explained:

> BA07: Just in that I do not understand how to use the program in its entirety…I do not understand how to use it for care planning. I do not use it for clinical decision making that is why I say that. I am confident in the coding and how I fill it out, but I am not confident in translating that into a care plan.
>
> BA08: Right now…not. I have some pieces…but I do not have the whole thing. You know the reasons…lack of knowledge and no time to do it on my own…we did do the education on care planning and CAPS stuff… but if you do not have time to use it…I mean ya…I could jump in and start using it but you need to understand it and work with it to do a good job of it.

For one participant, engagement in the comprehensive utilization of RAI-HC is not moving forward because status quo is *ok* – there are no concerns to push for a change in how the system is being utilized.

> BA07 described this as follows: It is because we are functioning how we are and we are meeting the minimum criteria. We were told we have to do MDS and we are doing MDS and we are meeting the minimum criteria, our HC program is still standing and people seem to be happy…client satisfaction is at a level...it is not a worry…the program is treading water ok...if it is not broke don't fix it. Like we are functioning just fine and

> everyone is getting their care and services. Until something maybe happens to prove we are not giving clients the best care possible…it will not be a priority.

Although lack of confidence in utilizing RAI-HC was identified by some participants, others conveyed growing confidence the more assessments they completed, and all the more when the client outcome data generated validated their clinical judgement. This was identified with respect to completing the assessment and then considering the client outcome data to verify clinical judgement.

> BA06: I am confident to do it…it takes the constant reminder to use it.

> BA10: It is important to me to know that I have read this person right and the care plan flows a lot easier when I have confidence in what I have seen and then they have confidence in you. I guess it gives me confidence in my assessment…in that what I am sensing of this client in my clinical judgement matches with the RAI outcomes.

Participants also conveyed they are mindful of coding when someone is looking at the client outcome data, for them, this was an element of accountability that made the accurate completion of the assessments meaningful.

> As BA07 described: When it was mandated that we had to use these numbers for LTC…that is when people starting to care about it and then education was sort of put forth to do better coding and that because of the LTC project…right? So as soon as it became something that management and people sort of…said they were going to find these numbers useful or they were going to be looking specifically at the numbers…as soon as they said that then we started to get more education on it and then people started caring about it. Maybe similar to with care planning and those types of things…if we were told or mandated…or if someone other than us would find those numbers useful I think we would move that way…but at this time we are going through the motions because we have been told to.

> And BA03: If the RHA and my supervisor were to look at the data, I would be much more inclined to code correctly and consider the data generated.

Collective action. The NPT element of collective action moves the participant to the actions or the work they do to make the utilization of RAI-HC happen. Again, even though RAI-HC utilization is not at its potential, the data does convey participant consideration of what has influenced collective action either positively or negatively. The data were coded into the four constructs of collective action: a) interactional workability; b) relational integration; c) skill set workability; and d) contextual integration.

Interactional workability (IW). IW refers to the impact of the implementation of RAI-HC on the client and the client's interaction with the participants.

Most participants agreed their clients trust in RAI-HC with respect to the client outcome data that is generated from the system. Participants convey that while they may not share the client outcome data with the client (or family) at point-of-care, especially for those who are completing a paper copy then transferring it into the system, they may share the client outcome data with respect to that validation of clinical judgment aspect once the assessment has been entered.

> As BA01 described: I think the client trusts this system. I do not always say it indicates, I explain that the system confirms what you have told me…that this is a deficit…you know that kind of approach. And, they are not usually surprised because I find that it usually indicates why we have gone in there, but not always.
>
> And, BA07 explained about client trust in RAI-HC as follows: You know they do! I am not sure if I have been lucky…but yes. They feel I have access to all this information and it is not just me personally making an opinion on you based on my own thoughts but with the system.

Other participants would add that this trust comes with understanding the client outcome data, and that translation of the client outcome data by the user to the client and family is important.

> As BA10 described: So it is not really using direct outcome measures, it is taking it and translating it into their terms, into something they can understand. I know what the outcomes are and share them in a way they can understand.

Participants also emphasized that during an assessment, interaction with the client is critical. Some participants believe they can maintain client interaction as they use the laptop in the home, others did not believe that to be possible or appropriate.

> BA10: For the most part they are pretty receptive…for the most part it is really not a barrier (the laptop). Sometimes I have shut down the computer myself just to take a few notes because I feel like I am not looking at them as much as I think I should.
>
> BA03: I jump all over the place…to me it is a conversation. I don't start with A and go to B…we talk and it leads from one to the next. I think if I would bring my laptop in now I would go back to the rigid order so I would not miss anything.
>
> BA11: You can look at the client, you do not have to sit at a table so you can type…you can be beside them on the couch or across from them and not have anything in your way…I am a little old fashioned that way.

Even though there was some participant perception that clients did not like it when the laptop was utilized in the home, none of the participants had a client actually articulate that dislike to them, then again, one participant pointed out that the client would be too polite to complain. Additionally, some of this perception was based on personal experience.

> BA08: I am not comfortable with it, so I cannot imagine how some of our elderly would be. Even though I have never really asked them, most would be too polite and say…oh it is no problem dear.

> BA09: Our older staff will say to you that they do not want to see that…they do not want to be looking over someone's computer. I mean now it does not matter where you go, everything is on the computer and out clients are getting used to that. I have not heard any overwhelming…get that computer out of here. No one has called about that.
>
> BA12: I have never taken the laptop into the home. I go to see my Dr. and he has his face in the computer. He is not looking at me, just listening and typing in and I do not like it…I do not like it at all.

Other participants described the client reaction to the laptop in the home as neutral or even positive, and again, the use of the laptop comes with an explanation of it.

> BA04: Some were interested in the fact that they had this laptop…when an assessor came out to assess my father in law; my mother in law commented afterward…there were a lot of questions but they were good questions and no mention of the laptop at all.
>
> BA07: I am very good at explaining why I have the computer there and what I am doing and after that no problem at all…I use the laptop.

No matter the participants perception of the use of technology and the client, most agreed that the use of RAI-HC was beneficial for the client. Continuity from one assessment to the next was emphasized in addition to the assessment identifying needs that may have been missed without the use of RAI-HC. One participant acknowledged that clients have an opportunity to better understand their own needs with this system; and yet another recognized that her understanding of the impact on the client when client outcome data are used for a purpose such as LTC placement motivated her to put more effort into the assessment and accurate coding.

> As described by BA07: Again the LTC thing did make a difference…cause the girls said…hey there is a panel of 10 people looking at MDS…I better do it and I better do a good job on it…and this is making

> a decision for this family. So I am going to put a lot of effort into this…this is impacting someone's life in a tangible way.

The participants also shared with the researcher what they valued with respect to RAI-HC and their interaction with the client. Consistency in approach to the assessment, and objectivity were typical responses.

> In the words of BA07: The computer and the outcomes give me some confidence to negotiate with the client if the client requests do not match the identified need.

One participant failed to see the benefit for the client with the use of RAI-HC.

> As BA08 stated: Does the client get better care because of RAI-HC here? Right now? No…

Relational integration (RI). RI refers to the impact of RAI-HC on relations between different groups of professionals. The participants shared their perceptions of how the use of RAI-HC impacted their team within home care, and the teams they worked with outside home care.

Overall, the data collected showed little to no impact within the home care team that extended to the nursing and support staff who did not utilize RAI-HC. Participants identified that because these groups have very little knowledge or awareness of RAI-HC, there is disconnect in terms of sharing RAI-HC client outcome data – that it is not shared because it would not be well understood by those team members. In turn, some participants questioned the need for the support staff to have the information at all.

> BA11: Well the only...like with the nurses…no we don't because they are not in the system and they do not know what it means…there is no translation from the CCC (client care coordinator) to the nurses or the CCA (continuing care aide), and they too are not familiar with the system…they do not know.

> BA09: I would bet the majority of them do not understand those things…and is there a need for them to understand that information…probably to provide better care I would think.
>
> BA01: I do think sometimes too much information is not a good thing with respect to the CCA.

Two participants identified the beginnings of positive RAI-HC impact for other team members.

> As BA10 described: I think sometimes, depending on the outcome measures I might put something on the care plan…that this client suffers from depression or anxiety so the aides are aware of that. It is there as background information. I think my care plans have gotten a lot more detailed with information unique to that client that might help the aide care for the client.

Generally, the impact on the teams outside of home care drew similar perceptions from the participants in that RAI-HC is not well understood and therefore of little use to those outside the assessment/home care world. Furthermore, most participants ascertained the need for knowledge and understanding of the system outside of home care to be central to optimal client care.

> BA05: Home care has access, but we are in our own little system alone. There needs to be a merger of systems and the physician for example needs access. They do not understand that this is a twelve page assessment that takes into consideration the discussion with the client, the family and the staff. So although it is really good with us and working well it is to get everyone else to understand the system.
>
> BA10: I think it is getting there, but I think there is still a ways to go. I think within home care it is pretty much there, but to translate it to the other areas of the health care system I think there needs to be more training…like in therapies…I think if they understood where we are coming from a little bit it might make some of the communication easier…quicker or more efficient. Same thing when working with mental health.
>
> BA03: What you see as important might be different from what the physiotherapist sees as important…it would be a common…I think the

> outcome measures and CAPS speak to all disciplines…everybody involved so you can come together to make one unified care plan that would meet all client needs.

Skill set workability (SSW). SSW refers to the fit between RAI-HC and the existing user/assessor coordinator skill sets. The data collected in this area revealed the varied opinions of the participants with respect to skills required in the utilization of RAI-HC. Some participants believed that only nurses should be utilizing RAI-HC, while others thought that as long as one had a clinical background, a variety of health care professionals could work with the system. Further, most participants considered assessment and case management skills in addition to computer or technical skills to be important.

> BA04: I think case management. Because with case management you are doing the assessment and then you are planning and implementing. If you look at RAI, that is actually what it is doing…you are getting the information in…you should be looking at the outcomes and triggers…and all that stuff to do your care planning…then you are implementing those things…then you come back to see if your numbers have changed.
>
> BA08: I think if you are doing just the data input…I think you can do whoever…whatever…the skill set as long as you are techy. I think to interpret…I think you need to not just look at the numbers…you need to have that clinical judgement. I think anybody can assess…but when it goes to the next level…to interpret and care plan I think it should be a nurse…I think the nurse has the general knowledge. And again…life experience is huge. Life experience is huge.
>
> BA09: Perhaps it is just my experience but the SW and the OT's and PT's have worked in the medical system and are familiar, so they seem to do quite well. A SW without experience in home care or a bit of medical background, in my eyes, just does not have the ability to complete the MDS well. We have had two LPN's in positions and they have done stellar. Technical skills are also key.

Even though the data revealed these varied perceptions, most participants identified that indeed the skill set existed and that the skills of the assessor coordinators in the RHA's studied did fit with the utilization of RAI-HC.

> BA10 summed this up well: I think it is getting there…I think within home care it is pretty much there. I think the assessors are better than they think they are…but they just need to be told that and to check in their manual…links with the confidence piece.

Contextual integration (CI). CI refers to the fit between RAI-HC and the overall organizational context, and the participants shared their perceptions of the impact RAI-HC had on their home care programs.

Overall, the participants identified greater accessibility of information on clients within the home care system. That access can be provided to multiple users as the client journeys through the continuum of care, and that this has optimized efficiency within the home care system and client centred care.

> BA07: Um…with the system…what I find most beneficial is when we have been placing people from out of region, or transferring people out of region. I like that I have this tool that I can send out to them and they will understand. Whereas before maybe you would send hundreds of nursing notes, or have a very long conversation, and now it is like…hey I did an MDS…would you like me to send an MDS and vice versa. So time saving and I am sending them a tool they are familiar with. Even for sharing with other members of the team within our RHA, that are familiar…like LTC staff when they get a client for admission, they can understand. It is all time saving that we can do and all understand this one tool.
>
> And BA11: Yes they can access it…everyone in the RHA can access the MDS...making it easier for the client and family.

Some participants also identified the changes to LTC assessment and prioritization as positive and more objective and standardized as they utilize the client outcome data generated from RAI-HC for those deliberations.

> As BA06 described: I think it has been positive for both. And…although on both myself professionally and the organization we may not use it to its full extent…we are using some of those outcomes without knowing it…I think that is true…we just need to recognize that in using them fuller. So, it has been positive…I cannot say it has not. Our client load has increased…for the most part since I started it has increased and I think we provide better care now than we used to…and even though all of those things I said we are not using…we are using some of it to do that. And I think specifically for LTC placement it has had a huge benefit…at least it has provided a standard...somewhere to start to weed out those unnecessary applications for LTC.

Further, most participants convey confidence in decision making around service provision for clients, and that overall, the use of RAI-HC has augmented standardization in the home care assessment processes.

> BA10: Then it allows us to have our home care services be what people need them to be versus a service that ends up being what people think they need. It has allowed us to change from a glorified housekeeping and bathing assistance to putting in services that people need to keep them at home or improving their quality of life...more than on a superficial level.

> BA03: Probably...that it is standardized. I keep thinking too, all the things that we can change, and all the things that need to be changed and this is one step towards that.

> BA06: It brings a standardized assessment to the province. It has great potential, it just has to be realized and used as such.

Reflexive monitoring. The NPT element of reflexive monitoring considers the formal and informal appraisal of RAI-HC. According to all participants a formal evaluation of RAI-HC has not been completed in any of the participating RHA's. Furthermore, some participants question whether a formal evaluation can be completed on a system that is not utilized to potential or indeed as intended, while one participant could see the merit in it.

> BA03 explained: I think an evaluation would be timely, considering we are not using the system as we should be. Maybe it would spark that initial

> interest again…maybe they would say…oh yes, we have this program running and I wonder how it is doing.

Considering the lack of formal evaluation, the participants did personally reflect on the value of RAI-HC and most would consider it worthwhile.

> BA10 summed this up as follows: I see RAI-HC as worthwhile, in particular the outcome measures. The outcome measures in our daily practice in particular for LTC placement have value for me and I would like to see us expand to provision and prioritization of home care services beyond LTC placement.

Summary

The researcher findings of this qualitative interpretive description have been based upon the responses of the twelve individuals participating in the study. The participants shared their perceptions of the current state of RAI-HC delineated in the following areas of focus: a) the significance of clinical judgment; b) care planning; c) impact of aggregated data; d) LTC and RAI-HC; e) challenges of utilization; and f) opportunities (current and potential) for utilization. Overall, the participants identified that RAI-HC is not being utilized to its potential or as intended, and that for the most part, client outcome data is considered for LTC acceptance and prioritization rather than its purpose to support decision making in home care.

Data coding and analysis lead to the development of five principal factors (themes) that influence this current state of utilization of RAI-HC as:
a) understanding RAI-HC; b) preparation for use; c) ongoing education; d) time; and e) implementing electronic systems. Further, with continued analysis of the data, there came to light three fundamental dynamics that gave context to the five themes described: a) the importance of a key individual to support users; b) the

importance of supervisor support for users; and c) the impact of how RAI-HC and home care itself is viewed in the overall system of health care. These dynamics helped the researcher understand related influences on the utilization of RAI-HC. Throughout, the participants described their challenges, and as well what they gleaned as opportunity and potential with RAI-HC.

In addition to the general findings, the data were also coded and analyzed in relation to the elements of NPT as follows: a) coherence (meaning and sense making by participants); b) cognitive participation (commitment and engagement by participants); c) collective action (the work the participants do to make the intervention happen); and d) reflexive monitoring (formal and informal appraisal of the benefits and costs of the intervention).

All findings presented will now be discussed as interpreted in Chapter VI.

Chapter VI

DISCUSSION

As outlined in the study introduction, implementing an electronic client assessment and information system such as RAI-HC is one thing, understanding and utilizing it as intended is another. In order to realize the benefits of RAI-HC with respect to clinical decision making and indeed client and population health outcomes, user understanding and application of this system as a whole, inclusive of the client outcome data and aggregated data is central. The value of RAI-HC is maximized when the client outcome data generated are used to inform care planning and client outcome evaluation (Coles et al., 2008). Even though RAI-HC had been implemented in Saskatchewan, how well it was understood, utilized, and integrated within home care programming and delivery of care was not known. As such, the primary purpose of this study was to move beyond adoption of RAI-HC – to identify and to understand those factors that impact the successful utilization and eventual embedding/integration or *normalisation* of RAI-HC within home care services' day to day practice in Saskatchewan home care programs.

Accordingly, the data collection, organization, and inductive analysis focused on the utilization of RAI-HC and its impact on the client, the user, and the home care program as a whole. This process led to the understanding and emergence of the prevailing theme that RAI-HC is underutilized and/or not utilized as intended within the three RHA's in this study. Moreover, two distinct concepts: a) encumbered utilization; and b) opportunities to empower utilization have been recognized, and the general thematic breakdown of the data revealed the factors that influence both concepts. Additionally, the findings with respect to implementing RAI-HC and how that relates to NPT reinforced that the utilization of RAI-HC has not been normalised into day to day home care practice within the three RHA's involved in the study. The details of this all-encompassing interpretation just described are now outlined, inclusive of related literature.

The interpretation is focused on the experience and perceptions of the assessor coordinators, sometimes referred to as users. Furthermore, unless identified otherwise their experience and perceptions were reinforced or substantiated by the program managers in the study.

Utilization of RAI-HC – Current State

For the most part, assessor coordinators or users relied on their clinical judgment or past practice alone when assessing and determining client needs, and care planning, versus utilizing RAI-HC client outcome data to support clinical decisions. Thus, care planning with the electronic system was no different than care planning with the previous paper assessment tool (SCIP). The use of client outcome data was not deemed to be negative, however its distinct use was seen as insufficient in that the client outcome data alone could not replace clinical judgment or professional experience. As the use of clinical judgment was defended, it seemed there was a general perception that RAI-HC and the information it generates is intended to be used as a stand-alone decision maker, rather than its real purpose of *enhancement* to clinical decision making. RAI-HC has embedded decision support algorithms that summarize the client information entered electronically by the assessor coordinator, and these algorithms are designed to support clinical and organizational decisions (CIHI, 2010). For most assessor coordinators who engaged in some consideration of client outcome data, the data was understood more for its potential for justification or validation after clinical decisions were made, rather than assistance or support in making those clinical decisions.

In general, the participants lacked an awareness of the aggregated RAI-HC data. If users were made aware of these data, it was brought forward as an error on their part with respect to how they were coding and entering assessment information, rather than the aggregated data being recognized as correct and meaningful population indicators. For those users who have some understanding of the usefulness of these data, it is a frustration to have this assumption made. Nevertheless, even though there was a lack of awareness with respect to the aggregated data, there was a general sense of confidence amongst the users with respect to these data impacting practice and programming, and it seems that the users would welcome the integration of the knowledge from these data into their practice. This aligns with the thoughts of Carpenter (2006). This author suggests that interRAI academics took this approach because they understood that aggregated data could demonstrate the complex needs and patterns of service associated with older persons in local, national, and international milieus.

Overall, client outcome data from RAI-HC is primarily utilized for determining the need for LTC within the RHA's involved in the study. While there was an appreciation for the standardization of LTC placement decision making by utilizing RAI-HC client outcome data for this process, there was also a substantive concern that a *client outcome data* only focus can narrow the overall client picture – again, RAI-HC client outcome data is intended to support clinical decisions not to limit decisions with exclusive use of the client outcome data. In as much as there were concerns with respect to an over focus on the client outcome data or *numbers* to determine LTC placement decisions, the knowledge that the client outcome data was scrutinized by decision makers lead to user accountability for accuracy of data input and timeliness of assessments. The project undertaken in one RHA with respect to the development of a process to consider RAI-HC client outcome data for LTC assessment and prioritization, and the resulting increase in user understanding and appreciation of RAI-HC, parallels the Coles et al. (2008) study. In this study, it was determined that an overall improvement to understanding and appreciation of the benefits of RAI-HC occurred when clinicians linked initiatives such as falls prevention or stroke strategies with the utilization of RAI-HC to inform, support, and guide clinical practice.

It is also noted that a fundamental barrier exists with respect to change in moving from an embedded and established nursing process (in particular with the RN assessor coordinators) of assessment, planning, implementing, and evaluating, to a process that for the most part relies on technology and faith that the client data entered into the system would produce accurate algorithms to support decision making. Further, users were divided on the benefits of utilizing RAI-HC with the complex client.

Nonetheless, value and potential opportunity with respect to using the RAI-HC client outcome data was evident, and the acknowledgment of the client outcome data, even if only for information and validation purposes, occurred more often than the assessor coordinators realized. Value was noted with respect to RAI-HC and the objectivity the system can offer users in that: a) identifying needs does not need to be clinical judgment alone; and b) the client outcome data facilitates identification of client risk that may not be captured by clinical assessment alone. So while the utilization of RAI-HC was fraught with challenge, there were glimmers of potential and opportunity inherent within it. For those users who have had the advantage of extra education and experience with RAI-HC, their understanding and appreciation for the system as a whole was likely more substantive than those users with less opportunity and exposure.

As the analysis evolved, one could ascertain that the *completion* of RAI-HC had been integrated into the assessor coordinators day to day to work, but that the integration of the *utilization* of RAI-HC into their day to day practice had yet to be realized. As Kraft and Scott (2007) contend “full use of the collected data and its integration into everyday practice is not yet a reality” (p. 31). Likewise, Stolee et al. (2010) and Stolee et al. (2012) suggest home care organizations have not yet fully realized MDS-HC integration which can lead to inadequate provision of services. Nonetheless, even though there was a collective perception that the assessor coordinators were doing the assessment but not utilizing the assessment and all that it has to offer, the system was regarded as worthwhile with substantive potential to move beyond just doing it or *beyond adoption*.

As indicated in the findings, participants agreed that using RAI-HC correctly and to potential requires: a) adequate preparation and a solid understanding of the system; b) ongoing education; c) effective technology, portable devices and IT support; and d) time, in order to make the most of RAI-HC and to ensure reliability and validity of the client outcome data. "MDS, or any assessment system for that matter, will yield poor information when the instruments are not used appropriately" (Crooks et al., as cited in Hirdes et al., 2003, p. 1). Furthermore, using to potential requires that the client outcome data generated from the system are relevant for the client, the user, and as importantly to the home care program and the health system as a whole – that these data need to be regarded as valid and useful. As Stolee et al. (2010) and Stolee et al. (2012) established, there is limited understanding with respect to how home care administrators, case managers, and service providers view the role of health information systems, namely MDS-HC, in terms of clinical and administrative management and use of information, and/or decision making.

Principal Factors that Influence the Utilization of RAI-HC

To begin, an overall understanding of RAI-HC as a system inclusive of what the client outcome data means is important in order to move beyond completing the assessment and to engage in the utilization of the system. Although users reflected on their value of RAI-HC, and that they would *like* to engage in its utilization as intended, one barrier affecting their utilization was their lack of understanding and hence their trust of RAI-HC as a system. Then again, as most assessor coordinators established their appreciation for an evidence based standard assessment system, trust and understanding were cultivated with use. Hence, the more the system is used, the better it is understood and trusted.

Ongoing and regular use of the system therefore becomes a facilitator for users to move beyond completing the RAI-HC assessment and to engage in the utilization of RAI-HC. Nonetheless, understanding begins with knowledge.

Comprehensive preparation and orientation of RAI-HC was seen as a critical component for the accurate completion and the appropriate utilization of this system. A critical limitation with the interRAI instruments is the threat on their reliability and validity when used by clinicians with a limited knowledge base of the system and/or motivation to use it correctly (Landi, Onder, Tua, et al., 2001). Preparation and orientation was not standard across the three RHA's and much of what was presented either overwhelmed or underwhelmed the assessor coordinators.

Barriers to utilization of RAI-HC with respect to preparation for use are gleaned as: a) preparation focus on completion rather than completion and utilization; b) too much information on the system in one orientation session; and c) lack of case management knowledge for inexperienced assessor coordinators – RAI-HC supports case management, but completing and utilizing this system is not case management in and of itself. Coles et al. (2008) argue that clinicians can be overwhelmed with the amount of information and learning required to integrate RAI-HC into practice – "how to *do* the assessment and then how to *use* the assessment is complex and overwhelming" (p. 20).

Even though preparation for use is understood as insufficient, the assessor coordinator orientation experience provided real and potential solutions of what could lead to a preparation that would facilitate RAI-HC utilization as follows:

a) trainer knowledgeable in RAI-HC (clinical and technical aspects), and in home care itself; b) smaller groups that offer a safe and confident learning environment, and to ensure that the education corresponded with learner abilities; and c) dividing the preparation into two separate components of completion and utilization, with the utilization component provided once the completion component is mastered. Hirdes et al. (2003) contend clinicians must learn and understand first how to *do* the assessment, followed by clinicians, managers, and policy makers learning and understanding how to *use* the assessment, and that educational needs are supported in phases to achieve this.

While a thoughtful preparation potentiates the comprehensive use of RAI-HC, initial learning requires ongoing support. According to Hirdes et al. (2003), education is required upon introduction of the system and ongoing, to deal with staff turnover and system updates. As such, there was a strong need conveyed for continued education and competency testing, and feedback on the application of RAI-HC in order to potentiate its use, irrespective of the length of time one had been working with the system. Hirdes et al. (2003) emphasize the need for an effective, efficient, and ongoing education/utilization strategy to ensure clinically relevant data generation that supports “evidence based decision making at all levels of the organization” (p. 2).

Varied educational needs existed within the three RHA’s studied, depending on the experience of the user. Some needs were in the assessment completion phase with respect to coding, while others were in the utilization phase with respect to considering the client outcome data. No matter the need, it was ongoing. As Hirdes et al. (2003) describes:

> Without effective education of the staff who will actually do the MDS assessments, efforts to implement the instrument and to use its data for decision making related to clinical practice, resource allocation or the needs of the persons being served can be at risk for failure (p. 1).

And later, Hirdes' emphasis would remain on the user of the assessment. In as much as the data must be used to inform decision making within all levels of the health system, it is critical that the emphasis is on the assessment system's clinical application in order to sustain its use in day to day client care provision (Hirdes, 2006).

Within the RHA's studied, there was a sense that education for users of RAI-HC was not a priority within their RHA and as such, this was a barrier for the participant with respect to access. Ultimately, this leads one to consider whether RAI-HC itself is of little importance to the RHA, or is it that the comprehensive nature of the system is not well understood, and therefore its educational support is not understood as critical.

Participants did have the ability to access on line, self-directed updates to support continuing competency with RAI-HC, which ought to be noted as a facilitator; but in addition to this, participants cited the barriers of lack of time and competing priorities to access. Moreover, because continuing competence or ongoing education was not mandated or audited, participants were less compelled to access the available resources. In comparing the findings of Stolee et al. (2012)

with respect to integrating RAI-HC into day to day practice, and the literature review of Stolee et al. (2010), with respect to the integration of electronic health information systems (EHIS) into day to day practice, the most prominent similarity in their findings is the recommendations for mandatory education and standardized processes. Further, the lack of mandatory continuing competence may again be relative to the importance the RHA's place on the accurate completion and appropriate utilization of RAI-HC, or on the actual RHA understanding of RAI-HC and what the system has to offer.

Indeed, the participants in this study consider ongoing education to be of high priority, and in order to maximize the benefit of ongoing education, users of RAI-HC needed allotted time to access and to partake. Users require time to engage in the all-important ongoing education for RAI-HC, and adequate time to accurately complete and utilize the comprehensive assessment system to capacity. This was common amongst all users, but even more apparent in the smaller areas of the study where the assessor coordinator had multiple roles – these users find themselves with a multitude of competing priorities. In addition to ongoing education and client assessment/planning for care provision, these users were also responsible for staffing and program issues, which took priority over client assessment with RAI-HC. Assessments in these situations were often not completed prior to the beginning of service and therefore client outcome data that could potentially support clinical decisions was not even available. As a result, practices in these situations were not influenced by RAI-HC. Thus, users with multiple roles and time restraints are considered barriers to completion and utilization of RAI-HC.

Furthermore, while users agreed that RAI-HC is a time consuming process, the requirements for completion of client assessments as set out by the Ministry are difficult to adhere to. So assessor coordinators attempted to complete the assessments because they have to, but time constraints limited their ability to do anything with the assessment when risks were identified in the client outcome data. Nevertheless, there appears to be a certain level of comfort with the planning of care and provision of services without assessments, especially when clients are well known to the assessor coordinator by virtue of living in a small community where people are well known to one another. One might also question the need for such a comprehensive assessment on high functioning and stable clients. Is there a modified version that could identify needs appropriately for the higher functioning client? As such, current Ministry requirements and expectations are also seen as a barrier with respect to the utilization of RAI-HC.

Finally, with respect to time, assessor coordinators continue to engage in the completion of supplemental tools such as the Braden Scale and the Mini Mental Exam, duplicate assessment processes when combined with the completion of RAI-HC. These redundant processes impact user efficiency and time as these users continue to do what they have always done. However, this may be directly related to lack of trust in the client outcome data as discussed earlier. Thus, another barrier to moving beyond the implementation and into utilization of RAI-HC is the practice of maintaining these duplicate activities amongst assessor coordinators in home care.

While the difficulties of assessor coordinator multiple roles and competing priorities with respect to the utilization of RAI-HC is not found in the existing literature, heavy caseloads, redundant processes, and the time it takes to complete the assessment are. Kraft and Scott (2007) assert that the successful and useful transformation to MDS-HC can be threatened by: a) caseloads that are too large and complex to allow clinicians to carry out the processes as intended; and b) redundant processes (such as supplementary assessments when one is not confident with the data). And, as noted by Van Houdt et al. (2011) the length of MDS-HC causes resistance to implementation in daily practice.

Even though time (or rather lack thereof) presented many challenges to the assessor coordinators, they were willing to consider the use of technology to achieve some efficiency if their working environment supported the utilization of technology.

Implementing an electronic system is the final influencing factor in the utilization of RAI-HC as discussed by the participants in this study. If assessor coordinators did not have adequate IT support and well-functioning portable tablets or laptops, they became frustrated and reverted to completing the paper copy of the assessment in the home and later transferring the client information onto the computer in their office. This created a lack of efficiency for the users, and also eliminated their ability to access point-of-care technology – a key feature of RAI-HC.

Older assessor coordinators were perceived by some of the younger assessor coordinators as being reluctant to use technology; however, this was noted to be an assumption only. Most assessor coordinators expressed confidence with the use of technology and accepted its utilization as here to stay – both considered facilitators for the utilization of RAI-HC. Nonetheless, because electronic systems are typically not the users area of expertise, functioning equipment along with IT support are needed and expected in a timely manner; both considered barriers to utilization if they are not present.

Even though the user experience with implementing and using an electronic system was fraught with challenge, once again they could consider the value and opportunity to be had by engaging in the use of an EHIS. Thus, potential facilitators for the comprehensive utilization of RAI-HC are the necessary IT supports, portable functioning tablets or laptops, and a positive attitude amongst users. In their systemic literature review Stolee et al. (2010) identified lack of user acceptance and staff resistance one of the more prevalent barriers to using EHIS in home care, and in turn, one of the most common facilitators was noted to be portable technology. Moreover, as Hirdes (2006) maintains, supporting IT is a precondition to the successful implementation of RAI-HC.

Contextual Influences on the Utilization of RAI-HC

Three fundamental dynamics were constant throughout the findings with respect to their contextual influence on the principal factors influencing the utilization of RAI-HC. Essentially, these dynamics are considered related impacts on the utilization of RAI-HC and should be considered important if RAI-HC is to be integrated into day to day practice of home care. As outlined in the findings these dynamics are: a) the importance of a key individual to support users; b) the importance of supervisor support for users; and c) the impact of how RAI-HC and home care itself is viewed in the overall system of health care.

The key individual is viewed as one who is well versed in home care, and in a role that is dedicated for clinical education and support for the user of RAI-HC. This would optimize support for initial and ongoing user learning needs, and potentiate the creation of a common interpretation and language for the users within a region with respect to completion and utilization of the system.

Supervisory support is contingent on the supervisor engaging in and understanding RAI-HC. Without supervisor and indeed overall home care understanding and support, user accountability in completing and utilizing the system may decline. It appears that enthusiasm from supervisors within the home care program itself is motivating to users when RAI-HC and what it has to offer means something to those who direct the program.

The impact of how RAI-HC and home care itself are viewed in the overall system of health care is noteworthy. As the participants shared their beliefs in this area, it became apparent to the researcher that these perceptions had an impact on the seeming support of and in turn the optimal utilization of RAI-HC. Perceptions that: a) home care is not understood or valued and therefore not a priority in the system and hence nor is RAI-HC; b) RAI-HC is mandated and therefore believed to be supported only in principle; c) there is a lack of knowledge at the senior level within RHA’s of what home care can and cannot do; and d) the RHA is so focused on acute care that funding is pulled from home care to augment facility based services. One example where the assessor coordinators perceived a lack of support was within the scope of their roles and the expectations to *do it all* as the assessor coordinator. When users have multiple roles with respect to assessment of clients and approval of anticipated service, there is a fundamental conflict with respect to doing the assessment and advocating for services, and then turning around and approving or denying those requests.

These are all perceptions, but what it does for the user is project that lack of understanding and importance for home care, which translates to a lack of prioritization for RAI-HC and all that might entail. Thus, if home care and what this service and its employees offer the health system as a whole is not acknowledged and perceived as valued, there is potential for users of RAI-HC to simply engage in this system at a superficial level.

Even though the comprehensive utilization of RAI-HC has been shown to be encumbered for the participants involved in this study, these are users who have also identified opportunities that would help them to understand more completely the comprehensive system of RAI-HC and then to successfully utilize and apply it. Given the elimination of the factors that potentially inhibit utilization (described as barriers in the discussion), and the establishment of factors that potentially promote utilization (described as facilitators in the discussion), this is conceivable. *Table 2* outlines the factors that may potentially promote or inhibit the utilization of RAI-HC.

Table 2. Utilization of RAI-HC – Factors that Potentially Promote/Inhibit

Factors that Promote	**Factors that Inhibit**
Ongoing/regular use of RAI-HC.	User lack of understanding/trust in RAI-HC as a system.
Thoughtful preparation… ✓ Trainer knowledgeable in home care and in clinical and technical RAI-HC. ✓ Smaller groups – safe and confident learning environment/education matches learner abilities. ✓ Division of preparation into completion and utilization components. Utilization provided once completion mastered.	Lack of standard comprehensive preparation… ✓ Limited trainer or no specific trainer. ✓ Overwhelming orientation or no formal orientation. ✓ Focus on completion versus completion and utilization. ✓ Lack of case management preparation for inexperienced assessor coordinators.
Dedicated, mandated, and supported continuing competence in RAI-HC. Ongoing education specific to identified need. Access to on line, self-directed education to support continuing competency with RAI-HC.	RAI-HC education for users not prioritized. RAI-HC continuing competence not mandated or audited.
Roles that focus on assessment and care planning. Adequate time to utilize an EHIS. Elimination of redundant processes and assessments.	User lack of time and competing priorities Multiple role positions. Ministry requirements and expectations for RAI-HC assessment completion. Duplication of screening or assessments in conjunction with RAI-HC.
Projects/initiatives that utilize the client outcome data to support clinical decision making – engagement with the client outcome data for decision support.	Lack of engagement or awareness of client and population outcome data.
Acceptance of and confidence with the use of technology – positive attitude amongst users. Portable functioning tablets or laptops. Available and timely IT supports.	Lack of functioning equipment and timely IT support.
Key individual to support preparation and ongoing education. Home care program manager/supervisor engagement.	Lack of dedicated individual for focused in-house clinical support. Lack of managerial RAI-HC knowledge, understanding, and support.
Overall health system understanding and value for home care and support for the comprehensive utilization of RAI-HC. Thus in turn, attention to the client and population outcome data.	Overall health system superficial understanding and appreciation for home care and thus RAI-HC and its capacity.

The Participants, the Data, and Normalisation Process Theory

The researcher in this study suggests that while the *completion* of RAI-HC has been integrated into day to day home care practice, its *utilization* has not. RAI-HC is the mandated client assessment system in Saskatchewan home care programs. The three RHA's involved in this study adopted its use 5 – 7 years ago. As such, all participants in the study are completing the assessment by virtue of the mandate, so the study focus was to move beyond adoption and to understand whether the utilization of RAI-HC had been integrated and normalised into day to day practice. Considering the interpretation is '*no it has not'* based on the general study findings, the data as it relates to NPT is also interpreted and found to reinforce this assumption.

As identified in the literature review, NPT focuses on the work that individuals and groups do to facilitate the normalisation of a complex intervention into practice, or in other words, how research (intervention that has been proven effective) becomes embedded into practice (Murray et al., 2010). As the components of NPT were coded, analyzed, and described in the findings, it became clear that some elements of the components were absent. Murray et al. (2010) provides some questions to consider within the NPT framework, and the interpretation is founded within the context of these questions.

Coherence. Coherence or sense-making considers these questions. Is the intervention easy to describe? Does it have a clear purpose and do participants have a shared purpose of the intervention? What benefits will the intervention bring and to whom? Are these benefits valued by potential participants?

Indeed, the assessor coordinators could describe RAI-HC; they could articulate its purpose; and they could identify the benefits the system might have on their clients and in the communities in which they work. Even though one user expressed a desire to know more about why RAI-HC was chosen for the province, coherence is interpreted as essentially established with respect to the utilization and integration of RAI-HC within the RHA's studied.

Cognitive participation. Cognitive participation or engagement considers these questions. Are user groups likely to think the intervention is a good idea? Will they be prepared to invest time, energy, and work on it?

The assessor coordinators valued this system even though they recognized it was not being utilized to its potential. However, their ability to invest time and energy, as the findings suggest, is where they fell short related to the multitude of factors described earlier. Cognitive participation is therefore interpreted as lacking with respect to the utilization and integration of RAI-HC.

Collective action. Collective action or the work done to enable the intervention to happen is further delineated as interactional workability (IW), relational integration (RI), skill set workability (SSW), and contextual integration (CI), and considers these questions. How will the intervention affect the work of the user group – will it promote or impede their work? How will the intervention affect interactions with clients? What effect will it have on consultations? Will staff require extensive training? How compatible is it with current work practices? Will it fit with the overall goals and activities of the organization?

As discussed in the general findings, RAI-HC is a time consuming assessment to complete and to utilize, which added to the user's day to day workload without additional resources. So while assessments were completed for the most part, time to examine and understand the client outcome data was deemed deficient. While this did not impede the assessor coordinators work, as they often reverted to pre-intervention processes – it did not augment their work either as RAI-HC is fundamentally intended to do. RAI-HC's impact on the client was minimal as client outcome data was only sometimes shared with the client. Moreover, even though some users felt the technology in the home was a distraction to the client, these users could not identify any client that had articulated a distraction. Conversely, some clients were noted to be intrigued by the laptop and the technology of RAI-HC. Client outcome data utilization for sharing within home care or for referrals or consultation purposes outside of home care was almost nonexistent. While staff did require extensive training, this too was deficient, as identified in the general findings. However, the assessor coordinators did perceive that the skill set exists within users of the three RHA's studied. With respect to RAI-HC compatibility with current work practices and fit with the organization, there is current satisfaction amongst the assessor coordinators that RAI-HC is a very good fit with home care. Further, while it currently provides quick and easy access to client information and validation of client care needs, it has the potential (and users are optimistic) to be of even greater value if the system can be used to capacity. Collective action is interpreted as moderately achieved with respect to the utilization and integration of RAI-HC.

Reflexive monitoring. Reflexive monitoring or the formal and informal appraisal of the benefits and costs of the intervention considers these questions. How are users likely to perceive the intervention once it has been in use for a while? Will it be clear what effects the intervention has had?

The assessor coordinators shared there has been no formal evaluation of the system and they question if an evaluation could even happen given it is not utilized as intended. But again, the users do consider the system worthwhile with considerable potential. As such, reflexive monitoring is interpreted as mostly absent from the processes of NPT in the utilization and integration of RAI-HC.

Integration and normalisation are threatened when all components of NPT are not realized/established, or collectively carried out, as is interpreted within the three RHA's participating in this study. "Normalisation is defined as the routine embedding of a complex intervention in healthcare work and the normalisation process model (NPM) offers a robust structure for investigating the collective work that leads (or not) to this" (Elwyn, Légaré, van der Weijden, Edwards, & May, 2008, p. 3). Murray et al. (2011) suggest that difficulties in one area should cause alert, while difficulties in all four areas require serious reconsideration of the intervention. As such, it appears that correlating the data to NPT demonstrates that the participants working with RAI-HC in this study have yet to integrate or to normalise their utilization of RAI-HC into day to day practice. Thus reinforcing an assumption gleaned from the general findings of the study.

Chapter VII

CONCLUSION

Advancement of Knowledge

Based on the interpretation of the information obtained from the participants, and considering NPT, it is noted that while the implementation of RAI-HC has been well established as the home care assessment tool, its full utilization has yet to be integrated or *normalised* into day to day home care practice within the RHA's studied. Considering the primary purpose of this study was to move beyond adoption of RAI-HC, and the research question 'what are the factors that promote or inhibit the successful implementation, utilization, and embedding/integration of RAI-HC within home care services' has been explored, how has knowledge been advanced?

The analytical framework that evolved from the literature review and the theoretical perspective (depicted in the design of the study and found in *Figure 1*), outlined facilitators and barriers that primarily have impact on the implementation/adoption phase, the initial phase of the progression to integration/embedding of RAI-HC into day to day practice. What has been learned in this study from the clinician or assessor coordinator perspective is that three RHA home care programs in Saskatchewan face similar barriers and facilitators potentially impacting the utilization/integration phase as well. The study has also shown that the implementation/adoption of a system can be carried out when it is mandated, even with substantive challenges, but its utilization for full effectiveness and its integration into practice is stalled dramatically when those challenges are not addressed.

Moreover, the following are new perspectives which could now be situated in an analytical framework to describe what potentially impacts the implementation, utilization, and integration of client assessment and information systems such as RAI-HC into day to day practice: a) the perceptions of less than desirable RHA support of home care and how that in turn relates to the support of RAI-HC utilization; b) the challenge of multiple roles placed on assessor coordinators; c) the significance of a key clinical support dedicated to home care; and d) the lack of standardized education and mandated continuing competency.

Finally, even though NPT was considered in the study in the context of analyzing practice and congruency with general findings, NPT itself has been reinforced as a theory that can help groups understand and facilitate the normalisation of a complex intervention into practice, or in other words, how research (intervention that has been proven effective) becomes embedded into practice (Murray et al., 2010).

Implications for Practice

As outlined in the study introduction, RAI-HC has been implemented in all RHA home care programs in Saskatchewan. As such, it is a substantive practice change to move from completing a paper assessment questionnaire, to completing *and* utilizing a comprehensive electronic client assessment and information system such as RAI-HC. Nonetheless, the utilization of RAI-HC in the assessment and care planning of community clients has been shown to optimize their care and their health outcomes. Thus, the comprehensive utilization of RAI-HC is important to the community population and indeed the health system, yet it remains underutilized in the three RHA's involved in this study. Practice change with respect to utilizing RAI-HC and considering the client outcome data to support clinical decisions and program planning is therefore desirable. The consistency of factors that have been interpreted to potentially promote or inhibit the comprehensive utilization of RAI-HC may well be fundamental to optimize practice change. Therefore, three recommendations are for consideration:

1. Leadership within RHA's and home care programs ought to reflect upon the overall support that is provided to the users of RAI-HC to include:
    a) A review of the program's orientation and ongoing education practices to include continuing competence and audits.
    b) A review of RAI-HC clinical and technical support.
    c) A review of the devices (laptops/tablets) that are in use for the completion of RAI-HC.
    d) A review of the role of the assessor coordinator and their role priorities.
    e) A review of business practices with RAI-HC to streamline and reduce workload/process duplications.
    f) A review of how well RHA leadership understands RAI-HC and all that it can offer the health system with respect to optimizing community care.

2. Users of RAI-HC ought to reflect upon the challenges and opportunities of utilizing RAI-HC, and consider what it is they can do to change/improve their practice by:
    a) Embracing RAI-HC preparation for use and ongoing education when it is offered and/or available in order to build understanding and trust of RAI-HC as a system that can support clinical decision making.
    b) Embracing the habitual utilization of RAI-HC in order to build self confidence in the utilization of RAI-HC.
    c) Eliminating redundant practices such as duplicate assessments.
    d) Utilizing available devices (laptops and/or tablets) and consider the benefits of point-of-care technology and how this information can empower the client and support the user's practice.
    e) Considering championing the utilization of RAI-HC, and supporting others in their learning and practice.
3. Finally, considering the widespread adoption of RAI-HC in Saskatchewan, and considering this system is applied and potentially utilized by a variety of health professionals, the Ministry of Health, professional regulatory bodies, and RHA leadership in Saskatchewan ought to advocate for the implementation of a RAI-HC educational component in the province's post-secondary health sciences education.

Limitations and Future Research

This study has been limited by the use of a single data source (participant interviews) and a limited range of participants with respect to professional background of the assessor coordinators who utilize RAI-HC. Both limitations have the potential to threaten credibility of findings. Nonetheless, some variance in professional background, areas of practice responsibility, work settings, and participant experience with RAI-HC did exist, thus providing some counterbalance to these limitations. Further, the settings were all small population centres creating an additional limitation with respect to the lack of the larger population centre representation. However, there were notable differences in the populations and caseloads, thus some variance did occur. Kalengayi, Hurtig, Ahlm, and Ahlberg (2012) utilized a wide range of participants in different settings so information could be checked across informants, providing some measure of triangulation. An additional counterbalance for identified limitations occurred with purposeful sampling of participants. Even though "purposive sampling does not confer transferability, it does provide in depth information from different individuals representing valuable perspectives, which also strengthens findings" (Kalengayi et al., 2012, p. 15).

In considering implications for future research, the limitations outlined may well influence further studies in the comprehensive utilization of RAI-HC. The examination of the larger population centres where RAI-HC has been implemented, and the broader professional background of the assessor coordinator may provide additional perspectives and useful information for the Province of

Saskatchewan. One might also consider a study that compares users of RAI-HC who have client focused roles, versus users who have client and staff focused roles – does the utilization of RAI-HC differ in these groups? Implications for future research should also consider an ongoing focus on the client, and whether the full and appropriate utilization of RAI-HC impacts quality of life and maintenance of health considering the ever increasing emphasis of aging in place in the community. Ultimately, electronic client assessment and information systems are here to stay. The more one can learn about the successful utilization and application of these systems, the better the utilization and application becomes.

NPT is a theory that should be considered for continued development and insight. To this end, future studies in relation to this theory would be substantive. The more that NPT is applied and considered within the context of implementing and utilizing complex and useful interventions, the more likely those interventions will be integrated or normalised – practice strengthens with theory and evidence. As health care systems embark on new and comprehensive initiatives, they must be useful and appropriate, and in turn influential on the quality of care for the client and indeed the community – understanding and application of theory may support this.

Concluding Thoughts

The Saskatchewan Ministry of Health remains committed to seniors with targeted outcomes identified in their plan for 2014-2015:

> The population of seniors in Saskatchewan continues to grow. Seniors and their families have a desire to see a shift from institutional care to more community supports. With better supports in place for seniors, we expect to see improved health status and a reduced need for emergency department visits, admission to hospital, long term care and/or personal care homes. By March 31, 2020, seniors who require community support can remain at home as long as possible, enabling them to safely progress into other care options as needs change (Government of Saskatchewan, 2014, p. 5).

The literature has shown that the comprehensive utilization and integration of RAI-HC into home care practice and care delivery is a critical component to the optimal health care of community clients, and ultimately to the health care system. Fundamentally, RAI-HC can help Saskatchewan achieve its goal.

This qualitative interpretive description has furthered the understanding of the perceptions and the experiences of those professionals who work with RAI-HC, and what may promote or inhibit the comprehensive utilization of RAI-HC and its integration into their day to day home care practice, substantive phases central to RAI-HC effectiveness.

Even though the comprehensive utilization of RAI-HC has been shown to be encumbered for the participants involved in this study, these same participants are committed to the potential value of RAI-HC and what it can offer with respect to meeting client and population needs in the community. The participants identified this value time and again throughout their interviews, and gravitated to the client outcome data more often than they realized. These users would like the opportunity to understand fully the comprehensive system of RAI-HC and then to successfully utilize and apply it. Given the elimination of the factors that potentially inhibit utilization, and the establishment of factors that potentially promote utilization, this is conceivable.

While this inquiry is not transferable, it is anticipated that the knowledge gained from the valuable perspectives within this study may indeed broaden or deepen the understanding of what is desirable as groups pursue the incorporation of technology such as electronic client assessment and information systems into health care and day to day clinical practice – knowledge that can in turn optimize the use of these systems that can benefit clients, populations, and the health care system as a whole.

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Appendix A

Research Description and Invitation to Participate

If you are an Assessor Coordinator (with a minimum of six months experience utilizing RAI-HC/MDS-HC); or a Home Care Manager/Supervisor, you are invited to participate in a research study entitled:

Beyond Adoption:
Exploring the Utilization and Integration of RAI-HC

Please read this form carefully, and feel free to ask questions you might have.

Researcher:
Colleen R. Toye RN BSN
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Research Supervisor:
Dr. Caroline Park RN PhD
Associate Professor
Athabasca University

Purpose:

The primary purpose of this study is to identify the factors that promote or inhibit the successful implementation and utilization of Resident Assessment Instrument-Home Care (RAI- HC), also known as Minimum Data Set-Home Care (MDS-HC), within home care services' day to day practice in Saskatchewan home care programs.

Considering the implementation of RAI-HC is relatively new to Saskatchewan home care, this study will:

a) explore perceptions of the impact RAI-HC has had on home care;
b) explore perceptions of the value of RAI-HC application in home care;
c) explore the extent to which RAI-HC is utilized with respect to clinical decision making, care planning and overall program planning, or in other words, explore the extent to which RAI-HC is considered integrated or a "routine aspect" of home care practice; and,
d) explore what facilities or impedes this integration of RAI-HC into home care practice.

Procedure:

The data collection for this study will include two interviews with the following participants from three separate Health Regions:

a) Assessor Coordinators representative of the variety of professionals who utilize RAI-HC and representative of urban and rural home care;
b) Home Care Managers/Supervisors

As a participant you will have an initial interview with the researcher, lasting approximately 2 hours. A second interview is planned where you will have an opportunity to confirm the initial overall themes and patterns the researcher has derived from the first interviews, and in addition you will have an opportunity to provide any additional information you believe will be useful.

The interviews will be scheduled at a time that is mutually convenient for you and the researcher. The interviews will be in private and tape recorded. You will have the opportunity to read the transcription of the interviews and make corrections if necessary. By participating in the interviews, you will be providing valuable information about the implementation and utilization of RAI-HC within home care day to day practice.

A synthesis of all data collected and analyzed will result in general overall themes and concepts with respect to the purpose of the study. These concepts and themes will be presented as results and discussion in the researcher's Thesis document. In addition, a summarized fact sheet of the themes and concepts will be shared with participants, home care programs in Saskatchewan, and the Saskatchewan Ministry of Health.

Privacy and Confidentiality:
Steps will be taken to maintain/respect your privacy and confidentiality throughout the interview. The names and contact information of the participants will be deleted once the data collection and analysis process has been completed. A pseudonym/numerical code will be used to identify you, both in the analysis and in reports. All data will be stored in password-protected files or in a locked cabinet at the researcher's home office. Only the researcher and the research supervisor will have access to the data. Once the study has been completed and results have been compiled, the data will be retained for future research use for five years. This data will not have any identifiers except pseudonyms/numerical code.

Right to Withdraw:
Your participation is voluntary, and you are free to answer only those questions that you are comfortable with. There is no guarantee that you will personally benefit from your involvement. You may withdraw from the research study for any reason, at any time.

Potential Benefits:
It is anticipated that the information gained in this research will be instrumental in understanding the impact of RAI-HC within home care and the critical factors that facilitate and impede the application, utilization and integration of RAI-HC into

day to day home care practices. Other home care programs may benefit from this understanding, and individual participants may glean a deeper understanding of RAI-HC and its utilization.

Potential Risks:
There is minimal risk that the eventual identity of the participating Regional Health Authorities may become known.

Follow-Up or Debriefing:
The researcher will send a fact sheet concerning the results of the study when it is complete. If you are interested in receiving a copy, please contact the researcher at 306-445-0148.

Questions:
If you have any questions concerning the research study, please contact the researcher at the phone number or email address provided.

This study has been reviewed by the Athabasca University Research Ethics Board. If you have any questions concerning your rights as a possible participant in this research, please contact Athabasca University Research Ethics Board at 1 (780) 675 6718 or rebsec@athabascau.ca.

Thank you for taking the time to review the research description and invitation. It is my hope you will be interested in participating in this study. Once a pool of interested individuals has been established, actual study participants will be selected from this pool in order to ensure representation of the full range of professionals (Assessor Coordinators and Home Care Managers) who work in urban and rural home care areas.

If you are interested in participating, please contact me (Colleen Toye) by phone @ 306 445 0148 or email at jc.toye@sasktel.net . I will ask you the following brief questions in order to select the range of professionals.

(Please note if you an interested Assessor Coordinator, it is important you have used RAI-HC for a minimum of six months).

1. If you are an Assessor Coordinator, what is your professional background/title?

RN?
Social Worker?
LPN?
Other?

2. As an Assessor Coordinator have you utilized RAI-HC for a minimum of six months?

3. Are you a Home Care manager/supervisor?

4. Do you work in Urban home care? Rural home care? Both?

Thank you again for considering participation in this study.

Colleen R. Toye
306 445 0148
jc.toye@sasktel.net

Appendix B

Interview Questionnaire/Tool

Beyond Adoption
Participant Interview Questions (Interview one - core)

Core questionnaire is founded in normalisation process theory and appreciative inquiry. The second questionnaire to be developed will be based on evolving data analysis and seeming patterns in the analysis. The questions as outlined are intended to stimulate conversation and engagement of the participant. The conversation is expected to be flexible and the questions are intended to provide “some” structure only.

Introduction/ice breaker

1. Welcome!
    a. Introduce self and a brief overview of study. Discuss interview tool and questions. Make known the use of the tape recorder and that the participant can ask questions at any time and indeed decline to answer any questions. Remind participant of confidentiality and privacy with respect to assigning codes to interviews and storage of any written documents and tape recordings. Ensure participant comfort and that fluids/breaks are available.

2. To begin, I would like to understand a little more about your professional background and experience.
    a. Professional background and education
    b. Age
    c. Overall experience
    d. Experience with home care
    e. Current position in home care
    f. Length of time using RAI-HC
    g. Size of team and number of close working colleagues
    h. Size of caseload and travel required
    i. Your usual reaction to a new intervention or technology
        i. I am usually one of the first to try it out
        ii. I will try it once others have tried it with success
        iii. I will try it once many have used it with success
        iv. I am usually one of the last to use new technology

Coherence (sense-making)

1. What is your understanding of the reasons for implementing and using RAI-HC in your home care program?
    a. How was this presented to you?
    b. What did you value most about your initial introduction to RAI-HC?

2. Can you describe ways in which RAI-HC data outputs (outcome measures, risk triggers, and CAPS) might be used in your clinical practice decisions and care planning?
    a. How does this differ from your previous care planning practices?

3. Do you agree with the use of RAI-HC?
    a. Why or why not?

4. In what ways are you required to use RAI-HC?
    a. Do you understand and fulfill those requirements? Why/why not
    b. Do you believe the requirements to be important/valid?
    c. What would most encourage you to follow the requirements?

5. What (if any) potential benefits would ensue from using RAI-HC in your day to day practice?
    a. How would you rate the importance of using RAI-HC? For clients? For the community as a whole?

Cognitive Participation (engagement)

1. Would you say that your colleagues are equally interested in utilizing RAI-HC?
    a. What do you believe they value most with this system?
    b. Are there key individuals in you organization who advocate the use of RAI-HC and in particular the client outputs (outcome measures, risk triggers, and CAPS) and the aggregated population data (population levels re pain, depression, cognition etc.).
    c. In what ways to these individuals advocate the utilization of RAI-HC?

2. In what ways might you see yourself working with other assessor coordinators or other members of the team with respect to RAI-HC and the data outputs?
    a. For care planning?
    b. For client conferencing?
    c. For referral purposes?
    d. For presentations and admission into long term care?
    e. For quality improvement initiatives, such as falls prevention, pain reduction, skin breakdown prevention or others.
    f. What is it about RAI-HC that you value the most with respect to sharing information with other health team members? RAI-HC and its impact on teamwork?
    g. In what ways has your communication and direction with care providers such as HHA who provide direct care been augmented by your use of RAI-HC for client assessment and care planning?

3. Now that you and your colleagues have been using RAI-HC what do you think needs to be done to make this system an on-going and integral part of home care and client care?

4. What is your perception of the impact on clients as you use RAI-HC?
    a. How do your clients react to technology (the laptop) in the home? Has this had an impact on your level of interaction with your clients?
    b. How has your ability to see outcomes and client risks at point-of-care impacted your care planning with your client?
    c. Do your clients seem to “trust” the electronic assessment?
    d. What do you value most about RAI-HC and your client interactions?

Collective Action (work done to enable the intervention to happen)

1. How were your prepared in the use of RAI-HC?
    a. In the completion RAI-HC?
    b. In the utilization of RAI-HC?
    c. What do you value most about your preparation in the use of RAI-HC?
    d. What small changes do you think could make a difference in the preparation?
    e. What is your perception of the skill set needed to utilize RAI-HC and to what degree does this exist in your organization?

        i. For yourself?
        ii. For your colleagues?

2. In the utilization of RAI-HC can you describe whether or not and in what ways you have been able to utilize RAI-HC including the data outputs (outcome measures, risk triggers, and CAPS)
    a. What is it that you value the most about working with the outcome data?
    b. (if not using outcome data) What would most encourage you to utilize the outcome data that is generated by RAI-HC?
    c. How confident are you in your ability to understand and utilize the outcome data in your clinical decision making/care planning/program development?

3. How confident do you feel in your colleagues/supervisors efforts and abilities to understand and utilize the outcome data in clinical decision making/care planning/program development?
    a. How would you assess their level of skill with RAI-HC?

4. Has the implementation of RAI-HC been supported by your health region/supervisors?
    a. In what way has this support been demonstrated?
    b. Do you believe your organization values the use of RAI-HC?

Reflexive Monitoring (formal and informal appraisal of the benefits and costs of the intervention?)

1. To your knowledge, have formal and/or informal evaluation methods been used to assess the implementation of RAI-HC?

2. What are your colleagues' and your views at this point in time on the effectiveness of using RAI-HC?

3. Would your colleagues and you agree or disagree that the use of RAI-HC in home care has been worthwhile?
    a. Why or why not?
    b. What is your perception of the overall "fit" of RAI-HC with home care services and the increased emphasis on home care?
        i. If positive, in what ways?
        ii. If not positive why not?

4. Are your colleagues and you able to make changes or provide input into how you make use of RAI-HC with your clients and your team as you gain experience with its use?
    a. In what ways?

Closing:

1. Is there anything you would like to comment on that we have not discussed?

Appendix C

Secondary Questionnaire/Tool

General Questions

XXXXXX

Thank you for participating in the second portion of the interview process for "Beyond Adoption". The following questions were identified for consideration following the transcription of the initial interviews

1. Many of the participants speak about "not using RAI-HC to potential".
    a. What does that mean to you?

    b. How does "using to potential" translate to
        i. Your home care program?

        ii. Your RHA?

        iii. To the Ministry of Health?

Additional Questions

Additional questions as they pertained to each participant were added if missed in the first interview and deemed important to ask here.

Appendix D

Preliminary Findings/Participant Response

Beyond adoption: Exploring the utilization and integration of RAI-HC

The researcher findings of this qualitative interpretive description have been based upon the responses of the twelve individuals participating in the study.

a) The participants shared their perceptions of the current state of RAI-HC delineated in the following areas of focus:

- The significance of clinical judgment
- Care planning
- Impact of aggregated data
- LTC and RAI-HC
- Challenges of utilization
- Opportunities (current and potential) for utilization

Overall, the participants identified that RAI-HC is not being utilized to its potential or as intended, and that for the most part, client outcome data is considered for LTC acceptance and prioritization rather than its purpose to support decision making in home care.

b) Data coding and analysis lead to the development of five influencing factors (themes) relating to this current state of utilization of RAI-HC as:

- Understanding RAI-HC
- Preparation for use
- Ongoing education

- Time
- Implementing electronic systems

c) Further, with continued analysis of the data, there came to light three fundamental dynamics that gave context to the five themes described:

  - The importance of a key individual to support users
  - The importance of supervisor support for users
  - The impact of how RAI-HC and home care itself is viewed in the overall system of health care

These dynamics helped the researcher understand additional interconnecting influences on the utilization of RAI-HC. Throughout, the participants described their challenges, and as well what they gleaned as opportunity and potential with RAI-HC.

In addition to the general findings, the data were also coded and analyzed in relation to the elements of normalisation process theory (NPT) as follows:

- Coherence (meaning and sense making by participants)
- Cognitive participation (commitment and engagement by participants);
- Collective action (the work the participants do to make the intervention happen)
- Reflexive monitoring (formal and informal appraisal of the benefits and costs of the intervention)

Based on the information obtained from the participants and considering NPT, it is noted that while the implementation of RAI-HC has been well established as the home care assessment tool, its full utilization has not been integrated or "normalised" into day to day home care practice within the RHA's studied. The themes as emerged from the data analysis are depicted in the ***Figure 1.*** Facilitators and barriers to the utilization of RAI-HC are depicted in ***Table 1.***

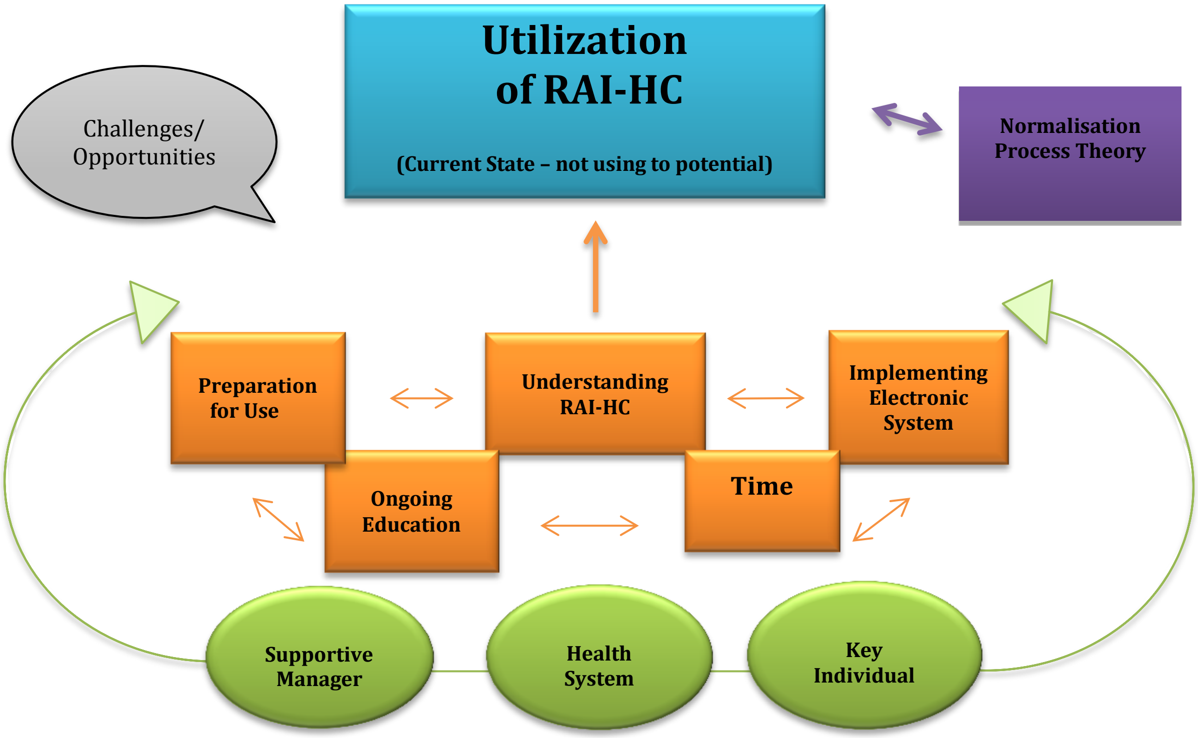

***Figure 1*. Themes Emerged from the Interviews**

Table 1: Utilization of RAI-HC – Factors that Facilitate and Impede

Factors that Facilitate	**Factors that Impede**
Ongoing/regular use of RAI-HC.	User lack of understanding/trust in RAI–HC as a system.
Thoughtful preparation… ✓ Trainer knowledgeable in home care and in clinical and technical RAI-HC ✓ Smaller groups – safe and confident learning environment/education matches learner abilities ✓ Division of preparation into completion and utilization components. Utilization provided once completion mastered.	Lack of standard comprehensive preparation… ✓ Limited trainer or no specific trainer ✓ Overwhelming orientation or no formal orientation ✓ Focus on completion versus completion and utilization ✓ Lack of case management preparation for inexperienced assessor coordinators
Dedicated, mandated and supported continuing competence in RAI-HC. Ongoing education specific to identified need. Access to on line, self-directed education to support continuing competency with RAI-HC.	RAI-HC education for users not prioritized. RAI-HC continuing competence not mandated or audited.
Roles that focus on assessment and care planning. Adequate time to utilize an EHIS. Elimination of redundant processes and assessments.	User lack of time and competing priorities Multiple role positions. Ministry requirements and expectations for RAI-HC assessment completion. Duplication of screening or assessments in conjunction with RAI-HC
Projects/initiatives that utilize the client outcome data to support clinical decision making - engagement with the client outcome data for decision support.	Lack of engagement or awareness of client and population outcome data.
Acceptance of and confidence with the use of technology – positive attitude amongst users. Portable functioning tablets or laptops. Available and timely IT supports.	Lack of functioning equipment and timely IT support.
Key individual to support preparation and ongoing education. Home care program manager/supervisor engagement.	Lack of dedicated individual for focused in-house clinical support. Lack of managerial RAI-HC knowledge, understanding and support
Overall health system understanding and value for home care and support for the comprehensive utilization of RAI-HC. Thus in turn, attention to the client and population outcome data.	Overall health system superficial understanding and appreciation for home care and thus RAI-HC and its capacity.

Participant Response to Preliminary Findings

1. Thanks Colleen. It was a pleasure to meet you. The findings definitely resonate with me and within our scope here at XXXXXX Homecare. May I share these findings with our CM group? I think they would find this both reassuring and valuable. Thanks again

2. Hi Colleen,
   Thanks for sharing your findings – I would say your findings are definitely consistent with what I'm experiencing. Since my interview with you, we have had a home care review of Caps and Outcomes with XXXXXX – she is more familiar with RAI-LTC but it was still beneficial. In September we plan to have a review of the entire MDS. XXXXXX is our official "go to person" and these little changes are all appreciated in our home care offices.
   Hope you enjoy your summer now that all your hard work is finished.

3. This looks excellent Colleen. It certainly does seem consistent with my experiences/use of the RAI-HC.
   Thank you for allowing me the opportunity to be a part of your study.
   Will this be forwarded to anyone within the realm of Homecare for future consideration??

4. Thanks for sending out, I feel you have summed up ideas well. It would appear that most of your participants have similar view points.

5. Hi Colleen,
   Excellent! Yes it is consistent with what I have experienced and in some ways I'm kind of glad that others also see things the same way. I guess this gives us a concrete foundation to begin making some changes. I am pleased to say that XXXXXX is moving forward with formal MDS education, likely starting in the fall. There will be dedicated instructors and support for new and experienced assessor coordinators, so happy we accomplished this. Thanks for all of your hard work!

Appendix E

MEMORANDUM

DATE:	**August 24, 2013**
TO:	Colleen Toye
COPY:	Dr. Caroline Park (Supervisor) Alice Tieule, Secretary, Athabasca University Research Ethics Board Dr. Vive Kumar, Chair, Athabasca University Research Ethics Board Eileen Paluck, Ass't to Dean, FHD
FROM:	Dr. Sharon Moore, CNHS Research Ethics Review Sub Committee
SUBJECT:	**Ethics Proposal #CNHS-13-02-Colleen Toye:** *"Beyond Adoption: Exploring the Utilization and Integration of RAI-HC"*

Thank you for providing the additional information requested by the Centre for Nursing & Health Studies (CNHS) Research Ethics Review Committee.

I am pleased to advise that the above-noted project has now been awarded **APPROVAL TO PROCEED**. **You may begin your research immediately once you have your relevant health regions' ethics approval in place. Please forward that approval for file purposes only, once you have received it.**

This approval of your application will be reported to the Athabasca University Research Ethics Board (REB) at their next monthly meeting. The REB retains the right to request further information, or to revoke the interim approval, at any time.

The approval for the study "as presented" is valid for a period of one year from the date of this memo. If required, an extension must be sought in writing prior to the expiry of the existing approval. **A Final Report is to be submitted when the research project is completed.** The reporting form can be found online at http://www.athabascau.ca/research/ethics/

As implementation of the proposal progresses, if you need to make any significant changes or modifications, please immediately forward this information along with an e-mail of support from your research supervisor for the changes, to the CNHS Research Ethics Review Committee via rebsec@athabascau.ca for further review.

I wish you all the best with your research.

Appendix F

RHA Ethics Board Approvals (De-Identified)

From: XXXXXXXXXX
Sent: Wednesday, September 18, 2013 3:06 PM
To: Toye, Colleen PNRHA
Cc: XXXXXXXXXX
Subject: RE:

Hi Colleen this e-mail will serve as notice that your request to conduct research in the XXXXXXXX Health Region has been approved based on the information that you have supplied.

You can contact XXXXXXXXXXX, Regional Director of Home Care XXXXXXXXX for contact information for Home Care staff.

Thank you

XXXXXXXX
Chair Ethics Committee
XXXXXXXXX Health Region

XXXXXXXX

From: XXXXXXXXXX
Sent: Tuesday, September 17, 2013 2:28 PM
To: Toye, Colleen PNRHA
Subject: RE: Ethics Committee

Hi Colleen, the ethics committee met September 5th - I just got your e-mail today as I have been away. Please proceed with your study. Glad to hear there is some interest. Thanks, XXXXXX

From: XXXXXXXXXX
Sent: Tuesday, September 10, 2013 5:30 PM
To: Toye, Colleen PNRHA
Cc: XXXXXXXXXX
Subject: RE: ethics approval for research in XXXXXXX Health Region

Hi Colleen – thanks for sending & it is fine to have XXXXXXXXXX participate in your study. Please let us know what you might need us to do!

Thanks

XXXXXXXXX

Appendix G

Informed Consent

Research Study – Beyond Adoption: Exploring the Utilization and Integration of RAI-HC

Colleen R. Toye, RN BSN, Masters of Nursing Student

Consent to Participate:

I have read and understood the research description and invitation provided. I have had an opportunity to ask questions and my questions have been answered. I consent to participate in this research study, understanding that I may withdraw my consent at any time. A copy of this consent has been given to me for my records.

______________________________	______________________________
(Name of Participant)	(Date)
______________________________	______________________________
(Signature of Participant)	(Signature of Researcher)