

**The Development of a Workload Measurement Resource for
Community Health Nurses within the Central Regional Integrated
Health Authority of Newfoundland and Labrador**

by

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Abstract

Background: Over the past decade, the roles of Community Health Nurses (CHNs) have changed significantly. Patients who are discharged from hospitals and referred to CHNs have more complications and it is important to determine ways to examine the means by which the CHN can meet the needs of these clients. CHNs have requested a review to determine if staffing levels reflect the quantity and complexity of the client's they are responsible for. Currently a workload measurement tool does not exist in the Central Regional Integrated Health Authority (CRIHA) of Newfoundland and Labrador (NL). Therefore, it was determined that a need for the development a workload measurement tool to use in community health in the CRIHA of NL was necessary.

Purpose: The purpose of this practicum project was to develop a workload measurement tool to help better understand the caseloads of CHNs within the CRIHA of NL.

Methods: Two methods were used; a literature review and consultations with key stakeholders. The framework used to guide this practicum project was the Community Health Nurses of Canada (CHNC) Professional Practice Model and Standards of Practice. In addition, a description of how the advanced practice nursing (APN) competencies were demonstrated by the practicum student is provided.

Results: Several workload measurement tools were identified in the literature. The Client Audit Community Care Workload Measurement Tool (CACCWM) previously developed by Cawthorne and Rybak (2008) in Stoney Plains Alberta was adapted to demonstrate the workload of CHNs in CRIHA of NL. Additionally, based on consultations with CHNs and the literature review an extra duties sheet was developed as part of the workload measurement tool.

Conclusion: With the introduction and use of the workload measurement tool for CHNs in CRIHA, opportunities to improve staffing levels may be identified to reflect the quantity and complexity of clients on the CHNs caseload. The four APN competencies were demonstrated throughout this practicum project.

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Table of Contents

Abstract.....	ii
Acknowledgment.....	iv
Introduction.....	7
Objectives.....	8
Literature Review Summary.....	8
Purpose.....	8
Methods.....	9
Results.....	9
Consultation Summary.....	12
Purpose.....	12
Methods.....	13
Results.....	14
Developed Resources Summary.....	17
Theoretical Framework.....	19
Proposed Implementation.....	20
Proposed Evaluation.....	21
Advanced Nursing Competences.....	22
Summary.....	24
References.....	26
Appendices.....	27
Appendix A- Literature Review.....	28
Appendix B- Summary Tables.....	41

Appendix C- Invitation to Participate	49
Appendix D- Consultations with CHNs.....	50
- Consultation with Managers.....	51
Appendix E- Consultation report.....	53
Appendix F- Developed Resources.....	65
Workload Measurement Tool.....	65
Extra Duties Sheet Workload Sheet.....	66
Workload Measurement Tool Instructions.....	67

Canadians living in rural areas are older than those in urban areas. Approximately one third of all seniors in Canada reside in rural regions and 15% of the population is over 65 years of age (Dandy & Bollman, 2008). It is projected that by the year 2038 approximately one third of the overall population in NL will be over the age of 65 (Health Profile, 2014). More specifically the Central Regional Integrated Health Authority (CRIHA) located in Central Newfoundland and Labrador (NL) is considered a predominantly rural region with 18,100 people over the age of 65 (Health profile, 2014). Therefore, there is a growing need to ensure that healthcare is delivered and organized to meet the needs of this increasing older population.

According to Turcotte (2014), many older Canadians have unmet care needs and it is predicted that as the baby boomer generation continues to age those unmet care needs will continue to increase. A high percentage of seniors choose to stay in their own homes longer and often require the supportive services provided by CHNs to meet their needs and enable them to stay home (Turcotte, 2014). Specifically, the CRIHA has seen a 249% increase in home supports from 2006 to 2014 (Ropson, 2014). As a result, CHNs in Central NL are seeing an increase in the amount of seniors they see daily and have requested a review of staffing levels to reflect their workload.

A workload measurement tool collects data that can be used to determine, validate and monitor specific details of patient care needs and to establish standard times needed to complete the care relative to available staff time (Canadian Nurses Association, 2004). A literature review revealed that there have been numerous workload measurement tools developed for a variety of acute care settings; however, there was little transferability to the community health setting. There were two workload measurement tools used for

community health found in Canada: one used in Alberta (Cawthorne & Rybak, 2008) and another used in Ontario (O'Brien-Pallas et al., 2001). In addition, the CRIHA is not currently utilizing a workload measurement tool for community health. Therefore, the overall goal of this practicum project was to develop a workload measurement tool to better understand the quantity and complexity of clients on CHN caseloads in the CRIHA.

Objectives

The following objectives were addressed as part of this practicum project:

- 1: To conduct a literature review to identify relevant research related to workload measurement tools used in community health provincially, nationally and globally and to identify a framework to guide the completion of this project.
- 2: To conduct consultations with key stakeholders in the CRIHA of NL to identify relevant information about CHN caseloads to help guide the development of a workload measurement resource.
- 3: To develop a workload measurement resource based on the literature review, the consultations with key stakeholders and the identified framework.
- 4: Demonstrate advanced practice nursing competencies while completing this practicum project (i.e., clinical, research, leadership and consultation and collaboration).

Literature Review Summary

A brief literature summary of the literature review is found below. A copy of the full literature review report is located in Appendix A.

Purpose

The purpose of the literature review was to identify workload measurement tools

that have been developed and/or previously used in the area of community health nursing worldwide, to explore the effects of the aging population on CHN caseload, to guide the development of the questions for the consultation with colleagues, and to identify a framework to guide the development of the resource.

Methods

The CINAHL and PubMed databases were searched, as well as relevant websites including the CNA, Statistics Canada and Google Scholar. The searches were limited to the English language, and publication years 2000 to 2015. The search terms included: community health, workload measurement tools, rural areas, community health nurses, public health nurses, seniors and benchmarks. Only articles that discussed the use of workload measurement tools in rural areas for CHNs were included in the literature review. The articles were retrieved electronically from the Memorial University of Newfoundland library.

Results

The CRIHA of NL captures workload information from CHNs electronic documentation in the Client Referral Management System (CRMS); this documentation system is used throughout NL (Electronic Health Record, 2013). The Eastern Regional Integrated Health Authority (ERIHA) also has a service provider workload which estimates each nurse's activities but is not connected to the CHN documentation system (Follett & Noel, 2010). The information provided by Follett and Noel (2010) regarding workload measurement in NL was identified within a PowerPoint presentation completed within the ERIHA.

In Canada, two articles were located that examined workload measurement tools in community health and several papers from the CNA and Statistics Canada provided valuable information. Cawthorne and Rybak (2008) developed and implemented a workload measurement tool called the Client Audit Workload Assessment Tool (CAWAT) which is used to review CHNs caseloads in rural Alberta. This tool not only improved the understanding of workload associated with each client on a caseload, it contributed a greater understanding of the most appropriate case mix and other work related issues identified by staff. Within Ontario, a group of researchers' evaluated results from a workload measurement tool called the Client Care Delivery Model for community home nursing (O'Brien-Pallas et al., 2001). The results from the evaluation revealed factors that influence nursing utilization and the complexity of community home nursing delivery system. They concluded that factors such as, case complexity, visit time and number of visits, have been underscored and need to be addressed (O'Brien-Pallas et al).

Globally, workload measurement tools were identified in Australia, Scotland, and England. In Australia, Willis, Henderson, Toffoil and Walter (2012) developed and evaluated the Staffing Methodology Equalization Tool (SMET). This tool proved to be most useful for CHNs providing caseload management and identified many factors contributing to the increasing size of CHNs caseloads. One major factor that has contributed to the increase is a shortage of acute care beds leading to increased hospital discharges with a higher level of patient acuity (Willis, Henderson, Toffoil & Walter).

In Scotland, The Scottish Nursing Workload Measurement Tool (SNWLT) was developed by CHNs to provide a consistent approach to nursing workload (Grafen & Mackenzie, 2015). The SNWLT assisted CHNs to identify workloads and increased

communication with management to ensure sufficient human resources were available to satisfy patient demand. If the SNWLT is used daily it can provide an adequate representation of workload and to ensure a consistent approach to measuring nursing workload.

A study completed by Byrne, Brady, Horan, Macgregor and Begley (2007), in Scotland explored the relationship between dependency levels of seniors on a CHNs caseload and the amount of nursing participation required. The Community Client Need Classification System (CCNCS) demonstrated that as the level of the need of the senior increased so did nursing time. The CCNCS also identified that the seniors classified as high need were usually in receipt of home support services.

In England, the Cassandra Matrix Tool was identified. This is a workload measurement tool that was originally designed as a paper-based tool to capture what nurses do, where these actions occur, who the actions are done for and the work CHNs had left undone due to time constraints (Jackson, Leadbetter, Manley, Martin & Wright 2015). The workload measurement tool was originally designed for use in a specialty acute care area but was piloted for the transferability in the specialty area of community nursing as well (Jackson et. al, 2015). Data collected from the Cassandra Matrix Tool was evaluated and it was identified that the tool could potentially be adopted and used within the community setting. Preliminary findings suggested it could be a valuable resource that promotes quick and easy comparative analysis however; the study sample was small and not sufficient to make generalized recommendations.

Overall, the literature review highlighted that workload measurement tools can be adequate at documenting direct nursing care but often do not capture indirect nursing

activities (Brady et al., 2007). These indirect activities may include discussing a client case with another CHN or researching a particular diagnosis. In addition, CHNs often complete more than one task at a time, such as, educating a client while completing wound care. The literature review also highlighted that caseload management is an important aspect to take into consideration when measuring workload. Caseload management has been defined by Ervin (2008), as the process of organizing and coordinating care for any number of clients on a caseload. According to Kane (2008), effective caseload management analysis is dependent on the caseload management practices of the nurse and the accuracy in which caseload statistics are recorded. Measuring nurse workload is a priority and workload measurement tools need to be modified locally to show the variation of different areas of the community health providers in different community health areas (Brady et al.).

Consultation Summary

A brief consultation summary of the consultation report is found below. A copy of the full consultation report is located in Appendix D

Purpose

Before starting this practicum project, I discussed caseloads with several CHNs in rural areas of the CRIHA of NL who all identified more staff was necessary to satisfy client demand. Therefore, consultations were conducted with key stakeholders who included CHNs and CHN Managers in the CRIHA of NL to identify relevant information about CHN caseloads to help guide the development of a workload measurement tool and to identify factors the CHNs felt should be included within a workload measurement resource.

Methods

Procedures. The consultation consisted of completing a questionnaire. The consultation questionnaire was developed based on the practicum student's personal experiences working in community health and findings from the literature review. All CHNs from the CRIHA were contacted via email and asked to participate in the consultations. Prior to circulation, the email was approved by the Director of Home and Community Nursing and then forwarded to all CHNs. Initially, only three CHNs volunteered to complete a consultation questionnaire. Therefore, a follow-up email was sent and additional eight more CHNs responded and agreed to participate if the questionnaire was emailed to them to complete. CHNs were eligible to participate if they worked in a small rural area outside of the larger center of Grandfalls-Winsor or Gander, were directly responsible for a caseload and had a minimum of three years' experience managing a caseload. Two individuals in leadership/management roles were contacted via telephone to provide a consultation as well.

When the questionnaires were returned they were checked to ensure the participants met the inclusion criteria. The questionnaires were manually sorted and all responses were tallied up with responses next to them. The answers on all the questionnaires were cross referenced in categories and common themes were identified which will be discussed further in the results section. The responses to items on the consultation questionnaire were explored using basic descriptive statistics (i.e., frequencies and percentages).

Participants. In total, two telephone consultations with managers were completed and 11 questionnaires were completed by CHNs. One questionnaire was excluded as the

CHN had only been managing the particular caseload for six months. Another questionnaire completed by a CHN from a larger center was returned, and although this particular nurse worked in community health, she did not work in a rural area. Although the questionnaire did not meet the inclusion criteria it was kept and used for comparison purposes to show any variations between the larger centers and the rural areas. Thus, the final sample consulted was comprised of two individuals in a leadership/management role and 10 CHNs, including seven full-time and three part-time CHNs within the CRIHA of NL. All the questionnaires returned were from registered nurses (RNs).

Results

CHNs. Common themes identified included changes in CHNs caseload due to the aging population, caseload management, extra duties, travels and work not completed daily. These consultations provided relevant information on how the CHNs in the CRIHA of NL perceive their caseloads and how improvements could be made.

The consultations with CHNs in the CRIHA identified that CHNs have found an increase in their caseloads due to an increase in the amount of clients over 65 years of age. Many CHNs noted that they spend between 2 and 10 hours per week completing extra duties. All CHNs felt caseload management is needed and two felt caseload management was needed for new CHNs receiving orientation. Eight of the CHNs stated they have not received any caseload management orientation and two CHNs stated they attended an in-service on time management years ago but not caseload management. Nine of the CHNs admitted they rarely get required daily work completed and work is always left for the next day. The CHNs cited Resident Assessment Instrument (RAI) for home supportive services and long term care placement and documentation as activities that

consume most of their time at work. All of the CHNs stated their duties require daily travel and the furthest distance in return travel on a given day is between 50-100 kilometers (kms) with the average being 63kms daily. Three of the CHNs are responsible for a personal care home (PCH) which is a privately operated home for seniors who require level one or level two care. These homes are government regulated and the CHNs are required to complete quarterly reports and yearly RAI assessments on every client.

Clerical support has shown to be valuable to the CHNs of CRIHA of NL and an increase in clerical support would help reduce the CHNs workload and would allow them to complete more nursing centered work. Most of the CHNs reported they have some clerical support but the amount clerical support varies per work site. Three of the CHNs felt they were supported by their managers, two CHNs did not feel supported, one CHN was undecided, one CHN stated very little support, one CHN stated sometimes supported and two CHNs stated the level of support depended on the manager. In rural areas CHNs generally have two managers, the program manager who is the home and community nurse manager for all CHNs of the CRIHA and an operational manager onsite.

The CHNs were asked if there was anything else they wanted to add at the end of the consultations and five of the CHNs added more information. Three of the CHNs felt they needed more hands on teaching rather than teleconferences to keep up with all the new required training. One of the CHNs stated that it is becoming increasingly difficult to keep up with all the memos and changes being made to the referral process, RAI assessments, CRMS, meditech, Special Assistance Program and Safety Line. One of the CHNs felt she spent more time on documentation and other administrative duties than on actual hands on care and stated technology has “taken over our world” and that is not

always a positive thing.

Managers. The two individuals in the leadership/management roles in home and community nursing were consulted to identify if any, or what workload measurement tool was currently in use in CRIHA of NL and what was currently being completed during existing caseload reviews with CHNs. Both of the leaders in home and community nursing reported that they have seen changes in the amount of clients over the age of 65 years and the amount of clients on the CHNs caseloads. There is now only one program/nurse manager instead of two and there are operational managers that oversee many aspects of the CHNs in the rural sites. The director reported that the home supportive services with the CRIHA have increased 249% over the past eight years. Currently when the manager completes caseload reviews they discuss the number of client's on a CHNs caseload, what category of admission the clients are listed under and the amount of time the CHN documents for interventions completed on a given day. The current reviews do not look at the client needs or complexities and the review does not account for non-service workload such as administrative duties.

Personal perspective. With respect to my own perspective, as a CHN I have identified an increase in the number of clients I provide care for on a daily basis and I have identified that the number of seniors over 65 on my caseload has increased dramatically over the past few years. In the rural area where I work, the community is predominantly seniors and there is a long term care facility that has 80 residents, a PCH with approximately 100 residents and at least six different senior housing areas containing between eight and 80 cottages in each area. The PCH and at least 40 of the cottages are less than a decade old, yet they are always full. My caseload is not only busy due to the

amount of seniors I deal with but because clients with acute illnesses, surgeries and more complex problems are being discharged from hospitals quicker and sicker than when I started working here nine years ago.

Developed Resource Summary

The workload measurement resource developed for this practicum project was adapted from the Client Audit Community Care Workload Assessment Tool (CACCWT) created by Cawthorne and Rybak (2008) and the SNWLT created by Grafen and Mackenzie (2015), identified within the literature review. The CACCWT provides an approach to workload measurement in Alberta similar to the workload in the CRIHA in NL. Permission to adapt and use the CACCWT tool was received from the original authors. The tool developed consists of two parts and an instruction sheet. The first part of the tool is completed on every client on a CHNs caseload within the CRIHA and can be found in Appendix F, page 66. The second part of the workload measurement tool is where the CHNs keep track of the amount of time they spend completing extra duties on a daily basis and it can be found in Appendix F, page 67. The instructions to accompany the workload measurement tool are found at the end of appendix F, page 68. The two parts of this tool will be used together with the CHNs professional judgment of knowing what is best or needed for each individual client or family. The SNWLT helped CHNs in Scotland identify their workload and to communicate with management to ensure sufficient human resources to meet patient demand were provided (Grafen & Mackenzie, 2015). The SNWLT provided managers with data showing the amount of time the CHNs spent on administration duties, on travel and on other non-clinical areas. The use of this tool has helped identify the need to have a consistent approach to measuring nursing

workload and calculating staffing levels across the entire country in Scotland. Specific changes made to the SNWLT to fit within the context of the CRIHA of NL. This section of the tool showed the extra duties and included the addition of the following items; cleaning instruments, consultations, phone calls, meetings and an “other” option for the CHNs to add a duty not captured in the workload measurement resource or the CRMS electronic documentation system.

The CACCWT was developed and implemented for community health nursing in a rural area of Alberta, similar to that of the CRIHA of NL. According to Cawthorne and Rybak (2008), the implementation of their workload tool improved the understanding of the work required associated with each client on a caseload and it contributed to a better understanding of work related issues by staff and the most appropriate case mix. The tool also provided valuable information to the manager about program needs, skill mix and program planning that allowed the manager to determine the number of clients per staff member. According to Brady et al., (2007), measuring workload of nurses is a priority and workload measurement tools need to be modified locally to show the variation of different roles of the community health providers in different community health areas. Therefore, several of the sections within the tool were changed to reflect the differences in community health in rural CRIHA of NL as compared to that of Alberta. For instance, a place to indicate whether the RAI assessment tool was completed on a client was added to the developed workload measurement tool. RAI assessments are completed annually on every client in receipt of home care services and they are typically time consuming to complete (e.g., 2-3 hours is needed). Thus capturing whether or not the CHN completed this timely task is important. This corresponds with information identified by CHNs

during the consultations; tasks that are very timely to complete and need to be addressed within the resource. In addition, interventions that are often completed with the client were added to the developed workload measurement tool to capture details about what specific nursing interventions the CHN completes. The frequency of home visits item was changed to reflect how often the CHN visited a client, which corresponds to the visits CHNs perform in the CRIHA of NL (e.g., visits bi-weekly was added). The amount of travel section was changed to reflect the amount of travel CHNs in the rural areas of the CRIHA travel, according to the distances of greater than 100 kilometers they travel to see their client`s, as reported during the consultations. All of these changes/additions were made based on the findings from the literature review and consultations. All items in this tool will help to identify if a client is considered to be low, moderate or heavy intervention in the weighting scores. The tool should not take CHNs any more than a half an hour to complete and can be done while completing any client visit.

Theoretical Framework

The framework used to guide this project was the Community Health Nurses of Canada (CHNC) Professional Practice Models and Standards of Practice. This framework was chosen because the model illustrates community health nursing practice past and future and it is based on the definition of a practice model that supports nurses having control over the delivery of nursing care and the environment in which care is delivered from (CHNC, 2011).

According to the CHNC (2011), CHNs must continue to maintain control over their practice and one way of ensuring this happens is to remain aware of the evolving nature of the community health needs. In order for CHNs to maintain, restore and protect

the health of the community they need to ensure adequate resources area available. Throughout this practicum project the standards have guided the decision making process to meet the needs of senior population by developing a resource to measure CHN workload and to ensure sufficient resources are available to care for the clients. CHNs are accountable to their client's and have a professional responsibility to ensure their clients receive the care they need. The developed workload measurement resource is congruent with the CHNC Standards of Practice.

Proposed Implementation Plan

Before the developed workload measurement resource can be implemented in the CRIHA, it will first need to be presented to the individuals in the leadership/management positions in community health in the CRIHA to receive their support. The leaders/managers have been in support of this practicum project since its inception, however, it is important for them to review the resource and give their final support on the completed tool. Once their support is received the resource will then have to be presented to the senior nursing team in CRIHA for their approval and then to the director of rural health for the final approval. Once the final approval is received a timeline will have to be set forth with the leaders/managers to develop an orientation schedule and an implementation schedule.

CHNs will need to be orientated by the care facilitator or leader/manager on the utilization of the workload measurement tools. This could occur during face-to-face quarterly meetings. Face-to-face learning will be used because it was identified in the consultations as being more beneficial and easier for the CHNs to understand in comparison to teleconference. As well, face-to-face learning allows for a small number of

nurses to be orientated at a time. Although this may add a small amount of work to the CHNs day, it is hoped that it will help with staffing decisions that need to be made in the future.

Once all the CHNs are orientated to the workload measurement tool it is expected that within a few months they should be collecting data for each client on their caseload. The CHNs should complete as much of the resource as possible when a client is admitted to their caseload. The resource will be kept on the front of each client's paper chart so the CHNs can add to the resource over time, as client needs change. The information captured on the resource will be reviewed at least twice yearly to determine the weighting of clients needs as low, moderated or high intervention to help inform resources. Once the data collection is completed by the CHN, the manager or care facilitator should be notified so that they can arrange to review the CHNs caseload and have more accurate data than during previous caseload reviews. The data from the workload measurement resource should provide more accurate detail to demonstrate the workloads of CHNs and help determine appropriate staffing levels.

There will no doubt be problems during the data collection period but hopefully these problems can all be worked out in a timely manner. Once the data is collected and presented to senior management there may be some issues with obtaining financial resources from government if any new positions are needed to be created once the CHNs caseloads are more understood.

Proposed Evaluation Plan

Successful implementation and use of the workload measurement resource will result in the identification of gaps in service delivery, specifically surrounding the

adequacy of nurse staffing in rural areas of the CRIHA of NL. The CHNs will also be asked to provide feedback to identify any issues they may have had in completing the resource or any areas of the resource they would like to see changed. A strategy to obtain this feedback was not developed as part of the practicum project; however, this might include a survey or informal consultations with CHNs. The evaluation of the workload measurement resource will continually need to be evaluated and monitored to ensure all areas of CHNs workloads are captured.

Advanced Nursing Competencies

Nursing competencies are the specific knowledge, skills, judgment and personal attributes needed to practice ethically and safely in a specific setting or role (Canadian Nurses Association, 2008). The competencies for advanced nursing practice are based on the graduate prepared nursing knowledge, theory and research and reflect the graduate nurses' practice in a specialty area (CNA, 2008). The CNA has four advanced nursing practice (ANP) competencies: clinical, research, leadership, consultation and collaboration. I have demonstrated all four of these APN competencies throughout the completion of this project.

Clinical

Clinical competencies in APN are expertise in a specialized area of nursing in which the nurse works in partnership with the client and other members of the healthcare team for the provision of comprehensive care (CNA, 2008). I have indirectly demonstrated clinical competencies throughout this practicum through using my own knowledge of the clinical activities of the CHNs in the CRIHA of NL. This knowledge helped to guide the

development of questions on the consultation questionnaire and the final practicum resource.

Research

The CNA (2008) defines research competencies as being demonstrated by identifying, conducting and supporting research in nursing as a primary investigator in order to improve nursing practice for improved client care. Although I did not complete a research project, I have demonstrated research competencies by using my literature review skills and summarizing and synthesizing findings from the research reports, papers and studies identified within the review and by writing and presenting the findings. Research competencies have also been demonstrated by the development and implementation of the consultation plan, specifically the development of the protocol/methods within the consultation plan.

Leadership

APNs are leaders in the organizations and in the communities where they work. APNs are agents of change, they advocate for individuals while developing resources to meet needs, while identifying problems and initiating change to address the challenges at an organizational level (CNA, 2008). I have displayed leadership in nursing by working to complete this practicum project. Under my leadership I have identified nurses' needs of more support through resources and identified gaps in our present delivery of care to our clients in the community and I developed a resource to initiated change to address challenges at the individual, organizational and system level.

Consultation and Collaboration

Competencies of consultation and collaboration are defined as the advanced practice nurses ability to consult and collaborate with colleagues from different sectors in society (CNA, 2008). Through consultation and collaboration with home and community care nurse managers, CHNs, and my practicum supervisor I have shown the advanced nursing competency of consultation. I have successfully collaborated with these professional colleagues to obtain relevant information to inform the development of a workload measurement resource to be used for CHNs in the CRIHA of NL.

Summary

Throughout this practicum project it was identified that there was a need to develop a resource to measure workload in community health nursing in the CRIHA of NL. Early in the project it was evident that the development of a workload measurement tool required a comprehensive and systematic process. Therefore, based on the findings from the literature review, I decided to modify two existing workload measurement tools, namely the Client Audit Community Care Workload Assessment Tool (CACCWAT) and the Scottish Nursing Workload Measurement Tool (SNWLT). The adapted workload measurement tool and extra duties sheet combined to form the Workload Measurement Tool for Community Health Nurses in the CRIHA of NL. This tool will provide a consistent approach to measure nursing workload and inform adequate staffing levels in community health in the CRIHA of NL. The next steps include receiving approval from all managers, leaders and directors to adopt the resource developed.

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Appendices

Appendix A

Student's Name: Brenda Dicks

**Memorial University of Newfoundland
School of Nursing
Master of Nursing Program**

Literature Review

Introduction

The rural population of Canada is older than that in urban areas with 15% of the population over 65 years of age. As well, approximately one third of all seniors in Canada reside in rural regions (Dandy & Bollman, 2008). Central Health is located in Central Newfoundland and Labrador (NL) and is considered a predominantly rural region. Currently in NL there are 82,110 people over 65 years of age and in Central NL there are 18,100 people over the age of 65. It is projected that by the year 2038 approximately one third of the population in NL will be over the age of 65 (Health Profile, 2014). Worldwide people are living longer and our population is aging fast. Therefore, research needs to be completed to determine ways to meet the needs of this increasing older population while providing nursing care accordingly. Most seniors choose to stay in their own homes as long as possible and many need home supportive services to be able to stay home. According to Turcotte (2014), many older Canadians have unmet care needs. As the baby boomer generation continues to age there will be more care needs in our communities adding to the already high numbers being seen by Community Health Nurses (CHNs). Further to this, Central Health has seen a 249% increase in home supports from 2006 to 2014 (Ropson, 2014).

I have worked in community health for over eight years and there has been a dramatic increase in the amount of seniors I deal with on a regular basis. With the introduction of a new paid family care giver option of home supports in 2014 the workload has increased even more. The new paid family care giver option was introduced because it was becoming very difficult for clients to find home care workers in rural areas. With this option immediate family members can now get paid for taking care of their loved ones.

This home support option has increased the workload of CHNs because there has to be more frequent monitoring and visits to assess if family are indeed providing the appropriate care and hours approved through the program. Clients are unlikely to report if family is not providing care according to the paid family caregiver option so an increase frequency of home visits is necessary to ensure client's care needs are being met.

Workload measurement tools collect data that is used to determine, validate and monitor specific details of patient care needs and to establish standard times needed to complete the care relative to available staff time (Canadian Nurses Association, 2004). The nurse managers in community health have witnessed the increase in CHNs caseloads and have put forward a proposal to hire a new care facilitator for community health in Central Health to look at workload management and I have been awarded the position.

Literature Review

Purpose

The purpose of this literature review was to explore the effects of the aging population on CHNs and to identify workload measurement tools that have been developed and previously used in the area of community health in Canada and other countries. Findings from this review will be used to guide the development of a workload measurement tool for use in community health in Central NL.

Methods

The databases of CINAHL and PubMed were used to conduct this literature review as well as searches of the Canadian Nurses Association, Statistics Canada and Google Scholar. The searches were limited to the English language, and publication years 2000 to 2015. The keywords included: community health, workload measurement

tools, rural areas, community health nurses, public health nurses, seniors and benchmarks. Public health nurses (PHNs) was used as a keyword because the terms CHNs and PHNs are often used interchangeably. In fact, the Canadian Nurses Association offers specialty certification and the CHN certification includes both CHNs and PHNs. Articles were included in this literature review if they discussed workload measurement tools, rural areas and CHNs. The articles retrieved were located electronically from the Memorial University of Newfoundland library. Hundreds of articles were found using the keywords and most of the studies were completed in England, Scotland, and Australia and within Canada. A table summarizing the details of included studies is found in Appendix A.

Caseload Management

Caseload management, as defined by Ervin (2008), is a process of organizing and coordinating care for any number of clients by a professional and is an important aspect to take into consideration when measuring workload. Ervin's study looked at caseload management and ways to improve efficiency. Results suggested that many nurses have not been properly taught caseload management in their education programs or through staff development and it is suggested that in order to have effective caseload management nurses need organizational, priority setting and time management skills. Methods of caseload management include caseload analysis and scheduling home visits (Ervin).

According to Kane (2008), effective caseload management analysis is dependent on the caseload management practices of the nurse and the accuracy in which caseload statistics are recorded. In community health many admissions are acute or short term in nature. In general CHNs admit clients to their caseloads, plan their care, implement interventions and then discharge the clients. This practice for short term admissions also

happens in Ireland (Kane, 2008). When the nurses review their caseloads with their managers the managers are mostly reviewing numerical data and are not getting a true picture of the CHNs work because they do not see the complexity of the clients or details about the care that is being provided to the client. When caseload review was completed with nurses in Ireland it revealed that a significant difference in the size of a nurses caseload was due to a lack of consistency in nurses clinical decision making, inappropriate admissions, over visiting, poor caseload management and reluctance to discharge patients (Kane). In a follow-up study by Kane (2009), it demonstrated that caseload analysis led to many benefits for the district nurses in England, including a reduction in size of caseload. Specifically, in England the average caseload size in 2002 was 95 clients and after caseload review the average caseload size in 2006 was only 40 clients. In addition to these findings I cannot remember any information about caseload management in my nursing education and to my knowledge there has not been any orientation or in servicing to CHNs within Central Health on caseload management.

According to Willis, Henderson, Toffoil and Walter (2012), within acute care settings a shortage of beds and shorter admissions has led to increased hospital discharges with a higher level of patient acuity that has contributed to the increase in numbers of the CHN caseload. A workload tool was developed and trialed in Australia over a six week period (i.e. April to July 2007) with 48 Community Mental Health Nurses (CMHNs) and 63 CHNs participating. This tool looked at the equalization of the workload of the CHNs and the CMHNs working in interdisciplinary teams. The development of the Staffing Methodology Equalization Tool (SMET) and an evaluation of the results (both quantitative and qualitative) over the preliminary evaluation identified that the tool is

most useful for CHNs and CMHNs providing caseload management and not episodic care. This use of the SMET helped to equalize the caseloads of the CHNs and other team members and it increased transparency of caseloads (Willis, Henderson, Toffoil & Walter, 2012).

Workload Measurement

Newfoundland and Labrador. Presently in NL, Eastern Health has two types of workload measurement collected in some areas of community health: 1) Service recipient workload in which information is captured from CHNs electronic documentation in the Client Referral Management System (CRMS), and 2) Service provider workload which is an estimate of each nurse's activities and it is not connected to their documentation (Follett & Noel, 2010). In Central Health, CHNs document in the CRMS but they no longer capture any other statistics, therefore in-servicing, travel times and clerical duties are not captured. Although Eastern Health has electronic workload measurement tools, most Canadian health care organizations do not use computer based workload measurement tools (Canadian Nurses Association, 2004).

Alberta. Cawthorne and Rybak (2008) developed a workload measurement tool that was used in the Community Care Program in Stony Plain Alberta. The tool sought to determine CHNs workload while caring for clients in their own homes. Like most rural areas in Canada, it was found the Community Care Program had experienced many changes since regionalization of health care and keeping seniors in their own homes was a priority. Using a single point of entry of access to ongoing community care programs patient assignment was approximately 50 clients for 1.0 full time equivalent (FTE) nurse. It was also noted that due to caseload mix and distances travelled to client's homes they

needed to objectively identify how much care each client required (Cawthorne & Rybak, 2008). The workload measurement tool developed collected basic client demographic information, diagnosis, program category that each client would fall into and whether a baseline assessment of functional ability had been completed (Cawthorne & Rybak). Each nurse within the program would use a form to assess each client on their caseload, then review with the manager to determine if the work required was feasible to complete in the nurses work week. The manager would then compare individual staff members' caseloads to ensure equality of caseloads and skill mix while determining which client's would be best managed by a Registered Nurse (RN) or Licensed Practical Nurse (LPN) (Cawthorne & Rybak). The implementation of this workload tool not only improved the understanding of work required associated with each client on a caseload, it contributed to a better understanding of work related issues by staff and the most appropriate case mix for each professional (Cawthorne & Rybak). The tool also provided valuable information to the manager about program needs, skill mix and program planning that allowed the manager to determine the number of clients per staff member.

There has been a shift in nursing care from the acute care settings to community health for the past couple decades and it is rapidly increasing. There have been many workload measurement tools developed for a variety of acute care settings that cannot be transferred to the community health setting and the need to develop a workload measurement tool is evident now more than ever (Cawthorne & Rybak). The Client Audit Community Care Workload Assessment Tool could be a valuable resource to the development of a workload measurement tool for use in the community division of Central Health.

Ontario. Within Ontario, a group of researchers made up primarily of RNs, completed a study in which they evaluated a workload measurement tool called the Client Care Delivery Model for community home nursing (O'Brien-Pallas, Doran, Murray, Cockerill, Sidani, Laurie-Shaw and Lochhaas-Gerlach 2001). The researchers set out to understand the variables that influenced clients' use of the publically funded home visiting nursing service available in Toronto, Ontario. The longitudinal study included a sample of 38 RNs and LPNs that serviced 16 geographic areas with 751 of their clients participating in the study (O'Brien-Pallas, Doran, Murray et al, 2001). The results of the study revealed that the factors that influence nursing utilization and the complexity of community home nursing delivery system such as, case complexity, visit time and number of visits, have been underscored and need to be addressed (O'Brien-Pallas, Doran, Murray et al.). The study demonstrated that management decisions about the nurses, consistency in assignment of patients and caseload size can lead to improved utilization of nursing services. Overall, the Client Care Delivery Model was proven to provide an empirically sound framework for examining variables that influence nursing in the community (O'Brien-Pallas, Doran, Murray et al.).

Globally. Many factors have contributed to the increasing size of CHN caseloads globally. Within the community settings workload measurement tools have been viewed as a way of managing workload increases. In Scotland, a tool was created by CHNs in order describe what they do and to show the complexity, intensity, scope and knowledge necessary to perform their work. The Scottish Nursing Workload Measurement Tool (SNWLT) was used as part of a three tool method used to provide consistent approach to nursing workload (Grafen & Mackenzie, 2015). The three tools used in this workload

measurement were the specialty specific approach measurement tool, the SNWLT, and professional judgment tool (Grafen & Mackenzie). The SNWLT helped the CHNs identify their workload and to communicate with management to ensure sufficient human resources to meet patient demand. The SNWLT provided managers with data showing the amount of time the CHNs spent on administration duties, on travel and on other non-clinical areas. The use of this tool has helped identify the need to have a consistent approach to measuring nursing workload and calculating staffing levels across the entire country in Scotland (Grafen & Mackenzie).

A study completed by Byrne, Brady, Horan, Macgregor and Begley (2007), explored the relationship between dependency levels of seniors who are part of CHNs caseload and the amount of nursing participation required. In this study the researchers used the Community Client Need Classification System (CCNCS), their previous research proved the validity and reliability of the CCNCS (Byrne et al, 2007). Data collection took place over a four week period in 2004 and 44 nurses visited 1482 older people (age 65 years or older). The results of this study demonstrated that nursing time increased as the level of need of the senior increased and it also identified that the seniors classified as high need were usually in receipt of home support services (Byrne et al). This was a quantitative study that was conducted in a region of Ireland consisting of a city and rural areas similar to that of Central NL.

Although workload measurement tools usually document direct nursing care they often do not capture the indirect nursing activities (Brady, Byrne, Horan, Griffiths, Macgregor & Begley, 2007). These indirect activities include discussing a client case with another CHN or researching a particular diagnosis. CHNs often complete more than

one task at a time, for example, educating a patient while completing wound care. Measuring workload of nurses is a priority and workload measurement tools need to be modified locally to show the variation of different areas of the community health providers in different community health areas (Brady et al.). Although it is necessary to develop workload measurement tools to map workload activity these approaches could underestimate and misinterpret the complexity and scope of the community care episode and the time taken to provide it (Jackson, Leadbetter, Manley, Martin & Wright 2015).

The Cassandra Matrix Tool is a workload measurement tool that was originally designed as a paper-based tool to capture what nurses do, where these actions occur, who the actions are done for and what work nurses left undone due to time constraints (Jackson, Leadbetter, Manley, Martin & Wright 2015). The Cassandra Matrix Tool was originally designed for use in a specialty acute care area and now it has being piloted to see if it could be used in the specialty area of community nursing (Jackson et. al, 2015). The pilot study consisted of 24 CHN participants and data was gathered over ten working days using a paper based tool. Each nurse completed daily record sheets and added up the activities for each day for a ten day period and after the ten days the data was analyzed (Jackson et. al.). Data collection from using the Cassandra Matrix Tool was evaluated and identified that the tool could potentially be adopted and used within the community setting and could be a valuable resource that promotes quick and easy comparative analysis. However, the study sample was very small and not sufficient to make generalized recommendations so it is presently being tested in six community areas (Jackson et. al.).

Conclusion

As our aging population continues to grow it is more important now than ever that we have enough resources to care for our seniors. CHNs want to ensure the care needs of our seniors are being and will continue to be met; therefore assessing nurses' workload is important in our communities. This is particularly true in Central NL where home supportive services have already increased by approximately 250% in the past ten years and it has been projected that one third of population of NL will be over the age of 65 by 2038. Studies identified throughout this literature review have demonstrated several different workload measurement tools that have proved valuable for workload measurement and caseload management in community health. Through the literature search it is evident that the development of a workload measurement tool requires a comprehensive and systematic process. Therefore to meet the requirements of this practicum project I plan to modify the Client Audit Community Care Workload Assessment Tool that was developed and used by CHNs in Stoney Plains Alberta. This tool was used by CHNs in a rural area of Alberta comparable to that of Central NL and both had experienced many changes since regionalization of health care. In Alberta it is a priority to keep seniors in their own homes and it is also a priority in Central NL. I will also use part of the Scottish Nursing Workload Measurement Tool because it uses a three tool approach to measure nursing workload and calculating nurse staffing levels.

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Appendix B. Literature Tables

Study	Sample/Methods	Key Results	Comments
<p>Brady,Byrne,Horan, Griffiths,Macgregor, & Begley, (2007). Measuring the workload of community nurses in Ireland: a review of workload measurement systems</p>	<p>-Quantitative study in Ireland which included a city and rural areas. -4 week period in 2004 with 44 nurses assessed all older people on their caseloads (n=1482 clients) using the CCNCS</p>	<p>- The tool was successful in discriminating between care needs levels of older people. -Tool may be useful in determining the type amount of human resources required by individuals who need community nursing services. -As client level increases so does the amount of nursing time.</p>	<p>-No information on demographic variables may limit the transferability of the findings.</p>

Study	Sample/Methods	Key Results	Comments
<p>Cawthorne & Rybak, (2008) Workload measurement in a community care program.</p>	<p>-Community Care Program, home care in Stoney Plains Alberta) -Looked at all community care nurses caseloads in rural areas -Participants used the tool to assess all clients on their caseload. -9.46 FTE Registered Nurses (RNs) & 3.74 Licensed Practical Nurses (LPNs) with n=650 clients over 3 categories. - 3 categories i.e. long term, short term & case management</p>	<p>- Implementation of the tool facilitated improved understanding of each client on a caseload. - Successful in quantifying nursing time as well as client need. - Ensured even case mix amongst CHNs. -Identified which client's would best be managed by an RN or LPN - improved the understanding of work required associated with each client on a caseload, it contributed to a better understanding of work related issues by staff and the most appropriate case mix</p>	<p>-One limitation noted was the possibility of subjective biased because CHN completed the tool on their own clients. -Important to ensure staff feels comfortable using the tool. -Tool is work intensive and hard to fit into a regular workday. - Tool should be used regularly over a year to identify trends within the program to be successful.</p>

Study	Sample/Methods	Key Results	Comments
<p>Ervin, (2008). Caseload management skills for improved efficiency</p>	<p>-363 nurse administrators surveyed, -Administrators identified caseload management as the ability to coordinate care for a specific number of clients.</p>	<p>- Nurse managers should use the information when orientating new staff members to improve time management. - 3 skills are highlighted for effective caseload management is a combination of organization skills, time management, and priority setting. -Caseload analysis is a process of examining types and numbers of a caseload.</p>	<p>-Tracking systems are the key component of caseload management.</p>

Study	Sample/Methods	Key Results	Comments
<p>Grafen & Mackenzie (2015) Development and early application of the Scottish nursing workload measurement tool.</p>	<ul style="list-style-type: none"> -Tool was created by CHN to identify their workload & liaise with managers. - Used a triangular (three tool) approach to measure workload. -Workload measurement tool allows CHNs to record & report their workload on 6 categories; i.e. face to face contact non face to face contact, home visits, associated workload, travel and exception reporting. -Takes less than 30mins to complete. -.Provides a good picture of workload if used daily. 	<ul style="list-style-type: none"> - Simple & easy to apply - Consistent approach to measuring nursing workload and staffing levels need to be put in place if care continues to shift from acute care to community settings. 	<p>-It is a workload tool not a caseload-profiling tool</p>

Study	Sample/Methods	Key Results	Comments
<p>Jackson, Leadbetter, Manley, Martin & Wright, (2015). Making the complexity of community nursing visible: the Cassandra project.</p>	<p>-24 nurse participants. -Paper tool -Data was captured by each participant over a 10 day period. -92% response rate on returned data after the 10 days</p>	<p>- Opportunity to see the profile of a set of employees' activities. -Enabled comparison between activities. -Showed where the concentration of activity lies in terms of interventions. - Phase one pilot demonstrated the need to make some amendments in order to pick up more community interventions.</p>	<p>- Only a small sample size. -Now in an electronic version</p>

	Sample/Methods	Key Results	Comments
Kane, 2008 Caseload analysis in district nursing: the impact on practice	-Caseload profiling was used to review nursing caseloads to achieve equity in terms of the quality of care provided and access by patients. - Sample was district nurses caseloads in Ireland.	- Data reports from nurses should be systematically interrogated to ensure reliability and validity. -Analyzing data from nurses' caseloads can be used in human resource planning and performance management. - Using caseload analysis with continuous improvement.	-Introducing caseload analysis with continuous improvement can improve equity in service provision and staff morale.

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	Sample/Methods	Key Results	Comments
<p>O'Brien-Pallas, Doran, Murray, Cockerill, Sidanie-Shaw, & Lochhaass-Gerlach (2001). Evaluation of a client care delivery model, Part 1: Variability in nursing utilization in community home nursing.</p>	<p>-Used client visit time & nurses ratings of the adequacy of visit time. -Longitudinal study with 38 RNs and 11 LPNS represented 16 geographical areas and 751 clients participated. -Examined the influence of clinical provider characteristics i.e. organizational variables and environmental complexity on home care nursing.</p>	<p>- Client Care Deliver Model has provided an empirically sound framework for examining relationships among multiple variables that influence CHN. -Showed that simple management decisions can lead to improved utilization of nursing services.</p>	<p>-Showed that BN prepared RNs had greater satisfaction with adequacy of care provided, implying educational status should be considered in planning staffing for community health.</p>

Study	Sample/Methods	Key Results	Comments
<p>Willis, Henderson, Toffoli, & Walter (2012). Calculating nurse staffing in community mental health and community health settings in South Australia</p>	<p>-63 CHNs & 48Community Mental Health Nurses (CMHNs) involved in the initial study over 6 week period in 2007. -Trialed at 6 different sites to determine feasibility -Both qualitative & quantitative data was used to evaluate the tool.</p>	<p>- Reduced work intensifications and reduction in caseload size -Transparency & equalization of workloads. -Provided a means of reducing workload through demonstration of capacity to take new clients.</p>	<p>- Further work is needed to factor in the intensity of a caseload into the tool.</p>

Appendix C

Email invitation for CHNs to participate in consultations

Dear Community Health Nurses

My name is Brenda Dicks and I am a Community Health Nurse working full time in Springdale, NL. I am currently working on the practicum part of my Master of Nursing program at MUN. My practicum topic is: The Effects of the Aging Population on Community Health Nurses Caseloads in Central Newfoundland.

I am contacting you because you are a CHN within the Central Region of NL. If you are responsible for a caseload, work rurally (outside of a large healthcare setting), and have at least 3 years' experience working in community health I would like to invite you complete a telephone interview to ask you a few questions related to your role as a CHN. If you are willing to participate please reply to this email or feel to call me at 673-2786 to set up a date/time for an interview at your earliest convenience.

Thank-you in advance

Brenda Dicks BN RN CCHN(c).

Appendix D

CHN Consultations

Questionnaires

- 1) Are you an RN or LPN?
- 2) Do you have a BN degree, a certificate in community health, community health certification or any other community health education preparation?
- 3) Do you work full time, part time or casual?
- 4) How long have you managed your caseload?
- 5) How many clients on your caseload?
- 6) Has your caseload changed over the past few years?
- 7) Have you noticed an increase in clients over 65 years of age?
- 8) Were you ever taught or orientated to caseload management?
- 9) Do you feel orientation for caseload management is needed?
- 10) Do you feel the aging population has affected your caseload?
- 11) Do you always get your work completed or do you leave some for the next day?
- 12) What would you say consumes the most time in your work to complete?
- 13) Do you feel you are supported by management in your role?
- 14) Do you complete assessments in a hospital for home supports or placement options?
- 15) Are you responsible for a Personal Care Home? If so how many residents?
- 16) Do you spend much of your time on administrative activities? Ex. filing, ordering supplies, cleaning instruments, admitting clients on CRMS and getting charts

ready.

17) If you spend time on administrative duties how much time a week?

18) Do you have clerical support? If so how much time a day or week?

19) Do you normally travel in your work?

20) What is the maximum distance you normally travel?

21) Is there anything else you would like to add?

Consultation Questionnaire for Managers

- 1) Have you seen any changes in the amount of clients over 65 years of age in the Central health region?
- 2) Have you witnessed an increase in the amount of clients on CHNs caseloads?
- 3) Have you noticed an increase in the amount of clients on home supportive services within the Central Health region?
- 4) What has been discussed or looked at when caseload reviews are completed with CHNs?
- 5) Has there been any increase in staffing to community health recently?

Appendix E

**Memorial University of Newfoundland
School of Nursing
Master of Nursing Program**

PRACTICUM: CONSULTATION WITH COLLEAGUES REPORT

Student's Name: Brenda Dicks
200264877

Student ID #:

Course Names and Numbers: MN Practicum 1 (N6660)

Supervisor: Professor Julia Lukewich

Title: The development of a workload measurement tool for community health nurses within the Central Regional Health Authority of Newfoundland and Labrador

Date: April 2016

Overview of Project

The purpose of this practicum project is to better understand the caseloads of Community Health Nurses (CHNs) within the Central Health region of Newfoundland and Labrador (NL) to inform the development of benchmarks and a workload measurement tool. NL has four regional integrated health authorities; Central Health, Eastern Health, Western Health and Labrador-Grenfell Health. Central Health is located in Central NL and is considered a predominantly rural region. Currently in NL there are 82,110 people over 65 years of age and in Central NL there are 18,100 people over the age of 65. It is projected that by the year 2038 approximately one third of the population in NL will be over the age of 65 (Health Profile, 2014). Worldwide people are living longer and our population is aging fast. Therefore, research needs to be completed to determine ways to meet the needs of this increasing older population while providing nursing care accordingly. Patients are being discharged from hospitals sicker and quicker and CHNs are left caring for these patients and their caseloads are becoming larger. CHNs are asking for staffing levels to reflect the amount of client's they are responsible for. According to the Canadian Nurses Association (2006) it is important for nurses to take actions to improve their work environments because it enables nurses to better meet the needs of their patients and achieve personal goals for quality work lives.

Consultations with CHNs, in the Central Health region were conducted to identify if CHNs have found an increase in their caseloads due to an increase in the amount of clients over 65 years of age. According to Merriam-Webster (2015), a caseload, in medical terms is defined as the number of cases handled by someone (nurse or a doctor) usually in a particular period of time. The CHNs were asked several questions about

caseload management as this was brought out in the literature review as an important aspect to consider when developing a workload measurement tool. These consultations provided relevant information on how CHNs in the Central Health region of NL feel about their caseloads and how improvements need to be made. CHNs need to work together in partnerships to provide evidence to understand the impact of changing health care needs (Registered Nurses Association of Ontario, 2007).

Methods

Setting

The setting for this project was the Central Health region of NL.

Participants

Overall, 40 individuals were invited to participate in a consultation and ten completed a consulted. The final sample consulted was comprised two individuals in an administrative/leadership role and seven full-time and three part-time CHNs within Central Health that work in a small rural area outside of the larger centers of Grandfalls-Winsor or Gander and are directly responsible for a caseload. The two individuals in the leadership roles were consulted to obtain information about caseload reviews conducted over the past few years.

Procedures

CHNs were all contacted via email and asked to participate in the consultations. The email was sent to the director of home and community nursing and was then forwarded to all CHNs in the Central Health region. A copy of the email communication that was sent to the CHNs is located in Appendix A. The CHNs that agreed to participate were asked to provide a date and time to contact them via telephone to ask questions or if

they preferred I sent the questionnaire to them via email to complete at their earliest convenience.

Initially, emails were received back from only three CHNs volunteering to complete the questionnaire. I then sent out a follow-up email a few days later emphasizing that the information provided in a consultation would inform the development of a workload measurement tool. Participants were also reminded that they could complete the consultation at their own leisure through the completion of a questionnaire. After this follow up email, eight more CHNs responded stating they have been very busy but would complete the questionnaire if it was emailed to them.

The two individuals in the leadership/administrative roles were consulted via telephone to complete an interview. The individuals were asked several questions about caseload reviews and what information was gathered during the reviews.

Data Management/Analysis

Once all the questionnaires were returned they were checked to ensure the participants met the inclusion criteria. One questionnaire was excluded then the ten remaining questionnaires were assigned a code. All of the questions and corresponding answers were categorized and separated. It was too difficult to use a software program to analyze the information due to many of the questions having more than a yes or no response. The questionnaires were manual sorted and all responses were tallied up with responses next to them. The answers on all the questionnaires were cross referenced in many categories and many common themes were identified and will be discussed further in the results section.

Ethical Considerations/Data Management

Prior to beginning the consultations with colleagues I spoke with the director in charge of ethics at Central Health and explained the purpose of my practicum project to him. The director did not anticipate a need for ethics approval through Central Health. I also completed the Health Research Ethics Authority Tool (HREA) which indicated that review by an ethics board was not necessary because this project is considered a quality improvement activity, not a research project. A copy of the HREA tool can be found in Appendix C. Permission to interview staff was obtained through consultations with the two individuals in the nursing leadership/management position in Central Health.

Participation in the consultations was voluntary. Privacy of each participant was maintained by not attaching their name to the questionnaire. Each questionnaire was assigned an identification code that corresponded to the CHN name and I was the only person with access to this information. The questionnaires were only used by me, brought to my office and secured in a locked filing cabinet in Green Bay Health Centre in Springdale

Results

In total, there were 11 completed questionnaires returned. One questionnaire had to be excluded because the CHN had only been managing the particular caseload for six months. A questionnaire completed by a CHN from a larger center was not excluded but kept and used for comparison purposes. The questionnaires returned were from registered nurses (RNs). Of the ten questionnaires analyzed, five of the RNs had their Bachelor of Nursing degree, five RNs were diploma prepared and one of the diploma prepared RNs had a certificate in community health nursing.

Consultations with Managers

Both of the leaders in home and community nursing reported that they have seen changes in the number of clients over the age of 65 years and the amount of clients on the CHNs caseloads. There is now only one program/nurse manager instead of two and operational managers oversee many aspects of the CHNs in the rural sites. The director reported that the home supportive services with the Central region have increase 249% over the past eight years. Currently when the manager completes caseload reviews they discuss the number of client's on a CHNs caseload, what category of admission the clients are listed under and the amount of time the CHN documents for interventions completed on a given day. The current reviews do not look at the client needs or complexities and the review does not account for non-service workload such as administrative duties. The managers also reported that in many areas in of community health nursing in Central Health there has not been any increase in staffing levels for many years.

The director of home and community nursing reported that a proposal was submitted to Central Health to develop a leadership role to support the CHNs in the Central health region and to complete caseload reviews and develop benchmarks within community health nursing. This proposal was accepted and there is a Care Facilitator/Nurse Educator position in the Central position

Consultations with Community Health Nurses

Aging population. All of the CHNs who participated agreed that the aging population has affected their caseloads and they have noticed a difference in their caseload over the past few years. Seven out of the ten CHNs have found an increase in the amount of clients over 65 years of age including the CHN from the larger center. Two of

the CHNs also stated that in the communities in their district most of the residents are over 65 years of age.

Caseload management. When asked about caseload management, eight CHNs stated they have not received any caseload management orientation and two CHNs stated they attended an in-service on time management years ago but not caseload management. Despite these findings, all ten of the CHNs felt caseload management is needed and two felt caseload management orientation was needed especially for new CHNs on orientation.

Workload. Nine of the CHNs admitted they never get all their daily work completed and some of the work is always left for the next day. The CHN from the larger center stated that it varies depending on the day if she has work left for the next day. The CHNs cited assessments for home supportive services and long term care (LTC) placement and documentation as the duties that consume most of their time at work. All of the CHNs complete assessments in their offices and in client's homes and four of the CHNs also reported that they complete LTC assessments within a hospital setting. Within the two hospitals in the larger centers, assessments for LTC placement are completed by liaison RNs and not by the CHNs that work in the community.

All of the CHNs stated they travel for work. In the smaller centers the CHNs complete clinic visits and home visits but in the larger sites there is a CHN that does just clinic visits while the others complete home visits. When completing home visits the CHNs reported that the furthest distance return travel they have to drive in a given day is between 50- 100 kilometers (kms) with the average being 63kms.

As well as being responsible for a caseload, three of the CHNs are responsible for

a personal care home (PCH). A PCH is a privately operated home for seniors who require level one or level two cares. In these homes the CHN is required by government to complete quarterly reports and to complete LTC assessments yearly on every client living there. The CHN also completes any wound care, intramuscular injections and delegation of some nursing tasks to personal care workers employed by these homes. The CHNs in charge of a PCH are responsible for a minimum of 100 client's up to a maximum of 120 clients on their caseloads with anywhere from 15 to 88 clients residing in a PCH. All three of these CHNs leave work undone and have 20 to 30+ more clients on their caseloads compared to other CHNs consulted.

Clerical Support/Administrative Duties. CHNs were asked if they have clerical support and if so how often and they were asked how much time they spent completing various administrative duties such as filing, ordering supplies, cleaning instruments, admitting clients on Client Registry Management System (CRMS) and getting charts ready. Most of the CHNs reported that they do have some clerical support but the amount clerical support varies.

Clerical support is provided daily in the larger site and the CHN from this site stated she only spends an hour or so completing administrative duties each week. Two other sites also reported that there is clerical support daily (i.e. Monday to Friday) but shared with public health and social workers. In these two sites the CHNs stated they only spend one to two hours a week completing administrative duties.

One of the CHNs that are responsible for a PCH stated that there was three and a half mornings per week of clerical support shared with social workers. This clerical person was not orientated to CRMS and often was pulled away to work in other areas.

The CHN stated it was hard to determine the amount of hours she spent completing administrative duties and she felt there should be somewhere to capture non-service workload like there is in Meditech.

In two other sites the CHNs reported they have one day of clerical support a month, one site has a day of clerical support every two weeks and the last site has a half a day of clerical support a week. These four sites report the most amount of time completing administrative duties from a minimum of five hours a week to ten plus hours a week. The last CHN reported she has no clerical support and spends four to five hours a week completing administrative duties. Clerical support has shown to be valuable to all of the CHNs and more clerical support would help reduce the CHNs workload and would allow them to complete more nursing centered work.

Management support. When asked about management support there was wide range of complex responses. Three of the CHNs felt they were supported by their managers, two CHNs did not feel supported, one CHN was undecided, one CHN stated very little support, one CHN stated sometimes supported and two CHNs stated the level of support depended on the manager. In rural areas CHNs generally have two managers, the operations manager who is the home and community nurse manager for all of Central Health region CHNs and an operational manager onsite. The CHNs have stated that with the increase in operational managers they feel the support has decreased mostly due to the operational manager's lack of understanding of community health and the RNs role. One CHN stated she was told one thing by her program manager and then the operational manager got upset with her because she did not check with her. Due to this lack of communication between managers the CHN feels she is left to managing a lot of things

herself.

Additional information. The CHNs were asked if there was anything else they wanted to add at the end of the consultations and five of the CHNs added more information. Three of the CHNs felt they needed more hands on teaching rather than teleconferences to keep up with all the new training. One of the CHNs stated that it is becoming increasingly difficult to keep up with all the memos and changes being made to the referral process, LTC assessments, CRMS, meditech, Special Assistance Program and Safety Line. One of the CHNs felt she spent more time on documentation and other administrative duties than on actual hands on care and stated technology has “taken over our world” and that is not always a positive thing. The same CHN also stated CHNs are all about caring and showing compassion to clients in our communities.

Another CHN felt the community health program is nothing like it used to be and she felt it is like a “dumping ground for everything”. The same CHN stated that it is unfortunate that even though statistics show that our population is increasingly elderly and the trend will continue this way for many years, it seems the community health services are not accommodating these needs. Presently CHNs are struggling to provide care to the clients we already have, so what is going to happen to the community health program when the baby boomers all become elderly? Another CHN simply stated it is very difficult to manage a large caseload when acute clients and palliative care clients make it more difficult to organize our time.

The last CHN who provided additional feedback works in an area that has a Licensed Practical Nurse (LPN) working with her. This CHN stated that the aging population and complexity of clients has increased the amount of time needed to provide

care and the frequency of visits but caseload numbers alone do not reflect the workload. This CHN thinks that her workload has increased with the addition of an LPN instead of an RN because of the complex needs of the clients; this has not been recognized due to the number of bodies working in the district. This CHN feels that in the rural areas where resources are limited and doctors are non-existent or locums we need “quality” staff (RN versus LPN) as the knowledge base and decision making is especially important in meeting the complex needs of clients.

Personal perspective. With respect to my own perspective, as a CHN I have found an increase in the number of clients I provide care for on a daily basis and I have found that the number of seniors over 65 on my caseload has increased dramatically over the past few years. In the rural area where I work our community is predominantly seniors and we have a LTC facility that has 80 residents, a PCH with approximately 100 residents and at least six different senior housing areas with a minimum of eight cottages up to a maximum of 80 cottages in each area. The PCH and at least 40 of the cottages have only been built since I started in 2007 and these cottages are always full. My caseload is not only busy due to the amount of seniors I deal with but because client’s with acute illnesses, surgeries and more complex problems are being discharged from hospitals quicker and sicker than when I started working here nine years ago.

Conclusion

The consultation questionnaires completed by the CHNs in the Central Health region have shown that CHNs have found an increase in their caseloads. Part of the increase in the CHNs caseload has been identified as being due to the aging population

and the amount of clients over 65 years of age as well as other factors such as early hospital discharges and acute care clients. The responses have also provided some relevant information on how CHNs in the Central Health region of NL feel about their caseloads and how improvements need to be made. These consultations have also shown the difference in the amount of administrative duties the rural CHNs complete and the amount of clerical support they have in comparison to a CHN in a larger site. It is important to not only look at the numbers of client's a CHN has on their caseload but also to consider many other factors that can influence a caseload. The amount of time a CHN spends with each client, the complexities each client may have, caseload management skills and if the CHN is responsible for a PCH should all be considered. The results from literature review and consultations will inform the development of a resource to measure workload of CHNs within Central Health region of NL. The workload measurement tool developed will help determine benchmarks and the amount of clients a CHN may have on their caseload while safely and efficiently managing care.

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Appendix F

WORKLOAD MEASUREMENT TOOL for COMMUNITY HEALTH NURSES In CENTRAL REGIONAL INTEGRATED HEALTH AUTHORITY OF NL

CLIENT INFORMATION		
Name:	Admission Date: Y / M / D	Homebound Status No restriction [] Homebound > 70% [] Homebound < 30 % []
Diagnosis(es):		RAI Assessment Complete: Yes [] No [] Date:
Program Category: [] Maintenance [] Acute Home Visit [] Rehabilitation [] Acute Clinic [] Palliative [] LTC Supportive		RAI Reassessment Required: Yes [] No [] Date: Falls Prevention _____ Braden Scale _____ Med Reconciliation _____ Home Risk Assess _____
PROFESSIONAL SERVICES		
What Interventions Were Provided?	Home Visit	Visit Length
Delegation of nursing function []	Yearly [] (1)	< 30 min [] (2)
Teaching []	Six Months [] (2)	30-60 min [] (3)
Wound Care []	Quarterly [] (3)	> 60 min [] (4)
Supplies Order []	Monthly [] (4)	KM's From Home Office
Home Supports []	Bi-Weekly [] (5)	< 15 [] (1)
Equipment []	Weekly [] (6)	> 15 [] (2)
Venepuncture []	3 Times Week [] (7)	> 30 [] (3)
Injection []	Daily [] (8)	> 50 [] (4)
Other [] [] []	Last Visit	Next Visit
Coordination Time Required Each Month < 1 hr / mo [] (2) 1 - 4 hr / mo [] (3) 4 - 8 hr / mo [] (4) > 8 hr / mo [] (5)	Client Stability <i>(Frequency of service change)</i> Stable [] (1) <i>(Changes 1-2 times per year)</i> Variable [] (2) <i>(Changes 3-4 times per year)</i> Unstable [] (3) <i>(Changes monthly or more often)</i>	Client / Caregiver's Coping <i>(Time spent supporting client beyond the home visit)</i> 0 - 1 hr / mo [] (1) 1 - 2 hr / mo [] (2) 2 - 3 hr / mo [] (3) > 3 hr / mo [] (4)
PROFESSION SERVICES ASSESSMENT		
WEIGHTING SCORE	RECOMMENDATIONS	
Low Intervention 8 - 13		
Moderate Intervention 14 - 21		
High Intervention > 22		
TOTAL []		

Adapted From: Cawthorne, L., & Rybak, L. [2008]. Workload Measurement in a Community Care Program. *Nursing Economics*, 28(1), 45-48.

Extra Duties Worksheet

This form should be completed with the "Workload Measurement Tool"

Month _____	M	T	W	T	F	S	S
DATE:							
Filing							
Clean Instruments							
Admitting CRMS							
Preparing Charts							
Travel Time							
Non Client Work							
Consultations							
Meetings							
Phone Calls							
Other							
TOTAL TIME							

Appendix F

Workload Measurement Tool for Community Health Nurses in the Central Health Region of Newfoundland and Labrador

CLIENT INFORMATION

The Community Health Nurse (CHN) must complete the client information sections of the workload tool. This includes the following items:

- *Client's Name
- *Admission Date
- *Diagnosis (es)
- *Program Category
- *Homebound Status
- *RAI Assessment Completed
- *RAI Reassessment Required.

In addition, the Falls Prevention, Braden Scale, Medication Reconciliation and Home Risk Assessment forms are to be completed by the CHN on each client and then their completion recorded on the tool.

PROFESSIONAL SERVICES

In this section the CHN identifies the services provided to the client. The “what interventions were required”, “last visit” and “next visit” items sum up the “what” and “when” of services provided and all the other items in this section are weighted by assigning a number. The lower score is applied to the response item requiring the least amount of intervention and the highest score is assigned to the response item requiring the highest amount of intervention. Each client will then be assessed using the following items to determine the intervention weighting as follows:

<u>Professional Services Item</u>	<u>Description</u>
*What Intervention(s) Were Required?	Select interventions and add as needed
*Home Visit	Indicates how often a visit is completed
*Visit Length	Time spent with client
*KM's from Home Office	Indicates travel time. Note: One way travel
*Coordination Time Required Each Month	Helps to show complexity of client
*Client's Stability (Frequency of changes)	Indicates whether the client need(s) change
*Client/Caregivers Coping	Indicates whether time is spent supporting beyond a visit

SCORING INSTRUCTIONS

Once all the sections are given a score and a total is calculated, the score can be used to evaluate the level of intervention required by the client. i.e., if a client weighting score is

12 they require low intervention, if the client score is 23 they require high intervention. The CHN manager will review the CHN caseload and the recommendations section will be completed in consultation with the manager.

EXTRA DUTIES FORM

This portion is a separate sheet that accompanies the workload measurement tool. Each CHN is responsible to enter the amount of time he/she spends (in minutes) completing extra duties each day. There are 9 duties identified and additional rows in the table which the CHN can add duties not listed. The total amount of time engaged in extra duties should be totaled at the end of each day. At the end of each week the Extra Duties Form should be sent by fax or email to the manager for her review. It is very important to ensure that this form is completed and sent to the manager because the overall amount of time the CHN spends each week on extra duties will help management understand the overall CHN workload.

If you have any comments or questions about completing any area in the Workload Measurement Tool or the Extra Duties Form please contact Brenda Dicks by phone at 709-673-2786 or email brenda.dicks@centralhealth.nl.ca