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Evaluating Effectiveness:

Can a Geriatric Nurse Practitioner Increase the Health of Canadian Seniors?

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The Use of Research and Evaluation: Designing Outcome Research

Root causes of poor health status among seniors include lack of a primary care provider (PCP), decreased access to primary health care (PHC), increased wait times, chronic illness, and a lack of appropriate medical screening, monitoring and follow up (Barer, Evans, Hertzman, & Lomas, 1987; Canadian Institute for Health Information [CIHI], 2009; Statistics Canada, 2006; World Health Organization [WHO], 2010). Other cited reasons involve the inability of seniors to access the social determinants of health necessary to support and maintain a healthful lifestyle. Insufficient resources including home health care, failures in meeting basic types of care needs, food insecurity, low levels of health literacy, chronic illnesses, and the lack of adequate patient/family education necessary for the appropriate management of chronic health conditions remain some of these commonly unmet social determinants of health (Al-Tehwy et al., 2009; CIHI, 2009; Huws et al., 2008**;** Konetzka, Spector, & Limcangco, 2007; Rosenberg & Moore, 1997; Saxena, George, Barber, Fitzpatrick, & Majeed 2006; WHO, 2003).

Several authors provide evidence suggesting that seniors who experience poor health face a multitude of negative consequences **(**Canadian Health Services Research Foundation [CHSRF], 2010; Roberts et al. 1995; Ware & Sherbourne, 1992). Issues such as frailty, excess morbidity, and a decreased sense of well-being are some examples of these consequences. Thus the value of appropriately addressing this issue should be of grave concern not only to health care professionals, but also to the Canadian health care system as well as Canadian society as a whole. Several authors optimistically note that increasing the provision of senior PHC services has the potential to ameliorate and decrease some of these negative consequences thus improving

the overall health status of Canadian seniors and, simultaneously, the efficacy of our health care system (Prentice & Pizer, 2007; Sloan, 2009; Starfield, Shi & Macinko, 2005). In spite of this, there continues to be a lack of support (both politically and economically) for an increase in the provision of PHC services provided to Canadian seniors (Sloan, 2009). Sloan (2009) notes that the sustained use of biomedical determinism as Canada's primary philosophical health care underpinning may be partially responsible for this lack of support. I propose that the continued use of this antiquated philosophy makes little sense given current existing evidence suggests the provision of PHC has the potential to most effectively address the unique challenges faced by Canadian seniors.

Health care resources require accountability, thus every health care dollar used must demonstrate it has been spent toward health care services that are purposeful, innovative, and effective (Dykeman, MacIntosh, Seaman & Davidson, 2003). The question becomes one of balance: How can health care professionals, specifically the discipline of nursing, simultaneously demonstrate the effectiveness of health care interventions for seniors whilst ensuring that both monetary and non-monetary causes of the health care problems inherent in this population are adequately addressed? Davis, MacDonald, and Purkis (2008) assert evaluation research is one potential method to answer this question effectively.

Polit and Beck (2008) affirm evaluation research plays several critical roles. These roles include policy development, determining effectiveness of services, bringing evidence into practice, and providing substantiation of the merit and worth of programs or interventions. According to Patton (2002), a logic model (LM) is one way in which evaluation research can be examined (see Appendix A for complete LM). Patton suggests that LMs demonstrate "the connections between program inputs, activities and processes, outputs, immediate outcomes, and

long-term impacts" (p. 162). Moreover, Patton (2008) describes the use of LMs in evaluation research as a way of providing an organized, yet malleable framework with which to evaluate programs. There are multiple benefits inherent in using a LM to perform outcomes research such as its ability to clearly delineate, identify, clarify, and illustrate pictorially the underlying assumptions and components of a program, its economic feasibility, and its potential to demonstrate program cost-effectiveness (Conrad, Randolph, Kirby & Bebout, 1999). By using a LM, the researcher aims to incorporate all perspectives of those with a vested interest in the program who may otherwise be excluded by traditional research methods (Renger, Page, & Renger, 2007). For the purpose of this paper I will describe a research proposal to evaluate the geriatric family nurse practitioner (GFNP) practice at the Murrayville Family Practice Group (MFPG). The methodology of the LM will be summative in nature and described using a goal-oriented approach.

Several studies demonstrate that studying health outcomes, level of satisfaction with PCP, and the type of health care accessed (primary versus tertiary care) have significant implications on the health status of seniors and thus the Canadian health care system as a whole (Agosta, 2009; Dobrzanska & Newell, 2006; Green & Davis, 2005; Silverstein et al., 2008). However, current scholarly literature is virtually devoid of any program evaluation studies implemented with the specific purpose of collectively examining these variables within the context of specific programs. As such, I feel it is reasonable to investigate whether the GFNP at the MFPG could fill this void in seniors' health care. The findings from this research have the potential to provide data both to the public and policy makers, demonstrating the ability of GFNP to increase access to PHC while simultaneously increasing the overall welfare of Canadian seniors.

In this paper, I propose methods with which to evaluate whether the GFNP's provision of health care services to seniors is purposeful, innovative, and effective whilst simultaneously suggesting ways to provide evidence of the "uniqueness and contribution of nursing-based primary care" (Green & Davis, 2005, p. 139). First, I will locate this research question contextually within the existing literature. Second, I will discuss the methods and methodology of my evaluation approach by describing the intended LM. Third, I will discuss the evaluation approach used for determining the effectiveness of the GFNP at the MFPG and locate this research question contextually within the existing literature. Fourth, I will discuss any foreseeable limitations, challenges or problems that may be encountered when using the proposed approach. Fifth, I will discuss which techniques could be used to analyze data gleaned from the program evaluation as well as the criteria needed to judge the effectiveness of the program. Finally, I will discuss a potential plan for dissemination of the program evaluation results.

Context of the Problem

In Canada, the elderly are defined as those aged 65 and over (Rosenberg & Moore, 1997). Despite statistics that demonstrate a large proportion of senior Canadians are healthy (CHSRF, 2002a; Statistics Canada, 2006), it remains clear the elderly continue to consume the majority of health care resources worldwide (CIHI, 2009; Institute of Medicine of the National Academics [IMNA], 2008; Rosenberg & Moore, 1997; Sanchez-Garcia et al., 2007; Statistics Canada, 2006). In fact, among persons in the 65-or-older age group, contact rate with a physician increases up to 91% per year as opposed to 71% in younger age groups (Statistics Canada, 1999). In Ontario, "those 65 and older take up 44% of the healthcare budget…and approximately 40-50% of family physicians visits" (Dalziel, 2002, p. 4). Moreover, the elderly

population is projected to double by the year 2031 (Rosenberg & Moore, 1997). Thus, the potential for even greater utilization of our already over-burdened health care system is a grave issue of concern for the discipline of nursing and the health of all Canadians (CHSRF, 2002b, 2010). Increased utilization of health care resources leads to increased utilization of health care dollars and a potential decrease in access to the services currently available to non-elder Canadians (Knickman & Snell, 2002).

Despite long-standing evidence to suggest NPs (nurse practitioners) may have positive outcomes on the health, well-being and quality of life of Canadian seniors (Ducharme, Alder, Pelletier, Murray, & Tepper, 2009; Horrocks, Anderson, & Salisbury, 2002; Reseau Ontarien de Recherché Sur Les Resources Humaines en santé/Ontario Health Human Resources Research Network [RORRHS/OHHRRN], 2009; Russell et al., 2009; Sackett et al., 1974; Spitzer et al., 1974), the health care system and those providing the vast majority of senior health care remain rooted in a deterministic, biomedical, and acute care model of care (Sloan, 2009). For example, in Canada, more funding continues to be allocated toward tertiary acute care than to PHC services (Sloan, 2009). This makes little sense given the empirical evidence provided throughout the body of this paper. From both a fiscal and health perspective, it makes more sense that increased resources are allocated toward the development of NP primary care clinics that specialize in the care of elderly patients. At the micro level, greater resource distribution toward the multitude of health issues faced by Canadian seniors will increase access to care, reduce wait times and provide more health care services to offset both monetary and non-monetary costs by reducing barriers to health care services. At the macro level, a move toward PHC, population health, health promotion and illness prevention policies aimed specifically at Canadian seniors could perhaps relieve some of the burden currently placed on our health care system. This would

allow for a greater expanse of health care options for non-senior Canadians while simultaneously increasing seniors' health and well-being.

The degree to which the benefits of NPs is supported by scholarly literature, especially in British Columbia, where FNPs (family nurse practitioners) are scarce in urban settings, as compared to Ontario or the United States (CHSRF, 2002b), the more viable and prominent their role will become within our health care system. Although in reference to the United States of America, Agosta (2009) astutely notes: "The ongoing evolution of the nurse practitioner discipline depends upon the ability of the profession to identify, define and perpetuate those traits, qualities and aspects of primary care delivery perceived as beneficial and resulting in…" (p. 114) the enhanced, overall well-being of all. With greater opportunity and greater access to PHC, there is the potential for decreased use of tertiary care centers, increased satisfaction with PCPs and increased well-being and health status. Decreased use of tertiary care centers allows for decreased financial strain on the health care system, but also increased positive health outcomes for those enabled to stay within their own communities, close to their families and social networks (Wong, Stewart, & Gilliss, 2000).

Given that a lack of research currently exists regarding the potential benefits of FNP care specifically related to the senior population, it makes sense to evaluate the GFNP currently providing senior care at the MFPG and study this as a potential source of data. Moreover, no formal evaluation has been conducted to examine the achievement of the GFNP program's purported goals. Most importantly, however, evaluating this program could demonstrate that FNPs provide care to the elderly that increases patient satisfaction, provides better health outcomes and is cost saving to the Canadian health care system. The development and application of a program evaluation using a LM has the potential to determine how effectively

the goals of this program are being met. As such, evaluating this program and demonstrating its effectiveness and feasibility could provide necessary evidence demonstrating that previously discussed costs (both fiscal and health related) may be ameliorated by programs such as the GFNP at the MFPG.

Methods/Methodology

Methodology

According to Davis et al. (2008), outcome evaluation is a research method that attempts to determine if, or the degree to which a program has achieved the goals outlined at program initiation. For the purpose of this paper, Rutman's (1984, as cited in Stewart, Law, Russell, & Hanna, 2004) definition of a program will be used; his definition is that a program is: "…an organized set of activities that are managed towards a particular set of goals…" (p. 454). Given the above definitions, utilization of an outcome evaluation design appears a well-suited research technique to garner conclusions about the impact of the GFNP at the MFPG clinic.

Methods

According to Hulton (2007), LM development begins with identification of key stakeholders. Bringing together key stakeholders to share information and an understanding of the proposed program allows the evaluator to determine the program's purpose as well as what program needs must be identified and defined.

Moreover, bringing together key stakeholders enables different program perspectives to be vocalized, underlying assumptions to be clarified and a definitional consensus of understanding/congruency to be reached (Davis et al., 2008). Involving stakeholders may increase commitment to the program, broaden the knowledge of the evaluation team and increase the possibility that results from the program evaluation will be disseminated appropriately

(Shackman, 2010; W.K. Kellogg Foundation [WKKF], 2004). Unlike other evaluation methods, a LM clearly delineates and identifies the people involved in the program and their purported roles and responsibilities (Shackman, 2010; WKKF, 2004). This ensures the identification of key program goals are evaluated by those most invested in program outcomes.

In relation to the GFNP program at the MFPG, essential key stakeholders include all MFPG staff, seniors under the care of the GFNP, family members or caregivers of seniors under the care of the GFNP, the Fraser Health Authority (FHA), community members and leaders in the Langley area, funders of the MFPG program, policy makers, and government officials directly invested in the domain of seniors health care in British Columbia (BC).

Program Purpose and Sample Population Demographics

The MFPG clinic is located in Langley, BC. The target population of the GFNPs practice includes patients 65 years of age and older (community and residential care dwelling) who show signs of frailty or risk of frailty as defined by the Canadian Study on Health and Aging (CSHA, 2002; also please see the British Columbia Ministry of Health Services Guidelines and Protocols Advisory Committee [BCMHSGPAC], 2008).

Three physicians (general practitioners), two FNPs (including the GFNP), one registered nurse (RN), one counselor, four medical office assistants (MOAs) and one office manager provide general clinic services. Although provision of PHC is the MFPG's main purpose, other provided services include group education programs, dieticians, respiratory therapists, pharmacists and others (C. Murphy, personal communication, May 15, 2010).

Patients of the GFNP practice include those from the Langley community who physically come into the clinic, housebound elderly patients and those from four extended care facilities. Patients are most commonly referred to the GFNP from residential care facilities in Langley and

secondly from within practice referrals (i.e. those who see other MFPG PCPs initially) (C. Murphy, personal communication, May 17, 2010).

The most common patient demographics of GFNP patients are European background, female sex, widowed or married status, middle-class, with high school or less. In addition there are community dwelling seniors requiring significant help with their instrumental activities of daily living (IADLs) (C. Murphy, personal communication, May 15, 2010). For the purpose of this paper IADLs are those performed by a senior who is living *independently* in the community during the course of a normal day (BCMHSGPAC, 2008; Rockwood et al., 2005). Examples include the ability to manage finances, shop, use the telephone, travel within the community, perform housekeeping duties, prepare meals, and take medications correctly. In contrast, activities of daily living (ADLs) include life functions necessary for maintaining the senior's immediate environment (BCMHSGPAC, 2008; Rockwood et al., 2005). Examples include the ability to obtain food, mobilize and transfer, dress, eat, and provide themselves with personal hygiene whereas IADLs measure a senior's ability to live independently.

Logic Model

Inputs/Resources

The next step in LM development is to look at "what is invested" in the program or its "inputs" (Davis et al., 2008, p. 72). The program inputs or resources used by the GFNP at the MFPG to achieve cited goals and objectives include one GFNP, three general practitioners (GPs), one RN, one counselor, four MOAs and one office manager. The FHA provides funding for the GFNP's position. Further resources include the facility where the clinic is run including exam rooms, equipment to perform physical exams and histories, and health educational materials. Transportation for the GFNP is by car and is funded by the FHA.

The principal inputs or goals, vision and objectives of the GFNP practice at MFPG are to anticipate and avoid patient frailty and its inherent negative health consequences, as well as to maintain and improve health status (Murphy, C., 2010, p. 1). Thus, the ultimate intended long-term outcomes of the program pertain to all seniors 65 and older in the Langley area and include: Prevention of frailty (ability to maintain or increase independence), identification of patients as frail or at risk via Senior's Assessment Tool (SAT) or by other PCP at the MFPG, decreased excess morbidity and increased satisfaction with PCP. Improved health status, sense of wellness, empowerment/well-being, and increased self-confidence in independent health management (including IADL and ADLs) are further goals. Moreover, program goals are to decrease the number of avoidable/non-emergent ER visits for patients 65 and older, as well as decrease the number of hospital admissions and number of days spent in hospital for those 65 and older (Murphy, 2010). Please see Appendix A for complete LM details.

Outputs

According to LeFort (2003), an effect is something produced by a cause. In terms of LM development, output measurements consist of two sections, activities and participants (Davis et al., 2008). In the case of the GFNP program at the MFPG the effects of the activities undertaken by the GFNP and the participation of those involved (patients, other staff, patient families etc.) are the outputs of the seniors receiving care.

The activities of a program illustrate precisely what it is a program does with its inputs to ensure challenges commonly encountered by the patient population being served are addressed (Davis et al., 2008). As discussed previously, inadequacies related to social determinants of health are frequently experienced barriers faced by seniors and are associated with the experience of poorer than average health status (WHO, 2003). As such, one of the most critical

GFNP activities is to address the common health challenges inherent within her patient population with regard to their social determinants of health. These include transportation, assistance with IADLs, and a lack of family support or social network (C. Murphy, personal communication, May 17, 2010).

Specific activities undertaken by the GFNP begin at the initial patient interview. Patients attending the clinic are rated using the Frailty Scale (please see BCMHSGPAC, 2008 guideline for frailty scale algorithm). Following this, a modified version of the BCMHSGPAC's (2008) SAT is used as an initial patient screening tool and then repeated at least annually to track patient progress. Once patients have been assessed, they are asked to bring in all medications, vitamins, minerals and any other supplements so a medication review can be undertaken (C. Murphy, personal communication, May 21, 2010). Moreover, patients are asked to bring those whom they consider to be their main supports should the patient so wish (C. Fisher, personal communication May 6, 2010). Over several visits a comprehensive geriatric assessment is undertaken by the GFNP (See Appendixes A and C for inclusion material).

A crucial part of the GFNP's role involves patient follow-up. Methods of follow-up include phone calls for monitoring and encouragement, clinic visits every six months and referrals to geriatricians, geriatric psychiatry, physiotherapy, occupational therapy and community centers (C. Murphy, personal communication, May 17, 2010).

Another activity undertaken by the GFNP is the tracking of patient data including SAT information. These data are collected and used to evaluate patient progress and facilitate quarterly reports and indicator data (C. Fisher, personal communication, June 2, 2010).

The participants or sample population portion of the LM outputs are the people who are reached through program activities (Davis et al., 2008; Shackman, 2010; WKKF, 2004).

Participants of the GFNP at the MFPG practice include the number of seniors who attend the clinic, those who are housebound, and those who are from the four extended care facilities, as well as the number of support people brought into the clinic (see Appendix A for quantification/summary of all outputs, including both activities and participation).

Identification of Evaluation Approach

Effectiveness speaks to what a program's interventions try to accomplish, whereas an effect is similar to an outcome (Davis et al., 2008; Shackman, 2010). The effectiveness of any one outcome should reflect the short, intermediate and long-term goals inherent in the GFNP practice. The purpose of outcomes is to describe what "difference the program makes" (Davis et al., 2008, p. 72) to those who are participating in it. For the purpose of this LM, the program outcomes will be divided into three short and one long-term outcome (see Appendix A).

Although there are several different ways of approaching outcome evaluation, I have decided to use one that is goal-oriented in nature. Stretcher and Davis (1987) describe the goal-oriented approach to evaluation as one to examine whether and how well, a program's goals are being met (as cited in Davis et al., 2008). The purpose of clarifying whether these goals are being met is to provide evaluators with a consistent and homogenous benchmark with which the success of the program can be compared and measured (Davis et al., 2008).

Evaluation Methods

Short-term outcomes. Davis et al. (2008) assert short-term outcomes are not definitive regarding ultimate program results. However, they note short-term outcomes are necessary to pave the path for the program to emerge. The three short-term program outcomes to be evaluated include: a) the level of patient satisfaction with primary care provided by the GFNP, b) patients' rating of their health since joining the GFNP practice, and c) the number and percent of

ER visits for "avoidable" or non-emergent reasons that have occurred since joining the GFNP practice.

In order to quantify whether, or the extent to which these outcomes have or have not been reached, the evaluator needs a method with which to provide measureable data. As such, for each short-term outcome, I will discuss a measurement tool with which the data can be collected as well as the ways in which outcome data can be analyzed.

Finally, the evaluator needs a method through which to demonstrate the extent to which each outcome is or is not reached. Indicators of success are used to substantiate what specific outcomes are of interest to stakeholders with regard to program results (Hulton, 2007). In essence, the evaluators chosen indicators of success depict whether the program has been successful in meeting its intended objectives (WKKF, 2004). Moreover, indicators of success serve the purpose of meaningfully linking the impact of program interventions to the targeted, precursor conditions under study (Cheadle, Beery, Greenwald, Nelson, Pearson et al., 2003; Renger et al., 2007).

Short-term outcome #1: Increased satisfaction with primary care.

Implications for practice. Nelson and Steele (2006) assert the investigation of client satisfaction is crucial to any program evaluation because "client attitudes toward a treatment can have an important impact on the treatment's success in the field" (p. 392). Obviously patients are the "consumers" of GFNP services (treatment) at the MFPG; therefore, measuring this outcome has great implications for demonstrating whether they continue seeking out PHC services at this clinic. The results of this evaluation data are an important way for evaluators to determine whether increased patient satisfaction with the PHC the GFNP provides ultimately also increases the likelihood that patient's in her practice are able to access appropriate health

care. As previously discussed, this is one of the greatest barriers faced by Canadian seniors today. Evaluators may also be able, depending on results, to use this data to confirm that increasing a senior patients level of satisfaction with the health care they are provided simultaneously improves their biopsychosocial health outcomes i.e. by decreasing frailty, morbidity etc. As such, this evidence may provide data to support stakeholders with facts that funding for this program should be secured and thus the program continued and maintained.

In their meta-analysis, Reeves, Hermens, Braspenning, Grol, and Sibbald (2009) demonstrate "nurses providing first care for patients…tend to…achieve higher levels of patient satisfaction compared with doctors" (p. 19). Rather than just a matter of additional time spent with elderly patients (Bryant & Graham, 2002; Charlton, Dearing, Berry, & Johnson, 2008; Dierick-van Daele, Metsemakers, Derckx, Spreeuwenberg, & Vrijhoef, 2009; Horrocks et al., 2002; Mundinger et al., 2000), I contend it is the unique, relational, continuous and holistic perspective that the MFPG GFNP brings to the patient relationship that further distinguishes her care from that of physicians (Kinnersley et al., 2000; Shum et al., 2000; Venning, Roland, Roberts, & Leese, 2000).

Given the evidence cited by the several scholarly authors with regard to the importance of measuring patient satisfaction (Bear & Bowers, 1998; Benkert, Barkauskas, Pohi, Tanner, & Nagelkirk, 2002), the hypothesized indicator of short-term outcome number one will be an increase in mean patient satisfaction. Specifically, I propose to look for an increased number and percent of patients who were satisfied with their PCP from between January 2012 to January 2013 versus January 2010 to January 2011 (see Appendix A). Patients will be asked to rate their satisfaction with their previous health care provider from January 2011 to January 2012 and then

their level of satisfaction with the GFNP as their PHC provider from January 2012 to January 2013.

Measurement tool. Polit and Beck (2008) assert the collection of structured data is consistent in that it is fixed and thus enhances "objectivity and reduce(s) biases" (p. 414). One type of tool used to collect structured data is surveys. When used in the clinical setting, surveys are inexpensive, efficient and likely to provide a rich source of data information (Polit & Beck, 2008). As such, the use of surveys in the program evaluation of the GFNP at the MFPG seems both an effective and feasible measurement tool for the first proposed short-term outcome.

One instrument the evaluator could use to collect data demonstrating whether this short-term outcome has been met is a modified version of the Nurse Practitioner Satisfaction Survey (NPSS) (Agosta, 2009, see Appendix B for modified survey). In order to account for current GFNP patient population demographics and health challenges, the NPSS would need to be modified, for example it would need to be printed in large font to be easily visible and use simple language (see Appendix B – it must be noted that large font is not used in the Appendix B example). Moreover, some of the inapplicable questions from the original survey have been removed to reduce question redundancy, shorten the survey, and simplify its meaning (please see Agosta's, 2009 article for original survey).

According to Polit and Beck (2008), relevant literature must be critically reviewed to determine the extent to which any one measurement tool has demonstrated reliability, validity, and sensitivity. The original NPSS measurement tool is a 28-item Likert-type, researcher developed instrument that has been psychometrically analyzed. Agosta's (2009) study provides empirical evidence substantiating the validity and reliability of her tool's ability to measure patient satisfaction with NPs in the primary care setting. As such, the NPSS meets the criteria

set forth by Polit and Beck. The benefits of this survey include its potential to "identify and quantify those intricate, dynamic, and unique aspects of human complexity that might influence and serve as determinants of overall patient satisfaction with care delivered by a nurse practitioner" (Agosta, 2009, p. 117).

However, because this author proposes modifications to the original NPSS survey, the evaluators will need to remain mindful that Agosta's (2009) study findings of validity and reliability regarding the tool may not be directly applicable to the modified version. In order to ensure face and content validity, the evaluators will have to engage in further relevant literature that goes beyond the scope of this paper.

Procedures/sample population. The modified NPSS survey would be administered at the first appointment by the MOAs (pre-intervention or time one [T1]) and then 12-months later (post-intervention or time two [T2]). Should the GFNP be doing a home or residential care visit for the first appointment, the NPSS survey will be administered at these first patient-provider meetings as well. In these cases, the GFNP will require an impartial third party to administer the survey such as a family member or other care provider who is uninvolved with the GFNP.

It is imperative that the minimum sample size necessary to be representative of the GFNPs population and provide meaningful results be calculated (Agosta, 2009; Polit & Beck, 2008). Given the GFNP's current practice volume, this should not be an issue. Please note that it is beyond the scope of this paper to discuss this calculation: please see reference list to ascertain this information.

Respondents would include those 65 and older visiting the GFNP for the first time. Because transportation is a significant barrier facing this population with regard to clinic access, the survey would be administered during a pre-scheduled office visit. At T1, upon entering the

examination room, the purpose of the survey would be explained to each respondent by one of the MOAs. Respondents would then be handed a package containing an information consent form and copy of the modified survey and left to complete the survey on their own if they are so able. Upon completion of the survey, respondents could anonymously place the survey first into an envelope they self-seal and then into a folder strategically located in the waiting area. They would then return for their GFNP appointment. In this way, the evaluator(s) could avoid potential respondent bias introduced by meeting the GFNP before completing the survey. A parallel process will occur at T2 to ensure consistency, but will occur one year post first GFNP visit.

Because the demographics of the clinic population most commonly includes high school reading level, the wording of the questionnaire should be conducive to the collection of this structured data. If for some reason the respondent is unable to read the survey, it will be read to him or her by one of the MOAs and the answers recorded. The patient would then be asked to place the sheet by themselves into the envelope to maintain anonymity.

Patients with English as a second language (ESL) and a low level of health literacy must also be considered during survey development. However, due to the demographics of the population under study (i.e. primarily Anglo-Saxon / English-speaking with high-school education level), these two issues may not necessarily need to be addressed. A more in-depth analysis of patient demographics would be needed to ensure inclusivity of ESL or patients with lower levels of health literacy should findings suggest this necessity. If findings are suggestive that the survey needs to be translated into other languages or worded differently to provide greater inclusivity of participants, this could be accomplished via re-wording of questions, professional translators and transcriptionists.

Because some of the GFNP patient population may be too physically or mentally unwell to complete the survey, these patients will be excluded from its completion and thus the sample population. As such, a certain percentage of this population will not be captured. The potential ramifications of not including this population within the sample pool must be taken into account and recognized as a potential source of bias by study evaluators. Accordingly, this lack of sample inclusivity and probable effect on outcome results must be considered and discussed in study findings.

Data analysis. According to Polit and Beck (2008) descriptive statistics use "averages and percentages" (p. 556). Given that the hypothesized indicator of short-term outcome number one will be an increase in mean patient satisfaction, the use of descriptive statistics is an appropriate way to analyze the collected data. Once means and percentages have been calculated, a *t*-test and standard deviation (SD) will be calculated. Variability will then be analyzed and captured via calculation of the SD to determine the "degree to which scores deviate from one another" (Polit & Beck, 2008, p. 565). The SD will be compared between T1 and T2 to determine significance of resulting data and potential degrees of error.

Because the same group of patients will be used between T1 and T2, a dependent groups test will be used to establish the level of significance and compute a test statistic (Polit & Beck, 2008). The *t*-statistic will "then…be computed from pretest and post-test data" (Polit & Beck, 2008, p. 595). A statistician will be hired to compute *t*-stat values. A paired *t*-test will be used to construct confidence intervals "around mean differences for paired as well as independent means" (Polit & Beck, 2008, p. 595). The paired *t*-test will be used to determine the statistical significance of results and thus whether the proposed indicator of success has been met.

Short-term outcome #2: Rate health status as "better".

Implications for practice. Over a lengthy period of time, several quantitatively conducted studies provide consistent evidence that patients who visit an NP rather than a physician have equivalent or better health outcomes (Agosta, 2009; Bryant & Graham, 2002; CHSRF, 2002b, 2010; Dierick-van Daele et al., 2009; Ducharme, Alder, Pelletier, Murray, & Tepper, 2009; Mundinger et al., 2000; Reeves et al., 2009; Seale, Anderson, & Kinnersley, 2006). In fact, in a systemic review of NPs providing PHC comparing GP and NP patient health outcomes, Horrocks et al. (2002) found that no differences in patient health status existed between the two groups, and that, in fact," quality of care was in some ways better for nurse practitioner consultations." (p. 819). Moreover, a meta-analysis Reeves et al. (2009) finds several of the variables needed for positive senior health outcomes such as health education, health promotion and patient compliance are greater with nurse-led care as opposed to physician led-care. It has been suggested by several authors that this is because nursing consultations are significantly longer and more holistic than physician consultations, and thus lead to greater patient satisfaction with care (Kinnersley et al., 2000; Shum et al., 2000; Venning et al., 2000) and equivalent or better health outcomes (CHSRF, 2002b, 2010; Konetzka et al., 2007). It makes sense that spending more time with patients not only allows a practitioner to glean more information regarding the patient's chief complaint, but further allows the practitioner to gain more insight into what unique individual interventions might be helpful to keep each patient as healthy and satisfied with their health, and health care services as possible.

The importance of this outcome cannot be underscored. Current Canadian research demonstrates that chronic illnesses "comprise the majority of health problems" (Roberts et al., 1995, p. 892; Russell et al., 2009) and that senior patients rating of their health and health care

services has a great impact on the ultimate outcome of their health status, (Roberts et al., 1995; Ware & Sherbourne, 1992). Obviously "system interventions that can both improve patient well-being and reduce utilization of health services" (Roberts et al., 1995, p. 893) make this is a crucial indicator to measure.

Measurement tool. The GFNP at the MFPG uses a measurement tool called the Seniors Assessment Tool pertaining to the guideline: Frailty in Older Adults – Early identification and Management (BCMHSGPAC's, 2008) SAT. The SAT used by the GFNP has been modified from its original format and will again be modified by the evaluator (See Appendix C). Modifications to the original SAT include the addition of relevant questions and the deletion of redundant irrelevant ones. Moreover, the SAT has been modified to reflect the specific purpose of the evaluation at hand.

Currently, the SAT is used as an initial screening tool for GFNP patients. The goal of administering the SAT is the early identification and management of at risk 65 and older seniors who attend the GFNP at the MFPG. The SAT includes several items frequently included in widely used health surveys (see Ware & Sherbourne, 1992; Rockwood et al., 2005), making its use as a measurement tool valid and reliable. As such, this instrument will be used by the evaluator to collect data demonstrating whether there is an increase in the number and percent of patients who rate their health status as better between January 2012 to January 2013 versus with their previous PCP from January 2011 to January 2012. As with modifications to the NPSS, because this author proposes modifications to the original and modified SAT tool, previous findings of validity regarding the tool must be taken into account in relation to quantified outcome statistics. Validity will have to be re-calibrated and analyzed by evaluators. An in-

depth discussion of this process is beyond the scope of this paper, for further information please see Polit and Beck (2008).

Finally, evaluators will need to remain cognizant of the effect confounding factors may have on resultant outcome statistics. A more thorough discussion of underlying confounding factors goes beyond the scope of this paper, but must be mentioned as another potential source of bias and skewing of outcome results.

Procedures/sample population. Patients will include those 65 and older seeing the GFNP for the first time (both community and residential care dwelling). The SAT is administered by the GFNP at the first appointment (T1) and then one-year later (T2) to physically, linguistically, and mentally able patients who attend the clinic. Obviously, risk for coercion exists by having the patient and GFNP complete the SAT in tandem. However, given the population, nature and purpose of the SAT beyond an outcome measurement tool, this seems the most appropriate procedure in this circumstance.

As previously discussed, because transportation is one of the barriers this population faces in accessing the clinic, the SAT will be administered during a pre-scheduled office visit. At T1, upon entering the examination room, the purpose of the tool will be explained to each respondent by the GFNP prior to discussion of patient concerns. This will be done to decrease any contamination of bias. After consent is obtained, the GFNP and patient will mutually complete the SAT together. The exact same process will occur at T2 to ensure consistency, but will occur one year after the first GFNP visit.

By comparing *t*-statistics from T1 to T2, quantitative data will be gleaned as to whether the GFNP program is having any effect on the measures outlined in the SAT. An indicator of success pertaining to this short-term outcome will be SAT data demonstrating an increased

number and percent of patients who rate their health as better one year after joining the GFNP practice then it was compared to health status ratings at T1.

Benefits of using the SAT in gathering this data include its use throughout the history of the program, its straightforwardness, simplicity and short length. Moreover, the SAT is based on the Frailty in Older Adults Management Guidelines as proposed by the BCMHSGPAC (2008) and is a research-based (Rockwood et al., 2005), valid and reliable tool that has been replicated repeatedly making its use from a statistical standpoint germane.

Data analysis. As previously discussed, descriptive statistics use "averages and percentages" (Polit & Beck, 2008, p. 556). Given that the second short-term indicator of success is an increased number and percent of patients from January 2012 to January 2013 who rate their health status as better since joining the GFNP practice then it was with their previous PCP from January 2011 to January 2012, the use of descriptive statistics again is an appropriate way to analyze this collected data (please see discussion in short-term outcome number one for same). The procedure for data analysis for this second short-term outcome will be the same as that of the data analysis used in the first short-term outcome. These procedures will determine the statistical significance of results and whether the proposed indicator of success was met.

Short-term outcome #3: Decreased number and percent of ER visits for avoidable / non-emergent reasons.

Implications for practice. ER visits are classified as avoidable (or non-emergent) and unavoidable (Massachusetts Division of Health Care Finance and Policy [MDHCFP], 2004). DeLia (2006) suggests "primary care preventable conditions account for a large percentage of total ER volume, suggesting many patients experience access barriers to PHC or dissatisfaction with their PCP" (Executive Summary, p. x). Furthermore, she points out authors of current

statistics specify the considerable size, expected growth and overuse of avoidable health care of the elderly population in the coming years. As such, it seems logically and fiscally relevant that concentrating on gathering data regarding avoidable or non-emergent ER visits for this population will yield important information (DeLia, 2006). For the purpose of this paper, avoidable or non-emergent ER visits will be defined as visits made by seniors for conditions that could have been managed safely by PCPs in the PHC setting by application of preventative, accessible, timely and effective PHC (MDHCFP, 2004). Examples of common avoidable or non-emergent ER visits made by seniors include complications of diabetes, COPD, HTN, CHF, dehydration, pneumonia, urinary infections, angina, and asthma (America's Health Insurance Plans, Center for Policy & Research [AHIPCPR], 2009, Appendix C-1).

A vast number of scholarly authors denote numerous reasons why studying this issue is imperative to the overall picture of seniors' health. There is no debate that many Canadian elders visit the ER and/or are hospitalized for conditions that are unavoidable. However, many still continue to make ER visits for conditions that can either be prevented or managed in the community.

Unplanned ER visits and hospital admissions are stressful and disruptive for patients and their families, fiscally expensive, and disrupt planned health care (Konetzka et al., 2007; Sloan, 2009). Most importantly, however, they lead to the additional morbidity and mortality of Canadian seniors (Konetzka et al., 2007; Sloan, 2009). Researchers such as those above make evident the importance of studying which interventions most effectively ensure the population of Canadians in the 65-or-older age group experience the best quality of life they can for as long as possible. This includes examining whether PHC provided by the GFNP at MFPG has any effect on the frequency of either of these two variables.

In their article, Konetzka et al. (2007) discuss the evaluation of NPs to increase the "intensity" (p. 45) of primary care interventions in long term care settings, and associate the care of NPs in this elderly population with better patient outcomes and health care system cost-containment. Similarly, in another study, Kane, Keckhafer, Flood, Bershadsky, and Siadaty (2003) looked at a program called Evercare. This program "represents a model that tests the effectiveness of primary health care in improving the outcomes of nursing home residents" (p. 1427) and uses a multidisciplinary team that consists of NPs working alongside physicians. The Evercare NPs regularly visit nursing home residents/staff and are thus available to provide intensive primary health care/monitoring and respond to any untoward problems arising with regard to the elderly residents. The results of this study are quite significant in that Evercare enrollees had hospitalization rates half that of either control group after two years. Moreover, there were accompanying findings related to health care cost-savings which leant credence to the importance of study findings.

Other NP models found to improve care for elderly patients include NP-led care management. Three such programs in the United States are the Inspiris and Mercy Care Plan in Arizona and House Calls in Boston. All three programs provide primary home health care to elderly patients who have difficulty with transportation and mobilization. All three programs are found to reduce hospitalizations, emergency rooms visits, and improve patient quality of life (QOL) (Case Management Advisor [CMA], 2008; Oakie, 2008).

From looking at these programs, it appears that front-loading elderly patients with intensive primary *preventative* health care is what may be making the difference in decreasing the number of avoidable ER visits, decreasing the rate/length of stay of hospital admissions, preventing frailty, decreasing morbidity, increasing wellness, increasing ability for self-

management, improving elderly patients QOL and increasing satisfaction with PCPs. Ensuring patients and their famililes have the monitoring, screening and education necessary to prevent acute incidents before they occur are all activities undertaken by the GFNP at the MFPG **(**see Appendix A).

Although this indicator may demonstrate decreased morbidity of patients who attend the MFPG as well as the skill of the GFNP caring for the patients, globally it has political and economic implications. According to Foster, Dodge and Jones (2003) an evaluation project must attempt to ascertain "whether the intervention is a good use of society's limited resources" (p. 76). Because the literature describes the financial burden of avoidable ER visits (morbidity-related costs) in the elderly population, providing evaluation data on the net economical benefits of the GFNP is essential. As supported by evidence from the literature, the importance of the data from this indicator cannot be underscored.

Measurement tool. Polit and Beck (2008) discuss several advantages of obtaining research data from existing records. For example, they suggest that use of existing records for data collection is both economical and less time-consuming than obtaining original data. Moreover, preexisting records are retrospective and thus "permit…examination of trends over time" (Polit & Beck, 2008, p. 368), are not as susceptible to bias as some other data collection methods, and need no reliance on population participation.

As stated above, Polit and Beck (2008) demonstrate that determining the effectiveness of the GFNP program could be greatly enhanced by using existing data such as hospital and clinic records to measure the success of this third short-term outcome. For example both clinic and hospital records will be used to ascertain what number and percent of program participants visited the ER for what the literature denotes as avoidable/non-emergent reasons. An indicator

of success regarding this care-related outcome will be data demonstrating a decreased number and percent of patients with ER visits for avoidable/non-emergent reasons since joining the GFNP practice. This short-term outcome could be measured by examining clinic and hospital records indicating the number and percent of patient ER visits between January 2007 as compared to January 2009. Records for the same two variables and patients will then be compared to their hospital and clinic records between January 2009 to January 2011 to measure whether any statistically significant differences are found.

Procedures/sample population. The sample population would include those 65 and older, both community dwelling and residential care patients, visiting the GFNP for the first time. The strengths of chart reviews have been discussed previously. This care-related outcome will be measured by collecting data via a 24-month retrospective chart review of the number of ER visits for avoidable/non-emergent reasons per patient (pre-intervention), followed by a 24-month chart review regarding the same data, post first GFNP visit.

Accessing hospital and residential care records will be procured via communication with the GFNP at the MFPG clinic, with Donna Reynolds manager for Cedar Hill and Maple Hill Residencies as well as via the FHA. Exclusion from chart reviews will include patients who have passed away or whose previous records cannot be accessed.

Data analysis. Bivariate descriptive statistics describe relationships between two categorical variables (Polit & Beck, 2008). Because this outcome examines both number and percentages of ER visits at T1 and T2 and whether visits were avoidable/non-emergent at T1 and T2, bivariate descriptive statistics will be used. According to Polit and Beck (2008), the "two most commonly used methods of describing two-variable relationships are through contingency tables and correlation indexes" (p. 567). Contingency tables record and analyze the relationship

between categorical variables by displaying the frequency distribution in a matrix format (Polit & Beck, 2008). As such, a contingency table will be used to crosstabulate the two-dimensional frequency of the variables. After the contingency table is compiled, the numbers and percentages will be computed and compared allowing for quantification of variable proportions.

Any statistically significant difference between the categorical variable proportions will be displayed using a normal distribution of data and then constructing a confidence interval (Polit & Beck, 2008). The confidence interval for all patients will then be visually displayed by graphing the relationship on a normal distribution curve (Polit & Beck, 2008). This will be done to ensure ease of result visualization.

Long-term outcome #1: Decreased length of admitted hospital stay

According to Davis et al. (2008) long-term outcomes are the ultimate results of the program goals first conceived at the outset of a programs inception. These results may be intended or unintended. The long-term outcome is: decreased number of admitted hospital days per patient per 24-month period compared to the number of admitted hospital days per patient in the 24-month period before joining the care of the GFNP.

Implications for practice. Several authors demonstrate the costs of admission to hospital for elderly patients are immense (Soeken, Prescott, Herron, & Creasia, 1991). For example, both the WHO (2010) and CIHI (2009) suggest self-perceived health and health-related behaviours are two factors that have a great effect on the health status of elderly people. With hospitalization, not only does physical health decline, but also the potential and probable loss of independence and a decrease in the level of functioning (Konetzka et al., 2007; Sloan, 2009). A decline in physical health, loss of independence and decreased level of functioning culminate in a reduced QOL and a simultaneous increased risk of frailty (Konetzka et al., 2007; Sloan, 2009).

Further cited costs include increased morbidity and mortality, as well as decreased independence post-hospital discharge (Hendrix & Wojciechowski, 2005; Huws et al., 2008).

Several researchers have explored the implications of admission to hospital, as well as the reasons that exist for this phenomenon, as an important health issue to all Canadians, not just the elderly population (Arora et al., 2007; Coleman, Min, Chomiak, & Kramer, 2004; Coleman, Mahoney, & Parry, 2005; Corrigan & Martin, 1991; Fernandez-Olano et al., 2006). A research study undertaken by the CIHI (2009) cited that the mean rate for hospital readmission was greatest for those with chronic illness and co-morbid conditions. Moreover, CIHI (2009) raises several pertinent rationales for studying hospital admission in seniors. Not only do the cited reasons include rising health care costs, patient safety, and unnecessary utilization of emergency room resources, they also astutely make reference to the negative implications for the family's mental, social and economic health as well as the fiscal and social health for Canadian society as a whole. The longer a hospital admission, the more at risk the elderly patient is for decline, making this a crucial variable to be examined.

Procedures/sample population. The sample population includes those 65 years and older visiting the GFNP for the first time. This population will include both community dwelling and residential care patients. The strengths of chart reviews have been discussed previously, and as such need no further mention. This care-related outcome will be measured by collecting data via a 24-month retrospective chart review. The number of admitted hospital days at T1 per patient, followed by a 24-month chart review of the same data, post first GFNP visit at T2 will be compared. Access to hospital/residential care records will be procured via communication with the GFNP at the MFPG clinic, Donna Reynolds manager for Cedar and Maple Hill Residencies and the FHA.

Data analysis. Given that the long-term indicator of success is a measurement variable (decreased number of admitted hospital days per patient per 24-months since joining the GFNP practice then it was in the previous 24-months), the use of correlational statistics is an appropriate way to analyze the collected data (Polit & Beck, 2008, see Appendix A). Data analysis will determine if or to what degree a patients' number of admitted days to hospital differed between those under the care of the GFNP versus another PCP.

Statistical data will be gathered retrospectively and then compared. Any difference in number of admitted hospital days will then be computed. In an effort to examine the degree to which the variables relate to one another, correlation coefficients will then be calculated. The relationship, or lack there of, between variables will be visually displayed using a scatter plot to ensure ease of result visualization (Polit & Beck, 2008). Depending on the direction of the slope of the points per subject, the scatter plot will denote whether a positive or negative correlation exists between being under the care of the GFNP and a decrease in number of days admitted to hospital (Polit & Beck, 2008). This analysis will demonstrate direct quantifiable evidence as to whether the proposed indicator of success was met, as well as to determine whether results are statistically significant.

Potential Study Limitations

Use of Quantitative Data

Theoretically, the use of quantitative data comes along with viewing the discipline of nursing through a positivist lens. As such, I acknowledge that the limitations, risks and benefits of the use of qualitative research to establish causation of outcomes in nursing research have historically been debated (Carr, 1994; Polit & Beck, 2008). For example, Carr (1994) astutely notes that this method of data collection has the potential to ignore patients' lived experiences.

Despite Carr's suggestion as to the controversial nature of its use as a research method, I propose it is outside the realm of this specific study to explore the patients lived experience.

From a feasibility perspective, in order to be sound, quantitative data must use large sample sizes (Polit & Beck, 2008). I recognize that sampling a population such as the elderly tends to be tenuous in nature because of potential limitations such as accessibility (i.e. patients may be too ill or too cognitively impaired to complete surveys/tools) and loss to follow up (i.e. death or transition to nursing facility outside the GFNPs scope) are inherent within this population. However, the size of the GFNP's practice should provide sufficient access to ensure a good evaluation of this type can be accomplished.

Further, undertaking and analyzing quantitative research requires the use of multiple resources, and as such, it is expensive. Given the current financial state of the Canadian health care system, this is another feasibility issue that could interfere with the evaluator's ability to collect data via this research method (Polit & Beck, 2008).

Analysis of Administrative Data

Polit and Beck (2008) cite problems with the use of administrative data such as hospital records and community patient records. For example, from a feasibility perspective, it may be difficult for the evaluator to gain access to institutional records. Several restrictions exist to protect the public's privacy and access to records may only be available to certain stakeholders.

Ethical Issues

Both Carr (1994) and Davis et al. (2008) note that the safety and protection of human rights must always be obtained via informed consent of those participating in a research study. For patients who are cognitively challenged, this is another potential feasibility issue. Ascertaining consent to be a research participant in patients who are cognitively compromised is

not an impossible feat (i.e. going through the patient's power of attorney to gain consent, but would be greatly time consuming and expensive, hence their exclusion from the sample population). I recognize that excluding these patients as part of the sample population has the potential to compromise outcome data by possibly introducing bias or skewing study results.

Moreover, due to the inherent power imbalance regarding the patient-provider relationship, it will be imperative to ensure participants know that their eligibility to receive services does not hinge on their participation in the study. This may be problematic given the procedure for data collection proposed in short-term outcome number two.

As previously discussed, evaluators involved in the research process must be cognizant of their own biases. In their article on guiding principles for evaluators, the American Evaluation Association ([AEA], 2008) discusses issues such as conflicts of interest between evaluator, clinic staff, patients and stakeholder values. In order to address this issue, the scholars from the AEA suggest evaluators ensure that the process of transparency is adequately attended to with all members of the evaluation team. Remaining transparent includes ensuring all members of the evaluation team do their utmost to remain honest, sincere, open and forthcoming regarding all aspects of the research study. In this way, conflicts can be acknowledged, clarified and more promptly addressed. Concurrently, by viewing the study through a transparent lens, study evaluators may more effectively be able to clarify, acknowledge and address potential study limitations that arise throughout the research process.

Contextual Issues

Important contextual elements to remain cognizant of when undertaking this evaluation study include: The potential inability or difficulty of the sample population's ability to read surveys, being unable to provide informed consent, being lost or unable to follow up (i.e. due to

death or transition to other PCPs), and/or having conditions which disallow them from participating in the study. As such, these potential implications must be taken into account when planning, conducting, analyzing and reporting the evaluation results.

Result Dissemination

Two essential objectives of advanced practice nurses (APNs) are to develop a sound knowledge base to guide practice and policy making. According to Sidani and Epstein (2003), evaluation research can be used to develop a sound knowledge base to guide practice and develop policy within the political realm of health care. However, without a strategic plan to ensure the appropriate dissemination of evaluation results to the appropriate professionals/professional bodies, this is a difficult feat to accomplish.

There are several important purposes to disseminating the results of evaluation research. Davis et al. (2008) identify some of these as adding to an existing research knowledge base, changing practice, changing law, changing people's perceptions, providing evidence to support evidence-based practice and providing data to guide clinical-decision making.

Several authors discuss the essential nature of planning a *strategic* way in which evaluators can disseminate results of their evaluation study (Bledsoe & Graham, 2005; Conrad et al., 1999; Nelson & Steele, 2006; WKKF, 2004). Nelson and Steele (2006) note the traditional route for dissemination of outcome-focused findings is publication in scholarly journals. However, they suggest this tactic is not broad enough (Nelson & Steele, 2006). As such, in disseminating the results of study outcomes, evaluators should include the use of scholarly conduits such as journals, but also "conferences, newsletters, practice-oriented journals, books and workshops" (Nelson & Steele, 2006, p. 394). This ensures results will reach more disciplines, will be more widespread and further standardized (Shackman, 2010).

Those who need to know about the evaluation results include the health minister, FHA directors, researchers of all disciplines, practitioners, clinic staff, patients and their families. The inclusive nature of this plan for result dissemination creates avenues for several changes, but most importantly, will more clearly identify the contribution and imperative nature of the nursing discipline and PHC within the health-care system (Sidani & Epstein, 2003). With respect to researchers, results may provide data or recommendations for future evaluators (Bledsoe & Graham, 2005). By including stakeholders such as the health minister and FHA directors and management, the evaluators can ensure that "stakeholders who hold the purse strings in health care funding" (Conrad et al., 1999, p. 28) have statistical data with which to make decisions regarding funding. This could be accomplished via a brief executive summary entailing final study results and recommendations and could be presented orally at a formal meeting at the end of the study period (WKKF, 2004).

With regard to the dissemination of study results to researchers and practitioners, information could include research articles, executive summaries, and final reports in the form of conferences, newsletters, practice-oriented journals, books and workshops (WKKF, 2004). Sidani and Epstein (2003) note that with regard to the discipline of nursing, dissemination of this research could contribute to a sound nursing knowledge base to "deliver, and continually improve nursing services" (p. 35).

With regard to planning for dissemination research to clinic staff, patients and patients' families, information could include progress updates, final results and preliminary recommendations. These would be presented in written summaries, oral presentations and group discussions (i.e. at staff meetings) to clarify findings.

Summary

The purpose of this paper is to present an outcome evaluation study that investigates the effectiveness of the GFNP program practice at the MFPG and whether she is likely to have positive outcomes on the health, well-being and quality of life of both community dwelling and residential Canadian seniors in Langley. In the paper, I have proposed ways in which to evaluate whether FNP provision of PHC services to seniors is purposeful, innovative, and effective whilst simultaneously proposing ways to provide evidence as to explore the "uniqueness and contribution of nursing-based primary care" (Green & Davis, 2005, p. 139). First, I discussed the methods and methodology of my evaluation approach by describing the intended LM. Second, I discussed the evaluation approach used for determining the effectiveness of the GFNP at the MFPG and located this research question contextually within the existing literature. Third, I discussed any foreseeable limitations, challenges or problems that may be encountered when using the proposed approach. Fourth, I discussed which techniques could be used to analyze data gleaned from the program evaluation as well as the criteria needed to judge the effectiveness of the program. Finally, I discussed a potential plan for dissemination of the program evaluation results.

At the meso level, evidence that results from this program evaluation could provide necessary data for greater resource allocation towards seniors' health issues while simultaneously increasing access and reducing barriers to PHC services, two of the "five essential and defining characteristics of primary care" (Safran et al., 1998, p. 728). At the macro level, a move towards community-based PHC, population health, health promotion and illness prevention programs aimed at seniors could perhaps relieve some of the pressure currently placed on the Canadian health care system (Starfield et al., 2005). This would allow for a greater

expanse of health care options for non-senior Canadians while concurrently increasing the health and well-being of seniors.

FNPs who undertake any research endeavor can play an influential role at multiple levels including patient, nurse, economic, political and health care policy. As APNs, FNPs are in the privileged position to recognize that using research methods such as outcome evaluation in real world practice, has the potential to both inform and enter the discourse and praxis of advanced nursing practice (ANP) in complex, overarching and dynamic ways. In summary, what surfaces as most imperative to ANP is not only to ensure that program or intervention utilization is based on sound, qualitative and quantitative evidence, but most importantly that it resonates with the ultimate aims of nursing *and* patients. As we intersect between our patients and the healthcare system, we are afforded the great privilege to make changes at both micro and macro levels of health care. It is our moral and ethical duty to create research that supports and acknowledges the importance of our discipline and its unique knowledge base as well as providing evidence-based research to inform practice. Consequently, we are in a position in which we can serve to increase the health of all Canadians and pave the way towards a future of better health for all. Utilizing evaluation research to undertake this feat is imperative to the future health and quality of life of patients, as well as to the discipline of nursing.

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