



Health Human Resource Component Literature Review Report

Recruitment and Retention of Primary Health Care Nurse Practitioners in Canada

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Executive Summary

A critical shortage of primary care providers both nationally and internationally, compounded by reduced funding throughout the health care system, has prompted health care policy and decision-makers to explore the best models of care to meet population health needs. They are also interested in better understanding the distribution and mix of healthcare providers and changing health care delivery models. Emphasis is clearly on health human resource (HHR) planning and the creation of strategies to address primary care provider shortages and to enhance healthcare workforce forecasting. However, to date, efforts to retain and recruit such providers have been largely aimed at primary care physicians. Recently, provincial and territorial primary health care documents contain recommendations that efforts be focused on integrating nurse practitioners (NPs) into the health care system as a means to enhance public access to and continuity of health care. Research has clearly demonstrated that primary health care nurse practitioners (PHCNPs) improve public access to health services and it is recognized that efforts to recruit and retain NPs are central to the sustainability of optimal health care for Canadians. However, based on an extensive review of the literature, it appears that there is currently a lack of coordinated effort to recruit and retain PHCNPs in Canada. Such a lack of coordination must be addressed through a series of interdependent strategies.

The purpose of this work was to review and synthesize the current national and international literature on recruitment and retention activities related specifically to PHCNPs. In addition, an analysis of these findings was undertaken for the purpose of informing recommendations. Findings from both the grey and empirical international literature and from Canadian jurisdictional and federal governments, professional associations, and unions were considered.

Summary of Findings

There are currently limited strategies in place to coordinate the recruitment and retention of PHCNPs in Canada. Strategies undertaken must be aimed at developing appropriate remuneration and funding models, developing national legislative and regulatory frameworks aimed at providing a clear definition of the NP role, creating supportive work environments, and encouraging meaningful inter-professional and intra-professional collaboration to improve understanding of the unique contributions NPs make to health care. Other notable challenges relating to the education of PHCNPs especially those practicing in rural, remote or under-serviced areas need to be examined and addressed. Recruitment and retention strategies for PHCNPs need to be aimed at sustainable funding for formal education, continuing education, information technology support, and appropriate compensation.

Recognizing the importance of interdisciplinary approaches to health care delivery required in today's health care system, NPs must work collaboratively with consumers, family physicians and other health care providers. However, the need to establish autonomous care delivery models (i.e., not dependent on collaborative arrangements with physicians) should be further considered and evaluated. There is also a need to redesign current work environments for all health care providers to make them valued places to practise, where each professional works to his or her fullest scope. It is clear that autonomy, support, role clarity, collaboration and practising at full scope are necessary for workplace satisfaction. Strategies that lead to the successful development of a positive, challenging work environment will enhance the retention of NPs in existing positions, and may facilitate recruitment of other nurses into this advanced nursing role.

A number of recent provincial, territorial and federal documents demonstrate a committed effort toward the integration of NPs into the delivery of primary health care. However, efforts are not consistent across the country, nor are efforts comprehensive enough to fully address current issues for NP practice. Therefore, continued government commitment for NP practice is necessary to create effective policy and funding change.

It is clear that the geography in Canada creates challenges for the delivery of primary health care services to Canadians living in rural and remote communities. Many of those living in these communities are marginalized populations who have unique health needs related to social, economic, geographic, cultural and political factors. Targeted efforts with committed government policy and funding are necessary to address these unique needs. On a national level it is difficult to obtain a broad perspective, as there is minimal data on the deployment and utilization of NPs practising in Canada. It is anticipated that further commitment to and development of HHR-related databases will enhance both HHR planning and ways to determine the effectiveness of recruitment and retention initiatives.

1. Introduction

Tomblin Murphy Consulting Inc. was retained by the **Canadian Nurse Practitioner Initiative** (CPNI) to conduct a literature review related to the issues of recruitment and retention of primary health care nurse practitioners (PHCNPs).

The purpose of this project was to review, synthesize and analyze current literature on primary health care nurse practitioner (PHCNP) practice to inform recommendations to effectively recruit and retain PHCNPs in Canada. This is one of two literature reviews that will guide the next phase of the work.

2. Definitions

Nurse Practitioner– For the purpose of this literature review, the title nurse practitioner refers to primary health care nurse practitioner (PHCNP) defined as “a nursing role with an increased emphasis on health assessment, health promotion and illness prevention” (CNA, 2004). Furthermore, the Nurse Practitioners of Association of Ontario (n.d.) defines primary health care nurse practitioners (PHCNPs) as:

“registered nurses, who are specialists in primary health care, who provide accessible, comprehensive and effective care to clients of all ages. They are experienced nurses with additional nursing education which enables them to provide individuals, families, groups and communities with health services in health promotion, disease and injury prevention, cure, rehabilitation and support. The NP is an advanced practice nurse, functioning within the full scope of nursing practice and as such is not a second-level physician nor a doctor’s assistant.”

It is important to emphasize that the term nurse practitioner is often interchanged in the literature as advanced practice nurses, clinical nurse specialists or acute care nurse practitioners.

3. Methodology

In preparing this review, peer reviewed published literature from both national and international sources pertaining to the recruitment and retention of NPs in primary health care has been appraised. This literature was accessed through major health databases including CINAHL, Pub Med and the Cochrane Library. In addition, the electronic grey literature pertaining to PHCNPs was reviewed to capture the recent studies and the Primary Health Care initiatives and nursing strategies developed federally and by Canadian provinces/territories. This grey literature was derived from policy institutes, research units, governments and government agencies, professional associations and unions, universities, and others. This grey literature review included academic papers, scientific protocols, white papers, pre-prints, committee reports, proceedings, conference papers, research reports, standards, discussion papers, technical reports, government reports, house journals, newsletters, working papers, essays, and electronic columns. The review was Canadian and international in scope.

4. Preface

Building on the legacy of the Ottawa Charter, primary health care renewal has focused on: a health care system based on the principles of collaboration; integrated health services; access to health care; and health promotion and illness prevention. Primary health care was further recognized both in the 2003 and 2004 First Ministers' Health Accords. The need to recognize and to develop strategies based on health promotion and with an emphasis on the reduction of disparities in health care was emphasized in the work of the first ministers (Health Accord 2003, 2004). Health care policy makers are considering innovative health delivery models, often using alternative distribution and utilization of nurses, physicians, and other health care providers. This is due to recognition of a critical shortage of primary health care providers both nationally and internationally in an environment of fiscal restraint; demand for evidence-based policy decisions; an emphasis on patient safety and quality work environments, and on accountability. The requirement to align strategies with meeting the needs of people is apparent in both the grey and empirical evidence. It is clear that there is a need to better understand the distribution and mix of healthcare providers and changing health care delivery models. The emphasis is clearly on health human resources planning and the creation of strategies to address this complex HHR agenda.

Concerns about the public's access to primary health care services are pervasive. Recently in a Statistics Canada report, Sanmartin et al. (2003) found that 12-20% of Canadians reported having difficulty accessing routine health care (which varies by jurisdiction of residence); 16% reported having difficulty in accessing health information or advice; and 17-27% reported having difficulty accessing care for minor health problems. Efforts to retain and recruit primary health care providers have been primarily aimed at primary care physicians (New Brunswick Department of Health and Wellness, 2000, 2004). However, recent provincial and territorial primary health care documents recommend integrating PHCNPs into the health care system to enhance both the access and continuity of care (British Columbia Ministry of Health Services, March 2004; British Columbia Ministry of Health Services & Ministry of Health Services Planning, January 2003; British Columbia Ministry of Health Services, May 2004; LeGrow, December 2001; New Brunswick Department of Health and Wellness, n.d.; Nova Scotia Department of Health, n.d.; Nova Scotia Department of Health, May 2003a; Nova Scotia Department of Health, 2003b; Northwest Territories Health and Social Services, October, 2003).

In the United States PHCNPs have practised since the 1960s. In Canada, however, PHCNPs did not become integrated into the health care system until years later. The lack of political and support by physicians for the role of the PHCNP has been described as a possible explanation for this delay (van Soeren, Andrusyszyn, Laschinger, Goldenberg, & DiCenso, 2000). Over the past two years, the number of nurses delivering primary health care in Canada has increased as a result of primary health care reform (O'Brien-Pallas, Irvine-Doran, Murray, Cockerill, Sidani, & Laurie-Show, 2001). Research links the PHCNP's practice with enhancement of the public's access to health services. Innovative, well-resourced strategies to recruit and retain PHCNPs are viewed by some as being central to the sustainability of optimal health care for Canadians. However, based on analysis of the literature, it appears that there is currently a lack of coordinated effort to recruit and retain PHCNPs in Canada.

This review of the literature is organized based on the following important content areas derived from the literature search that are relevant to the recruitment and retention of PHCNP:

1. remuneration/ funding models
2. retention allowances
3. under-serviced areas
4. practice models
5. unionized vs non-unionized positions
6. interprofessional collaboration
7. professional support (role clarity, regulation, licensure, liability and intradisciplinary collegiality)
8. intraprofessional collegiality
9. community support
10. autonomy
11. workload/utilization
12. education/continuing education
13. working at full scope of practice
14. factors influencing NP satisfaction
15. nurse practitioner database
16. political support /interdisciplinary support
17. critical relationships
18. immigration

Each section begins with a description of the relevance of the topic to PHCNPS and incorporates the synthesis of relevant evidence. It should be noted that some of the evidence may fall into two or more content areas and that several content areas are interwoven and dependent on each other. Following an examination of each of the identified issues, a synthesis of key findings, and a summary and recommendations are presented.

4.1 Remuneration/ Funding models

Currently, there is a lack of public policy in Canada supporting a strategy for funding PHCNP services over the long term (Canadian Nurses Association (CNA), 2003). However, it is evident that there is considerable variation in remuneration and funding models for PHCNP practice throughout the country. Early research trials in Ontario in the 1970s cited comparable clinical outcomes, patient satisfaction and quality of care provided in a collaborative arrangement between PHCNPS and family practitioners or family physicians (FPs) compared to care provided exclusively by FPs. However, although overall practice satisfaction did not decline in both provider groups and physicians cited a number of advantages in engaging in collaborative practice with PHCNPs, it was noted that FPs were concerned about potential financial disadvantages. Recommendations from these studies indicated a need to evaluate fee-for-service models to address FP concerns related to appropriate remuneration (Spitzer, Kergin, et al., 1973; Spitzer, Russell, & Hackett, 1973; Spitzer, Roberts, & Delmore, 1976). This variation in funding models creates challenges associated with the PHCNP role including: difficulties in defining the role; under-utilization of PHCNPs; scope of practice; liability concerns; insufficient funding for overhead costs; and wage disparities (IBM, 2003; Implementation Monitoring Subcommittee of the Joint Provincial Nursing Committee (JNPC), 2003).

It is argued that funding models must reflect the varied responsibilities and legal liabilities of the PHCNP role. Four suggested funding models for PHCNP practice include: 1) budget/request based funding (based on costs of services); 2) utilization-based funding (based on allocation of

resources dependent on past use); 3) capitation/population-based funding (based on population demographics); and 4) needs-based funding (based on health status and the outcomes of populations) (CNA, 2002). Fee-for-service is another suggested model but is not currently recommended by the CNA as it focuses on the volume or frequency of interventions as opposed to the comprehensive care provided by PHCNPs (CNA, 2002). Based on a review of the grey literature, there is a variation in pay scales for PHCNPs by jurisdiction (See Table 1, Appendix A). Anecdotal evidence suggests that PHCNPs want to be compensated at a rate reflective of their scope of practice and which is comparable to compensation realized by family practitioners.

IBM (2003) recommended potential remuneration strategies for Ontario PHCNPs including: 1) remuneration via an organization employer; 2) remuneration directly from the ministry or an intermediary; 3) remuneration directly from Medicare; or 4) remuneration directly from a physician employer. Many PHCNPs (78.9%) and physicians (83.3%) surveyed in the Ontario-based study supported remuneration/funding models from employer organizations, while 62.4% of PHCNPs and 84.9% of physicians supported funding directly from the ministry or intermediary. Base salaries for PHCNPs practising in Ontario start at \$75,000 annually (Nurse Practitioners Association of Ontario (NPAO, n.d.) with mandatory benefits included. Furthermore, they may receive minimal benefits such as short-term disability, long-term disability, extended health care (medical and dental), four weeks vacation and pension plan or Registered Retirement Savings Plan (RRSP) contributions. In situations where no benefit plan is available, PHCNPs are paid a percentage of salary in lieu of benefits (i.e., 21% if the employer does not contribute to the mandatory benefits and 17.5% if Canada Pension Plan (CPP), Employment Insurance (EI) and statutory holidays are paid by the employer) (NPAO, n.d.). Across other Canadian provinces and territories, salaries for PHCNPs vary with the following salary ranges being reported: \$50,000 in Newfoundland and Labrador; \$52,000 to \$62,500 in Manitoba; \$74,500 to \$83,500 in New Brunswick; and up to \$90,000 in Ontario. It would appear that salaries depend on the level of experience and nurse practitioner designation, i.e., assuming a role as an acute NP versus PHCNP. In addition to salary variations for PHCNP, benefit plans also vary in Canada depending on whether PCHNPs are unionized. If unionized, salaries and benefits vary by the collective agreements (Canadian Federation of Nurses Union, 2004).

To effectively recruit and retain PHCNPs in Canada, the standardization of funding models and remuneration strategies to decrease wage disparities, lack of role clarity and the under-utilization of PHCNPs must be examined and supported by policy. It is apparent that the current funding models for PHCNPs in jurisdictions vary and do not necessarily follow suggested models outlined by the CNA (2002).

4.2 Retention Allowances

There is variation in the use of monetary allowances as a means for retention of PHCNPs. Such allowances may include “retention allowances” for completed years of service, travel expenses, and/or annual allowances for PHCNPs practising in remote or rural areas. For instance, in the Yukon, PHCNPs working outside of Whitehorse are eligible for a recruitment/retention allowance of up to \$3,000 per year (Letters of Understanding Q, n.d.). Similarly housing allowances, travel reimbursement and funded travel to nursing related conferences have been part of an incentive plan for PHCNPs in the Northwest Territories. In addition to wages, benefit packages, financial incentives and purchase of service arrangements are commonly used as

strategies to recruit and retain healthcare professionals. Other incentives include bursaries for education, training educational seat purchases, and relocation assistance. Furthermore, health benefit plans, housing and travel allowances, funding for continuing education, reimbursement for annual professional fees, and scaling up of salaries have been offered as incentives to consider employment as a PHCNP in the Northwest Territories. Retention bonuses are described in the grey literature as being an attractive strategy for retention of PHCNP. However, these bonuses are less common in Canada's publicly funded system (Harnett, 2002).

Although it would appear that there is widespread use of retention allowances for PHCNPs, it is not the only incentive plan identified by PHCNPs as being enticing for effective recruitment and retention. It is evident that the retention allowances are often short-term solutions to human resource shortages and do not adequately address worklife and other issues faced by PHCNPs. The retention of qualified health care professionals, including PHCNPs, requires strategies which offer opportunities for autonomy, professional development, flexible work hours, opportunities for career advancement and supportive national, provincial and organizational policies (Aiken, Clarke, et al., 2001).

4.3 Under-serviced Areas

Many PHCNPs are working in under-serviced areas such as rural or remote geographic areas where specific populations require services. According to the NPAO (n.d.a), there are 27 under-serviced communities in Northern Ontario currently attempting to recruit 72 physicians, and 45 under-serviced communities in Southern Ontario looking for 181 physicians. From the review of the literature, it seems that there are more severe shortages of both family physicians and PHCNPs in rural areas compared to urban locations. To address the unique needs for health care providers in under-serviced areas, The First Nations and Inuit Health Branch (FNIHB) and the Department of National Defense (DND) have both developed strategies for the recruitment of PHCNPs. In addition it appears that the physician assistant (PA) is presently being considered to fill the gaps in health care services being experienced in under serviced and remote communities. Based on an extensive review of documents from Canadian jurisdictions, it is important to note that strategies for recruitment and retention are essential for PHCNPs who face numerous challenges in the delivery of nursing and primary health care services to widely dispersed populations living in isolated areas. However, some argue that these strategies do not appear to address the unique work life issues faced by health care providers practising in under-serviced areas (Pong, 2000). Ironically, there are over 50 PHCNPs living in under-serviced communities in Ontario who cannot find positions as PHCNPs (NPAO, n.d.a). One reason for this underemployment may be that there are no formal funding mechanisms in place to support collaborative physician-PHCNP practice. This trend of underutilization of PHCNPs in other jurisdictions has been reported. For instance, in Nova Scotia there are currently three unfilled PHCNPs positions (Rural and Remote Working Group, 2004). In addition to the lack of funding structures, it is reported that there have been difficulties retaining PHCNPs to remote or rural areas due to numerous factors including: isolation; lack of resources such as professional support and/or continuing education opportunities; and the lack of communication technology supports. Similarly, issues of recruitment and retention for PHCNPs working in long-term care settings are prevalent. Issues faced by PHCNPs in long term care include poor working conditions, lack of wage parity with the hospital sector, lack of a nursing curriculum focused on geriatrics, lack of a

common support in practice settings (especially remuneration), and a lack of a common information technology infrastructure to support practice requirements.

The need to develop unique recruitment and retention strategies for aboriginal communities has been the focus of numerous reports. For instance, in the report entitled *Against the Odds, Aboriginal Nursing* (Gregory, Wasekeesikaw, Macrae, Wood, & Amaral, 2002) the need for strategies to enhance and support the ongoing participation of aboriginal RNs, including PHCNPs, in health care is described as critical. Furthermore, the need to address issues of recruitment and retention of aboriginal healthcare providers is emphasized in both the 2003 and 2004 First Ministers' Health Accords (Health Accord, 2003, 2004). The necessity for aboriginal nurses involvement in the development, implementation, and evaluation of these strategies is emphasized by both Health Canada and the FNIHB. Gregory et al. (2002) recommend the following recruitment strategies targeted to recruit aboriginal people into nursing education programs: the enhancement of visible role models; economic community development through education; and ongoing formal relationships between federal agencies, aboriginal communities, and nursing education programs. In addition, the authors reinforce that all education programs for aboriginal nurses must support innovative, flexible, relevant curriculum programming and above all, affirmative action policies. It is noteworthy that in 1999, the FNIHB of Health Canada developed a national recruitment plan for aboriginal nurses. Within this plan, important recommendations for recruitment and retention of aboriginal nurses were generated. Some of these relevant recommendations suggested mentoring programs and/or distance learning offerings which would help nurses to study in their home communities but would also facilitate mobility for aboriginal nurses who choose to study and practise elsewhere in the country.

Overall, many authors suggest that efforts to recruit and retain PHCNPs to rural, remote or under-serviced areas of the country need to be focused on the development of formal funding mechanisms to support PHCNP-physician collaboration, professional support and/or continuing education opportunities, and information technology and communication supports. Similarly, targeted recruitment and retention efforts are necessary to increase the number of aboriginal nurses practising in Canada. Consistent with the Health Accord (Health Accord, 2004), jurisdictional and federal governments are committed to PHCNPs taking on a major role in primary health care as part of a solution to enhance access to health services for Canadians in rural and remote communities.

4.4 Practice Models

Practice models refer to a variety of delivery models which may consist of collaborative relationships with physicians and collaboratively funding models for PHCNP practice. In Canada, there is a variation in the delivery models or practice models for PHCNPs. For instance, in the Northwest Territories there is an emphasis on integrated service delivery which is focused on collaborative approaches to care and primary health care task teams (Northwest Territories Health and Social Services, 2004). Similarly in Ontario, there is a commitment to collaborative teams with both PHCNPs and primary care physicians acting as core team leaders. In 2005, family health teams are expected to emphasize the need for PHCNPs to play a key role in the delivery of primary health care services in that province. Yet in other jurisdictions, such as Newfoundland and Labrador and Nova Scotia, the collaborative practice model of PHCNPs and generalist physicians remains predominant (see Table 1, Appendix A). Collaborative, integrated

practice models for PHCNPs, generalist physicians, and other health care providers are consistent with the recent federal and jurisdictional emphasis on interdisciplinary team approaches to both educational offerings and care delivery.

Different Employers: Different practice models support both a variety of funding arrangements and employer relationships for PHCNPs. For example, there are numerous models to both employ and reimburse PHCNPs, which include government, community, or physician as employer. For instance, a single funding model suggested by the NPAO (n.d.) supports committed funding from the Ministry of Health and Long Term Care (MOHLTC) (Ontario Ministry of Health and Long Term Care 2003a, 2003d). This committed funding is directed at communities with limited access to primary health care that have both with an interest in and commitment to collaborative practice arrangements for PHCNPs. In addition, this funding is committed to offering supportive environments in which PHCNPs can work at their full scope of practice. Through this model, direct funding is allocated through a not-for-profit transfer payment agency, which facilitates bypassing the need for fiscal employee-employer relationships between PHCNPs and physicians, communities, or organizations. In terms of liability insurance, it would then become the individual health care provider responsibility through his/her respective licensing body. Additional funding required for the implementation of the PHCNP role for operations, capital, start-up, and physician-collaboration costs would then need to be negotiated with the transfer agency (NPAO, 2002). In the Yukon, the planning for PHCNPs has been based on a formula derived from the Medical Services Branch (MSB) *Scope of Practice for Community Health Nurses* guidelines (Health Canada, 1993). In 1998, the Yukon government changed the title of Community Health Nurse to Community Nurse Practitioner to be more reflective of their expanded scope of practice and to provide appropriate compensation (Yukon Registered Nurses Association, 2004). It is important to note that all provinces and territories in Canada are in the process of developing, or already have, regulatory processes for PHCNPs, except in the Yukon where the government has opted to expand the definition of a registered nurse to incorporate advanced practice. The formula used by the FNIHB encompasses factors such as isolation, basic level of health services, schedules for health services, accessibility to physicians and the actual number of clients. This formula, called the Community Workload Increase System, needs to be revised to incorporate a more comprehensive approach to health services (Health Canada, 1993). Amendments to the *Nursing Profession Act* in the Northwest Territories resulted in authorized collaborative practice agreements at pilot sites designated by government (Northwest Territories Health and Social Services, 2003).

Physician as employer: Some PHCNPs are employed directly by physicians in collaborative or consultative relationships (IBM, 2003; CRNNS, 2003). The collaborative model does not include reimbursement for collaborative time spent between PHCNPs and physicians and as a result, these consultations are often unscheduled and may be perceived as being opportunistic. In contrast, the consultative model (described below) supports designated time and funding for consultations between the PHCNP and the physician which is perceived to be more respectful of the role of the PHCNP. It is suggested that funding models that support collaborative practice, such as those with reimbursement mechanisms for consultation, are needed instead of competitive practice arrangements between PHCNPs and physicians (Ryan, 1998; Way, Jones, Baskerville, & Busing, 2000). It has been argued that the current fee-for-service model of funding for physicians is counterproductive to developing a successful interdisciplinary collaborative primary health care practice (Pringle, Levitt, Horsburgh, Wilson, & Whittaker,

2000). At the same time it is recognized, however, that liability issues are at the forefront for physicians who practice with PHCNPs and other health care providers in the delivery of primary health care services. To foster collaborative relationships, clarity regarding medico-legal issues is necessary to dispel physician concerns related to liability insurance coverage, adequacy of coverage, and the issue of vicarious liability. PHCNPs have \$1 million in liability insurance with the option of an extended insurance program (CNPS Plus) offering an additional \$5 million coverage (Canadian Nurses Protective Society, 2002). If the physician is not the employer then there is no burden for vicarious liability. However, if the physician is the employer then appropriate malpractice liability coverage is required (Jardali, 2003). Liability coverage is a concern to PHCNPs. Information and options for coverage need to be made available to enhance both the understanding and choices for coverage for PHCNPs.

In 1997 the Medicare services in the United States expanded to allow PHCNPs to bill at 85% of the physician rate when they collaborate with physicians. However, PHCNPs can alternatively bill directly to the physician at the physician rate, which means that the PHCNP bills the physician who in turn bills Medicare. Given this more lucrative structure, today 71% of PHCNPs are billing incidents to the physician. It is important to note that this may obscure the care provided by PHCNPs. As a result, it makes it challenging to accurately capture the deployment and utilization of PHCNPs for health human resource management and planning. Moreover, this model promotes the physician's supervisory, hierarchical position in the system as opposed to supporting a collaborative model of care. Many argue that PHCNPs be compensated independent of physicians' practice (Phillips, 2002), thus limiting the need for PHCNPs to negotiate care dependent on this funding structure. For instance, in New Brunswick, when the collaborating physician is unavailable, the PHCNP may refer directly to a specialist physician. The specialist physician can then bill as he/she would when a referral is received from a family practitioner (Newfoundland and Labrador Health and Community Services, 2001).

Government funding: Most ministries or departments of health have introduced primary health care models of care under their primary care renewal projects. These projects often emphasize a role for multidisciplinary teams, including roles for family practitioners, PHCNPs, and a variety of other health care providers, to work in collaborative models of care at the community level. These PHC clinics are often located in rural, remote or isolated communities, as well as in inner city settings. The focus of these centres is on comprehensive approaches to care delivery, which include health promotion, disease prevention, health education and community capacity development. Several jurisdictions have reconfigured the scopes of practice for healthcare providers in PHC centers to offer a broad range of health care services, i.e., for PHCNPs, respiratory therapists, and other health care providers

Furthermore, through collaborative short-term funding provided from the federal government through the Primary Health Care Transition Fund and from the Nova Scotia government for the Strengthening Primary Care in Nova Scotia Initiative, the implementation and evaluation of PHCNPs in four rural communities in Nova Scotia was facilitated (Martin-Misener, McNabb, Sketris, & Edwards, 2004). The CNA has developed the aforementioned single funding model, supported by the NPAO suggesting arms-length funding for PHCNPs from the provincial Ministry of Health via a transfer payment agency (NPAO, 2002). It has been further suggested that it is also possible to have collaborative hiring arrangements where PHCNPs have multiple collaborating employers. It is clear that there is a need for both a legal and financial commitment

by government to support PHCNP practice (van Soeren et al., 2000). A number of jurisdictional governments have recently made commitments to the integration of PHCNPs into health care through a number of initiatives including: committed funding for both education and practice; education initiatives including programs and increasing numbers of seats; the development of new PHCNP positions, and the development of legislation to support PHCNP practice. In British Columbia, primary health care related documents support the integration of PHCNPs into primary health care delivery. This commitment is being realized through increasing seats in the program for nurse practitioners at the University of Victoria, the University of British Columbia and for a planned increase in seats at the University of Northern British Columbia. It is important to note that since 1998, nurses in B.C. have been utilized in formal expanded roles through the Nurse First Call system. Legislation to support PHCNP practice in B.C. is expected to be approved by May 2005 (British Columbia Ministry of Health Services, n.d.). Similarly, the Ontario government allocated more funding so that the number of seats for the Council of Ontario University Programs in Nursing (COUPN) PHCNP program would double from 75 to 150. Similarly, in New Brunswick, 95 additional PHCNP education seats are to be added in the near future, with a commitment to 40 more PHCNP positions and at least four more collaborative practice primary health care clinics to be added in that province. In the Northwest Territories similar commitment is demonstrated through both approved legislation and through the identification of practice locations for PHCNPs (British Columbia Ministry of Health Services, November 2004; NPAO, 2004; New Brunswick Department of Health and Wellness, n.d.; Northwest Territories Health and Services, October 2003).

Some contend that employment models that support government funding for PHCNPs would eliminate fiscal employee-employer relationships between PHCNPs and physicians, communities, and/or organizations. The elimination of these relationships may eliminate the hierarchical nature of these relationships and at the same time, support a collaborative model of health care. In a study by Smith and Hall (2003), neonatal nurse practitioners cited the appropriate remuneration for care provided as one of the factors influencing the level of job satisfaction. PHCNPs have cited that the enrichment of team dynamics and collaboration amongst health care team members as factors that would increase the levels of workplace satisfaction (IBM, 2003). A salaried approach by government would offer a variety of positive influences including: support for PHCNP autonomous practice; recognition of the PHCNP's unique contribution to health care; encouragement for recruitment of PHCNP to roles independent of physician practice (possibly to geographical areas where physicians are not located and collaboration occurs by distance); and facilitating the collection of the appropriate variables and data elements to inform meaningful health human resources planning for PHCNPs.

The World Health Organization (2001) has identified the need for an integrated, needs-based health human resource planning models. Needs based approaches to planning for PHCNPs would contribute to identifying the number, distribution, mix, and geographical locations for PHCNPs to practice based on the needs of people. HHR planning would need to target strategies to enhance recruitment efforts. Even though widespread shortages in primary health care providers are acknowledged, it is worrisome that PHCNPs are not successful in being employed in positions once they complete the education process.

4.5 Unionized versus Non-unionized Positions

There is widespread variation in the participation of PHCNPs in unions, as well as variation in the details of the collective agreements (i.e., salaries and benefits) for those PHCNPs who are working in unionized positions (Canadian Federation of Nurses Union, 2004). It has been suggested that approximately 16% of PHCNPs are employed in unionized positions across Canada. Currently, many of the PHCNP positions in the Atlantic Provinces, Manitoba, and Saskatchewan are unionized, while in British Columbia, PHCNPs are presently in negotiation regarding union status. PHCNPs in Ontario are supported by the NPAO (2002) to remain non-unionized. In Ontario, PHCNPs who are working in a unionized environment report being less satisfied with their role in decision-making than PHCNPs who are not working in unionized positions (IBM, 2003). As a result of the independent nature of practice for PHCNPs in Alberta, they have been excluded from labour relations coverage. In fact, maintaining a non-unionized status for PHCNPs is part of health legislation in Alberta (Alberta Association of Registered Nurses, n.d.).

There is continued debate over the pros and cons of the participation of PHCNPs in labour relations coverage. Although collective agreements may have the potential to decrease wage disparities and ensure appropriate benefit coverage, they may also subject PHCNPs to being pigeonholed into existing definitions for nursing practice which are often entrenched in collective agreements. These definitions do not necessarily recognize the unique contributions that PHCNPs offer to health care. As mentioned, positive workplace satisfaction is paramount to the successful recruitment and retention of PHCNPs.

4.6 Interprofessional Collaboration

The importance of teamwork in the education process for health care providers and the delivery of healthcare is a theme in numerous federal and jurisdictional reports. However, due to the mandated collaborative practice arrangements with physicians, much of the emphasis in the PHCNP role has been on enhancing partnerships with physicians and the acceptance of the PHCNP role by physicians. However, some purport that collaboration needs to expand beyond the relationship of PHCNPs and physician, and that it must advance to enhanced collaborative relationships with other health care providers in the provision of optimal multidisciplinary health care to patients (Martin-Misener et al., 2004). It is recommended that strategies be developed to enhance relationship building and interdisciplinary collaboration with all health care providers. However, PHCNPs work most often in formal collaborative arrangements with physicians. Therefore efforts aimed at relationship building with physicians are paramount to reducing the resistance of the implementation of the PHCNP role and to promoting and enhancing NP autonomy and independence (Irvine et al., 2000; van Soeren et al., 2000). There have been a number of barriers and enablers to effective collaborative practice arrangements identified by both nurses and physicians in the literature. The benefit of the collaboration between PHCNPs and physicians most often identified by physicians is the improvement in people's access to services. Barriers identified by physicians regarding the collaborative relationship include issues of funding, decreased effectiveness due to restrictions of the expanded nursing role and liability issues. Benefits of collaboration identified by nurses in expanded roles included improved collegiality, increased availability of services and improved quality and continuity of care. On the other hand, potential barriers identified by expanded role nurses of this collaboration

included: restrictions on scope of practice impeding effectiveness of the expanded role; decreased ability to provide comprehensive health care services due to lack of knowledge or skill; delayed acceptance of the expanded nursing role due to lack of public and professional awareness; issues with funding and unsupportive; and resistant physician colleagues (Advisory Committee on Health Delivery and Human Resources, 2001; Goss Gilroy, 2001).

The value of interdisciplinary education in relationship building between PHCNPs and physicians should not be underestimated (van Soeren et al., 2000; Adelman, 2003; Way et al., 2001). The current fragmentation of health professionals' roles in educational programming does not support collaborative approaches to care in the practice setting (Pringle et al., 2000). Furthermore, Adelman (2003) suggests that there needs to be an emphasis on enhancing the interdisciplinary education initiatives in content areas such as basic sciences, introduction to medicine, health law, ethics, and health care administration. This enhancement in collaborative education offerings is viewed as an opportunity or forum for creating a foundation of mutual respect and collegial relationships between and among health care providers, including PHCNPs and physicians. The emphasis on interdisciplinary approaches to health care provider education and practice is consistent with Health Canada's HHR emphasis (Health Canada, 2004).

Some authors report that PHCNP- physician relationships are often based on collaborative or consultative models involving condition-based, populations-based or scope-based restrictions. Norsen, Opladen and Quinn (1995) refer to collaborative practice as a process whereby physicians and nurses work together in a joint effort toward a mission of excellent patient care. The effectiveness of collaboration is based on cooperation, assertiveness, responsibility, communication, mutuality, autonomy and coordination (Way, Jones, & Baskerville, 2001) with joint decision-making recognizing the unique abilities of each health care provider (Hanrahan, 2001). This type of collaborative model is based on a collegial, opportunistic relationship and is most often used in community health centres, fee-for service settings, primary care networks, long-term care settings, emergency departments and in Aboriginal Health Access Centres. The establishment of parameters for collaborative partnerships is necessary to build and sustain effective relationships between PHCNPs, other health care providers, and communities. Clearly outlined clinical performance indicators, professional development opportunities, malpractice insurance requirements and appropriate physician compensation mechanisms also contribute to effective relationships (NPAO, 2002). The Nova Scotia Department of Health as cited in Martin-Misener et al. (2004) has defined collaboration.

“Primary care services are provided by an interdisciplinary team that must include a family physician and nurse practitioner who practice collaboratively as principal primary care providers for individuals and families. The team may be enhanced by the inclusion of other health professionals. Primary care organizations promote a climate of respect, trust, and support for shared decision-making. Decisions regarding the most appropriate provider to deliver a certain services are made with in the context of patient preference, provider competence and other considerations. The interdisciplinary team respects the clinical autonomy of health professionals to make decisions based on best evidence and the individual's and the family's wishes”.

Based on the literature, it is recommended that specific components of the collaborative model include:

1. Access to and number of physician partner(s);
2. On-call coverage including access expectations, rotation and physician back-up;
3. Description of caseload including any specific populations;
4. Number and location of practice sites;
5. Regular process to review and revise any aspects of the collaborative partnership as the role evolves and changes over time (six and 12 months initially, annually thereafter); and
6. Availability of a conflict resolution process to resolve practice issues if required by either the NP or physician partner(s). (Adapted from NPAO, 2002).

However, the consultative model is not necessarily based on a formal practice relationship between the physician and the NP. In this arrangement, clients perceive and access the NP as the primary care provider and they are referred to a physician only if necessary. Physicians are reimbursed for pre-arranged, structured, and negotiated consults with the NP. This model is present in fee-for-service, long-term care, Victoria Order of Nurses (VON), public health units, Community Care Access Centres, Aboriginal Health Access Centres and community agency environments.

Effective partnerships and collaboration are critical to the successful integration of PHCNPs into the health care system. Decisions regarding collaboration of health care providers are influenced by both patient preference and provider competence (Martin-Meisner et al., 2004). Some reinforce that in a consumer-driven health care environment it is important to focus on both the visibility and the image of PHCNP practice to enhance the likelihood of the public choosing a PHCNP as a viable choice for a primary health care provider. In the early stages of the Nova Scotia Primary Health Care Nurse Practitioner project, findings indicated a lack of confidence in the capabilities of PHCNPs by other health care providers. For instance, some providers, such as pharmacists, cited that the problems they face with physicians will also be faced by nurses practicing as PHCNPs. Tye and Ross (2000) concluded that despite blurred boundaries of the NP working in emergency settings with physicians, the clinical staff acknowledged the quality of care offered by NPs.

In the current context of health care, there is a need to dismantle policy-driven barriers to collaboration (Gallagher, 2004) and to focus on a reformed health care system, which supports partnerships and builds relationships that are supportive of PHCNP practice. Issues such as wait lists and decreased access to primary health care and their adverse effects on patient outcomes, have stimulated decision makers and policy makers to plan beyond the traditional physician-only models of primary care to a more collaborative PHCNP -physician model. Misperceptions about PHCNP practice may impede the successful integration of PHCNPs into primary health care delivery (Goss Gilroy, 2001). It has been suggested that concerns about boundaries and scope of practice regarding PHCNPs are typically perceptual and not necessarily evidence-based (Jardali, 2003). Many argue that the clarification of the scope of practice for PHCNPs can alleviate concerns about the role being simply a replacement for physicians, instead highlighting the unique contribution that PHCNPs make to the delivery of health care in the system, the health care team, and the public. Currently, the scope of PHCNP practice varies throughout the provinces and territories (Advisory Committee on Health Delivery and Human Resources, 2001). It is anticipated that the clarification of both the scope and role of the PHCNP, as well as the

opportunity to practise autonomously in a setting based on collaborative principles, will improve the practice environment for existing PHCNPs and may encourage other nurses and potential applicants to participate in PHCNP practice. It is anticipated that this clarification may positively impact both the recruitment and retention efforts for PHCNPs.

4.7 Professional Support (role clarity, regulation, licensure, liability and intradisciplinary collegiality)

1.1.1 Role Clarity

There is a widespread perception that the existing structures for professional regulation, particularly legislated scopes of practice create an unnecessary barrier to the development of a more integrated health care system in general and to interdisciplinary practice in particular (Lahey & Currie, 2004). A critical examination of scopes of practice of regulated health professions by several jurisdictions is contributing to the view that current scopes of practice protections are framed in overly exclusive and restrictive terms. Both Tomblin Murphy and O'Brien-Pallas (2002) and Romanow (2002) emphasized the long-standing tradition of carefully guarded scopes of practice and its relationship to primary health care reform. Governments and health care chief executive officers (CEOs) are increasingly citing scopes of practice and traditional professional boundaries as impediments to their efforts to improve health care delivery and to establish new models of care delivery. In addition, CEOs claim that an alternative system of jurisdictional regulation and bureaucratically mandated scopes of practice with fewer reserved acts would help them design and implement more effective systems and ensure the adequate supply of the right level and mix of health care provider. There is, however, little in the way of empirical evidence to support this position (Tomblin Murphy & O'Brien-Pallas, 2002; Lahey & Currie, 2004). While the relevant literature refers to scope of practice issues and regulatory barriers as possible inhibitors to health care, this happens with little explanation of the precise role they play in this regard (Lahey & Currie, 2004).

It is suggested that PHCNPs are not physician substitutes but instead are unique, competent primary health care providers. Consumers of health care often relate that PHCNPs, as opposed to physicians, are more apt to spend time with them, provide clearer education and engage in health promotion and illness prevention strategies more frequently. There is undoubtedly an overlap and sharing of services between PHCNPs and physicians to provide alternatives and choices for patients (Mundinger, 2002). Therefore, a clear division of labour among providers, sensitive to the fiscal demands of a dynamic health care system and aimed at meeting population health needs is necessary. The role description for the PHCNP should be aligned with the vision outlined by the employer, address communities' needs, and reflect the expertise of the PHCNP. It is further recommended that the PHCNP play an active role in the development of the role description and associated clinical performance indicators for PHCNPs, which can also serve as a means of evaluation (IBM, 2003; NPAO, 2002). Thirty percent of PHCNPs in Ontario identified that they were involved in developing their position/job description and this involvement contributed to higher levels of satisfaction with scope of practice and their role in decision making, collaboration and team dynamics in the practice setting (IBM, 2003).

Many components of the advanced nursing practice roles provide “added value” to the delivery of health care through the merging of traditional medicine and nursing roles and the resulting

blurring of professional boundaries (Smith & Hall, 2003). When roles and scopes of practice are not clearly defined for PHCNPs, PHCNPs report both being more concerned about liability issues and less satisfied with their practice environment (IBM, 2003). Sidani, Irvine and DiCenso (2000) stress that it is imperative to have national and provincial guidelines which clearly delineate PHCNP scope of practice with enough flexibility to meet the needs of the community and the multidisciplinary team. They further suggest that the formality and clarity of roles for PHCNPs will enhance their practice satisfaction, alleviate concerns regarding competency and liability voiced by other health care providers, and lead to successful recruitment and retention efforts for PHCNPs (Sidani et al., 2000).

4.7.1 *Licensure, Legislation and Regulation*

Across Canada there is a wide disparity in how PHCNPs are regulated and the extent of their legislative protections and professional autonomy (see Table 1 Appendix A). In general the difference is between jurisdictions that use traditional models of licensure and/or certification for PHCNPs, and those that have adopted a controlled-acts model. It is suggested that each model offers certain advantages and challenges. In each case the notion of scope of practice is central. Under the process of licensure, legislation prohibits all who are not licensed from providing the services that fall within their scope of practice of that profession. Under the process of certification, the legislation contains no such prohibition. The function of the scope of practice in certification models is limited to authorizing members of the regulated health profession to provide services that fall within it. Whereas licensure provides a legislated monopoly to members of a regulated profession, certification provides only a competitive advantage (Lahey & Currie, 2002).

Provincial and territorial legislation and professional regulation to support PHCNP practice includes varying levels of authority to communicate a diagnosis, to order specified tests, and to prescribe and to administer specified drugs ((RNAO, 2000, n.d.); Registered Nurses Association of Ontario, n.d.; College of Registered Nurses of Nova Scotia, 2004; Saskatchewan Registered Nurses Association October 2003; Nurses Association of New Brunswick, 2002). Potential changes to the legislation to support PHCNP practice in other provinces are in progress (Registered Nurses Association of British Columbia, 2004). There is currently no specific legislation to support PHCNP practice in the Yukon as there is a broad definition of nursing in *The Nurses Act*, and it is believed that there is no need for separate regulations for nurses working in these expanded roles (Yukon Registered Nurses Association, 2004).

Varied practice standards and education standards for have been developed throughout the country. Although the process for PHCNP licensure is similar across jurisdictions, the qualifications for licensure differ. The licensure process for PHCNPs is completed on an annual basis, with initial licensure contingent upon specific education requirements and examination (NPAO, n.d.; College of Registered Nurses of Nova Scotia, 2004; Saskatchewan Registered Nurses Association October 2003, Nurses Association of New Brunswick, 2002).

The role of the provincial and regulatory bodies is to set standards for education, to identify ethical and competent practice, and to establish systems of accountability for PHCNPs. No national regulatory framework for PHCNPs currently exists and the processes for legislation and regulation vary. Therefore, there is no consistent scope of practice definition for PHCNPs, nor is there a consistent definition or process for collaboration (Jardali, 2003). In Nova Scotia,

Newfoundland and Labrador, and the Northwest Territories, the PHCNP title is protected by legislation. However, in Alberta and Ontario, the title is not protected. The literature suggests that regulation of the PHCNP title is not a major barrier to practice and that scopes of practice are appropriately regulated by the appropriate regulatory body (Jardali, 2003). Cited benefits and barriers to the integration of PHCNPs into the health care system do not include concerns with the PHCNP title (Advisory Committee on Health Delivery and Human Resources, 2001), nor is the limited liability history of PHCNPs reflective of a concern with inappropriate regulation of scope of practice (CNPS, n.d.). Differences, however, do exist in the definition of autonomy and collaboration leading to confusion in role expectation, scope of practice and physician confusion regarding competencies for PHCNPs (Jardali, 2003).

Some believe that the development of national regulatory and legislative frameworks will facilitate the development of a clear definition of scope of practice, collaboration and autonomy for PHCNPs. This clear delineation of definitions may provide consistent role expectations both for existing nurse practitioners, other providers and the public, and provide clarification for those considering a career as a PHCNP.

4.7.2 Liability

It is recommended that both PHCNPs and their physician partners have adequate individual malpractice insurance coverage through their respective professional associations. For instance, PHCNPs whose regulatory bodies are members of the Canadian Nurses Protective Society (CNPS) are offered occurrence-based coverage (covers future claims from past occurrences) as part of professional provincial association membership. The majority of PHCNPs practising throughout the country are members of CNPS. However, the regulatory body for British Columbia (Registered Nurses Association of British Columbia) is not a member of CNPS and offers coverage under the Captive Insurance Corporation. Similar commercial coverage is available for nurses in Quebec through the Order of Nurses of Quebec. In Ontario, approximately 5% of PHCNPs do not belong to the RNAO and therefore must obtain their own liability insurance. As well, PHCNP agreements in Ontario require a total coverage of \$7 million, \$5 million of which is covered by CNPS and the rest being the responsibility of the PHCNP. It is important to note that employing organizations of PHCNPs should have adequate vicarious liability coverage for employee PHCNPs (Canadian Medical Protective Society, March 2002, August 2004; Canadian Nurses Protective Society, n.d.). Although the claims history for PHCNPs is low both in the United States and in Canada, (National Nurse Practitioner Data Bank, 1990-2004; CNPS, 2004) the requirements for additional coverage are often dependent on practice setting, the PHCNP's individual needs, and risk of patient caseloads (e.g., obstetrics). Liability insurance costs and professional association fees should be included as part of collaborative practice agreements (CRNNS, 2003) and planned for as yearly operational expenses (NPAO, 2002). It is imperative that physicians are confident that PHCNPs have adequate liability insurance and that NPs are also certain that the physicians they are working with also have adequate coverage (Jardali, 2003).

Clarification and effective communication regarding liability insurance coverage for collaborative practice is necessary to enhance the collaborative relationship between PHCNPs and physicians. Medical-legal issues are often cited by physicians as reasons not to engage in collaborative practice with PHCNPs. The successful continuation and integration of PHCNPs into the Canadian health care system is contingent on effective professional relationships.

4.7.3 Mobility

Mobility involves the ease of transfer of PHCNPs from one practice setting to another and/or from one jurisdiction and/or country to another. Mobility can involve moving from one employer to another within the same jurisdiction, to a different patient population or to another province/territory or country. A national exam and a mutual recognition agreement (i.e., similar to the ones for RNs) will enable mobility, enhance PHCNP satisfaction, and support practice in a variety of settings (including under-serviced, remote or rural settings). Furthermore, freedom of mobility efforts also needs to be focused on aboriginal nurses who are designated to work within full or expanded scopes of practice only within aboriginal communities (Gregory et al., 2002). Freedom of mobility will not only enhance the work satisfaction of PHCNPs by providing numerous practice opportunities but also facilitates more meaningful health human resource planning.

4.7.4 Resource Competition

Currently, there is a widespread shortage of health care professionals throughout Canada and the world (Canadian Nurses Association, 2002; Indian and Northern Affairs Canada, 1996; Kirby & Le Breton, 2002, Romanow, 2002; World Health Organization, 2002). Competition for scarce human resources in health care is fierce. Within Canada, it is necessary that inter-provincial and territorial strategies aimed at optimizing health human resources are ethical and non-competitive. In both western and Atlantic Canada, the provinces are working together to plan for appropriate health care. A national health human resources plan may optimize allocation of scarce health human resources and thus provide visionary anticipatory planning for recruitment and retention requirements for PHCNPs.

4.8 Intraprofessional Collegiality

There has been much resistance to and suspicion of the role of the PHCNP within the nursing and the medical community. Some speculate that the suspicions are related to the lack of role clarity and perceived threat of PHCNP practice on that of other healthcare providers, including the compensation of physicians. It is imperative that PHCNP scope of practice is clarified and that the inconsistencies in educational program efforts and regulation are examined and possibly eliminated. The elimination of inconsistencies may enhance the level of confidence and respect for PHCNPs with the public, other health care providers, and nurses. Phillips (2002) describes program accreditation and certification exams as being fairly standardized in the United States. There is however, considerable variation in education programs, and accreditation processes for PHCNPs in Canada. Some suggest that provincial/territorial associations should collaborate to determine if there could be agreement on consistent approaches to PHCNP education, practice experience, scope of practice, certification, and reimbursement. The variation in these areas may contribute to what would appear to be a lack of interprofessional and intraprofessional support for the PHCNP role. It is further suggested that the nursing community focus on defining scopes of nursing practice and standardizing education for PHCNPs, as well as considering the certification of PHCNPs through the CNA's certification program. Enhanced collegiality among nursing colleagues may enable and encourage PHCNPs to practice within their fullest scope of practice which may result in a renewed confidence and competence in practice. These factors

may contribute to the retention of PHCNPOS and also encourage other RNs to consider taking on advanced nursing roles.

4.9 Community Support

It is suggested that the key to engaging community support for PHCNPs is to promote the understanding of the scope of practice, credentials, and capabilities through extensive marketing campaigns. Research clearly demonstrates communities recognized need for PHCNPs, especially in areas with limited access to quality primary health care (Pong, 2000). Studies indicate that there are improvements in patient satisfaction and outcomes from collaborative practice arrangements compared to either physicians or PHCNPs practicing independently (Tye & Ross, 2000; Byrne, Richardson, Brundson, & Patel, 2000, Venning, Durie, Roland, Roberts, & Leese 2000; Reuben, Schnelle, Buchanan, Kingston, Zellman, Fraley, Hirsch, & Ouslander, 1999, Tingen & Harper, 1999; Marsh, 1999; Blunt, 1998). Phillips (2002) suggests that improved patient outcomes and satisfaction may result from enhanced professional satisfaction in a supportive collaborative environment.

A document released by the Canadian Nurses Association (2003) cites improved public access to high-quality care at cost-savings to the health care system due to PHCNP practice. Furthermore, in a joint effort by the RNAO and RPNAO entitled “Team up with Nursing” they focus on a public awareness campaign aimed at fostering a positive image of nursing and offering information about nursing as a career. Radio and television public service announcements and the distribution of media kits have a cumulative effect in public acknowledgement and value of nurses’ contributions to health care and society (RNAO, n.d.). Similar strategies may help to increase public awareness and interest in the unique role of PHCNPs in health care and improve the integration of PHCNPs into the health care system (IBM, 2003).

Communities are increasingly involved in health care decision-making, policy development and the allocation of health care resources. In a number of communities, decisions to employ PHCNPs are made by community health or district health boards (Goss Gilroy, 2001). Therefore, it is necessary to increase public awareness of the PHCNP’s role as a viable member of the health team and an alternative access point of entry to the health care system (NPAO, 2002). This will not only encourage communities to create new PHCNP positions but may also encourage continued community support of existing PHCNP positions.

4.10 Autonomy

PHCNPs work both autonomously and in collaboration with other health care providers (CNA, 2003). Autonomy is contingent on standardized education, role clarity and professional and public support. One of the facilitators to role implementation, cited by Irvine et al. (2000), is having the ability to implement interventions traditionally considered to be within the medical domain without the ongoing need for immediate co-signing by a physician. PHCNPs focus on health determinants support assessment and interventions strategies in-keeping with a comprehensive case management approach to care. Quality outcomes management includes: evaluation and treatment, education and counseling, risk assessment, health promotion, coordination of care and case management for individuals, families and communities (Unruh Davidson, 1999; MacDonald, Srieber, & Davis, 2004). Funding and remuneration, independent

of physicians, also contribute to the promotion of autonomy and to the recognition of PHCNPs as capable, competent and accountable practitioners, as opposed to physician employees. The current trend in the United States is towards independent practice for PHCNPs. To this end, there has been an approximate 12% increase in the number of states supporting independent practice for nurse practitioners. However, the debate remains as to the capability and appropriateness of PHCNPs to maintain independent practice (Alpert, Fjone, & Candela, 2002). A study by Mundinger et al. (2000) concluded that patient satisfaction, patient health status, accuracy of test results and service utilization (i.e., frequency of visits) were comparable between nurse practitioners and physicians. However, the scientific merit of this study has been questioned.

It is reported that collaborative partnerships, which support autonomy for PHCNP enhance the level of job satisfaction for these nurses. For instance, in the Ontario Nurse Practitioner Integration Study (IBM, 2003), 62% of PHCNPs cite autonomy as the most positive component of practice. Similarly, Karlin, Schneider and Pepper (2002) report professional responsibility as one of the top three factors influencing work satisfaction for PHCNPs working in geriatric sectors.

Although much of the literature cites autonomy as one of the most important contributors to work satisfaction for PHCNPs, there are few strategies or recommendations in the literature to support its' achievement. The standardization of education, clarification of roles and the demonstration of outcomes related to practice would contribute to and strengthen the position of PHCNPs and nurses for autonomous and accountable practice and thus enhance workplace satisfaction. The most effective recruitment strategy is ensuring existing PHCNP retention.

4.11 Workload/Utilization

In the United States, the number of NP students rose from fewer than 4,000 in 1992 to 21,558 in 1999 (Phillips, 2002). The number of NPs in the U.S. is projected to rise to over 100,000 and have a presence in all 50 states in the very near future (Alpert et al., 2002). This number of NPs is very close to the number of medical students graduating. Unfortunately, there is very little data available regarding the number of PHCNPs nurse practitioners practicing in Canada (Soeren & Micevski, 2001). In response to changes in nursing practice and to increasing requests from the research community, Canadian Institute for Health Information (CIHI) collection of nurse practitioner data began for the Registered Nurses Database in the 2001 data year. Newfoundland and Labrador, Ontario, Alberta and the Yukon submitted this data to CIHI in the 2001 data year, and nurse practitioner statistics were first reported in the CIHI publication *Supply and Distribution of Registered Nurses in Canada, 2001*. Although the Canadian Institute for Health Information (CIHI) gathered information on NP practice in Canada for 2001, there were reported difficulties with the definition for NPs. The focus on NPs as part of the CIHI Registered Nurses Database (RNDB) was also reported in the *Work Force Trends of Registered Nurses in Canada* report (CIHI, 2003).

Understanding the geographical location, sector, and nursing hours per patient days or frequency of visits for PHCNP's practice is critical for effective HHR planning. However, there are major gaps in data. It is estimated that as many as one-third of PHCNPs are employed in activities other than patient care as a result of their advanced education. PHCNPs are sought after for roles

in management, consulting, and teaching. It has been suggested that approximately one-half of NPs in the US work in rural and/or inner city areas. Approximately 85% of NPs in the US are providing primary care (Hooker & Berlin, 2002). Approximately 21% of physicians in the US are working with NPs. These physicians tend to be younger than 50 years of age, with fewer than 20 years of experience, work in larger clinic groups, and have an increased load of managed care patients. A survey of recent PHCNP graduates in Ontario indicates that 60% of PHCNPs were not optimistic about employment prospects and that the shortage of positions may be indicative of the under-utilization of NPs and unequal public access to NP health care services (Coty, Michel, Pong, & Stewart, 2003).

According to the NAMCS (National Ambulatory Medical Care Survey), physicians, rather than NPs, are more likely to see older patients due to the likelihood of more complex cases associated with older patients. NPs are more likely to provide therapeutic or preventive services than the physician, whilst they are both equally likely to prescribe medication (Hooker & McCaig, as cited in Kovner, 2002). Although there is overlap between services provided by NPs and physicians, patterns of shared practice indicate divisions of care. Strategies for support and disease prevention are provided more often by NPs while physicians are more likely to offer curative measures. There seems to be equal provision of health promotion strategies by each profession. However, there were limited bi-directional referrals, which may be due to medical-legal issues, lack of interdisciplinary education and/or lack of familiarity with NP scope of practice. The underutilization of NPs for curative and rehabilitation services remains an issue (Way, Jones, Baskerville, & Busing, 2001). A cost effectiveness analysis recently carried out (Way, 1999 in CNA, 2002) indicates that it is less costly to implement an effective collaborative nurse practitioner-physician approach to care than a physician-only arrangement. This coordinated, multidimensional approach to primary health care delivery was found to have similar cost benefits in an evaluation of the PHCNP role in Newfoundland and Labrador (Goss Gilroy, 2001). It is also important to note that 40-90% of primary care visits can be carried out by a PHCNP. Similarly in the US, studies indicate that primary health care provided by a PHCNP costs 10-40% less than primary care provided by a physician (Appleby, 1995; Fitzgerald, Jones, Lazar, McHugh, & Wang, 1995).

There is a need to recognize the value of all health care providers and to utilize each all providers to their fullest capacity. It is timely to create and sustain a collaborative health care work force designed to improve the health of the people it serves. It is difficult, however to evaluate current workload and utilization of PHCNPs in Canada as there is insufficient data for this analysis. A concerted effort is necessary to gather and invest in data for effective health human resource planning.

4.12 Education/Continuing Education

To address nursing shortages, several provincial/territorial governments have provided increased funding support to educational and health care institutions for the recruitment, retention and education of nurses. It is reported that addressing both training and education issues is essential to foster role enhancement in expanded scope of practice. The importance of promoting an understanding of competencies and scopes of practice of health care providers as a means to identifying opportunities for expanded collaboration is stressed in the literature. It is clear that all

members of the health care team must understand not only their own roles but also the roles of other players.

This lack of clarity is linked to the discipline-specific approaches in traditional educational programs and the discipline-centric viewpoints that result due to the process of silo-specific education (Minore Boone, 2002). Furthermore, it is suggested that a lack of understanding of varying scopes of practice boundaries and parameters among many of the health professions is a key factor in preventing health care providers to work to the full scope of practice. For example, it has been argued that a narrow understanding by physicians of the PHCNP role and its scope of practice has led to under-utilization of the PHCNP. One pilot study carried out in two rural Ontario primary care practices participating in an outreach intervention to improve structured collaboration practice between PHCNPs and family practitioners (FP) was conducted to determine what primary health care services are provided to patients by NPs and FPs working in the same rural practice setting. Findings from this study indicated that the NPs were under-utilized in both curative and rehabilitative care and there was little evidence of shared care between the two professionals. The authors concluded that the lack of collaborative practice in this study may be explained by the following concerns: medical legal issues related to shared responsibility; lack of education in working in interdisciplinary teams; and the lack of FPs familiarity of the scope of PHCNP practice (Way, Jones, Baskerville, & Busing, 2001).

There are a number of challenges for PHCNPs related to both formal education and continuing education. Currently, territorial and provincial education requirements for the educational preparation for PHCNPs vary from masters, baccalaureate, and diploma and/or certificate programs (Advisory Committee on Health Human Resources, 2001; Jardali, 2002). These educational requirements are in contrast to some international standards aimed at graduate level preparation requirement for PHCNPs (Canadian Nurses Association, 2002). Some suggest that it is important to strive for master's level education as a requirement for PHCNP preparation to facilitate a practice requiring both advanced knowledge and skills (van Soeren et al., 2000). Many authors reinforce the need to reform the current education environment to include components of interdisciplinary education in an effort to promote collaborative practice (Way et al., 2001; Pringle et al., 2000; van Soeren et al., 2000; Adelman, 2003). In 2003, the CNA lobbied for a funding commitment to increase seats for master's students by 2,500 throughout the country (CNA, 2003).

In the U.S., it is suggested that the declining NP supply is related to the overall nursing shortage, the aging nursing workforce and the lack of interest overall in nursing as a career (Hooker & Berlin, 2002). These reasons for decreased supply may be also true for Canada. Hicks (1998) compared nurses' and other colleagues' perceptions of the training requirements for NPs and found both to be similar. Broad themes related to required educational preparation included: a need for skills in research and auditing; advanced clinical practice; effective communication and ability to engage in teamwork; and knowledge of business and management. In addition, she argues that those practising in remote or rural communities have unique educational challenges requiring ongoing support for continuing education.

Suggested funding strategies to enhance PHCNP education and continuing education suggested include an amendment of the *Income Tax Act* to broaden education tax credits and improved academic funding from government for PHCNP programs and individual tuition funding (Webb, 2001). As stated earlier in this paper, in British Columbia funding from the Health Transition

Fund will support 30 seats at the University of Victoria and the University of British Columbia as well as a projected increase of 15 seats at the University of Northern British Columbia. In Ontario more funding has been allocated from the Ontario Ministry of Health and Long Term Care (OMHLTC) to double seats in the Council of Ontario University Programs in Nursing (COUPN) program from 75 to 150. The Ontario College of Family Physicians, the Registered Nurses Association of Ontario, Jones, Way & Associates, the University of Ottawa Department of Family Medicine/School of Nursing and the Ontario Medical Association (OMA) have partnered in a project to support the establishment of interdisciplinary practices in Ontario by establishing a FP/NP education and mentoring program funded by Health Canada's Primary Health Care Transition Fund (Ontario Hospital Association, 2004). Similar funding mechanisms and increases in NP education seats are found in other jurisdictions. Although government commitment to NP education is apparent through increasing the numbers of seats, it is a useless effort unless there are effective recruitment and retention strategies to deal with a dwindling supply of nurses.

Some suggest the need to build the capacities and strengths of communities by supporting and promoting the education of PHCNPs in their own communities (i.e., people from the north, educated in the north typically stay in the north) (van Soeren et. al, 2000; CNA, 2004). Similar continuing education supports and strategies available to primary care physicians could be offered to PHCNPs (Delva, Kirby, Knapper, & Birtwhistle, 2002). For instance, the support of distance learning for nurses practising in the north who wish to attain higher education is suggested to be important to both recruitment and retention of PHCNPs. As well, the development of an advanced practice program (graduate level) in a northern university may be a worthwhile investment.

Furthermore, there is a need for continuing education delivery for PHCNPs that is flexible, offered through distance approaches using a variety of delivery methods (e.g., WebCT, print, video/teleconferencing) (Andrusyszyn, Iwasiw, & Goldenberg, 1999; Andrusyszyn, Cragg, & Humbert, 2001; Mangan & van Soeren, 2000). Most notably, the expansion of distance online learning and telehealth opportunities for continuing education purposes in rural and remote practice settings is required (RNAO, 2002.). Educational content for PHCNPs should focus on clinical, professional and research issues. The clinical component, incorporating the role of a clinical mentor, is central to continuing education for PHCNPs (Gardner, Gardner, & Proctor, 2004). However, to reduce the level of burnout in the mentors it is necessary to consider and offer incentives to preceptors or mentors in concert with the strategies. Further continuing education and technical support is required in remote communities where there is limited access to high-speed Internet and mail delivery is slow (Caty et al., 2002; Tilleczek, Liboiron-Grenier, & Pong, 2004). A consortium approach to education for PHCNP may also be effective to improving both recruitment and retention (van Soeren et al. 2000).

MacLeod et al. (2004) highlight the need for recruitment and retention strategies to support nurse in aboriginal communities to provide culturally appropriate, continuous care. The provision of tuition assistance or bursaries for PHCNP students in exchange for return to service agreements and/or willingness to relocate to remote or rural areas has been suggested as effective strategies to recruit and retain PHCNPs for under-serviced areas (CNO Environmental Scan, 2004; New Brunswick Department of Health and Wellness, n.d.). There is also a pressing need for funded undergraduate and postgraduate education programs to incorporate the realities of rural and

remote nursing practice and offer new ways to design and provide relevant continuing education. Some suggest that there is a need to develop partnerships (between certifying and accrediting bodies) at the university level to establish guidelines for education for PHCNPs. It is further suggested that a national licensing exam may help to clarify the competencies and scope of practice associated with the PHCNP role and as a result enhance the credibility of the role (Jardali, 2003). The National Task Force on Quality NP Education is becoming the standard evaluation for NP programs in the US. It requires 12-24 months full time classroom education combined with a minimum 500 hours of clinical practice.

There are a number of viable formal and continuing education strategies aimed at improving practice environments for PHCNPs. Most notably, funded interdisciplinary graduate level preparation for PHCNPs is suggested to provide the necessary education preparation to position PHCNPs to meet the evolving needs of populations in a complex health care environment. Flexible, innovative continuing education offerings using multiple methods of delivery including distance education via the Internet and telehealth education will support practising PHCNPs. Results from the NP Integration Study indicate that 18% of NPs cited increased knowledge, professional growth and continuing learning as the most positive aspects of their role. As well, those who are offered the reimbursement of education expenses reported higher levels of workplace satisfaction (IBM, 2003). These are important findings to consider as strategies are developed, implemented, and evaluated to deal with issues of recruitment and retention of PHCNPs. It is necessary to strengthen support systems for students and newly practising nurses to alleviate the high attrition rate (50%) of PHCNPs in Canada (CNA, 2003) and thus support recruitment and retention efforts for these nurses.

4.13 Working at Full Scope of Practice

For PHCNPs to work at full scope of practice, national and local policy documents are required to detail the expectations of all stakeholders (Webb, 2001). As stated earlier, it remains a challenge that there is no consistent definition of the PHCNP scope of practice across Canada (Jardali, 2003). Irvine et al., (2000) cited that the acute care NP role implementation has been thwarted by lack of a formal role description, conflicting demands and expectations, lack of receptivity by others, lack of autonomy, and increased workload. These problems may influence the NPs' ability to work to full potential while there are feelings of reduced autonomy and workplace satisfaction. Furthermore, the ability to work at full scope of practice in Canada may be restricted due to misperceptions of the scope of the PHCNP role. In the U.S., the current trend is to move away from physician supervision and protocols (Phillips, 2002) to a more autonomous, independent practice. It is important to note that the ability for PHCNPs to work at full scope of practice is contingent on a number of system factors. The location and the setting of practice (urban, rural or remote) influences the degree of autonomy afforded to and expected of PHCNPs. As well, it is challenging to recruit and retain the appropriate mix of health care providers to provide consistent primary care services required by populations living in rural and remote settings. The core competencies and practice expectations of nurses working in expanded roles are also dependent on provincial legislation and regulations regarding scope of practice, colleges of nursing and/or employers or physician expectations (Advisory Committee for Health Delivery and Human Resources, 2001).

4.14 Factors to be considered for NP satisfaction

Occupational health and safety and workplace wellness strategies demonstrate a commitment to supporting and valuing PHCNPs. According to a report by the Auditor General of British Columbia, there are a number of factors related to a healthy workplace. These factors include: demands that fit the resource of the person; a high level of basic predictability; good social support; a high level of influence at work; and a balance of efforts and rewards. The authors of the report recommend a coordinated, participative, team approach to healthy workplaces through commitment to funding, visible leadership and links to strategic plans from the management through to government levels (Auditor General of British Columbia, 2004) This is in keeping with PHCNP-specific literature which links the presence of autonomy, support, collaboration and practicing within a defined scope of practice as integral to workplace satisfaction (IBM 2003).

Examples of strategies to improve workplace satisfaction for PHCNPs cited in the literature include:

- Disease management programs, which lead to better management of chronic conditions, decreased related long-term complications, increased productivity and job satisfaction, decreased medical and disability costs, reduced absenteeism and therefore improved recruitment and retention (CNA, 2003);
- Flexible work hours planned in collaboration with an interdisciplinary approach and participation in meeting the primary care needs of the communities they serve (Smith & Hall, 2003); and
- In Bathurst, New Brunswick, the Nepisquit Medical Clinic model supports an environment of learning and sharing with one-in-ten weekend call and guaranteed vacations (Capital Health, November 2003).

The impact of level of job satisfaction on the recruitment and retention of PHCNPs is a common theme throughout the literature. Role clarity, collaborative models of care and autonomy are all key factors in promoting job satisfaction for these nurses.

4.15 Nurse Practitioner Database

The utilization and associated outcomes of PHCNPs are related to productivity, the organization of human resources (including health care delivery models, skill mix and team structures) and the effectiveness of interventions (CNA, 2003). A comprehensive database including a directory of related research will support research initiatives specific to care provided by PHCNP care. There is a need for committed funding to NP-focused research investigating the relationship of care provided by PHCNPs to system (cost), provider, and health (clinical, functional and satisfaction) outcomes (Oermann & Floyd, 2002). It is imperative that these and other research findings are disseminated in a timely fashion and in a user-friendly way to influence both national and local policy. Expansion of rural health databases will also offer valuable data to support PHCNP practice (Centre for Rural and Northern Health Research, 2003). Ongoing self-evaluation and monitoring of outcomes may be beneficial information to assist PHCNPs in altering or improving care and to provide valuable data on effectiveness (Buppert, 2000; Goss Gilroy, 2001).

Data regarding the supply, utilization and deployment, and productivity of PHCNPs must be enhanced to influence more effective health human resource planning. Commitment to enhancing data based in this regard is apparent as jurisdictions and key stakeholder groups receive money from Health Canada through the HHR initiative to enhance recruitment and retention of healthcare provider groups.

4.16 Political Support /Interdisciplinary Support

It is imperative that PHCNPs muster both political and interdisciplinary support as a mainstream not a “fringe” health care practice. It is argued that this support will enhance interdisciplinary and interprofessional efforts to develop policy, which is essential to improving health outcomes (Phillips, 2002). There are both political and social barriers to PHCNP practice. These include: the traditional model of physicians as primary health care providers and gate-keepers of care; domination of the medical model in health care; and labels for NPs such as “non-physician” or “midlevel” providers, inferring a sub-standard level of care. The impetus for the introduction of PHCNPs was primarily due to physician shortage in remote, rural or undesirable areas (Goss Gilroy, 2001). In fact, in a number of remote and rural areas of the country, nurses have been providing up to 80% of primary care services for the past 50 years (NWT, 2004). These opportunities however, provided evidence of positive patient and system outcomes related to PHCNPs provision of care. This evidence is integral to policy development to support PHCNP practice. Current commitment by some territorial and provincial governments and the federal government through focused funding for both PHCNP education and positions reflects changing perceptions about new innovative models of primary health care delivery. Continued development of such strategies and continued commitment by government agencies and policy makers will increase the likelihood of nurses choosing advanced practice roles and will improve the implementation of the PHCNP role into primary health care delivery, thus improving recruitment and retention efforts (Goss-Gilroy, 2001)

4.17 Critical Relationships

There are a number of important issues that need to be resolved to support PHCNPs (Martin-Misener, 2004). Policy changes within current jurisdictional and federal programs will facilitate further implementation, utilization and integration of PHCNPs into the health care system. Currently, only physicians can complete official documentation for a driver’s medical exam, military clearance and vital statistic documents such as birth and death certificates. Scope of practice should be extended to include these practices for PHCNPs. Furthermore, there is variation among jurisdictions related to hospital privileges for PHCNPs. PHCNPs must be supported to admit and discharge patients as well as obtain relevant lab and diagnostic information across the health care continuum. In addition, there is a need for private health insurance policies to be modified to include services provided by PHCNPs and for modifications to pharmacare policies so that prescriptions written by PHCNPs will be filled. Ongoing formal relationships with communities, especially those in under-served, rural or remote areas, need to be developed to support the recruitment and education of PHCNPs (Gregory et al., 2002). Improved relationships with home care and workers’ compensation organizations were also noted as key to enhancing the PHCNP role.

Promoting and building on key relationships will enhance PHCNPs' scope of practice and enable PHCNPs to care for clients across the health care continuum. Enhancing relationships may also support autonomous practice for PHCNPs, enhance their job satisfaction and thus support the integration and continuation of NPs as valuable primary care providers in the health care system.

4.18 Immigration

Although the number of seats for the education for NPs in Canada has increased in the last two years (CNA, 2003), there is still a shortage of PHCNPs. Additional strategies for recruitment may include a need to explore the integration of PHCNPs from other countries, especially into rural areas of Canada. The exploration of current regulatory and legislative infrastructures by government and professional association may be necessary to facilitate this integration. Recent work by McLeod et al. (2004) states that only a fraction of foreign-educated nurses work in rural areas of Canada. However, recruitment and retention strategies aimed specifically at this population before commencing practice in Canada may be effective. Job fairs, advertisements and paid travel may entice foreign-educated PHCNPs to work in Canada. This would only be of benefit if supportive measures are in place to facilitate the integration of foreign-educated PHCNPs into practice settings. These measures might include: clearly defined criteria for practice outlined by the professional association and based on relevant education; support to overcome language barriers; and assistance with integration into a new culture. These are additional strategies which may be offered in conjunction with the aforementioned recruitment and retention strategies suggested to address PHCNP practice in Canada.

In Ontario, graduates of another program outside of nursing or nurses who through experience and education believe that they have achieved the competencies of the Ontario program must successfully complete the "challenge process". This process consists of a satisfactory completion of a provincial certification exam, a detailed portfolio of prior learning, and an oral exam (NPAO, 2002). Similar structures may apply to foreign-educated nurse practitioners. Currently, education for nurse practitioners varies throughout the world. A number of countries (the United States, Australia, New Zealand and the United Kingdom) have produced documents supporting the importance of nurse practitioners in primary care (CNA, March 2002). In some countries, the minimum education requirements are at the master's level (International Council of Nurses, n.d.; Pearson & Peels, 2002a, 2002b).

Although the international education requirements for PHCNPs in a number of countries are at the graduate level, there is still a need for consensus in Canada on clearly defined criteria for practice for foreign-educated nurse practitioners based on relevant education and certification and oral examinations. As well, supportive measures such as assistance with language barriers and assistance with integration into a new culture are needed. Once these processes are in place, a variety of recruitment and retention strategies may be implemented.

5. Synthesis and Summary of Findings

The sustainability of primary health care services for Canadians requires a collaborative effort among health care planners, decision-makers, providers and the public in offering Canadians viable alternatives for primary health care provision. Research clearly demonstrates the effectiveness of PHCNP practice in providing primary health care to Canadians. Therefore,

efforts to recruit and retain PHCNPs are central to the sustainability of optimal health care for Canadians. However, based on this review of the literature it appears that there is currently a lack of coordinated efforts to recruit and retain PHCNPs in Canada. Recruitment and retention efforts must be aimed at a variety of initiatives to improve the understanding of the unique contributions PHCNPs make to health care, including the development of: appropriate remuneration and funding models independent of physician funding; national legislative and regulatory frameworks aimed at providing a clear definition of the PHCNP role; consistent policies aimed at supporting and educating PHCNPs to practice in environments consisting of inter-professional; and intra-professional collaboration. There are a number of notable challenges for educating PHCNPs, especially those nurses practising in rural, remote or under-serviced areas.

It is imperative that standardized funding models be reflective of the unique care contributions that PHCNPs make to the health of Canadians through primary health care delivery. Recognizing these unique contributions warrants that PHCNPs be recognized and compensated at a comparable level to FPs. Acknowledging the importance of interdisciplinary approaches to health care delivery required in today's health care system, it is imperative that PHCNPs work in collaboration with consumers, physicians, nurses, and other care providers. Furthermore, the need to establish autonomous care delivery models (i.e., not dependent on collaborative arrangements with physicians) should be further considered and evaluated.

In addition, there is a need to address the issues in the workplace and redesign current practice environments to ones where all health care providers are valued and they are able to practise to their fullest scope of practice. Numerous reports outline the importance of creating strategies to enhance work environments for nurses and other health care providers. In July 2002, the report of the Canadian Nursing Advisory Committee was released to the Deputy Ministers of Health. The recommendations address the main issues identified as barriers to a quality workplace for Canadian nurses including: the need to increase the numbers of nurses; the need to improve education and maximize the scope of practice of nurses; and the need to improve working conditions of nurses. Furthermore, the factors influencing nursing job satisfaction and retention are highlighted. This report not only identified evidence-based strategies, but also is presently determining the costs associated with implementation of these strategies across Canada. Many of these recommendations are pertinent to PHCNPs and may need to be reconsidered in a changing environment. Recruitment and retention strategies for PHCNPs need to be aimed at sustainable funding for formal education, continuing education, information technology support, and appropriate compensation. It is clear that the role of autonomy, support, role clarity, collaboration and ability to practice at full scope are necessary components to retain PHCNPs in the workplace and to enhance job satisfaction. A number of jurisdictional reports outline strategies which focus on enhancing the worklife for PHCNPs. Examples of these strategies include: flexible work hours; effective collaborative relationships with other nurses, physicians, and other health care providers (i.e., supportive collaborative practice environments); and incentive programs and educational opportunities.

It is critical to reinforce the idea that autonomy is central to improving work life conditions and enhancing practice satisfaction for PHCNPs. Strategies to lead to the successful development of a positive, challenging work environment will enhance the retention of PHCNPs in existing positions, and may facilitate recruitment of other nurses into this advanced nursing role. There

are a number of incentive initiatives suggested in the grey literature including additional salaries, money, support for professional development, housing, etc. However, most of these incentives are short-term and are not necessarily comparable across jurisdictions. Therefore, the recruitment and retention efforts focused on PHCNPs may benefit the larger jurisdictions that have more resources to infuse into the identified incentive strategies, a situation that has the potential to create competition among the jurisdictions. Furthermore, incentives being offered to FPs should be considered by governments for PHCNPs as well. Funding for both formal and continuing education for PHCNPs is also essential to providing initial and ongoing support for PHCNP practice. Education requirements vary across jurisdictions and are often dependent on legislative and regulatory processes, population needs, provider availability and committed government funding. International approaches often involve graduate level preparation for PHCNPs.

Evidence supports the concept that both continuing and formal education for PHCNPs needs to be interdisciplinary, flexible and innovative, and involve a variety of delivery methods. This is especially crucial in remote and rural areas where PHCNPs often practise in isolation from other health care providers and institutional supports. These education initiatives will support nurses to engage in advanced education and to embark on expanded practice thus adding to the existing pool of PHCNPs in Canada. Although collaborative practice relationships for PHCNPs revolve primarily around the PHCNP-physician relationship, it is well documented that it is important to build relationships between PHCNPs and other health care providers. Currently most of the literature has focused on the NP-physician relationship by describing numerous barriers and facilitators to the development of collaborative practice. It appears that physicians focus primarily on issues of patient access to care and liability, whereas, PHCNPs focus on continuity and quality of care for patients and issues related to attaining autonomy and full scope of practice.

It is clear that the geography in Canada creates challenges for the delivery of primary health care services to Canadians living in rural and remote communities. People living in these communities may be marginalized populations with unique health needs related to social, economic, geographic, cultural and political factors. Targeted efforts with committed government policy and funding are necessary to address these unique needs. The effective recruitment and retention of PHCNPs to rural and remote communities is crucial to the sustainability of primary health care services for all Canadians. A number of recent provincial, territorial and federal documents demonstrate a committed effort toward the integration of PHCNPs into the delivery of primary health care. However, efforts are not consistent across the country nor are efforts comprehensive enough to fully address current issues for NP practice. Therefore, continued government commitment to PHCNP practice is necessary to create effective changes in both policy and funding mechanisms.

There are a number of innovative, primary health care delivery models being developed, implemented and evaluated within and across jurisdictions. However, the presence of the delivery models that incorporate the role of the PHCNP presents numerous challenges for effective collaborative practice. The ability for PHCNPs to work at full scope of practice in Canada is thwarted by the lack of a consistent, national definition for PHCNP practice, in turn leading to misperceptions in the scope of PHCNP competencies and underutilization of PHCNP primary health care services. This underutilization is reflected in the number of PHCNPs who are currently not employed in PHCNP positions in some jurisdictions. However, it is difficult to

obtain a national perspective as there is little data on the deployment and utilization of PHCNPs practising in Canada. It is anticipated that further commitment to and development of HHR related databases will enhance both HHR planning and ways to determine the effectiveness of recruitment and retention initiatives specifically aimed at PHCNPs. The need to develop a national PHCNP database to plan effective health human resource strategies and conduct PHCNP-specific research is apparent.

The literature reinforces that PHCNPs tend to engage in more prevention, promotion and restoration services compared to FPs who tend to engage more often in curative services. The unique case management approach to care provided by PHCNPs is evident in their focus on primary health care illness prevention and health promotion services. There are a number of factors as well that influence the ability for PHCNP to practice at a full scope which include: definition of PHCNP role; location and setting of practice (urban, rural or remote); and the dependency of PHCNP core competencies on legislative and regulatory processes. Working at full scope of practice within a collaborative, interdisciplinary environment has been highlighted in the literature as central to retaining these nurses in advanced practice and to the recruitment of nurses into this role. The unionization of PHCNPs varies across the country. There is clearly an ongoing debate as to the advantage of unionization on the provision of benefits and the harmonization of wages. The dominant concern remains whether PHCNPs are being/will be “pigeon-holed” into the existing definitions of nursing practice presently entrenched in collective agreements. The need to garner community support for the PHCNP role is pivotal to its successful integration into the Canadian health care system. This support can be sought through extensive marketing campaigns, which may enhance public awareness and the understanding of the PHCNP role and at the same time highlight the advantages of choosing a PHCNP as one of many primary health care providers. The need to market the role as a viable career option, as improving access to primary health care for Canadians and as having a positive impact on population health outcomes is clear as an effective recruitment and retention strategy. Given the evidence related to PHCNP practice on health and system outcomes it would be advantageous to consider how to deploy PHCNPs in the health care system more effectively. PHCNPs working in partnerships with other key players including consumers, communities, physicians, and other health care providers can enhance the integration of health care services across the primary health care spectrum. With the present critical shortages of health care providers and the impact that the retirement of nurses and other providers will have on the system, governments, planners, professional associations, unions, and other key stakeholders must work in partnership to create processes for the successful recruitment, retention and integration of PHCNPs including foreign-educated NPs into Canadian health care. Examples of such processes required for successful integration of foreign educated PHCNPs include: the development of clearly defined criteria for practice based on relevant education and experience; support for overcoming language barriers; and assistance with integration into a new culture. Critical relationships with jurisdictional and federal programs are also necessary to facilitate the ability of all PHCNPs to practice at full scope.

6. Overall Conclusion

The purpose of this project was to review, synthesize and analyze current literature on primary health care nurse practitioner practice to inform recommendations to stimulate effective recruitment and retention strategies for these nurses in Canada. The following issues were

analyzed: remuneration/ funding models; retention allowances; under serviced areas; practice models; unionized vs. non-unionized positions; interprofessional collaboration; professional support (role clarity, regulation, licensure, liability and intradisciplinary collegiality); intraprofessional collegiality; community support; autonomy; workload/utilization; education/continuing education; working at full scope of practice; factors influencing NP satisfaction; NP databases; political support /interdisciplinary support; critical relationships; and immigration. Findings were derived from both the grey and empirical literature from Canadian jurisdictional and federal governments, professional associations, and unions and recommendations were presented.

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APPENDIX A: Table 1

Comparison of Provincial and Territorial Issues related to Nurse Practitioners

Province	Legislation	Regulation	Scope of Practice	Education	Practice Models	Liability	Compensation (salaries, benefits, funding models)	Incentives/ disincentives	Distribution (urban vs rural)
British Columbia Registered Nurse (RN). Unofficial use of the title Nurse Practitioner (NP) in Community Health Centers.	May 2005	Presently in draft	Independent NP practice similar to that provided by family practitioners More reserved acts than anywhere in the country	Masters of Nursing or PLAR (Prior Learning Assessment & Recognition) process Professional development through the Professional and Organizational Development, Evidence and Evaluation strategy funded by the Health Transition fund 30 spaces per year at UVic & UBC 15 seats at UNBC program in development Investment in telehealth 3 priorities for NP education are PHC, geriatrics, mental health Educational funding has been equally distributed across communities to cover the cost of travel for remote communities	Variety..although NPs not integrated into the system yet. It is anticipated there will be interdisciplinary models of care. Use of Nurse First Call since 1998	RNABC not member of CNPS. Have own Captive Insurance Corporation coverage	No unionized agreement negotiated at present. Uncertain of current salaries	Lot of policy and recruit and retention efforts focused on rural physicians (58 million). In 2001 the Ministry of Education funding (1.32 million) for – loan-forgiveness program for new graduates for underserviced areas of the province	Difficult geography and widely dispersed populations
Alberta RN - EP (Expanded Practice) officially, but usually called Community Nurse Practitioners.	1999 under the <i>Health Professions Act</i> , amended in 2002 under the NP Regulations of	To be an NP must have: 4,500 hrs RN experience, completed a baccalaureate in nursing, completed an	Beyond the RN scope of practice, the NP scope of practice includes: diagnosing medical conditions, ordering and interpreting diagnostic	Masters prepared (The Nurse Practitioner, Capital Health, March 2004)	Employed by Regional Health Authority or Provincial Health Board	CNPS- occurrence-based and tail coverage Employer should have primary	Legislation does not currently support unionization.	PHC pilot projects have short-term project funding and presents challenges in evaluating	Large rural populations & Aboriginal communities therefore NP will address access issues

Province	Legislation	Regulation	Scope of Practice	Education	Practice Models	Liability	Compensation (salaries, benefits, funding models)	Incentives/discentives	Distribution (urban vs rural)
	the <i>Public Health Amendment Act</i>	approved NP program (Masters level)	tests and prescribing medications The Extended Practice Roster Regulation governs registered nurses in extended/expanded roles. AARN has developed competencies and guidelines to govern nurses providing <i>extended health services</i> .			insurance program		outcomes, recruiting positions and attaining and maintaining buy-in from stakeholders (Advancing Primary Health Care in Alberta)	
Saskatchewan	<i>Registered Nurses Act</i> 1988, Amended to RN Act in 2000 for NPs. Government approved legislation in May 2004		4500 hrs as RN & completion NP program approved by SRNA council. Scope of practice is defined by the province-wide clinical practice guidelines but subject to site modifications.	Approved NP program Bursaries available for NPs as a recruitment strategy in exchange for return for service agreement.	Most work in Physician/Nurse Practitioner Partnership	CNPS occurrence-based and tail coverage	Nurses covered in Collective Agreement Starting at \$61, 713 up to \$74, 131.		Large rural populations & Aboriginal communities therefore NP will address access issues
Manitoba Extended Practice	<i>Registered Nurses Act & the Registered Nurses Regulations, 2001</i> Extended Practice Regulation anticipated to be passed by end of 2004	Under the new legislation, regulations will be developed for required competencies in extended/expanded nursing practice. MARN has established standards of practice which apply to all practicing registered nurses in the province regardless of their roles or practice settings.	RN Complete a program of nursing education in advanced practice approved by the MARN board	Masters of Nursing advanced practice program and/or NP certification (Position paper on Advanced Practice nursing in the WRHA, 2001)		CNPS occurrence-based and tail coverage	Within unionized settings proposed salary range is 51, 693-62, 507 plus benefits (2001)		Large rural populations & Aboriginal communities therefore NP will address access issues
Ontario- RN- EC (Extended Class) and other titles, such as Nurse Practitioner, used by	<i>Registered Nurses Act, 1991</i> with amendments		Legislated scope of practice is relative to primary care functions only. These controlled acts are to be	Formal education via an approved NP program	Collaborative practice arrangements with physicians	CNPS occurrence-based and tail	Provider compensation funding linked to	1999 document appropriate compensation,	The community sector has the largest

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employing organizations.			<p>performed by RNs with an extended class designation.</p> <p>598 RN-EC registered with CNO</p>	<p>Education funding through the RNAO such as the Nursing Education Initiative and the Permanent Education Fund.</p> <p>More funding allocated from the Ontario government so that the number of seats would double from 75 to 150 for the COUPN program NPAO in Action, Volume 14, Issue 3</p> <p>Health Canada announced 1.5 million to be administered by COUPN to support continuing education programs for NPs</p> <p>Ontario is creating 300 Primary care NP positions in rural and under-serviced areas to increase access.</p> <p>Ontario government commitment to</p> <p>Additional 1.7 million annually from MOHLC which offers an NP program through COUPN</p>	<p>NPs to play a key role in new Family Health Teams (to be implemented in March 2005).</p> <p>Commitment to collaborative teams includes Primary care physicians and NPs as the core (1999)</p>	<p>coverage</p> <p>If not member of RNAO not covered by CNPS (accounts for ~5% of NPs)</p> <p>NP agreements in Ontario require \$7 million coverage, \$5 million comes from CNPS if RNAO member</p>	<p>population</p> <p>Separate salary grid. Negotiated at local agreement - \$80,000 - \$90,000</p> <p>Two groups: Primary Nurse Practitioner and Acute Nurse Practitioners</p> <p>Nurse Practitioners in Hospital not funded by Ministry so if Nurse Practitioner hired are taken out of general nursing budget.</p>	<p>continuing education, work life issues and quality of life indicators— committed to strategies aimed at</p>	<p>percentage of RN-ECs</p> <p>64.9% (CNO Membership stats report, 2004).</p> <p>15% of the population live in rural communities and are served by less than 8% of physicians.</p> <p>3 million/year from NP Demonstration project to support collaborative practice in underserviced communities</p>
Quebec RN (infirmiere/infirmier).	Looking at adopting umbrella legislation (Bill 90) for health professionals	Recently released a report to government PQ suggesting how category of NP be established to accommodate broad scope of responsibility				Have mandatory commercial coverage through Order of Nurses of Quebec			

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	to expand the scope of practice of each profession & encourage collaborative practice.	and services that the northern and isolated nurses provide (2004).							
New Brunswick NP	May 2002	At this time only primary health care NPs are eligible for registration/licensure		95 more nursing seats to be added; 40 more NP positions; at least four more collaborative practice primary health care clinics to be added Masters level at UNB and Université de Moncton Education subsidy program for student NPs to cover tuition and book costs however must stay in NB to practice	Move towards community-based, collaborative primary health care delivery models	CNPS occurrence-based and tail coverage	As per Collective Agreement. \$ 74, 470 to 83, 460 by July 2007		
Nova Scotia Primary Care Nurse Practitioner Now have 22 registered NPs	Registered Nurses Regulations, 2002 NS has put forward a propose for legislation change to introduce omnibus/ umbrella legislation via a regulated health professions act	Diagnostic and Therapeutics Committee establish and authorize practice schedules for NPs	Defined by delegation of medical functions under guidelines negotiated by the College of Physicians and Surgeons of NS and the CRNNS	Approved advanced nursing education for PHC NPs one year post baccalaureate program two year post diploma program	Collaboration with physicians is mandated in legislation	CNPS occurrence-based and tail coverage Physicians require proof of adequate coverage before collaborative practice agreement signed	Not yet negotiate - just been assigned to our union. Not sure what salaries or benefits are at this time. Each Nurse Practitioner up until now negotiated their own MOHs.		Of the 22 NPs in NS 11 work in rural areas. There are currently 3 unfilled positions
PEI	Dec. 16, 2004 Bill #13 Amendment to <i>Registered Nurses Act</i> .	one of three nurse practitioners working a pilot project in O'Leary.				CNPS occurrence-based and tail coverage	As per the Collective Agreement RN Level 3. Starting at \$49, 101 to \$60, 411		

Province	Legislation	Regulation	Scope of Practice	Education	Practice Models	Liability	Compensation (salaries, benefits, funding models)	Incentives/discentives	Distribution (urban vs rural)
Nunavut NWT Community Health Nurse but also referred to as Primary Health Care Nurse Practitioner.	June 2002 Bill 8 amendment to the nursing and pharmacy act with a separate register for NPs and registration for NPs who are parties in collaborative practice Amended in 2003				Integrated Service Delivery models focusing on collaborative approach Primary Community Care Task Teams: Client/family centered care Needs based	CNPS occurrence-based and tail coverage		Challenges: Funding Supporting care providers in their work Interest in expanding and clarifying the role of the NP	80% of health care has been provided by nurses in the last 50 years with the point of care at the community health centers in isolated communities. Incentive for nurses to attain advanced education as NPs
Yukon Community Nurse Practitioner.	<i>New Health Professions Act</i> in 2003	Broad definition of nursing practice. No separate regulations for nurses working in expanded roles	Employers have adopted the MSB Scope o practice guidelines for community health nurses	Employers accept a variety of education options		CNPS occurrence-based and tail coverage			
Newfoundland NP and Regional Nurse.	1998 NP Act with a number of amendments each subsequent year. Last amendment 2004			1999 first NP grads from Centre for Nursing Studies. One year certificate available to all nurses with at least 3 years experience	Collaborative practice arrangements with physicians. The NP may refer patients to specialist physicians if GP not available and billing at same amount as if referred by GP	CNPS— occurrence-based and tail coverage	In collective agreement. Starting at \$52, 624 to \$67, 600. Recent comments suggest we do not have sufficient positions for the number we are graduating.		Very large, rural province There are no consistent standards to ensure populations in rural areas receive primary health care. Highly dispersed populations many of which are aboriginal