



APPENDIX B Education Component Literature Review Report

February 9, 2005

Submitted to: Gail Shandro, Manager, Education
Canadian Nurse Practitioner Initiative

Submitted by: Gayle Rutherford
Rutherford Consulting Group Inc.

The Canadian Nurse Practitioner Initiative (CNPI)
Canadian Nurses Association, 50 Driveway, Ottawa ON CANADA K2P 1E2
Tel: (613) 237-2133 or 1-800-361-8404; Fax: (613) 237-3520
www.cnpi.ca

Initiative canadienne sur les infirmières et les infirmiers praticiens (ICIIP)
Association des infirmières et infirmiers du Canada, 50, Driveway, Ottawa ON CANADA K2P 1E2
Tél. : (613) 237-2133 ou 1-800-361-8404; Téléc. : (613) 237-3520
www.iciip.ca

Funding for the Canadian Nurse Practitioner Initiative was provided by Health Canada.

L'Initiative canadienne sur les infirmières et les infirmiers praticiens est financée par Santé Canada.

Table of Contents

<i>Executive Summary</i>	4
1. Introduction.....	7
2. Setting the Context.....	7
2.1 Literature Review Process	7
2.2 Connection to Previous Work.....	8
3. Curriculum & Programs.....	8
3.1 NP Program Development	9
3.1.1 Canadian Literature.....	9
3.1.2 International Literature	10
3.2 Core Competencies	13
3.2.1 Canadian Literature.....	13
3.2.2 International Literature	14
3.3 NP Curriculum Content	16
3.3.1 Canadian Literature.....	16
3.3.2 International Literature	16
3.4 Identification of Gaps	19
3.4.1 Interdisciplinary Education.....	19
3.4.2 National research agenda and best practices.....	20
3.5 Exit Credentials of NP Programs.....	21
3.5.1 Canadian Literature.....	21
3.5.2 International Literature	23
4. Education Delivery Methods	23
4.1 Faculty.....	24
4.1.1 Canadian Literature.....	24

4.1.2	International Literature	24
4.2	Preceptors.....	25
4.2.1	International Literature	25
4.3	Mentoring.....	28
4.4	Clinical Experience.....	30
4.4.1	Canadian Literature.....	30
4.4.2	International Literature	30
4.5	Distance Learning	32
4.5.1	Canadian Literature.....	32
4.5.2	International Literature	34
4.6	Collaborative Program Delivery	35
4.6.1	Canadian Literature.....	36
4.6.2	International Literature	37
4.7	Evaluation Methods	37
5.	Continuing Competency	39
5.1	Orientation in the Workplace/Internship	39
5.1.1	Canadian Literature.....	40
5.2	Continuing Education	41
5.2.1	Canadian Literature.....	41
5.2.2	International Literature	41
6.	Prior Learning Assessment and Recognition.....	42
7.	Re-entry to Practice.....	47
8.	Findings.....	50
9.	Conclusion	52
	References.....	53

Executive Summary

Implementation of the nurse practitioner (NP) role in Canada has been sporadic and inconsistent across the country. The goal of the Canadian Nurse Practitioner Initiative (CNPI), a federally funded project managed by the Canadian Nurses Association (CNA), is to facilitate sustained integration of the NP role in the health system to improve Canadians' access to health services. The CNPI consists of five strategic components: change management, social marketing, and strategic communication; education; legislation and regulation; practice and evaluation; and health human resource planning. The objective of the CNPI education component is to make recommendations on five aspects of Canada-wide NP education: curriculum and programs; education delivery methods; continuing education; prior learning assessment and recognition (PLAR); and re-entry to practice. These five aspects of NP education provide the frame for this report.

The objective of this document is to provide an overview of the literature on the aforementioned range of topics related to NP education. Rather than providing a thorough analysis of this literature, the report is intended to provide a context for discussions about NP education along with the other companion documents in the Education Component Environmental Scan. For the purposes of this study literature was collected first from Canadian sources and then from American and international sources. For the most part literature sources were restricted to the last five years in order to focus on the most current research and NP educational developments. Previous work has influenced the process and content of this paper. In particular, documents from the Canadian Nurses Association (CNA) and the Canadian Association of Schools of Nursing (CASN) helped to guide and frame this literature review.

This review of the literature shows that there are inconsistencies between NP educational programs in Canada and a significant number of areas where decisions need to be made in order to increase standardization of NP education. The challenge of reaching consensus on these decisions is complicated by the interdependence and complexity of the factors involved. Through this literature review, many of these factors and emerging issues can be identified. Some of these emerging issues are listed in the form of questions as a starting point for problem-solving discussions:

- How will collaborative working partnerships between educational programs be set up to support NP programs in a transition to standardized exit credentialing and other program changes?
- How will a common national philosophy for NP education be developed when faced with the current lack of consistency between NP programs?
- How will national core competencies be integrated with the development of a guiding framework and curriculum content in a way that can support standardization of NP education programming in Canada?
- What is the ideal balance between clinical and theoretical content in NP programs?

- What content areas need further emphasis in NP educational programs? (i.e., quality control; informatics; interdisciplinary education; and research into client outcomes and educational best practices)
- Should there be a standardized exit credential for NP educational programs and what should it be?
- Is faculty clinical competence best achieved by training PhD faculty as NPs or by providing practicing NPs with training as educators?
- What is the ideal length of a preceptor/student relationship and should NP students find their own preceptors?
- How much clinical experience should an NP student have before entering an NP program and how can NP programs best work with the differences in knowledge and skills of the nurses entering their programs?
- How will decisions be made regarding the combination of NP education programs that would benefit the most from collaborative program delivery?
- What is the responsibility of the NP educational program and what is the responsibility of the employer related to preparedness for practice? How long is it reasonable to expect an NP to take to become comfortable in a practicing role after graduation?
- How can the realities and advantages of distance education be combined with the advantages of face-to-face learning?
- What is the best combination of methods (face-to-face, on-site, distance technology, simulated patient encounters) for evaluation of clinical skills including the ‘softer’ interpersonal skills?
- How can partnerships be developed between employers and educational institutions to develop continuing education specific to the learning needs of NPs in practice?
- How will NP educational programs and regulatory bodies work together to develop consistency in PLAR processes and re-entry to practice programs?
- How can developing technology be put to the best use for distance learning, evaluation of NP student skills, and continuing education?

Planning and determining the structure of NP educational programs is not always within the control of educational institutions. Many larger system factors will influence the direction of the decisions that need to be made. Collaboration will be required on many levels in order to tackle all of the issues involved with NP education and broader NP practice.

Governments, policy-makers, employers, unions, regulatory bodies, nursing organizations, education providers and other health professionals will need to work together to achieve a national, coordinated framework for nurse practitioners (CNA, 2003b). This literature review provides only one small piece of the larger puzzle. It needs to be put into context along with the other documents of the CNPI Education Component Environmental Scan for discussions related specifically to NP education. Similarly, education cannot be discussed in isolation from the other components of the CNPI project. The complexity of issues in all areas of the CNPI project will need to be interwoven and addressed together in order to reach the goal of facilitating sustained integration of the NP role in the health system to improve Canadians' access to health services.

1. Introduction

Implementation of the nurse practitioner (NP) role in Canada has been sporadic and inconsistent across the country. The goal of the Canadian Nurse Practitioner Initiative (CNPI), a federally funded project managed by the Canadian Nurses Association (CNA), is to facilitate sustained integration of the NP role in the health system to improve Canadians' access to health services. The CNPI consists of five strategic components: change management, social marketing, and strategic communication; education; legislation and regulation; practice and evaluation; and health human resource planning. The objective of the CNPI education component is to make recommendations on five aspects of Canada-wide NP education: curriculum and programs; education delivery methods; continuing education; prior learning assessment and recognition (PLAR); and re-entry to practice. These five aspects of NP education provide the frame for this report.

The objective of this document is to provide an overview of the literature on the aforementioned range of topics related to NP education. Rather than providing a thorough analysis of this literature, the report is intended to provide a context for discussions about NP education along with other companion documents in the Education Component Environmental Scan such as the report on the consultative data and the charts comparing NP programs. It is hoped that together these documents will stimulate discussion and guide the future development of a framework for Pan-Canadian NP education.

2. Setting the Context

2.1 Literature Review Process

For the purposes of this study literature was collected first from Canadian sources and then from American and international sources. Published literature was sought using CINAHL and Medline. The majority of the literature reviewed was specifically related to NPs but in a few instances when no NP-specific literature was found, the search was broadened. The Internet was searched for additional unpublished grey literature. In addition, contact with interviewees throughout the consultation process provided access to other written information. For the most part literature sources were restricted to the last five years in order to focus on the most current research and NP educational developments. All of the gathered literature was reviewed to identify key content in each document directly related to the five aspects of the CNPI education component. The key content was then sorted and summarized into the literature review outline. Within each section, when the volume of literature required, the Canadian literature was summarized first followed by the international literature. Following the literature overview, emerging issues are identified in the findings section of the report.

2.2 Connection to Previous Work

Previous work has influenced the process and content of this paper. The Canadian Nurses Association (CNA) document, *Advanced nursing practice: A national framework* (2002a), is foundational. This document explains that advanced nursing practice (ANP) is expert and specialized practice founded on nursing theory and other theoretical frameworks, experience, and research. ANP extends the boundaries of nursing's scope of practice and maximizes the use of in-depth nursing knowledge and skill in meeting the health needs of individuals, families, groups, populations, and communities. In addition, leadership is fostered through ANP thus contributing to nursing knowledge and the advancement of the profession of nursing. The competencies of ANP are based in clinical practice; research, leadership; collaboration; and as a change agent. "These competencies are demonstrated in roles that require highly autonomous, independent, accountable, and ethical practice in complex, often ambiguous and rapidly changing environments" (CNA, 2002a, p.6). ANP is an umbrella term that includes the role of the NP and therefore, the CNA framework contributes an important element to this literature review. Other ANP-related literature sources have been included in this report for that reason.

In 2004 the Canadian Association of Schools of Nursing (CASN) Task Force on Primary Health Care/Nurse Practitioner (PHC/NP) education convened a workshop with representatives from colleges and universities across Canada (Doucette & Sangster-Gormley, 2004). The outcome of this workshop was the development of a national strategy to advance PHC/NP education in Canada, and a CASN position statement on level of education for entry to practice for PHC/NP in Canada (CASN, 2004a; CASN, 2004b). Content from the documents of the CASN Task Force is integrated throughout this report.

3. Curriculum & Programs

Currently there is a wide variety in the organization and structure of NP programs across Canada. A 2001 survey study into the nature of the extended/expanded nursing role in Canada revealed significant inconsistencies in expectations regarding the educational preparation of registered nurses (RN) for these roles in primary care (The Centre for Nursing Studies, 2001). The survey showed that educational programs varied across and within provincial/territorial jurisdictions with regard to length of courses, entry requirements, course and clinical requirements, and credential upon graduation. The CASN Task Force conducted a survey of all Canadian colleges and universities offering PHC/NP educational programs in 2003. This survey also showed wide variability between NP programs across Canada (Doucette & Sangster-Gormley, 2004). Internationally, NP educational programs are also diverse due to the context sensitive emerging and evolving nature of the NP role (ICN, 2003).

This section on curriculum and programs provides insight into possible requirements for the structure and organization of NP educational programs including establishment of a national core curriculum, core educational standards and core educational competencies (CASN, 2004c). Therefore, the following section reviews the literature on these pivotal areas of curriculums and programs as it relates to NP program development; core competencies; and NP curriculum content; identification of gaps, and exit credentials of NP programs.

3.1 NP Program Development

A review of the literature related to NP educational programs points to the need for a framework to guide NP curriculum development. Some authors (Gardner, Gardner, & Proctor, 2004) noted there is little published research about NP education. It is, however, useful to examine the various frameworks found in published literature that has been used to organize thinking about the components of NP education in Canada, in the U.S. and in Australia. Examining the ways that NP education is organized in these countries will assist in gaining further insight into the possibilities that exist for more standardized curriculum development in Canada. Although there are similarities between frameworks, each framework contributes a somewhat different approach to organization of NP educational programming. Each framework can be considered for relevance to NP education framework development in Canada.

3.1.1 Canadian Literature

One of the goals of the CASN/FNIHB sponsored Primary Health Care Np educators workshop (Doucette, Sangster-Gormley, 2004) is “to increase the educational opportunities for primary health care nurse practitioners (PHC/NP) employed in Canada” (p.6). Educational programs need to reflect the principles of primary health care in order to prepare NP’s to practice within their full scope of practice particularly since PHC/NPs use a broad base of knowledge to provide comprehensive care to their clients (Doucette, Sangster-Gormley, 2004). Although it is recommended that primary health care principles be the foundation of NP programs (CASN, 2004c) and are a good fit with NP’s focus on health promotion and maintenance, preventive measures, and the treatment of common illnesses (Research in Focus on Research, 2002), there was little reference to primary health care principles in the literature reviewed.

In June 2003, the CNA recommended that stakeholders work together to achieve a national coordinated framework that would, together with other outcomes, strengthen NP educational programs (CNA, 2003b). A review of the U.S. and international literature adds to the discussion of potential guiding frameworks.

3.1.2 International Literature

Inherent in American and international literature is the understanding that ANP and NP education is at a graduate level. Pearson and Peels (2002) stated that in both the UK and the USA, advanced practice includes competency in the areas of clinical, research, teaching, consultancy, and leadership. Although there is some lack of clarity in the definition of advanced practice nursing (APN)¹, the NP is included within the realm of the APN. In point of fact, the terms are generally synonymous in Australia (Pearson & Peels, 2002). Similarly, Daly and Carnwell (2003) described the confusion in the U.K around the use of the terms APN and NP among many others and used NP and APN synonymously in their paper.

According to the American Task Force on Quality Nurse Practitioner Education (2002), NP programs must reflect essential elements of both graduate nursing and advanced practice nursing in addition to the NP specialty component. The American Association of College of Nurses developed a consensus statement in 1996 recommending that NP education have three components: basic core curriculum common to all graduate nursing programs (i.e., research and outcome measurement, nursing theory, business and reimbursement, managed care, marketing, legal/ethical issues, health policy); advanced practice core curriculum (advanced pathophysiology, advanced health assessment, pharmacotherapeutics, health promotion, and disease prevention); and specialty core curriculum (adult, family practice, geriatrics, pediatrics, acute care, women's health) (Alpert, Fjone, & Candela, 2002; U.S. Department of Health and Human Services, 2002). However, although most U.S. NP educational programs are at the graduate level the specific course work within each program is not necessarily the same (Alpert, Fjone, & Candela, 2002).

Alpert, Fjone, and Candela (2002) recommended a continuum of three levels of introduction to NP practice (undergraduate, graduate and doctoral) and predict that before the end of the decade NP education would be expanded to include all three levels. The curriculum would be seamless with increased focus on “learner-based learning, health promotion, understanding operating in the marketplace, use of technologies in practice, and professional currency” (p.83). The first introduction to NP practice should be at the undergraduate level where generic nursing students would gain an understanding of the NP scope of practice, educational requirements for licensure, and NP relationship with the larger health team. This would broaden nurses’ understanding of the roles of the various health providers and instill future career aspirations. The second level would be graduate education for actual NP students that enlarges and enhances their undergraduate learning. Graduate students would be taught to “manage complex and changing practice situations, ranging from wellness to chronic conditions, which is evidence based” (Alpert, Fjone & Candela, 2002, p. 83) and move from being passive to dynamic learners using

¹ APN is the term used in American and international literature as opposed to ANP, which is used in Canadian literature.

active learning methods. The focus would be on preparing students at a beginning level of NP competence. Core curriculum at the third or doctoral level would support advanced specialization skills as well as a stronger focus on research.

Gagan, Berg, & Root (2002) described a model for ongoing development, evaluation and revision of NP programs, which incorporates elements of health policy, community needs and demands, and curriculum goals. “These concepts constantly are interacting, influencing, and being influenced by one another” (p.203). For instance, the leadership content of the NP curricula has a strong influence on health policy. Conversely, health policies such as NP prescribing privileges influence curriculum development and community needs and demands influence curriculum goals. NPs must be prepared to meet the needs of diverse populations and cultural groups. NPs must also be prepared to influence health policy decisions in an attempt to reduce inequities (Gagan, Berg, & Root). Hendricson and Cohen described a three part competency-based curriculum for all health care professionals consisting of: “(1) top-down planning based on analysis of the health care needs of patients, (2) a readiness based model in which students advance through the curriculum at different rates based on their individual capabilities, and (3) a horizontal curriculum structure in which students progress through competency modules hierarchically sequenced by level of difficulty” (as cited in Griener & Knebel, 2003, p.90). Hendricson and Cohen also outlined three questions that educational programs need to answer while developing competency-based health professions education: 1. “What knowledge, skills, and personal values should the student possess at the time of graduation to be...prepared to serve as an independently functioning entry-level general practitioner?”; 2. “What learning experiences will enable students to acquire these competencies?”; and 3. “What proof, or evidence, is needed to establish for faculty that a student has attained competency” (as cited in Griener & Knebel, 2003, p. 89-90).

Blasdell, Klunick, & Purseglove (2002) conducted research focused on the practice models that were being used by NPs in clinical practice and whether graduate education affected the choice of practice model. Using a questionnaire format they compared the use of a nursing model, a medical model and a wellness/health promotion model in practice between NPs with and without a graduate education. Both groups indicated that a wellness/health promotion model was the most important model for an NP to use and both groups used a traditional medical model and a nursing model to a minimal degree. The nursing model was the least used, although NPs with graduate education indicated that nursing theory was important in their educational preparation to a much greater extent than those without graduate education (Blasdell, Klunick, & Purseglove, 2002). In a study of NP preceptors by Gibson & Mauri (2000), some practicing NPs suggested there was a need to examine increasing the medical model aspect of practice. In fact, one NP respondent remarked that nursing theory was neither useful in her own practice nor did it help the student in practice (Gibson & Mauri). Daly and Carnwell (2003) expressed concern about the encroachment of the medical model into NP education. In their examination of nursing roles and levels of practice in the U.K., they suggested that the main difference between an NP and a clinical nurse specialist was that an NP worked with undiagnosed patients and conducted comprehensive health assessments, diagnosis, and intervention. Although developing the necessary skills to complete these tasks may

involve knowledge and skills from the medical domain, “these should be used in a manner that enriches the holistic quality of nursing practice, patients' health care experience and health care provision generally” (p.161).

Gardner, Gardner, and Proctor (2004) reported on an Australian qualitative research study of educational process and content of current NP preparation to determine NP educational requirements and use the findings to inform curriculum development. From their findings they developed a curriculum structure that identified four areas of study required within NP education: model specific educational requirements; generic educational requirements; contribution to the nurse practitioner role; and learning activities.

Model-specific educational requirements were developed based on the study participants “need to be fully conversant with, and confident in, the knowledge underpinning the extended elements of their practice” (Gardner, Gardner & Proctor, 2004, p.147) in order to improve participants’ confidence in making unfamiliar decisions. Thus, there was an early focus on specific skills such as assessment, knowledge of diseases, drugs and therapies, evidence based practice, and diagnostic processes. This content was covered under the conceptual headings of assessment and diagnosis; pathophysiology and pathology; and therapeutic options and clearly informed the content of the model-specific clinical practicum component of the NP curriculum (Gardner, Gardner, & Proctor, 2004).

Generic educational requirements consisted of a body of knowledge that was common across all areas of NP practice including acute care, outreach, community, and primary care settings as well as practice that extended beyond the traditional boundaries of nursing. Study participants identified the need to acquire skills and knowledge related to clinical leadership and collaborative practice, which incorporated intellectual and clinical tools needed to support safe and efficacious extended practice. Conceptual generic educational requirements relate to clinical decision making; assessment and diagnosis; evidence based practice; pharmacology; and models of practice (Gardner, Gardner, & Proctor, 2004).

The third element identified by Gardner, Gardner, and Proctor (2004) was ‘contribution to the NP role’. This is the role of extended practice and the components of an NP curriculum that make it different from that of the broader APN curriculum including the knowledge, skills, and confidence to practice with autonomy. The extended practice element of the curriculum related to assessment specific to the NP’s area of specialist practice; autonomy in clinical decision-making; collaboration and clinical leadership; and knowledge of science through in-depth study of pathophysiology and pathogenesis, diagnostics and pharmacology. The final element of the Gardner, Gardner, and Proctor model was learning activities. The learning activities within an NP program incorporated the processes of learning that crossed generic and model-specific boundaries. The main processes used were clinical and empirical learning; independent literature searching and reading; and attending resources lectures (Gardner, Gardner, & Proctor, 2004).

The literature has shown that there are many ways to structure the curricula of NP educational programs. The challenge in Canada will be to find a common national philosophy and framework for NP education that is broad enough to provide structure for the variety in NP programs that will be needed to meet the requirements of all stakeholders.

3.2 Core Competencies

Core competencies are an essential element to consider when developing NP educational programs and selecting guiding frameworks. Increasingly, emphasis is being placed less on the exit credentials of NPs and more on the competencies that NPs demonstrate as a result of their educational experience (CNA, 2002a). In the CASN survey of NP programs in 2003, respondents identified a lack of common competencies for the NP role in practice as one of the barriers encountered in the delivery of their educational programs (Doucette & Sangster-Gormley, 2004). In 2004 the Canadian Nurses Association selectively released a draft NP core competency framework approved by the CNA Forum on NP Assessment (CNA, 2004a). The use of standard core competencies to guide curriculum development for NP programs is supported in the literature.

3.2.1 Canadian Literature

The Centre for Nursing Studies (2001) recommended “that core competencies and consistent practice standards for registered nurses in the extended/expanded role be developed and used to facilitate consistency in education programs for beginning competency levels” (p.51). Schreiber et al. (2003) demonstrated a lack of consistency in understanding of core competencies among practitioners. They compared responses of study participants related to core competencies to the CNA advanced nursing practice framework (CNA, 2002a). They found that nurses working in advanced nursing practice roles in acute care settings viewed and acted in ways that were consistent with the CNA framework - “incorporating research, consultation, advanced nursing knowledge and skills, in-depth clinical expertise, and leadership in daily practice” (p.11). Nurses working in community settings framed their understanding of advanced nursing practice in terms of legal authority to practice certain medical skills autonomously and nurses working in settings with potential for development of advanced nursing practice roles identified themselves as working in advanced nursing practice roles, irrespective of the congruence of their practice with the Canadian Nurses Association framework (Schreiber et al., 2003).

Nurses in advanced nursing practice in B.C. raised a concern in relation to the need to have adequate educational preparation to perform delegated primary care functions. Some registered nurses were wary about being liable when performing functions that require them to go beyond normally expected competency levels in extended or expanded roles (The Centre for Nursing Studies, 2001). Therefore, it is important there is congruency between the PHC/NP core competencies and the educational programs that prepare the NPs for primary health care practice.

3.2.2 *International Literature*

The U.S. National Task Force on Quality NP Education (2002) listed one of the criteria for both instructive and clinical curriculum as consistency with nationally recognized core and specialty competencies. The U.S. Department of Health and Human Services (2002) stated that the emphasis of program and student evaluations will now and in the future be based on clear statements of competencies and evidence of assessment of how well these competencies are met. Competencies are defined as “a combination of skills, abilities and knowledge needed to perform a specific task” (US Department of Education as cited in U.S. Department of Health and Human Services, 2002, p.6). Competencies define a profession or discipline, guide training programs, provide expectations for employers, and provide a standard for accrediting organizations (US Department of Health and Human Services, 2002).

Greiner and Knebel (2003) raised a concern about using competencies as a basis for program or clinical evaluation since competencies based on technical skills are more easily measured than competencies based on more cognitive skills, critical thinking or interpersonal skills. In addition, there may be a question about how to evaluate competency when considering the reliability, validity, and predictive ability of related measures. Greiner & Knebel also suggested that the definition of a professional’s competency will change over time. However they understood that “...the fundamental competencies that define health professionals over their career are unlikely to change greatly, even though the knowledge that they must acquire, and its application, will change dramatically” (Greiner & Knebel, 2003, p.49).

The National Organization of Nurse Practitioner Faculty (U.S. Department of Health and Human Services, 2002) outlined the domains and core competencies that all NPs should be able to demonstrate at graduation with evaluation criteria listed for each of the competencies. Each set of specialty competencies builds upon this set of core competencies:

Domain 1. Management of Patient Health/Illness Status

Competencies:

- A. Health Promotion/Health Protection and Disease Prevention
- B. Management of Patient Illness

Domain 2. The Nurse Practitioner-Patient Relationship

Competencies: Twelve evaluation criteria listed

Domain 3. The Teaching-Coaching Function

Competencies:

- A. Timing
- B. Eliciting
- C. Assisting
- D. Providing
- E. Negotiating
- F. Coaching

Domain 4. Professional Role

Competencies:

- A. Develops and Implements Role
- B. Directs Care
- C. Provides Leadership

Domain 5. Managing and Negotiating Health Care Delivery Systems

Competencies:

- A. Managing
- B. Negotiating

Domain 6. Monitoring and Ensuring the Quality of Health Care Practice

Competencies:

- A. Ensuring Quality
- B. Monitoring Quality

Domain 7. Cultural and Spiritual Competence (U.S. Department of Health and Human Services, 2002).

Core competencies will need to play a central role in determining the framework that will guide the development of standardized NP educational programming and curriculum content development. The challenge will be to integrate these three components together in a meaningful way.

3.3 NP Curriculum Content

In addition to guiding frameworks and core competencies, the specifics of NP educational program curriculum content need to be considered. A review of the literature related to NP education offers a few perspectives that need to be considered when planning NP curriculum.

3.3.1 Canadian Literature

Curricula needs to be based on identified characteristics of practice and core competencies (CNA, 2002a). However, within published Canadian literature there is little to be found related to NP educational program curriculum content. Van Soeren et al. (2000) listed the five core courses offered in the COUPN NP educational programs: Pathophysiology for Nurse Practitioners (pathophysiology), Advanced Health Assessment and Diagnosis (assessment), Therapeutics in Primary Health Care (therapeutics), Roles and Responsibilities (roles) and the Integrative Practicum (practicum). Student feedback obtained three years after graduation indicated that students believed the theoretical component of the program was too heavy. They recommended that the content be kept within the NP scope of practice with more focus on 'controlled acts' such as: health assessment and diagnosis, drug prescriptions, and laboratory testing and interpretation (Research in Focus on Research, 2002).

3.3.2 International Literature

Published literature from the U.S., U.K., and Australia outlined some important content areas that need to be considered as well as studies that give more insight into the usefulness of various components of the curriculum. However, Daly and Carnwell (2003) found that in the U.K. there was little consistency among formal NP courses in terms of objectives and content, and training varied from short courses organized locally to postgraduate studies.

The American Academy of Nurse Practitioners (2002) stated that due to the autonomous nature of the NPs advanced clinical practice, they are accountable for health care outcomes. The curriculum of NP educational programs should be designed to prepare graduates for certification through the development of skills and expertise that lead to NP core and specialty competencies (American Academy of Nurse Practitioners, 2003). The competencies demonstrated on graduation include not only direct health related skills such as advanced assessment, diagnosis, treatment and prescribing, but also knowledge of health policy, economics and financing.

Greiner & Knebel (2003) outlined a list of competencies required by all health care professionals: patient-centered care; interdisciplinary team work; evidence-based practice, quality improvement approaches; and informatics. Other American literature focused on skills required by NPs. The American Academy of Nurse Practitioners (1999) listed seven domains in which NP skills and expertise as educator, counselor, advocate, consultant, manager, researcher, and mentor are developed. These content domains were:

- “Management of patient health/illness status
 - Health promotion/health protection and disease prevention
 - Management of patient illness
- The nurse practitioner-patient relationship
- The teaching-coaching function
- Professional role
- Managing and negotiating health care delivery systems
- Monitoring and ensuring quality health care practices
- Cultural competence” (AANP, 1999, p.1)

Goolsby (2000) reported on a number of studies related to perception of NP curriculum applicability. In a study regarding NP socialization (Hupcey as cited in Goolsby, 2000), findings indicated that NP students lacked adequate socialization to the roles of change agent, researcher, leader, teacher, evaluator, and theory user – the roles identified as important for a master’s prepared NP. Students rated the technical aspects of their roles as more important. In 1985 Brower, Tappen, and Webber (as cited in Goolsby, 2000) studied NP satisfaction with their educational preparation in a number of areas. Practicing NPs reported that health teaching, nutrition, pharmacology, differential diagnosis, pathology and health assessment were areas of high use in their practice. With the exception of health assessment, the NPs generally indicated that their programs had not provided enough content to prepare them adequately in these areas.

Kelley & Kopac (2001) examined advanced health assessment courses within NP programs in the U.S. based on the premise that advanced health assessment/physical assessment, advanced physiology/pathophysiology, and advanced pharmacology are core courses in APN curricula. They found that there was a lack of reported research on curriculum content and teaching methodologies in NP advanced health assessment courses. In their study, 136 schools of nursing responded to survey questions related to content of their health assessment courses. Almost all of the schools (99%) had history, interviewing, and physical assessment content in the assessment course. In addition, some schools (74 to 90%) offered content in ethnic and cultural considerations, developmental assessment, and functional assessment (Kelley & Kopac). Some, but not all, students entering NP programs learned some specific assessment skills in their undergraduate programs. Therefore, diversity in undergraduate curricula presented challenges in the design of the advanced assessment course. A significant question raised by the researchers was how to teach differential diagnosis alongside health assessment and still maintain a nursing (as opposed to a medical) focus (Kelley & Kopac). Reference to specific methods and content for teaching health assessment in NP programs is limited in the literature (Kelley & Kopac).

The literature showed that it is challenging to integrate application of research into NP educational programs. Smith, Erkel and Stroud (2002) reported on an initiative in the graduate nursing faculty at the Medical University of South Carolina that required NP students to produce a scholarly product prior to graduation. Due to the time needed to acquire advanced clinical practice skills, it was very difficult for NP students to conduct research and write theses during their intense program of study. Yet, Smith, Erkel and Stroud stated that one of the recognized goals of graduate nursing education is dissemination of nursing knowledge through research and publication. Therefore, beginning in 1995, NP students chose from a variety of options including developing a thesis, preparing a manuscript for publication, writing a grant application, and creating an audio-visual product in order to satisfy the requirement of achieving a scholarly outcome. Prior to this new initiative, 4% of previous graduates had completed a thesis and the remaining 96% produced no scholarly work as a requirement for graduation. The year after implementing the initiative 100% of students produced scholarly work and survey respondents voiced only positive comments about the requirement (Smith, Erkel & Stroud).

American literature had an emphasis on two content areas not highly visible in Canadian NP curricula. The first area was business management and quality control. Alpert, Fjone, & Candela (2002) suggested that NPs need to be prepared “to thrive in a fluid, competitive market environment” (p.83) and indicated a need for more emphasis in curriculum on the business management of practice, use of electronic information systems, health care economics, and financing. Greiner & Knebel (2003) found that quality improvement was rarely included as content in nursing courses and was most commonly found in management courses. The second content area was informatics. Greiner & Knebel asserted that using computers in the delivery of educational content is different from applying information technology to patient care. “Educating health professionals in informatics should enable many important capabilities, including appropriate interaction with clinical information systems for making decisions and mitigating error, use of the Internet to inform themselves and their patients, and facility in using e-mail to communicate and coordinate with team members and patients” (Greiner & Knebel, p. 86).

The course content of current NP education programs needs to be examined for potential gaps. The literature has identified potential areas including business management and quality control, as well as informatics, although the need for these must be considered within the requirements of the Canadian rather than the U.S. health care system. The following section will also suggest consideration of the content areas of interprofessional education and research into client outcomes and educational best practices.

3.4 Identification of Gaps

Two other distinct NP program content areas found in the literature require further examination. These two areas are listed in the ANP National Framework as two of the ways that educational institutions can prepare nurses to respond to the needs of the health care system: develop programs that reflect the interdisciplinary nature of advanced practice; and contribute to research that links ANP nursing interventions with client outcomes (CNA, 2002a). These content areas may need to be considered and developed to a greater extent within Canadian NP educational programming.

3.4.1 Interdisciplinary Education

The fourth goal in the CASN national PHC/NP education strategy framework (CASN, 2004a) refers to developing and supporting interdisciplinary education and practice. The Report on the CASN/FNIHB Workshop on PHC/HP Education (2004) specifies that health professionals need to be educated in a way that promotes collaborative practice using inclusive language with review and redesign of the current discipline specific methods of education. This should begin at the undergraduate level, particularly in institutions that educate a variety of health care disciplines and should be supported by interprofessional and interdisciplinary research, education, and practice (CASN, 2004c).

3.4.1.1 Canadian Literature

El Jardali (2003) developed a discussion paper related to effective collaboration between NP and family physicians. She reported that there is relatively little in the literature related to collaborative care models and that even though NPs are required by regulations in several provinces to collaborate with physicians there is no clear definition of the meaning of collaboration. In Canada there is a lack of interdisciplinary education both at the undergraduate and graduate levels (Way, Jones, Baskerville, & Busing, 2001). At the same time, data suggest that strategies to improve collaborative practice involving NPs could assist in improving care delivery within currently available resources (Way et al., 2001). Educational institutions need to plan opportunities for NPs and other health care professionals to learn about their respective roles during their professional training (IBM Business Consulting Services, 2003).

3.4.1.2 International Literature

Greiner and Knebel (2003) reviewed current U.S. undergraduate and graduate educational activities in the fields of medicine, nursing, pharmacy, and other selected allied health professions with respect to educational preparation to work in interdisciplinary teams. They reported that although the goal is to work cooperatively between professions, using all the expertise and knowledge of team members, this is not yet a reality. There is a general lack of understanding among the professions about the competencies of each profession and its training and education. “The absence of a common language, differing philosophies, politics, and turf battles across the professions remain the norm” (Greiner & Knebel, p. 79). This is made worse by educating health professionals in isolation with a focus on individual responsibility and decision-making.

Each profession has its own separate faculty, school calendar, different points of entry into the profession, and are governed by powerful separate deans, directors, and department chairs. In such settings, students learn little about the level of coordination and collaboration that is required to provide quality care to individuals, families and communities (Greiner & Knebel).

In a review of the literature, Greiner and Knebel (2003) listed a number of factors that may be barriers to interprofessional education. These barriers included: a lack of research on the impact of interprofessional education on interdisciplinary practice and patient care; fear of loss of professional identity; and fear of diluted power relationships. Many questions about interprofessional education remain to be answered requiring further research (Greiner & Knebel).

3.4.2 National research agenda and best practices

Clearly there is a need for more research into NP educational curriculum development and best practices in program delivery. CASN (2004a) called for the establishment of a national research agenda and the development of research capacity along with a call for research into best practices in NP education and development of a concomitant database. Research should be an integral part of all NP educational programs at the same time as research and evaluation is being used to continuously improve NP curriculum development and education (CASN, 2004c).

3.4.2.1 Canadian literature

Doucette and Sangster-Gormley (2004) reported that there are currently no evaluated examples of best practices in NP education in Canadian literature. IBM Business Consulting Services (2003) called for the development of a best practices information clearinghouse for information related to NP education in community, organizational, and health settings as well as orientation to the NP role. The clearinghouse should also integrate information from other initiatives related to primary health care.

3.4.2.2 International literature

Goolsby (2000) reported that there is no cumulative body of research related to NP education. She suggested that published reports to date have focused on narrow and isolated components of NP educational programs with no replication and have provided limited reliability in information related to NP graduate education processes. In addition, the viewpoints represented only one of the groups of stakeholders (faculty, graduates, students, preceptors, or administrators) whereas combining the views would provide a more holistic understanding of the factors involved with NP education (Goolsby). Greiner and Knebel (2003) suggested that failure to collect relevant data at nursing practice sites has impacted the diffusion of evidence-based practice into nursing curricula.

Smith and Sutton (1999) cautioned about use of the term ‘best practice’, which invokes a sense of having reached a ‘pinnacle of performance’. They suggested the term ‘better practice’ might be preferable to connote the reality that practice is progressive, evolving, and dynamic. In addition, identification of best practices does not allow for the diversity within organizations or the context within which they function – success in one organization does not necessarily mean success in another. Smith and Sutton suggest that “best practice must be subjected to ongoing critique to expose the gaps, silences and ambiguities that render it problematic” (p.105). There are multiple ways of knowing and multiple strategies for action that must be recognized when presenting ‘best practice’ recommendations for NP educational programs (Smith & Sutton).

3.5 Exit Credentials of NP Programs

One of the fundamental questions related to NP education is whether the exit credential from PHC/NP educational programs in Canada should be a master’s degree. Although there is variability in the exit credentials within the current NP programs in Canada (Doucette & Sangster-Gormley, 2004), the literature supports a uniform standard of a graduate degree.

3.5.1 Canadian Literature

Currently, both CNA (2002a; 2003b) and CASN (2004b, CASN, 2004d) recommend graduate education to prepare nurses for NP practice. NPs practicing in acute care have been educated at the graduate level for some time (Doucette, Sangster-Gormley, 2004). In addition, a graduate degree provides a credential that can be evaluated for equivalency from one area of Canada to another (CNA, 2002a; CNA, 2003b) thereby ensuring more mobility for practitioners.

CNA documents (CNA, 1997; CNA, 2002a; CNA, 2003b) explained that a graduate NP educational program is able to provide an integration of theory from a growing research-base in nursing and other disciplines to be used in clinical practice that supports sound decision-making and evidence-based nursing actions. With this advanced education, NPs can draw on their practice experience as well as the experience and research of the profession as a whole. A master’s prepared NP is able to incorporate new knowledge into practice, contribute to nursing knowledge development, and be involved in advancing the profession overall. Thus the NP is capable of combining the roles of practitioner, teacher, consultant and researcher and providing services within the scope of nursing practice in promotion, prevention, cure, rehabilitation and support (CNA, 1997; CNA, 2002a; CNA, 2003b)

Two studies of practicing NPs and nurses in advanced practice provide insight into the perspective of practicing nurses related to level of education and the impact of that education on their ability to fulfill their roles (Research in Focus on Research, 2002; Schreiber et al., 2003). In a follow-up study of Ontario NPs three years after graduation from the Council of Ontario University Programs in Nursing (COUPN) certificate program, more than 70% of the respondents believed that educational preparation for an NP should be a master’s degree in nursing with an NP concentration (Research in Focus

on Research, 2002). In a study of advanced nursing practice in British Columbia (Schreiber et al., 2003), although the nurses in the study thought advanced nursing practice should require practice experience and formal education, they differed in their beliefs related to the level of formal education they recommended. All participants recognized that the knowledge and skills required to perform an advanced nursing practice role are provided through advanced education. However, statements in this study report were less definite, using the word 'usually' rather than 'always': "competencies required of nurse practitioners are usually achieved through graduate nursing education and substantial nursing practice experience" (Schreiber et al., 2003, p.2). Nurses in this study ascribed their current level of knowledge and skills to formal and informal education as well as to experience, but there were notable differences in the way that nurses described their advanced nursing practice. This difference related to the participants' level of nursing education. Those with graduate degrees were more likely to describe their practice from a more advanced population health or systems-level perspective while the latter were more concerned with management of individual client care (Schreiber et al., 2003).

Van Soeren, Andrusyszyn, Laschinger, Goldenberg and DiCenso (2000) reported that the government of Ontario provided funding for a consortium primary care nurse practitioner certificate program beginning in 1995 with the stipulation that the program be at the post-baccalaureate level rather than a graduate level. This was to prevent restriction of enrolment to only those universities that offered graduate studies. "Master's preparation would have been preferred, but a post-baccalaureate education was better than none" (van Soeren et al., 2000, p. 832). The decision-makers in the consortium "bowed to political reality" so that they could maintain control of the program as it developed (Cragg, Doucette & Humbert, 2003, p. 227).

In *Issues and Trends in Canadian Nursing* (CNA, 1997) it was reported that some professional nursing associations in Canada had decided not to establish guidelines on the educational requirements for advanced nursing practice to allow for a flexible and creative evolution of practice. The Centre for Nursing Studies (2001) noted that the absence of a consistent policy related to NP education was evident in the variation in educational programming across Canada. Indeed, some provinces and territories did not require specific NP educational qualifications and some other provinces and territories relied on employers to determine the educational requirements. However, the CNA is now recommending that graduate education is the most effective way for nurses to acquire NP competencies and function autonomously (CNA, 2003b). CNA (2002a) noted that as more provinces and territories require baccalaureate preparation for entry into the nursing profession, the requirements of a master's degree for NPs become increasingly feasible. When programs work toward graduate education for NP's, collaboration with other programs will be crucial. A CASN (2004c) key message is to recommend "a transition process that facilitates the progress for those schools moving toward a master's exit" (p.6) through collaboration by colleges and universities across the country during the transition period.

3.5.2 International Literature

The American Academy of Nurse Practitioners also supports entry level preparation for NP practice as a master's degree (AANP, 2003). The premise for graduate education is based on the understanding that a master's degree provides NPs with the advanced clinical, theoretical, and research knowledge and skills necessary for the delivery of comprehensive nursing care in a variety of settings. (AANP, 2003). Pearson and Peels (2002) stated that in both the UK and the USA, advanced practice is based on at least a master's level of advanced education. Most NP education in the U.S. is now offered at the graduate level (Alpert, Fjone, & Candela, 2002). In the U.K., Daly and Carnwell (2003) stated that preparation for the NP role needed to be formally accredited at a higher academic level than that of nurses in either basic or specialist roles. NP expert practice would then develop through the combination of academic training with an extended period of professional experience.

Educational requirements for NPs in the U.S. include a baccalaureate degree in nursing or a related field followed by two years of graduate school to obtain a master's degree (Greene as cited in CNA, 2002b). In New Zealand, NPs are required to have at least four to five years of experience in their chosen clinical area along with a master's degree (Nursing Council of New Zealand as cited in CNA, 2002b). Overall, there is a growing international consensus that the appropriate educational preparation for an NP is a graduate degree (CNA, 2002b). The International Council of Nurses Nurse Practitioner/Advanced Practice Network (2003) recommends a masters level degree as entry level for NP practice.

Issues related to exit credentials will need to be addressed in order to provide a consistent foundation for discussions. A consensus will need to be reached about whether a graduate degree should indeed be the standardized exit credential for NP educational programs. Following this discussion there will need to be plans developed for collaborative working partnerships between educational programs to support the transition to standardization of exit credentials.

4. Education Delivery Methods

Educational institutions must use innovative ways to facilitate access and provide flexible pathways to NP education (CNA, 2002a). Delivery of NP educational programs is influenced by the availability of resources such as faculty, preceptors, and clinical placements and by program design factors such as distance learning, collaborative program delivery and evaluation methods. A summary of literature reviewed on each of these topics follows.

4.1 Faculty

Doucette and Sangster-Gormley (2004) listed some of the barriers commonly encountered in delivery of NP educational programs. Barriers related to “issues of faculty workload in cost recovery funding, difficulty in recruiting full time tenure track faculty, lack of doctoral prepared NPs to act as faculty, and lack of funding for conversion of courses to on-line” (p.4). CNA (2004b) noted that 2,750 new nurse educators will be required to teach the next generation of RNs and NPs and to conduct the research that will be required to support their practice. If NPs are to be educated at a graduate level, it is necessary to develop, recruit and retain faculty capable of teaching within these programs (Doucette & Sangster-Gormley). In addition, these educators must have a significant clinical component in their practice if they are to demonstrate NP characteristics and competencies for NP students (CNA, 2002a).

4.1.1 Canadian Literature

Canadian literature offered little insight into the issues related to NP faculty development, recruitment and retention. Van Soeren et al (2000) identified some of the challenges for faculty involved in the development of a new NP educational program. These challenges included a compounded workload involving both course design and teaching at the same time with no opportunity to develop a guiding philosophy and framework. Many of the faculty challenges related to a short time line for program development indicating the importance of adequate preparation time for all involved in the development of NP educational programs (van Soeren et al).

4.1.2 International Literature

Preparing faculty with both clinical and teaching expertise is a challenge for NP educational programs. One way is to have faculty with teaching expertise add NP education to their repertoire. Margolius and Sneed (1999) described their experiences as PhD-prepared faculty in learning the clinical skills of NPs. “Becoming NPs after many years as research track faculty members is a transforming endeavor” (p.9). They described their experience of ‘being retooled’ as humbling, intense, and challenging as well as a unique experience in role confusion. While they were expert in their faculty and research roles, they were novices in the clinical NP roles. Returning to their faculty positions they required more time to refine their NP skills to be the kind of faculty mentors that NP students need.

A second way to combine faculty clinical and teaching expertise is to provide clinicians with teaching skills. Krisman-Scott, Kershbaumer, and Thompson (1998) described a program to increase the teaching skills of expert NP and midwifery clinicians. They acknowledged that “no one can doubt educators must have excellent clinical knowledge and skills to prepare the next generation of clinicians. However, these clinically skilled experts do not have the knowledge and skills necessary for higher education and the teaching role” (p.318). In a 9 month long program with three 1 week residential periods on campus, the program provided content on classroom teaching, clinical teaching, and a

variety of other topics. All stakeholders viewed the end results as very positive, particularly the participants themselves (Krisman-Scott et al).

The U.S. National Task Force on Quality Nurse Practitioner Education (2002) maintains that faculty members who teach clinical components of the NP program/track must maintain currency in practice. Therefore, methods must be found to support faculty to practice the required clinical hours to develop and maintain their clinical skills. Two possible methods have been described from the literature. These and other methods will need to be considered to reach the goal of supporting faculty to achieve and maintain their clinical skills.

4.2 Preceptors

In Canadian NP education one of the real challenges in programming is the scarcity of experienced NPs to serve as preceptors (Doucette & Sangster-Gormley, 2004). Many programs use physician preceptors to some extent but a lack of funding for these preceptors creates another barrier (Doucette & Sangster-Gormley). No further Canadian published literature related to preceptors and NP education was found. However, international literature provided some important insights that need to be considered.

4.2.1 International Literature

Four published articles related to preceptorship in U.S. NP education were found. Two are research-based articles (Gibson & Hauri, 2000; Amella, Brown, Resnick, & McArthur, 2001); one examines strategies used at two universities (Hildebrandt, 2001), and one is editorial (Miller, 2000). The perspectives from these four articles are presented by themed areas relevant to NP education.

NP programs are increasing in the U.S. and there is increasing difficulty in placing students in clinical settings with qualified NPs as preceptors (Amella et al, 2001). Hildebrandt (2001) stated that in some parts of the U.S. “NP education programs have proliferated to the point of excessive competition” (p.176). In many cases NP graduates provide a pool of NPs as preceptors. These NPs have a good understanding of the need to contribute to the NP profession by helping to prepare the next generation of NPs (Hildebrandt, 2001).

In many U.S. clinical settings, salaries are tied to productivity thus making precepting of students an economic issue (Hildebrandt, 2001). Amella et al (2001) found that students increased preceptor’s time in the clinic and decreased the estimated number of patient encounters per hour explaining why generally preceptors decline to teach due to loss of income. Data addressing the costs of NP student clinical education are very limited (Hildebrandt, 2001). In some situations preceptors appreciate students’ questions. Students’ desire to learn provides opportunity for preceptors to increase their knowledge. However, students often take more time than they give back in patient encounters and don’t always come at times that are convenient to the practice (Hildebrandt).

A committed preceptor facilitates purposeful learning in a positive clinical environment for NP students (Gardner, Gardner, & Proctor, 2004). “The attitudes and opinions of preceptors of NP students are extremely important to the availability of qualified and motivated preceptors, the clinical growth of the students, the quality of the student’s learning experience, and the survival of NP programs” (Gibson, & Hauri C, 2000, p.362). Goolsby (2000) noted that among expert preceptors there were two styles. The first style involved “progressive preparation of students and increased responsibility based on their progress” (p.47). The second style was described as the student being set loose to ‘sink or swim’ with the preceptor correcting judgment errors when they were made.

Hildebrandt (2001) suggested that using a variety of preceptors and settings was more likely to meet all student needs. Not all preceptors of NP students will be practicing NPs. In reality, some of the best clinical experiences that meet program objectives may be provided by an interdisciplinary mix of preceptors (National Task Force on Quality Nurse Practitioner Education, 2002). Physicians can be effective preceptors but members of other disciplines should not be a student’s only preceptors due to the danger of incorporating the values of another discipline rather than their own nursing values into their NP practice (Hayes, 1998). Physicians should not necessarily be preceptors in the early experiences of NP students because role modeling is especially important at that time (Hildebrandt, 2001). In point of fact, physicians in a study by Gibson & Hauri (2000) overwhelmingly preferred NP students closer to the end of their programs because their busy practices did not allow them to give beginning students the attention they needed. Amella et al (2001) noted that while 44% of the NPs in their study exclusively supervised NP students, many were expected to supervise non-NP students as well. In a multi-disciplinary setting it is important that practicing NPs advocate for accommodation of NP students along with all the other disciplines (Hildebrandt, 2001).

Preceptors benefit from adequate orientation and support, and retention of good preceptors should be given as much attention as recruitment (Hildebrandt, 2001). Some colleges and universities in the U.S. go so far as to require preceptors to go through a rigorous credentialing process and become adjunct faculty before becoming preceptors (Hildebrandt). A less rigorous approach to orientation and training of preceptors involved sharing articles about student needs and preceptor responses to student issues in order to reduce uncertainty about program and faculty expectations (Hildebrandt). One student need emphasized by Miller (2000) is that educators and preceptors must incorporate the basic principles of adult learning into their program design. This would recognize that NP students are adult learners and benefit most by being active participants in their own learning.

With regard to preceptor support, Gibson & Hauri (2000) reported that preceptors appreciated faculty visits. These visits provided opportunities for the faculty to become more familiar with the setting and the staff, to get a realistic view of student performance, to provide a forum for mutual feedback, and to provide an opportunity for the preceptor to assess their effectiveness in their role (Gibson & Hauri). The standard set by National Organization of NP Faculties (NONPF) guidelines is that faculty members are expected to provide adequate supervision of students in clinical practice (Amella et al, 2001). However, 24% of preceptors in the study by Amella et al reported no contact with faculty

regarding student problems. The majority of preceptors in the study by Gibson & Hauri felt that faculty support was high but they would like to have more information on student's strengths and weaknesses, an outline of topics that needed to be covered in the clinical experience, and a better understanding of the program curriculum and requirements.

Incentives for preceptors were discussed in the literature. Examples of incentives included thank-you letters, courtesy faculty appointments, free library services, computer classes on doing literature searches, invitations to lectures and graduations receptions, reduced fees for continuing education, and free tuition to conferences (Gibson & Hauri, 2000; Hildebrandt, 2001). In many academic programs, adjunct faculty status is also one of the benefits of being a preceptor (Hildebrandt). Hildebrandt observed that library services, computer classes and reduced fees were more valued by preceptors than invitations to a meeting or a computer generated certificate. Amella et al (2001) reported that even though 30% of the preceptors in their study held faculty appointments, the preceptors did not see the appointment as recognition for their teaching. Interestingly, Amella et al also noted that 50% of the faculty in their study reported their school offered some type of incentive, but only 16% of the preceptors reported receiving any incentive for their involvement. Hildebrandt (2001) reported that the American Association of Colleges of Nursing had conducted an informal survey in 1998 that showed fewer than 5% of schools of nursing paid preceptor sites and when this was done, it was often done through 'soft funds' such as grant money. If increased numbers of NPs are needed in the health care system, funding for financial incentives for expert preceptors needs to be considered (Amella et al).

Various perspectives on student-found preceptors were presented in the literature. Hildebrandt (2001) described the process where students' were being given responsibility for finding their own clinical sites as an abdication of responsibility and a cost-cutting practice by colleges and universities. Student selection of preceptors and clinical sites could also lead to less faculty involvement with the preceptors (Hildebrandt). Another concern could be that familiarity between the student and preceptor may lead to a 'too-relaxed' environment where the preceptor is less likely to be able to provide experiences consistent with the program objectives (Miller, 2000). On the other hand, if students feel comfortable with the preceptors, the students are more likely to be active participants in their own learning (Miller). Student-found clinical placements are also more likely to be in closer proximity to where the students live and in an area that matches their own interest, making the clinical experience more relevant to their potential future employment (Hildebrandt). Amella et al (2001) reported that the majority of the preceptors in their study were initially contacted by students directly first (78%) and then by faculty (68%). To ease the concerns about student-found preceptors, these preceptors need to be evaluated by the same criteria or standards that any other preceptor would be evaluated (Miller). In the study by Gibson and Hauri (2000), faculty used several methods for maintaining quality control of sites including; site visits; telephone calls with preceptors; student conferences and logs; preceptor seminars; and structured guidelines for the experience.

Several issues related to preceptor/student relationships have been identified in the literature. One of the issues that will need to be discussed is the ideal length of this relationship and whether it is beneficial to have students find their own preceptors. Literature on mentoring provided more insight into this question.

4.3 Mentoring

Further insight into student-found preceptors was found in two U.S. articles related to mentoring and NP student/preceptor relationships (Hayes, 1998; Hayes, 2001). Hayes conducted a descriptive correlation study of the relationship between NP students' perceptions of mentoring by their clinical preceptors and student self-efficacy (Hayes, 1998). The initial study was followed by a set of qualitative interviews with the NP students who had described the best and the worst mentoring experiences with their preceptors (Hayes, 2001). These articles provide insight into effective student/preceptor relationships and the facilitators and hindrances to their development.

Mentoring has not been extensively studied related to advanced nursing practice (Hayes, 2001). Hayes defined mentoring as “a voluntary, committed, dynamic, extended, intense, and supportive relationship characterized by trust, friendship and mutuality between an experienced, respected person, such as an NP preceptor and an NP student, for the purpose of socializing the student and promoting student self-efficacy in taking on the advanced practice role” (p.111). It is a longer-term relationship than the typical preceptor model which is often a series of short-term, faculty assigned relationships between an expert NP and a student. The mentoring model provides time for the development of a relationship between the preceptor and student beyond the teaching of clinical skills to exposure to other broader aspects of the NP role (Hayes, 1998).

Hayes (1998) found a positive correlation between mentoring and students' self-efficacy and significantly higher mentoring scores for students who had self-selected their own preceptors. Student familiarity with a preceptor that they admired and respected was an important factor in developing a mentoring relationship between the expert preceptor and novice student. This was much less likely to happen with a faculty assigned preceptor. Finding their own preceptors can be very anxiety-provoking but supporting choice encourages students to ‘take charge’ of the clinical experience that is foundationally important as preparation for their future practice (Hayes, 2001). Hayes (2001) also noted that self-selecting preceptors can also be very rewarding for the students. However, even if faculty assigned preceptors are used, faculty can plan longer clinical placements particularly if the preceptor/NP student relationship is showing signs of ‘flourishing’. This will strengthen the possibility of the development of a mentoring relationship (Hayes, 1998).

From the qualitative interviews, Hayes (2001) outlined some of the factors that facilitated and hindered the development of mentoring relationships. Gender and discipline of the preceptor were non-factors in most relationships. The facilitators for the development of mentoring relationships were:

- Preceptors and students with common interests – most of the time related to age;
- Preceptor acknowledgement and respect for NP student's history and experience;
- Experienced preceptors who knew what the NP students needed and brought out the best in them;
- Preceptors confident in their own roles;
- An open collaborative working environment;
- Continuity in a longer-term relationship – at least one year; and
- Student selected preceptors – knowing, admiring, and respecting the preceptor before preceptor/student relationship began (Hayes, 2001).

The barriers to the development of mentoring relationships were:

- Differences in age between preceptor and student causing difficulty in establishing common ground;
- Focus only on direct patient care with little exploration of advanced nursing practice role;
- Unrealistic expectations from preceptor related to students' abilities;
- Preceptor inability to accept experienced NP student as a 'beginner';
- Student perception that preceptor had a lack of time to devote to the preceptor role; and
- Lack of preceptor placements causing an inability to change from a non-mentoring preceptor relationship; and
- Inability of students to find their own preceptors (Hayes, 2001).

It is not realistic to expect that all students will experience a mentoring relationship during their educational experience. However, faculty can promote the possibility of the development of such a relationship through providing opportunities for NP students to work with NP preceptors who are most likely to model the full scope of NP practice (Hayes, 1998).

4.4 Clinical Experience

Doucette and Sangster-Gormley (2004) noted that one of the common challenges faced by NP educational programs is finding appropriate clinical placements. Literature on NP clinical experience provides insight into the perceptions of physicians and students regarding the amount of experience required in educational programs. The American National Task Force on Quality NP Education (2002) criteria for evaluation of the clinical experience portion of NP programs provides a useful benchmark against which to compare Canadian NP programs.

4.4.1 Canadian Literature

Nurses in the study by Schreiber et al (2003) emphasized the need for practical experience during their educational programs. In a 2001 report on the nature of the extended/expanded nursing role in Canada, the Centre for Nursing Studies reported that there were wide variations in clinical competence among nurses in extended roles. At the same time, they reported that there was wide variation in NP programs with regard to entry requirements, graduation status, curriculum content, and length of the program as well as intensity and duration of the clinical experiences. Some of the nurses participating in the study suggested that the clinical component of their programs could have been longer. Several physician participants in the study indicated that their observations of variation in competence among the nurses in extended practice affected the degree of confidence that they had in the nurses' abilities. The perceived lack of knowledge and/or skills was attributed to inadequacies in their educational programs in preparing them for the role or to their limited experience prior to entering the educational program (Centre for Nursing Studies).

4.4.2 International Literature

In a study by Gibson and Hauri (2000), physician and NP preceptors had strong opinions about the amount of experience and number of classes that should be required for NP students before beginning their clinical rotations. Both physician and NP preceptors believed that students needed at least three years of basic medical/surgical experience before entering clinical courses. They identified necessary prerequisite courses as "pathophysiology (95%), pharmacology (93%), health assessment (91), and diagnostic reasoning (86%)" (Gibson & Hauri, p.362).

Gardner, Gardner and Proctor (2004) studied four Australian NP students who were highly motivated to advance their education over a ten month period. They found that the students continued to be challenged by field placements that placed high demands on their clinical skills and knowledge. Given the options of clinical learning, independent literature research and reading or attending lectures, the students invariably agreed that the clinical experience would be their first choice.

Blunt (2001) reported on a program whereby NP students could acquire clinical skills in a laboratory setting. She noted in Pennsylvania that although NPs with a well developed knowledge and skill base of minor procedures have a competitive edge when seeking

employment, NP educational programs often had limited time and resources within the program for students to learn these skills. Blunt gave a brief overview of a three credit elective course where NP students learned minor medical and surgical procedures. Students who completed the course had a firm foundation in minor procedures and reported increased confidence. However, she noted that equipment management, maintenance of skills stations, and acquiring supplies was very labour intensive for the faculty (Blunt).

The greater number of supervised clinical hours in NP educational programs in the U.S. is one of the differentiating factors between NP and clinical nurse specialist (CNS) preparation (Amella et al, 2001). Criteria for evaluation of the clinical aspects of NP educational programs in the U.S. are listed by the National Task Force on Quality NP Education (2002). The criteria include:

- A minimum of 500 supervised clinical hours overall,
- Additional clinical hours for specialty tracks that provide care to multiple age groups or in multiple care settings,
- Post-master's students must master the same criteria as other NP students and are required to complete a minimum of 500 supervised hours of clinical time,
- Clinical education experiences need to be supported by adequate faculty, clinical sites, and preceptors,
- Contractual agreements must be set up with agencies or individuals used for student's clinical experiences,
- The ratio of faculty/student in direct supervision/preceptorship is 1:2 if faculty members are not seeing their own patients and 1:1 if faculty members are seeing their own patients. The recommended ratio for indirect faculty supervision is 1:6. Indirect supervision includes coordinating the clinical experiences, interacting with the preceptors and evaluating the students.
- Clinical sites should be assessed on a regular basis for adequacy of clinical experiences, patient type and mix, and preceptor/student interactions to ensure that students are able to gain the experiences required to meet core and specialty competencies, and
- Faculty involved in delivering the clinical portion of the curriculum need to maintain their clinical expertise, licensure, and NP certification (National Task Force on Quality Nurse Practitioner Education, 2002).

Clearly, clinical experience is a main focal point of NP education. However, the ideal balance between the clinical and theoretical components of NP education will need to be defined. In addition, it will be important to discuss the amount of clinical experience an NP student should be required to have before entering an NP program. NP programs need to continue to find ways to deal with the differences in knowledge and skills of the nurses entering their programs.

4.5 Distance Learning

In the 2003 CASN survey of all colleges and universities offering PHC/NP educational programs, one of the commonalities found was the offering of alternative online and distance delivery methods such as WebCT, audio, video, print and teleconference (Doucette & Sangster-Gormley, 2004). Access to computers and on-line or on-site library resources and services were listed as institutional supports offered for online learning. The costs and benefits of options for delivery of NP education, such as distance education and workshops, need to be considered (CASN 2004c).

4.5.1 Canadian Literature

Distance learning allows for graduation of a steady stream of NPs (Bolan, 2003) for employment in all areas of the country. NP students choose online learning for varieties of reasons that are often based on where they live in relation to their home university, the need for flexibility due to work and family responsibilities, and reduced personal expenses (Andrusyszyn, Cragg, & Humbert, 2001; Bolan, 2003). Although learning styles, specific types of content, and experience with technology are factors, convenience is a greater factor for those who lived a considerable distance from the learning institution (Andrusyszyn et al.). For many people who live in rural or remote areas, the choice may be either distance education or none at all (Bolan). However, van Soeren et al (2000) stated that distance education may be seen as second class by those who teach in institutions that are not traditionally involved in distance education.

Distance education courses and programs need to be designed incorporating sound pedagogical principles (Bolan, 2003) and provide effective technological support for the students (Cragg, Humbert, & Doucette, 2004). Asynchronous learning allows the students to have the flexibility to access course materials at a time that fits their own schedules. However, attrition from courses that are totally asynchronous may be high (Bolan). Scheduling specific milestones in the courses greatly reduces the attrition rate (Bolan). Technological support is essential to allow students to focus on the learning and not the technology (Cragg et al.). Cragg et al. reported on the development of a toolbox that provided new NP students with a variety of strategies to increase their comfort level with the technology. Prior to the introduction of this toolbox, learners reported taking four to six weeks to get online and become comfortable. Following the introduction of the toolbox, students were online within one to two weeks and feeling comfortable in four weeks or less. Toolbox components included: paper-based materials, face-to-face orientation sessions, Web-based materials, technical support staff, a common template to standardize all courses, and a CD-ROM starter kit. Although the toolbox reduced

students' anxiety and loss of learning time, the toolbox did not necessarily save the program money, particularly related to the hiring of technical support staff. There appears to be a changing trend whereby students entering NP programs now have a greater familiarity with technology than they have in the past (Cragg et al.), which may lead to a reduction in the need for technological supports in the future.

Andrusyszyn et al. (2001) noted that there is a lack of research comparing distance learning delivery methods with student learning preferences in a distance delivery program. The authors used questionnaires and interviews to examine the relationship between learning preferences, delivery method preferences, and academic achievement among 86 participants in a PHC/NP program in Canada. They found that the students succeeded in their assignments whether or not the method matched their preference by modifying their learning habits to match the content. They also found that there is no single approach that suits all students or all content and that the preference for computers was not highly rated by the participants. If possible, distance education programs should consider including opportunities for group activities and hands-on practice, using virtual reality if this is the only alternative (Andrusyszyn et al.).

A variety of methods are used in distance education programs including print-based materials, CR-ROM, video conferencing, computer conferencing, video tape, simulations, and case-based scenarios (Andrusyszyn et al., 2001, Bolan, 2003). Andrusyszyn et al. found that preferences for method of delivery varied with the content. Video conferencing was preferred over other methods for learning about interpersonal relationships and issues in such areas as "goal setting with clients and families, crisis management and counseling, interdisciplinary collaboration, dealing with ethical dilemmas and transcultural issues, as well as political action and health policy" (p.169). CR-ROM was the preferred method for learning about health history taking and pathophysiology because it can blend sound, graphics, text, animation, and interactive exercises. Video tape was preferred for learning physical assessment (Andrusyszyn et al.). Simulations and case-based scenarios supported the development of critical thinking skills in a risk-free environment (Bolan).

Marshall & van Soeren (2000) studied the effectiveness of CD-ROM as an educational method in a PHC/NP program pathophysiology course. CD-ROM was seen as having the potential to engage students visually while providing for asynchronous study opportunities and as a valuable adjunct to other distance learning methods. The CD-ROM was expected to achieve an interactive learning environment as an adjunct to the written course materials in a course that had no face-to-face contact between the instructor and the students in the course. Since purchase of the CD-ROM was optional, not all students accessed this resource (50 of 74 students ordered the CD-ROM). Twenty-seven of the students who ordered the CD-ROM consented to participate in the study. The authors reported that using a CD-ROM in this type of course can be an effective method of delivery. The percentage of students with grades of B or higher was greater for those who had purchased the CD-ROM (96%) than for those who did not (66%). They concluded that although the development of a CD-ROM is labour intensive, the enhanced interactive learning that occurs justifies its use in NP education (Marshall & van Soeren).

4.5.2 International Literature

Distance education has been defined as “the delivery of an educational offering to a remote site rather than the site of origin” (Zimmerman, 1999, p.509). The U.S. National Task Force on Quality NP Education (2002) set the expectation that NP programs and courses delivered through distance education must meet the same academic program and learning support standards as programs provided in a face-to-face format. Indeed, in 1999, Zimmerman reported that previous studies had shown that nursing distance education students had higher grades compared to on-campus students and educators were able to use more creative teaching techniques using distance technologies. Distance education reduces barriers to graduate nursing education for those who are ‘location-bound’, providing more flexibility, reduced costs and travel time, and self-directed learning opportunities (Zimmerman). Web-based learning should be used to greater advantage to respond to the different levels of learning needs among the students (Kelley & Kopac, 2001).

Kelley & Kopac (2001) examined creative teaching strategies in advanced health assessment courses. Those who used distance education strategies noted that it was important that programs be interactive and allow for individual learner differences. Zimmerman (1999) described distance learning methods as either synchronous or asynchronous methods of interaction between the learner, other participants, and the educator. Synchronous methods included chat rooms, desktop video conferencing, and virtual reality through the set up of a ‘virtual classroom’ (using graphics and other media to simulate a classroom setting or a student lounge for students over the Internet). Examples of asynchronous methods included website links, discussion groups, e-mail, listservs, and ‘streaming video’ (educators provide a videotape that can be played using the Internet). Zimmerman suggested that the technology is now available for providing new and innovative methods for delivering educational programs to APNs.

Evaluation of clinical skills through distance education programs can be a challenge. Two articles highlighted new and innovative ways to observe NP students in clinical settings (Zimmerman, 1999; Sackett, Campbell-Heider, & Blyth, 2004). Zimmerman reported on a pilot study examining the use of a desktop video conferencing method to provide graduate students with feedback in a clinical setting. The student had a laptop computer in the clinical setting and conducted a video conference with a faculty member in another location. From a distance faculty members were able to evaluate student-patient interaction, performance of physical examinations, interventions, and procedures without making on-site visits (Zimmerman). A later pilot study (Sackett et al., 2004), examined Integrated Services Digital Network (ISDN)-based videoconferencing modalities extended for use into clinical evaluation of NP students being precepted in remote sites. The pilot study showed that this technology allowed a university-based faculty member to interact in real time with a student, patient, and preceptor involved in a patient encounter. The faculty member used a remote camera control to change the camera view in the remote site to target and zoom in on any particular area of interest without disturbing the student-patient interaction. This type of technology allowed for a higher quality of interpersonal interface between the student and the faculty member similar to traditional onsite evaluations. However, issues related to security and confidentiality of

patient information remained an issue with this new use of technology. The costs of using ISDN are also prohibitive. Nurse educators must decide how to best match emerging technology to compatible teaching and learning situations. “When the videoconferencing delivery platforms and teaching capabilities are properly matched, learning and student access to education are greatly enhanced” (Sackett et al., p.105)

Authors of two articles evaluated the effectiveness of distance learning as compared to traditional classroom learning (Ryan, Carlton, & Ali, 1999; Bata-Jones & Avery, 2004). Ryan et al. reported on a study that used the perceptions of graduate nursing students’ to evaluate courses that combined traditional classroom with online learning. The results indicated the importance of the traditional classroom method to the students. However, both traditional and online learning had positive and negative aspects. Online learning modules facilitated communication and interaction between the students but in different ways than the classroom setting. Saving time was also a major factor in support of distance learning. At the same time, Ryan et al. noted that the teaching work load for faculty in the design, support and maintenance of courses needed to be considered. It takes more time for faculty to communicate regularly with each student online rather than having a group discussion in a classroom once per week. Critical thinking skills were rated approximately the same for both teaching methods. The authors concluded that participants wanted a combination of online modules and contact with faculty and other students in the classroom. At the same time, they noted that the benefits (increased access, resources, and opportunities for diversity) of online learning far outweighed the problems (Ryan et al.).

Bata-Jones and Avery (2004) evaluated the effectiveness of an online graduate pharmacology course with a face-to-face course taught simultaneously where the students self-selected into the type of course delivery. The courses were taught by the same faculty member using the same examinations to test the students’ learning. Three face-to-face sessions were held in the online course and there was no web-based component to the traditional classroom course. There were no significant differences between the students taking the classroom and online courses in either their characteristics or their success in the course. The results of this study were similar to other studies by the authors. Overall the students were satisfied with their online learning experience (Bata-Jones & Avery).

The literature has provided insight into the strengths and challenges of distance learning. The issue that will need to be addressed relates to the best way to combine the realities and advantages of distance education with the advantages of face-to-face learning.

4.6 Collaborative Program Delivery

In the Report on the CASN/FNIHB Workshop on PHC/NP Education (2004c), there was a call for more collaboration among NP educational institutions across the country. This would support joint delivery of virtual programs, linkage of learners with experts, a focus on specialty expertise by institution, and provide a mechanism that would allow NP students to move across institutions to meet their learning needs. There was also a call to explore the concept of a centre of excellence for PHC/NP education that could link NPs

working in rural and remote communities and in Aboriginal communities with schools of nursing. The centre of excellence could be either physical or virtual but would provide an opportunity for consideration of course content and how to designate programs/centres for specific specialties. "Achieving collaboration represents, perhaps, the most key challenge to realizing the benefits of nurse practitioners in the Canadian health care system." (CASN, 2004c, p.12).

4.6.1 Canadian Literature

Collaboration between educational programs extends accessibility and is becoming a reality in a variety of fields (Doucette & Sangster-Gormley, 2004). The reality of shrinking financial resources, limited numbers of faculty with expertise, and small numbers of geographically dispersed students make new ways of thinking about educational programs attractive (Doucette & Sangster-Gormley). Three articles were found that described the process and experience of a collaborative program in Canada (van Soeren et al., 2000; Marshall & van Soeren, 2000; Cragg et al., 2003).

The consortium of ten university schools of nursing in the PHC/NP program in Ontario was initiated and funded by the provincial government ministry responsible for health in 1995 (Cragg et al., 2003). The development of a province-wide collaborative NP program supported academic autonomy for program decisions and created a united provincial voice on professional and NP implementation issues based on a shared vision (van Soeren et al., 2000). The consortium structure also created more consistency in curriculum and standards for NP programs (van Soeren et al.), increased accessibility for students throughout the province at the same time as allowing for the sharing of scarce faculty resources (Marshall & van Soeren, 2000).

In the consortium, students are admitted to individual universities and clinical placement contracts are with that home institution (Cragg et al., 2000). Four regional coordinators work with their universities and faculty liaisons to ensure that regional needs are being met. In rural and remote areas, face-to-face lab sessions are concentrated in weekend sessions and tutorials are conducted by teleconference. In urban areas face-to-face meetings occur more frequently (Cragg et al.). In the consortium development process, each group took a different perspective (van Soeren et al., 2000). The deans and directors were focused on the political significance of the program and effective liaison with the government. The regional coordinators were focused on smooth program operation, finding adequate clinical placements, and understanding the complexity of working within a collaborative structure. The course developers were concerned with improved course integration, complex communication, and the hierarchy for decision-making (van Soeren et al.).

4.6.2 International Literature

Distance education in nursing can lead to competition for students and faculty that goes beyond geographical boundaries (American Association of Colleges of Nursing as cited in Varnell, Pollock, Klotz, Green, & Sportsman, 2002). Varnell et al. reported on a collaborative arrangement between three Texas universities to provide advanced education to nurses in outlying areas of the state. They described the collaborative program as based upon collegiality rather than competition with the vision of combining their expertise to better meet the needs of the students and the communities in a cost-effective manner. The collaborative partners all served primarily rural communities, shared the same vision for preparing APNs, and were committed to distance education.

Evaluation of the Texas collaborative program showed positive outcomes for the communities, students, and faculty members (Varnell et al., 2002). Eighty-five percent of the graduates were currently working as Family Nurse Practitioners (FNP) with rural populations and all participants in the program had increased awareness of the rural culture. Classes were conducted approximately one-third on site and two-thirds through distance education. Students expressed a desire to travel to their collaborative site for some of the classes and the need for technical assistance to be available. Student evaluations of the program were very positive and program improvements were made each year based on student feedback. Faculty members have become more competent in using telecommunications and increased their level of expertise in distance education (Varnell et al.).

Varnell et al. identified the challenges that they faced in developing and delivering the collaborative program (Varnell et al., 2002). Communication among everyone involved with the program was difficult and faculty members and students continue to make efforts to communicate effectively with each other. Preceptors need to be made a more integral part of the educational process and there is a need for more support and technical expertise for the distance education. The cost of technology and distance education is also a challenge. Both faculty and students identified the convenience of distance education, but a need for more professional socialization was also expressed. Opportunities for socialization were increased through the use of interactive video. In spite of the challenges, the collaborative program has been successful and is being expanded to include other NP specialty programs (Varnell et al.).

More collaboration between NP educational programs will likely be necessary to provide accessibility to the highest quality programs for the greatest number of NP students. The types and locations of NP programs that would benefit the most from collaborative efforts will need to be identified.

4.7 Evaluation Methods

Very little published literature on methods for evaluating or testing NP learning in educational programs was found. Three U.S. articles (Stroud, Smith, Edlund, & Erkel, 1999; Blunt, 2001; Vessey & Huss, 2002) and one U.K. article (Khattab & Rawlings, 2001) provided insight into methods for examination of NP clinical skills.

Blunt (2001) described the methods used to teach minor procedural skills to NP students. The skills were taught in face-to-face classroom or laboratory setting. Methods included re-demonstration of the procedure skills during class, development of a written procedure including a recent bibliography, and patient discharge information. Content knowledge was tested using multiple choice questions and critical thinking skills were tested using case studies and related questions in a written final examination. At the end of the course, students had a complete set of procedures, discharge instructions, and bibliographies for their future clinical practice. Blunt noted that combining clinical skill development with the written components reinforced the learning and instilled valuable skills to be used after graduation.

Evaluating NP student performance in a clinical setting can lead to inconsistencies due to the unpredictability of patient availability and presenting problems; and differences in evaluation styles between clinical faculty members (Stroud et al., 1999). Stroud et al. highly recommended that on-site clinical evaluation be supplemented with a standardized simulated patient encounter evaluation strategy. They reported that a structured evaluation method provided NP students with an opportunity for self-evaluation and critique; enabled faculty members to pinpoint areas of difficulty that may not be apparent in a clinical setting; provided an objective measure on which to base decisions about student progression; and strengthened the validity of the evaluation. However, regular clinical site visits continued to add value through providing student instruction and evaluation and through strengthening relationships with preceptors (Stroud et al.).

Vessey and Huss (2002) reported on a study into the use of standardized patient (SP) encounters as a method to test clinical skills for adult and pediatric NP students. SP encounters included both simulated clinical encounters where students completed one comprehensive visit and objective structured clinical experiences (OSCE) where students went through multiple stations with differing clinical problems presented at each station. As much as possible the student encounters were videotaped for later critique of interpersonal and psychomotor skills. An advantage of the use of SP encounters noted was that the encounters could be changed in intent and complexity to match the course intents. They also provided realistic clinical experiences without violating patient rights and provided opportunities for students to practice dealing with sensitive topics, difficult skills, and time management (Vessey & Huss).

Drawbacks to the use of SP were also noted (Vessey & Huss, 2002). A limited range of clinical problems that could be simulated and some of them required recruiting patients with a specific condition to be the SP. The use of SP experiences was costly and accurate evaluation of skills was difficult. The authors noted that it is very important, prior to the testing, to have defined in detail what is being tested. Often items on the evaluation checklist were too general to have provided an accurate representation of the students' competence. The authors found that the evaluation of students' performance on the SP encounters varied and was sometimes poorer than in other clinical assessment ratings done by their faculty and clinical preceptors. This may have been due to a lack of experience with the specific patient condition or the anxiety associated with being tested or videotaped. It could also have been related to the variation in the acting skills of the SP participants (Vessey & Huss).

Concerns about the use of SP encounters included the reports from literature cited by Vessey and Huss (2002) that indicated the reliability and validity of SP experiences to be low in relation to providing a global picture of student skills. On the other hand, the authors reported that the correlation of the results on OSCEs was closer to that of other examination methods. However, OSCEs were seen to be difficult to construct and expensive to administer. There was also concern that it is much easier to evaluate the 'discrete items of performance' in a checklist form to increase interrater reliability than to measure the softer skills of interpersonal abilities and ethical decision-making. The authors also compared the use of SP encounters in formative and summative evaluations. They suggested that they are best used as formative evaluations so the students can benefit from reviewing their tapes and receiving feedback. When they are used for summative evaluations, students are less likely to use their tapes for self-reflection and to enrich their learning experiences (Vessey & Huss).

Khattab and Rawlings (2001) described the use of modified OSCEs in evaluating physical assessment skills of NP students in the U.K. The OSCE was structured to be used as a tool for examination as well as a means of self-assessment and learning. The students went a series of two stations: one where they had to perform tasks and one where they had to answer questions based on content learned during the physical assessment course. The emphasis was placed on techniques, communication skills, and approach to the physical exam rather than on the NP student's clinical findings thus emphasizing the process rather than the product. The OSCE was used as a summative evaluation tool but was also seen as formative through the provision of copies of the guidelines and marking criteria at the beginning of the course. Although issues related to reliability, feasibility, and cost of delivering this type of assessment remained, the authors stated that feedback from all involved was extremely positive thus demonstrating the benefits of the modified OSCE as an assessment tool (Khattab & Rawlings).

The challenges related to evaluation of clinical skills have been identified in the literature. A combination of methods was discussed including face-to-face, on-site, using distance technology and simulated patient encounters. Consideration will need to be given to the development of methods that evaluate not only physical assessment skills but also the 'softer' nursing interpersonal skills.

5. Continuing Competency

Continuing competency for NPs includes both orientation to the workplace and continuing education programs that support ongoing learning. Limited literature was found on each of these topics, the majority of which came from unpublished reports.

5.1 Orientation in the Workplace/Internship

Prior to an examination of the literature related to workplace orientation it is useful to look at preparedness for practice when graduating from NP educational programs. In a study by the Centre for Nursing Studies (2001), the general sense received from participants in the study was that there needed to be a better match between what employers expected of extended/expanded roles for nurses and what they had been

prepared to do in their educational programs. Many of the nurses participating in the study described their early days in the work setting as extremely difficult noting feelings of low confidence and competence related to an increasing awareness of the gaps between their theoretical and practical knowledge.

NPs participating in the study conducted by IBM Business Consulting Services (2003) indicated that the majority (54%) did not feel educationally prepared when they first started practicing. They lacked some substantive knowledge and were not prepared for the complexity of health problems that they faced in their workplaces. The practicing NPs suggested that their concerns could be addressed by:

- “Having a longer practicum (73%);
- Having an internship type of year (64%);
- Having a master’s level program (47%);
- Creating a longer educational program (46%); and
- Having a greater emphasis on continuing education (41%)” (IBM Business Consulting Services, p. 103).

5.1.1 Canadian Literature

IBM Business Consulting Services (2003) reported that for many nurses, the first time they practiced independently within their full scope of practice was in their first position after graduation from their NP educational program. For many it took six months to a year to become fully comfortable in their role. They required greater assistance from other team members and from the physician as well as in-service training. Some participants said that this learning curve should be taken into account for new NPs and internships should be considered (IBM Business Consulting Services). One of the recommendations in the report was that COUPN along with the provincial government should plan for internship opportunities for NPs that build on their basic education and assist in the transition from novice to expert. Respondents in the study published in *Research in Focus on Research* (2002) also suggested that internships should be considered and that the clinical component of their program should be expanded.

The issues that need to be discussed relate to realistic expectations for preparedness for practice among both beginning NPs and employers. The responsibility of the educational institution and the responsibility of the employer need to be considered along with examination of realistic expectations for the length of time it should take for an NP to become comfortable in a practice role after graduation.

5.2 Continuing Education

Nurses in advanced practice need to support their practice through participating in life-long learning and continued competence development (CNA, 2002a). Educational institutions need help to prepare nurses to meet continuing competency requirements through offering continuing professional development strategies. Health organizations need to create partnerships with educational institutions and provide resources for nurses to participate in programs that support advanced nursing practice (CNA 2002a).

5.2.1 Canadian Literature

Research shows that even though Canada's educational institutions have considerable experience in using technology that increase accessibility of educational programs, nurses continue to perceive barriers to attending and accessing these programs. The barriers include distance, family and work obligations, expense of tuition and travel, lack of employer financial support, lack of available relevant educational activities and lack of replacement for study leave (Coty, Tilleczek, Pong, Michel, & Lemieux as cited in CNA & CASN, 2004). Bolan (2003) noted an earlier 1993 study by the Department of Health, Government of Newfoundland and Labrador: Nursing Human Resource Committee that listed the key reasons why nurses in that province did not attend continuing education programs. These reasons included: "lack of relevancy of educational programs; lack of flexibility in course delivery; lack of perceived value of the direct benefits of investing time and financial resources into continuing education programs, and in some instances, lack of support within health centres for nurses who wish to continue their studies." (Bolan, p.11)

Nurses in advanced practice see the need for accessible continuing education programs (Schreiber et al, 2003). Almost all of the NPs in the study conducted by IBM Business Consulting Services (2003) participated in continuing education activities such as lectures, conferences, and/or presentation and two-thirds participated in small group learning, traineeships, and workshops. However, many NPs are restricted to continuing medical offerings, which in itself is positive but raises concerns about the need to access programming based on the philosophy, values, and knowledge of the nursing profession (Centre for Nursing Studies, 2001).

5.2.2 International Literature

Health care professionals must have the ability to update their knowledge and skills to continue to provide competent care throughout their careers (Greiner & Knebel, 2003). The Internet has been successfully used for nursing continuing education and has become a rich source of information (Zimmerman, 1999; Hayes & Huckstadt, 2000). Continuing education on the Internet can come in the form of reproduced journal articles or other text-based content as well as more interactive content sites (Hayes & Huckstadt). However, continuing education over the Internet must be critically evaluated by the user. Internet learning programs should include a user friendly web site; educationally sound learning materials; provide for electronic communication with the learner; and should be

continually appraised and updated (Hayes & Huckstadt). The development of learning programs for the Internet takes considerable planning and the amount of faculty time needed to maintain the sites is as yet unclear. “The future of on-line continuing nursing education is dependent on well-structured, interactive, and challenging programs, as well as the accessibility and the skill of the user” (Hayes & Huckstadt, p. 203).

Responsibility for continuing education for NPs rests jointly with the practicing NP, employers and educational institutions. Developing opportunities for continuing education for NPs requires partnerships that support a sharing of responsibility and expertise among these potential partners.

6. Prior Learning Assessment and Recognition

No literature was found that directly addressed Prior Learning Assessment and Recognition (PLAR) with reference to NP education. Therefore a broader range of literature has been used. All of the literature used is based on Canadian experiences with the exception of one article that gives a historical context within the U.S. (Howard, 1993). Three of the main sources were research studies of PLAR processes in Canada (Aart et al., 1999; Day, 2001; Kennedy, 2003) while two of the sources related more specifically to transferability of credits between institutions (Canadian Alliance of Education and Training Organizations (CAETO), 2003a; CAETO, 2003b). Only one article was written specifically about nurses who were working toward taking credit for their experience as they return to school to advance their education (Esson, Dewar, & Entwistle, 2002). This summary of the reviewed literature will provide an initial context for further discussion of PLAR and its related issues.

Assigning credit for prior learning is complicated (Esson et al., 2002). Related policies must take into consideration the needs and concerns of institutions, educators, and students. A PLAR process must be fair and equitable to students at the same time as being credible and acceptable to the institution (Esson et al., 2002). Aarts et al. (1999) suggested that most learning exists below the surface (as in an iceberg) and therefore it is difficult to identify, assess, and recognize this learning. PLAR has numerous advantages but implementation presents many challenges to educational institutions (Esson et al.).

Recognition of prior learning has been defined both generally and specifically in the literature. Day (2001) noted that in the U.K. ‘accreditation for prior learning’ or APL is the general term used, meaning “award of academic credit on the basis of learning that has occurred some time in the past” (p. 37) and the credit is awarded for the demonstrated learning rather than for the experience itself. PLAR is the term used in Canada. Aarts et al. (1999), in their cross-Canada study on PLAR, used the definition “a process of identifying and measuring learning acquired outside known public educational institutions for recognition through academic credit” (p. 7). Kennedy (2003) outlined a more specific definition of PLAR for a snapshot of the use of PLAR in Canada’s public postsecondary institutions:

All the processes (advising, assessment, evaluation, transcription) associated with informal learning acquired by adults through employment, on-the-job training, volunteer work, independent study, military service, credit for workplace training and other life experiences, which are evaluated against the learning outcomes of a program or course through the use of a challenge test, demonstration, case study, or portfolio assessment. (p.6)

PLAR has been practiced in Canadian universities, such as Queens and Laurentian, for more than thirty years (Day, 2001). Processes for prior learning assessment (PLA) originated in the USA in the early 1970's (Howard, 1993; Day, 2001). The impetus for giving credit for prior learning, at that time, related to active recruitment of older entrants to colleges where it was also important that academic standards not be compromised. Later, in 1993, Howard noted that in the U.S. the reasons for attention to PLA included financial constraints; political desire to increase access to higher education for a greater number of students; the need to attract mature students through allowing students to complete courses in a shorter time and at a lower per capita cost; the need to retrain for existing and new jobs in a time of economic recession and rising redundancy rates; and an evolving philosophy valuing both experience and self-direction for the student (Howard).

Currently in Canada, influences on the development of PLAR have been closely related to the international flow of students, international migration and refugee movements, and academic mobility and international research collaboration (Canadian Alliance of Education and Training Organizations (CAETO), 2003a). In addition, information and communication technologies have advanced and higher education systems have expanded with changes in education and training methods leading to a greater need for the development of methods to recognize knowledge and experience acquired in a different jurisdiction (CAETO, 2003a).

There are two aspects to the recognition of previously acquired knowledge and experience, one is at an institutional level and one is at an individual level (CAETO, 2003b). At an institutional level there is a need for systems of credit and transferability between programs – also called articulation. This involves a comparison of course outcomes including block transfer of credits from one institution to another or individual credit transfer for specific courses in a given credential program (CAETO, 2003b). At an individual level, recognition of prior learning is done using PLAR processes. In theory, PLAR at its broadest sense refers to all learning that has occurred in the past. In practice, many institutions make a distinction between learning obtained through formal study and learning that has been acquired through experience (CAETO, 2003b). PLAR provides a process for assessment of competence and of non-traditional learning through providing a way to document a connection between the sources and outcomes of learning (CAETO, 2003b).

In a cross Canada study on PLAR (1999), Aart et al. described the student users of PLAR processes. Most PLAR student users were mature adults. Nationally, 52% of PLAR students were over 30 years of age with 12% over the age of 45. The overall average age of PLAR student users was 33 years compared to 27 years for traditional students. The older age allowed for more time to acquire knowledge and skills through work and life experience. These students wanted to complete their training programs in the most efficient way, avoiding unnecessary repetition of training, reducing course load, and freeing up time for other courses. Many were motivated by the need to obtain or upgrade their credentials for employment purposes and used PLAR to confirm existing work-related knowledge and skills, to obtain credentials required by changing job standards, and to plan for future job uncertainty. Almost all of the students surveyed used PLAR in the first year of their program; 63% were part-time and 37% were full-time students at the time. There has been no research on the impact of PLAR on the decision to return to formal education (Aart et al.).

Aart et al (1999) showed evidence that the students who used PLAR processes had successful learning outcomes. In fact, the overall passing grade in courses acquired through PLAR was slightly higher than in traditional courses. Students who had accessed the PLAR process had overall academic performances equal to or higher than traditional students in the same programs. “Early concerns about learners acquiring large percentages of their credentials through PLAR thereby jeopardizing the legitimacy institutions’ credentials were unrealized” (Aart, p. 41).

Introducing PLAR processes presents many institutional challenges. “The difficulties of implementing a flexible tool in an inflexible system may be at the root of PLAR’s growing pains” (Aart et al, 1999, p. 30). There are tensions within educational institutions, among various types of educational organizations, business, trade unions, and equity groups related to how PLAR is defined and implemented (Day, 2001). Kennedy (2003) found that although respondents to a PLAR survey believed in the credibility of the process and that students benefited from PLAR, there was a lack of institutional support. In some cases there was faculty resistance to the fundamental purposes of PLAR. Policies needed clarification to lessen the confusion and inconsistencies in PLAR implementation. The survey showed that while PLAR respondents believe in the credibility of the process and feel that it benefits learners, there is a lack of institutional support and, in some cases, faculty resistance to the fundamental purpose of recognition of prior learning. Some survey respondents reported that the policies currently in place require some clarification because they sometimes lead to confusion and inconsistencies in PLAR implementation (Kennedy).

There appears to be a difference in PLAR implementation between colleges and universities. Kennedy (2003) noted that while in universities there is a gap between the existence of a formal PLAR policy in universities (31%) and the existence of a policy for admission of adult learners into specific programs (69%), this gap does not exist in colleges. Colleges appear to be more positive about the implementation of PLAR policies. At universities there is more skepticism and concern that using PLAR will

negatively impact the value of a degree as well as the reputation of the institution. Survey respondents from universities also found the PLAR processes to lack credibility.

Perhaps it is the nature of university education or the lack of understanding of the rigor associated with the PLAR process that causes this unease. Universities in general have goals that focus on research, in addition to education. Colleges are more focused on educating students in a manner that will help them with their particular line of work. The assessment of experiential learning is much more compatible with goals of a college than goals of a university. It is also interesting that universities are more likely to question the credibility of assessment practices, yet are also less likely to have policies in place that could ensure consistent application and validity of practices. Since most respondents seem to believe that ‘policy drives application’, adoption of formal PLAR policies might help more systematic, broader implementation of PLAR practices in universities (Kennedy, p. 60).

The use of PLAR also presents challenges to the individual student. Aart et al. (1999) noted that successful use of PLAR processes, resulting in the number of classes required, can reduce students’ status from full-time to part-time eliminating that students’ continuing eligibility for government funded financial assistance. Some institutions had financial disincentives that required students to pay PLAR assessment fees in addition to tuition for the courses in which they were being assessed – particularly when student paid by program rather than by individual course fee. A rigid ‘lock step’ program delivery structure that required full-time attendance and limited class scheduling also impaired students’ ability to benefit from PLAR (Aart et al.). In addition, the PLAR process could be lengthy and time-consuming for both the student and the PLAR assessor (Esson, 2002). Aart et al. noted that the ways of documenting prior learning included portfolios, oral examinations, interviews, written ‘challenge exams’, and observation of work performance.

The advantages of using a PLAR process were outlined in the literature. PLAR provided important efficiencies to adult learners including shortening the program, reducing course load, and saving money for part-time learners (Howard, 1993; Aart et al., 1999). It reduced the pressure on mature adults by keeping the time away from work and family responsibilities to a minimum (Aart et al.) and enabled the students to focus on specifically needed or desired learning (Howard, 1993). PLAR increased adult learners’ confidence in their ability to learn and motivated them to pursue further education at the same time as contributing to many learners’ employability and an increased pool of qualified professionals (Aart et al.). Students became more self-directed in their learning, developing stronger problem-solving and negotiating skills (Howard, 1993). PLAR is also a catalyst for other educational reforms including diversification of assessment practices and expansion of a learning outcomes approach to training and education (Aart et al.). Institutions may also benefit by a reduction in per capita costs due to the faster throughput of students (Howard, 1993).

Some of the disadvantages of PLAR were also outlined in the literature. Howard (1993) expressed concern that PLAR has the potential to move the focus of learning from the process to the product. If PLAR is not properly implemented, “it will become a ‘cut

price' approach to education, with all the connotations associated with that phrase, of sub-standard goods with limited market value" (Howard, p. 1822). As mentioned previously, universities had issues with PLAR's potential impact on the credibility of the degrees offered by their schools and both colleges and universities had issues related to faculty resistance to the process (Kennedy, 2003).

Kennedy (2003) suggested that the top disincentive for implementation of PLAR processes was the cost of the loss of revenue that occurred because students were able to obtain credit for courses for which they did not have to pay tuition. In addition, the need for increased numbers of personnel to tackle the additional work caused difficulties for institutions (Kennedy). Some of the costs related to PLAR included:

- Coordinating and delivering faculty and staff professional development;
- PLAR marketing within institutions and with workplaces and other external community organizations;
- Liaison with assessors and program managers;
- Conduct training in learning outcomes;
- PLAR co-ordination with other institutions;
- Participation in internal and provincial policy development;
- PLAR record-keeping and other administrative duties;
- Conducting PLAR orientation for learners;
- Providing information on PLAR to students; and
- Conducting research (Aart et al., 1999, p.46).

However, Aarts et al. found that the direct costs of producing a course through PLAR were lower than the direct costs of delivering a traditional course.

The number of completed PLAR assessments was considered to be low in the 1999 cross-Canada study of PLAR (Aart et al. 1999). This low number was likely due to a combination of factors including institutional reasons such as: "incomplete record-keeping, lack of awareness of PLAR by the public, lack of cost-effective delivery structures, low priority-setting by government and institutions and inflexible program delivery systems that do not accommodate part-time learners" (p. 27). At the time of the study, there was a low demand for PLAR assessments and most institutions were in the developmental stages of PLAR, focusing more on design and pilot projects than volume of assessments (Aart et al.). In 2003, Kennedy reported that more than half of the schools within colleges and universities used informal PLAR practices the previous year, noting that at universities more informal than formal policies were used. Kennedy suggested that since only 21% of the universities indicated they had future plans for PLAR policy

implementation that this was an area that should be explored in further detail. The only NP reference in the list of institutions that used PLAR in the 2003 report on the status of PLAR in post-secondary institutions in Canada was the Saskatchewan Registered Nurses Association PLAR committee, which developed a framework for a Competence Assessment Process for nurses seeking licensure as NPs in Saskatchewan (Kennedy). However, Cragg et al. (2002) noted the use of PLAR in the Ontario NP educational experience and stated that a PLAR process was required by the government to allow NPs already in practice to challenge all or part of the program. Thus, a province-wide criteria and process were developed to assess portfolios submitted by NPs seeking credit in the program.

It is useful to review the suggestions and recommendations associated with PLAR in the literature. Four major areas for improvement related to PLAR in institutions were: funding, dedicated staff, implementation of a policy, and institutional support (Kennedy, 2003). These four areas were consistent between both colleges and universities. In addition, a need for increased information and promotion of PLAR processes and procedures was mentioned (Kennedy). Individuals involved as PLAR assessors suggested that the notion of self-assessment be incorporated more broadly into programming and general policies to better complement PLAR processes thus increasing equity with respect to fees and establishing criteria for assessment based on learning outcomes (Kennedy). The legal framework and mechanisms for quality assurance related to PLAR must be established along with techniques for measuring and evaluating competence that are broadly agreed upon (CAETO, 2003a). There is a need to develop national benchmarks to guide the practice of PLAR. “By providing provincially agreed national benchmarks for best practice, the expectations of learners and the responsibility of those who conduct PLAR assessment can be clarified, and issues such as currency and portability of credentials can be addressed” (Day, 2001, p.38).

PLAR processes will need to be established to grant credit for prior learning for the purposes of NP education as well as NP licensure and regulation. Development of these processes must be done jointly between educational institutions and regulatory bodies to ensure consistency and equality in both areas.

7. Re-entry to Practice

No literature was found that directly addressed NP re-entry into practice. Four relevant international articles were found that related to re-entry to practice in a broader context. Two U.S. articles reported on two differently structured refresher courses for nurses and surveys of practicing nurses who had completed their refresher course (McLean & Anema, 2004; Hawley & Foley, 2004). One article described the experience of one nurse returning to front-line nursing in the U.S. (Waibel, 2002) and one article described a course for doctors returning to general practice in the U.K. (Muller, 2002). The following summary of the content of these articles provides some insight into the reasons that nurses might leave or return to nursing, possible structures for re-entry courses, and ways that employers can support nurses to return to practice.

Nurses are not actively employed in nursing for a variety of reasons, such as employment outside of nursing, disability or health issues, or being a traditional at-home wife and mother (McLean & Anema, 2004). In addition, the physical demands and erratic schedules of nursing practice may have caused some nurses to choose to leave the profession. Nurses may decide to return to practice, also for a variety of reasons. Hawley & Foley (2004) stated that an increased number of nurses were inquiring about refresher courses and suggested this was due to a depressed economy in the U.S. Other reasons included having children who were an age that allowed them to return to work and a change in marital status resulting in a change of income status. However, most had a desire to return to the nursing profession. Hawley & Foley suggested that due to the current nursing shortage, nurses who have been away from clinical practice for a number of years are a valuable resource with their added maturity and many life experiences. In order to reactivate their license to practice, nurses require a refresher course in most jurisdictions (McLean & Anema). Through a well-structured refresher course, nurses gain the knowledge, skills, and confidence they need to return to practice (Hawley & Foley).

Publications addressing re-entry to practice following a refresher course are limited (Hawley & Foley, 2004). Two articles described their current refresher course and a follow-up survey of nurses who had completed their course (Hawley & Foley; McLean & Anema, 2004). Hawley & Foley described a structured refresher course with 124 hours of formal review and 128 clinical hours providing medical-surgical patient care under direct supervision of a faculty clinical instructor. Survey results showed that nurses benefited from the small numbers in the courses, which helped them to feel more secure and to take a more active role in their learning. The supervised clinical experience with group support, shared learning opportunities and a low student-to-faculty ratio were positive aspects of the refresher course. The authors noted that many nurses returning to nursing desired the structured, interactive, supportive learning environment where their own life experiences were valued (Hawley & Foley).

Another option for nursing refresher courses is to provide self-directed courses that prepare nurses to re-enter practice in the area of their own choice (McLean & Anema, 2004). The authors stated that an individualized refresher course was more accessible no matter where the nurse lived and reduced the barriers to re-entering nursing. This refresher course focused clinical activity on the knowledge and skills needed for a particular position, using the checklist for newly employed nurses as a guide as well as the staff evaluation form. Preceptors played a main role in the refresher course process and often were acquainted with the nurse returning to work in their own community. Self-directed study required a minimum of 60 hours and minimum clinical practice hours ranged from 60 to 80 hours. The goal was to prepare nurses with the knowledge and skills to function in the position they have selected (McLean & Anema). Interestingly, the strong point of each of these two styles of refresher courses was the structure (Hawley & Foley) or lack of structure (McLean & Anema).

Doctors returning to general practice after working in a limited capacity in general practice for a number of years or who have had a career break, also require their knowledge and skills to be refreshed. Muller (2002) described a course in the U.K. that was designed for doctors returning to general practice. The content of the course was

largely learner centered and based upon an individual needs assessment using a self-assessment form developed for the course. The course used problem-based learning methods and offered integrated teaching for generic general practice with a mix of systematic and apprenticeship aspects to the curriculum. Participants were provided with support and guidance to identify their own educational and professional needs, develop a strategy for fulfillment of those needs, and to follow a plan of self-directed learning to fit with the strategy. Small group workshops and buddy groups were found to be ideal teaching methods in this type of course. Muller reported that the course had been running successfully for over four years receiving positive evaluations from the participants (Muller).

Re-entering nursing practice can be challenging for the individual nurse. Waibel (2002) described her experience of returning to front-line practice as a perioperative nurse after having been a manager. She stated it was “a test of clinical competence, problem-solving skills, and implementation of nursing practice standards” (p.863). The orientation process was stressful, hard work, and time consuming. Waibel exerted constant pressure on herself to be proficient and clinically competent and she suggested this required patience and understanding on the part of the employer. However, she also suggested that orientation for nurses re-entering practice was no longer than for any new employee. In the survey conducted by McLean and Anema (2004), the refresher course participants indicated that they were almost as knowledgeable as experienced nurses and had more advanced skills than those of new graduates.

Employers can make re-entry into practice a smoother transition by heeding the advice written by Waibel (2002). She suggested that it is important to recognize the strengths of the returning nurse and reinforce these strengths during orientation. It is important to introduce new technology early in the orientation and build on previous experiences. Confidence can be built through providing opportunities for the returning nurse to use basic skills first. Returning nurses need to be assigned to mature, well-disciplined, sensitive preceptors. It is also important to provide a safe environment where there is opportunity for the returning nurse to confidentially discuss fears and feelings of insecurity (Waibel).

Employers can also implement strategies to attract inactive nurses back into the workforce. McLean and Anema (2004) outlined some of these strategies:

- Developing local and regional efforts to identify inactive nurses and determine what is needed to have them return to nursing.
- Developing local or regional courses that use technology options to increase access to refresher courses. This is a special need for nurses in rural areas.
- Including inactive nurses in the existing orientation plans of institutions and agencies. Refresher course participants could participate in new staff orientation. If nurses want to work part-time, that option needs to be available.

- Developing specific programs for inactive nurses in hospitals and other agencies that include mentoring and support.
- Other than just focusing on staff nurses, marketing other positions that require registered nurses but are not as physically demanding.
- Including work options for experienced nurses who decide they are quitting. What will it take to keep those nurses working at least part-time?
- Expecting nursing education programs to address the impact of becoming inactive. Nurses who completed the refresher course often stated they did not realize the value and importance of maintaining an active license (p. 215).

The content of this summary of literature related to re-entry to practice is relevant to both NP practice and education. Attracting NPs back into the workforce and preparing them to re-enter practice will require attention to many of the factors described here.

8. Findings

A review of the literature has shown that there are inconsistencies between NP educational programs in Canada and a significant number of areas where decisions need to be made in order to increase standardization of NP education. The challenge of reaching consensus on these decisions is complicated by the interdependence and complexity of the factors involved. Through this literature review, many of these factors and emerging issues can be identified. Some of these emerging issues are listed here in the form of questions as a starting point for problem-solving discussions:

- How will collaborative working partnerships between educational programs be set up to support NP programs in a transition to standardized exit credentialing and other program changes?
- How will a common national philosophy for NP education be developed when faced with the current lack of consistency between NP programs?
- How will national core competencies be integrated with the development of a guiding framework and curriculum content in a way that can support standardization of NP education programming in Canada?
- What is the ideal balance between clinical and theoretical content in NP programs?
- What content areas need further emphasis in NP educational programs? (i.e., quality control; informatics; interdisciplinary education; and research into client outcomes and educational best practices)

- Should there be a standardized exit credential for NP educational programs and what should it be?
- Is faculty clinical competence best achieved by training PhD faculty as NPs or by providing practicing NPs with training as educators?
- What is the ideal length of a preceptor/student relationship and should NP students find their own preceptors?
- How much clinical experience should an NP student have before entering an NP program and how can NP programs best work with the differences in knowledge and skills of the nurses entering their programs?
- How will decisions be made regarding the combination of NP education programs that would benefit the most from collaborative program delivery?
- What is the responsibility of the NP educational program and what is the responsibility of the employer related to preparedness for practice? How long is it reasonable to expect an NP to take to become comfortable in a practicing role after graduation?
- How can the realities and advantages of distance education be combined with the advantages of face-to-face learning?
- What is the best combination of methods (face-to-face, on-site, distance technology, simulated patient encounters) for evaluation of clinical skills including the ‘softer’ interpersonal skills?
- How can partnerships be developed between employers and educational institutions to develop continuing education specific to the learning needs of NPs in practice?
- How will NP educational programs and regulatory bodies work together to develop consistency in PLAR processes and re-entry to practice programs?
- How can developing technology be put to the best use for distance learning, evaluation of NP student skills, and continuing education?

Planning and determining the structure of NP educational programs is not always within the control of educational institutions. Many larger system factors will influence the direction of the decisions that need to be made. Collaboration will be required on many levels in order to tackle all of the issues involved with NP education and broader NP practice.

9. Conclusion

Governments, policy-makers, employers, unions, regulatory bodies, nursing organizations, education providers and other health professionals will need to work together to achieve a national, coordinated framework for nurse practitioners (CNA, 2003b). This literature review provides only one small piece of the larger puzzle. It needs to be put into context along with the other documents of the CNPI Education Component Environmental Scan for discussions related specifically to NP education. Similarly, education cannot be discussed in isolation from the other components of the CNPI project. The complexity of issues in all areas of the CNPI project will need to be interwoven and addressed together in order to reach the goal of facilitating sustained integration of the NP role in the health system to improve Canadians' access to health services.

References

- Aarts, S., Blower, D., Burke, R., Conlin, E., Howell, B., Howorth, C. et al. (1999). *A slice of the iceberg: Cross-Canada study on prior learning assessment and recognition*. Cross Canada Partnership on PLAR.
- Alpert, P., Fjone, A., & Candela, L. (2002). Nurse practitioner: Reflecting on the future. *Nursing Administrator Quarterly*, 26(5), 79-89.
- Amella E., Brown L., Resnick B., & McArthur D. (2001). Partners for NP education: The 1999 AANP preceptor and faculty survey. *Journal of the American Academy of Nurse Practitioners*, 13(11), 517-23.
- American Academy of Nurse Practitioners. (2002). *Scope of practice for nurse practitioners*. Washington: Author.
- American Academy of Nurse Practitioners. (2003). *Position statement on nurse practitioner curriculum*. Washington: Author.
- Andrusyszyn M, Cragg C.E, & Humbert J. (2001). Nurse practitioner preferences for distance education methods related to learning style, course content and achievement. *Journal of Nursing Education*, 40(40), 163-170.
- Bata-Jones, B., & Avery, M. (2004). Teaching pharmacology to graduate nursing students: Evaluation and comparison of web-based to face-to-face methods. *Journal of Nursing Education*, 43(4). 185-189.
- Blasdell, A., Klunik, V., Purseglove, T. (2002). The use of nursing and medical models in advanced practice: Does education affect the nurse practitioners practice model? *Journal of Nursing Education*, 41(5), 231-233.
- Blunt, E. (2001). Advanced practice: Helping expand nurse practitioner students' clinical skills repertoire. *Nurse Educator*, 26(4), 162-163.
- Bolan, C. (2003). Incorporating the experiential learning theory into the instructional design of online courses. *Nurse Educator*, 28(1), 10-14.
- Canadian Alliance of Education and Training Organizations. (2003a). *Recognition of Learning: An International Perspective*. Ottawa: Author
- Canadian Alliance of Education and Training Organizations. (2003b). *An overview of articulation agreements in Canada*. Ottawa: Author

- Canadian Association of Schools of Nursing. (2004a). *National PHC/NP education strategy framework*. Retrieved November 7, 2004, from http://www.causn.org/Education/Position_Statements/National_Strategy_PHCNP_Education.pdf
- Canadian Association of Schools of Nursing. (2004b). *Nurse practitioner education in Canada*. Retrieved November 7, 2004, from http://www.causn.org/Education/Position_Statements/PHC_NP_education.htm
- Canadian Association of Schools of Nursing. (2004c). *Report on the CASN/FNIHB Workshop on Primary Health Care/Nurse Practitioner Education*. Ottawa: Author.
- Canadian Association of Schools of Nursing (2004d). *CASN Statement on graduate education*. Ottawa: Author.
- Canadian Nurses Association. (1997). Out in Front – Advanced Nursing Practice. *Nursing Now – Issues and Trends in Canadian Nursing, No. 2*.
- Canadian Nurses Association. (2002a). *Advanced nursing practice: A national framework*. Ottawa: Author.
- Canadian Nurses Association. (2002b). *Fact Sheet: Role of the nurse practitioner around the world*. Ottawa: Author.
- Canadian Nurses Association. (2003a). *Helping to sustain Canada's health system: Nurse practitioners in primary health care. Primary Health Care Transition Fund Proposal*. Ottawa: Author.
- Canadian Nurses Association. (2003b). *Position statement: The nurse practitioner*. Ottawa: Author.
- Canadian Nurses Association. (2004a) *The Canadian nurse practitioner initiative*. Ottawa: Author.
- Canadian Nurses Association (2004b). *Nursing 2020: Transforming the future*. Ottawa: Author.
- Canadian Nurses Association & Canadian Association of Schools of Nursing (2004). *Joint position statement: Flexible delivery of nursing education programs*. Retrieved November 7, 2004 from: http://www.causn.org/Education/Position_Statements/flexible_delivery_e.pdf
- The Centre for Nursing Studies in collaboration with the Institute for the Advancement of Public Policy, Inc. (2001). *Final report: The nature of the extended/expanded nursing role in Canada*. Ottawa: Advisory Committee on Health Human Resources.

- Cragg, C., Doucette, S., & Humbert, J. (2003). Ten universities, one program: Successful collaboration to educate nurse practitioners. *Nurse Educator*, 28 (5), 227-231.
- Cragg, C., Humbert, J., & Doucette, S. (2004). A toolbox of technical supports for nurses new to web learning. *CIN: Computers Informatics Nursing*, 22(1), 19-25.
- Daly, W. & Carnwell, R. (2003). Nursing roles and levels of practice: A framework for differentiation between elementary, specialist and advancing nursing practice. *Journal of Clinical Nursing*, 12, 158 – 167.
- Day, M. (2001). Developing benchmarks for prior learning assessment. *Nursing Standard*, 15(34), 36-44.
- Doucette, S., & Sangster-Gormley, E. (2004). *CASN task force discussion paper: Primary Health Care/Nurse Practitioner Education*. Ottawa: CASN.
- El Jardali, F. (2003). *Barriers to effective collaboration between nurse practitioners and family physicians: A discussion paper*. Ottawa: Canadian Nurses Association.
- Esson, L., Dewar, A., & Entwistle, C. (2002). Putting experience to the test: Thinking about finishing one degree or working on another? Then take credit for what you've already learned on the job, through life experience or, in some cases, through your institutions. *Canadian Nurse*, 98(5), p. 28.
- Gagan, M. J., Berg, J., & Root, S. (2002). Nurse practitioner curriculum for the 21st century: A model for evaluation and revision. *Journal of Nursing Education*, 41 (5), 202 – 206.
- Gardner, G., Gardner, A. & Proctor, M. (2004). Nurse practitioner education: A research curriculum structure. *Journal of Advanced Nursing*, 47(2), 143-152.
- Gibson S. & Hauri C. (2000). The pleasure of your company: Attitudes and opinions of preceptors toward nurse practitioner preceptees. *Journal of the American Academy of Nurse Practitioners*, 12(9), 360-363.
- Goolsby, M. (2000). Understanding nurse practitioner preparation. *Journal of the American Academy of Nurse Practitioners*, 12(2), 43-48.
- Greiner, A. & Knebel, E. (Eds.) (2003). *Health professions education: a bridge to quality*. Committee on the Health Professions Education Summit. Retrieved September 10/2004, from <http://www.nap.edu/openbook/0309087236/html/45.html>
- Hawley, J. & Foley, B. (2004). Being refreshed: Evaluation of a nurse refresher course. *The Journal of Continuing Education in Nursing*, 35(2), 84-88.
- Hayes, E. (1998). Mentoring and nurse practitioner student self-efficacy. *Western Journal of Nursing Research* 20(5), 521-536.

- Hayes, E. (2001). Factors that facilitate or hinder mentoring in the nurse practitioner preceptor/student relationship. *Clinical Excellence for Nurse Practitioners*, 5(2), 111-118.
- Hayes, K., & Huckstadt, A. (2000). Developing interactive continuing education on the web. *Journal of Continuing Education in Nursing*, 31(5), 199-203.
- Hildebrandt E. (2001). Preceptors: A perspective of what works. *Clinical Excellence for Nurse Practitioners*, 5(3), 175-180.
- Howard, S. (1993). Accreditation of prior learning: Andragogy in action or a 'cut price' approach to education. *Journal of Advanced Nursing*, 18, 1817-1824.
- International Council of Nurses Nurse Practitioner/Advanced Practice Network (2003). *Definition and Characteristics of the Role*. Retrieved March 21, 2005 from: <http://icn-apnetwork.org/>
- IBM Business Consulting Services (2003). *Report on the integration of primary health care nurse practitioners into the Province of Ontario: Final report*. Toronto: Author
- Kelley, F. & Kopac, C. (2001). Advanced health assessment in nurse practitioner programs. *Journal of Professional Nursing*, 17 (5), 218-225.
- Kennedy, B. (2003). *A spring 2003 snapshot: The current status of prior learning assessment and recognition (PLAR) in Canada's public postsecondary institutions: Part one*. Canadian Association for Prior Learning.
- Khattab, A., & Rawlings, B. (2001). Assessing nurse practitioner students using a modified objective structured clinical examination (OSCE). *Nurse Education Today*, 21, 541-550.
- Krisman-Scott, M., Kershbaumer, R., Thompson, J. (1998). Faculty preparation: A new solution to an old problem. *Journal of Nursing Education*, 37(7), 318-20.
- Margolius, F. & Sneed, N. (1999). From expert to novice: Doctorally prepared nursing faculty retooling for the future [On the light side]. *Nurse Educator*, 24(1), 9-11.
- Marshall, M. & van Soeren, M. (2000). Development and evaluation of a pathophysiology CD-ROM for nurse practitioner distance education. *Computers in Nursing*, 18(2), 87-92.
- McLean, T. & Anema, M. (2004). Reduce the nursing shortage: Help inactive nurses return to work. *The Journal of Continuing Education in Nursing*, 35(5), 211-215.
- Miller S. (2000). Should students find their own preceptors? *Patient Care for the Nurse Practitioner*, 3(1), 72.

- Muller, E. (2002). How we teach on a 'Return to General Practice' course. *Medical Teacher*, 24(6), 590-593.
- National Task Force on Quality Nurse Practitioner Education. (2002). *Criteria for evaluation of nurse practitioner programs 2nd Ed.* Retrieved November 21, 2004, from <http://www.aacn.nche.edu/Education/evalcriteria2002.pdf>
- Pearson, A. & Peels, S. (2002). Advanced practice in nursing: International perspective. *International Journal of Nursing Practice*, 8, S1-S4.
- Research in Focus on Research. (2002). *Ontario NP's: A snapshot three years after graduation.* Sudbury, Ontario: Centre for Rural and Northern Health Research.
- Ryan, M., Carlton, K., & Ali, N. (1999). Evaluation of traditional classroom teaching methods versus course delivery via the world wide web. *Journal of Nursing Education*, 38(6), 272-277.
- Sackett, K., Campbell-Heider, N., & Blyth, J. (2004). The evolution and evaluation of videoconferencing technology for graduate nursing education. *CIN: Computers Informatics Nursing*, 22(2), 101-106.
- Schreiber, R., Davidson, H., MacDonald, M., Crickmore, J., Moss, L., Pinelli, J., et al. (2003). *Advanced nursing practice: Opportunities and challenges in British Columbia.* Victoria, B.C.: Canadian Health Services Research Foundation.
- Smith, C.S., Erkel, E.A. & Stroud, S.D. (2002). Promoting scholarship in nurse practitioner programs. *Clinical Excellence for Nurse practitioners*, 5(5), 25-30.
- Smith, C. & Sutton, F. (1999). Best practice: What it is and what it is not. *International Journal of Nursing Practice*, 5, 100-105.
- Stroud, S., Smith, C., Edlund, B., & Erkel, E. (1999). Evaluating clinical decision-making skills of nurse practitioner students. *Clinical Excellence for Nurse Practitioners*, 3(4), 230-237.
- U.S. Department of Health and Human Services. (2002). *Nurse Practitioner primary care competencies in specialty areas: adult, family, gerontological, pediatric and women's health.* Rockville: Author.
- van Soeren, M. H., Andrusyszyn, M., Spence Laschinger, H. K., Goldenberg, D., & DiCenso, A. (2000). Consortium approach for nurse practitioner education. *Journal of Advanced Nursing*, 32 (4), 825-833.
- Varnell, G., Pollock, S., Klotz, L., Green, A., & Shortman, S. (2002). Institutional collaboration *not* competition: Preparing family nurse practitioners to serve rural areas. *Journal of Professional Nursing*, 18(3), 165-169.

- Vessey J, & Huss K. (2002). Using standardized patients in advanced practice nursing education. *Journal of Professional Nursing, 18*(1), 29-35.
- Waibel, R. (2002). An administrator returns to practice as a perioperative nurse. *AORN Journal, 76*(5), 862-865.
- Way D, Jones L, Baskerville B & Busing N. (2001). Primary health care services provided by nurse practitioners and family physicians in shared practice. *Canadian Medical Association Journal, 165*(9), 1210-14.
- Zimmerman, L., Barnason, S. & Pozehl, B. (1999). Distance education programs for advanced practice nurses: Questions to ask. *AACN Clinical Issues: Advanced Practice in Acute Critical Care, 10*(4), 508-514.