

Executive Summary
On

Research Project:
The Integration of
Specialty Nurse Practitioners into the Ontario Healthcare System

Grant # 06430

Mary van Soeren RN PhD
Director, Canadian Health Care Innovations, Guelph, ON

Christina Hurlock-Chorostecki RN(EC) MScN
Nurse Practitioner, St. Joseph's Health Care, London, ON

Chris Kenaszchuk, MSc
Ilona Abramovich, MA
Scott Reeves PhD
Li Ka Shing Knowledge Institute
St. Michael's Hospital, Toronto, ON

Correspondence to:

Dr. Mary van Soeren
Director, Canadian Health Care Innovations
63 Derry St
Guelph, ON
N1E 2C2
mary.vansoeren@sympatico.ca
519-829-0370

EXECUTIVE SUMMARY

Background

A shift in population needs has challenged government and decision-makers in our healthcare system to provide timely access to high quality care to Ontarians. The scarcity of professional human resources is seen as a threat to maintaining the current standard of health care in Canada. In addition, the heavier burden of chronic disease related to longer life spans (e.g. cancers, diabetes, and heart disease), environmental links to increased disease and the complexity of possible treatments for previously fatal diseases all impact the amount and types of services needed. Health issues for Ontarians have shifted to concerns about the ability to sustain health services in the twenty-first century.

Within this context, the Ontario Ministry of Health and Long-Term Care has proposed a number of strategies to address these issues. These involve: technological strategies (e-Health); an increase in resources for primary health care to shift the focus to prevention and promotion; and introduction of different health care providers and new roles for existing providers to extend health human resources.

Given the number of new initiatives and pressure of population needs, the challenge will be to link new resources with patient and health service outcomes. Previous reports have demonstrated the value of the Nurse Practitioner (NP) role in primary health care settings (Romanow, 2002; DiCenso et al., 2003; van Soeren et al., 2009). Legislative and regulatory changes that protect the title of “Nurse Practitioner” and acknowledge distinct practice specialties (primary health care, adult, paediatrics and anaesthesia) were enacted in 2007 (College of Nurses, 2007). Legislation was tabled in spring 2009 (Bill 179 Regulated Health Professions Statute Law Amendment Act) that further expands the scope of practice and enables the role to be integrated more fully into the health care system.

The NP role, however, does not function out of context with a changing health care system. This study provides an evaluation of the integration of the NP role into hospital based settings in the Ontario health care system within the current legislative, regulatory and policy framework. It provides a description of existing specialty NP roles and an evaluation of the impact on patient care and health human resources, as well as the current barriers and facilitators of these roles in Ontario.

Objectives of the Study

In Ontario, the gradual increase in NPs in hospitals, in the absence of formal legislative and financial recognition for the role since the 1980s, suggests that there may be role implementation variation. Because Ontario currently has the largest number of NPs in Canada (60%) and there has not been a comprehensive evaluation of the NP role in specialty settings in Ontario, it is timely to explore how these NP roles are enacted within our provincial hospitals. Therefore an 18-month study of hospital based NP roles was completed to describe the nature of the NP role and aspects of care delivery addressing the following issues:

1. Describe the NP role interactions with team members including the impact on access to care for patients
2. What is the impact of the specialty NP role on provider satisfaction and team function?
3. What is the impact of the specialty NP role on patient/family satisfaction?
4. What is the impact of the specialty NP role on promotion of best practices in hospital settings?
5. What is the impact of individual, organizational and systemic attributes (policy, regulation and legislation) that enable or limit full specialty NP role implementation - given the local patient care needs?

Data Collection Methods

A mixed methods design using qualitative (shadowing, self reports, focus groups and interviews) and quantitative (questionnaires, tracking and collation of data) data collection was used to gather data across nine hospital sites across Ontario. The following aspects were studied to provide a broad understanding of the NP role in hospital settings. Because recent changes have resulted in title protection for the term “Nurse Practitioner” and not all those who had been practicing in the roles have completed their registration examination, this study included NPs who were registered in the Extended Class as well as those who had not yet completed this process. Therefore the term NP/APN is used to define the study participants in these roles.

Extent of Role Implementation: To establish the extent to which NP/APNs enact each domain or core competency relative to the Canadian Nurses Association Advanced Nursing Practice (CNA ANP) Framework, activities of the NP/APNs were recorded and categorized. The NP/APNs was shadowed on 5 randomly selected occasions in their work environment during normal working hours over 9-months by a Research Assistant (RA) as an objective measure of the role activities.

Access to Services: A self-recorded log of requests from staff regarding patient care or other issues to each NP/APN was kept over five 1-week time intervals over 9-months. Evaluation of the types of services required, the care provider requested, and who was involved described service utilization. Consultations to and from the NP to other team members describes the extent of consultation that occurs in practice.

Quality of Care: Adherence to best practice guidelines or evidence-based practices is an important aspect of current health care practices. The extent of involvement in this process (e.g. leading, facilitating and developing) of the NP/APN was reviewed. Focus groups of staff and physicians were held to review the capacity of the NP/APN to develop implement or utilize best practices.

Coordination of Care and Team Function: To obtain health care team members’ perspectives of the role of the NP/APN in coordination of patient care and efficacy of the functioning of the team on the unit were a questionnaire regarding team function was completed by team members and the NP/APNs. Team based focus group interviews using a semi-structured interview guide were conducted and transcribed. NP focus groups were conducted separately.

Patient/Family Satisfaction: A purposive selection of patients cared for on the participant's work area during the study was contacted by telephone approximately 2 weeks post discharge from the hospital. They were given the opportunity to share the experience of their care during the admission. The audiotapes were analyzed for themes related to continuity of care, accessibility to their health information, management of their symptoms and understanding of their care upon discharge. They will be asked to share interactions with the NP/APN on the unit.

Synthesis of Key Findings

In this section key findings from the data are presented using the following themes:

- Demographics
- Extent of Role Implementation
- Access to Services
- Team Collaboration
- Nature of Nurse Practitioner interactions
- Professional perspectives
- Patient Perspectives
- Nurse Practitioner/Advanced Practice Nurse Perspective

Study settings and Demographics

Nine hospital sites participated in the study: 1 northern location, 2 pediatric hospitals, 3 academic health science centres and 3 community hospitals. Study sites were selected to provide a broad insight of the nature of NP role based in urban/rural teaching/non-teaching locations

There were 46 NP/APN participants in the study. Ninety-three percent were female. Three-quarters were registered in the CNO Extended Class of nursing. The remaining participants all had formal NP education and were practicing in APN roles that involved all aspects of the NP role.

Extent of Role Implementation

Time spent in each domain of practice as outlined in the CNA ANP framework was consistent across sites. Approximately 75% of time is allocated to patient care in the clinical and consultation / collaboration domains. Leadership and research domains were almost evenly divided (8% and 7% respectively). There were interesting geographical and setting variations noted in domain time allotment: community hospitals spent the most time in the clinical domain, paediatric hospitals spent the greatest amount of time in collaboration and consultation, and academic hospitals spent more time in research. However, the number of participants is too small to allow for statistical comparison.

Access to Services

Self-tracking demonstrated highly collaborative practice with NP/APNs consulting other professions as equally as the professions consulted the NP/APN. Physician specialists were consulted as frequently as physician partners. Consultations to the NP/APN came most commonly from nurses and least often from allied health professionals.

Team Collaboration

Survey Results

Surveys were distributed to clinicians during on-site hospital focus groups. The scales incorporated into the survey include: Nurse-Physician Relations Subscale- Nursing Work Index (NPRS-NWI), Attitudes Toward Health Care Teams (ATHCT), Interprofessional Collaboration (IPC). Results of a number of different rater/target combinations are presented in the body of the report for all of the scales and subscales administered. The NP/APN participants completed the same survey outside of the team focus group settings. The total number of surveys returned was 243.

As a group, NP/APNs tended to receive the highest scores of all target groups. Among raters, physicians had a tendency to give the highest ratings and, often, these were assessments given of NP/APNs. Table A provides a summary of significant findings.

Table A: Summary of significant findings from the Team Collaboration Survey. The survey is comprised of questions from three validated tools: NPRS-NWI, ATHCT, and IPC. Findings are grouped by scale.

Summary of Team Collaboration Survey		
Scale	Significant findings	Data Location
NPRS-NWI	Teamwork between nurses and NP/APNs is greater than between either nurses and physicians or NP/APNs and physicians.	45
ATHCT Scales: <i>Team value</i> <i>Team efficiency</i> <i>Shared Leadership</i>	All groups surveyed rated team value and team efficiency equally. Support for shared leadership was strongest by NP/APNs followed by nurses, allied health care professional and finally weakest with physicians.	45 - 47
IPC Scale <i>Communication</i> <i>Accommodation</i> <i>Isolation</i>	The NP/APN were scored by all other groups as highest on communication & accommodation while physicians scored lowest	48 - 55

Observational and Interview Findings

Qualitative findings are presented in four main sections:

- Observational data are offered to describe the *nature* of NP/APN interactions across the study sites.
- Team focus group data are provided to offer a wide range of *responses and experiences* that health care professionals have had with NP/APNs.
- Data from the patient interviews are offered to present *patient's perspectives* and experiences of NP/APN care during their respective hospital stays.
- NP/APN focus group data are provided to present the *NP/APN perspective* on their role integration into the Ontario healthcare system.

Nature of Nurse Practitioner Interactions

NP/APNs undertook interactions with a wide range of professionals and patients. The highest number that NP/APNs initiated were with physicians (n=103), nurses (RNs, nurse managers) (n=86) and patients (alone or with relatives) (n=67).

Table B describes general themes of the nature of NP/APN interactions. A range of data extracts which offer a more detailed account of the nature of NP/APN interactions can be found in the full report as identified. In general, all NP/APN interactions were predominantly *collaborative* and *positive* in nature.

Table B: Summary of the Nature of NP/APN Interactions. General themes on NP/APN interactions as observed by Research Assistants

Summary of the Nature of NP/APN Interactions			
Professional	Theme	Comment NP/APN:	Data Location
Allied Health	Collaboration Congenial	Seeks advice of team members in planning care Speaks informally to team members	59 - 60
Physicians	Collaboration Concise	Offers updates and suggestions for patient care Focuses conversation on patient care Initiates brief, to the point conversation	58
Nurses	Collaboration Social	Provides updates and answers questions Initiates short casual interactions	58
NP/APNs	Collaboration Social	Offers support to NP/APN colleagues Engages in short personal discussions	58 – 59
Patients and Family	Educator	Provides information and answers questions	60
	Listener	Listens to the patient's perspective	
Students	Mentor	Works together to ensure developments of a plan	60

Professional Perspectives

Focus groups with various health professionals across the study sites are presented in the form of the main themes which emerged from the analysis. Table C provides a summary of the themes and location of supporting data.

Table C: Summary of Focus Group Data. Key themes and concepts.

Summary of Focus Group Data		
Theme	Comments	Data location
Collaboration & Coordination	Key to providing effective care Enhance team collaboration Glue that holds patient care together Fill the gaps Enhance discharge planning	61 - 63
Impact of Nurse Practitioners	Bridges medicine and nursing Enables physicians to perform work specific to their role while patient care continues Provide holistic care Promote continuity of care Expert knowledgebase Accessible and available thereby decreasing waiting time for information for staff and patients.	63 – 65
Nature of the NP role	Clinical expert Staff and patient educator Team confusion with NP role	58 – 60, 65 - 67
Quality & Safety	Timely and safe care Accessible, available and approachable Knows the patient	67
Communication	Speaks everyone’s language – translator Enables all team members to contribute to the plan of care Ensures all team members and patients are aware of patient plans and other relevant information	68
Professional Boundary Issues	Role overlap Lack of role clarity Interprofessional tension Bridges medicine and nursing	68 - 70
Implementing Best Practices	Best practice knowledge brokers	71
Organizational Issues	NP ownership Too much to do Vulnerable funding Lack of legislative support	71 - 72

Patient Perspectives

Patient interviews were conducted to explore their perceptions of the care they received and their impressions and experiences with the NP/APNs and physicians. In general, patients reported

positive experiences with the health care team that cared for them during their stay at the hospital. The patients regarded the NP/APNs contribution to their care as central in ensuring it was targeted, responsive and timely in nature. Themes expressed in patient interviews are summarized in Table D.

Table D: Summary of Patient Interview Data. Key themes and concepts.

Summary of Patient Interview Data		
Theme	Comments the NP/APN:	Data Location
Communication and Education	Provides explanation of the situation Offers support through materials and listening to questions	73
Available / Timely	Is available to respond to needs quickly Makes responding to needs of patient a priority Returns calls promptly	74
Holistic and Caring	Provides knowledgeable and thorough with assessments Makes everything happen Trustworthy	74

Nurse Practitioner/Advanced Practice Nurse Perspective

Five NP/APN focus groups (n=30) were held across the province to understand the NP/APN perspective of their role integration into the Ontario healthcare system. Themes that arose from analysis of the NP/APN focus group data are summarized in Table E. Location of detail regarding themes and informant quotes is identified.

Table E: Summary of NP/APN Focus Group Data. Key themes and concepts.

NP/APN Focus Group		
Theme	Comments	Data Location
Role Enactment	Works to engage trust from team members Feels underutilized when only clinical domain is valued Struggles to be effective within legislative/regulatory barriers Challenged to be effective collaborator due to fiscal limitations (e.g. referral to specialists)	75
Scrutiny	Feels role is constantly under evaluation	76
Proving	Works hard to demonstrate and promote value of NP role Works continuously to demonstrate NP role worth Challenged with proving worth due to small numbers and isolated roles	77
Role Effectiveness	Team appreciation of NP role Effective as a change agent Provides continuity to patients and team members	77 - 78

Summary Remarks

Role Clarity/Full Implementation

The data presented demonstrated that the NPs in this study implemented all aspects of their role; however the major component was in the clinical area. While the focus of the role is directed towards patient care, providing the NP with time to influence in other ways and to develop a range of practices (e.g. development of clinical practice guidelines, program development for specific patient needs) reaps broader benefits and more fully utilizes the role. While the findings suggest the best use of the NP role as a resource in the hospital setting is through full utilization of all domains of APN practice, NPs and team members identified the pressure placed on the NP to manage the clinical load.. Holding an expectation of NPs to squeeze time in for leadership and research activities in addition to a full time clinical load is neither sustainable for the NP nor beneficial to the hospital.

Role clarity remained an issue for the NPs in this study. Even in sites where the role had been established for a number of years, some NPs in programs new to the role had difficulty establishing the trust they all felt was needed to be successful. Some of the issues of clarity were organizational when NPs working in in-patient areas were able to order medications for patients and others were due to medical directives not being in place. The reasons given for not having access to medical directives included organizational challenges (lacking clear policy, changing policy), delays in the approval process from many different groups within the hospital structures (program approvals, professional approvals, organizational approvals), and physician lack of understanding of the NP role creating either a delay in establishing a medical directive or a "divided approach" to a medical directive in a program. The result of a "divided approach" was one where the NP hired to work on a specific hospital unit could enact her role with some patients (admitted to the services of Doctor 1 and 2) but not those admitted to Doctor 3 and 4.

There were competing interests for the NP role. Some participants suggested that physicians wanted a role that was entirely focused on clinical care delivery while administrators wanted other aspects of the NP role, such as education and leadership. The participants felt that the need to please all of these demands was stressful and resulted in a feeling of being scrutinized excessively.

Resources

The NPs in this study were funded largely from the base hospital budget. This threatens their positions in times of fiscal change. As well, none interviewed had secretarial support for many aspects of their role, such as data gathering and input for quality improvement projects, dissemination of policies or medical directives. This results in the NPs using their time to perform secretarial tasks.

Another issue raised by our participants includes the amount of time required to complete medical directives, which are an essential component of the NP role in hospital. It is clear that this process is cumbersome and does not reflect the capacity for NPs to practice safely,

something that has been demonstrated repeated in Ontario and worldwide. No participant or team member, including physicians, suggested the NPs in this study did not practice safely.

Finally the funding issue with referral to specialist was discussed by NPs who were limited outside the hospital by specialists not being paid as much for their referrals. This meant that the NPs were required to seek out a physician's signature leading to delays in referral and a poor use of the NP's and physician's time.

Access to Care/Quality of Care

One of the key factors that team members mentioned across the focus groups was the improved accessibility to patient related information with the NP role. Many described how important it was to have this resource to plan and act in a timely fashion. Social workers outlined the improved discharge planning, nurses suggested the role enabled them to intervene more quickly than if the NP was not working with them and physicians suggested they were enabled to extend their capacity to see other patients knowing the NP was working with them.

The capacity to influence care was also seen in the role the NP played in development and dissemination in evidence based practices. This was seen by many team members as a key role; in particular, administrators and physicians found this to be an important role for NPs.

Team members not only found the access to care improved but also the quality of care. For team members this meant a more holistic approach and one that engaged not only the patient but family. Hospital staff felt more fully informed about the plan. There was a sense of more proactive planning with the NP as well, ensuring details for discharge and other aspects of the patient plan were in place.

Interprofessional Practice

Without question the data revealed that the NP was seen as a key member of the team. The words "hub" and "glue that holds the team together," as well as the notion that the NP is responsible for team debriefing events, suggest this role is important for enhanced interprofessional care.

The issue of interprofessional tension was raised. There were some comments about role boundary issues. The researchers did not see these presented with any consistency and therefore they reflected individual concerns rather than a trend across teams.

One of the key attributes of the NP role seems to be the capacity to act as a liaison between the medical plan of care, the interprofessional plan and the implementation of this with the patient. This is consistent with what is now accepted as valuable qualities of interprofessional care, good communication, inclusion of multiple professionals' ideas for care and flexibility to change this plan as needed based on the patient response. The NPs portrayed by teams in this study all provided these qualities within the team.

Concluding Comments

Results obtained from this study provide more complete information on the *depth* and *breadth* of hospital based NP practices across Ontario. It is clear that the hospital based NP practice is highly regarded and valued by all team members, including physicians. Yet their role in hospital practices outside of the emergency department remains largely unrecognized and untapped. There has been little governmental acknowledgement of the role beyond primary health care, long-term care and emergency settings. Despite evidence that NP roles enable team members to work more effectively through enhanced communication, evidence-based practices and more timely decision making around patient care, no resources have been directed towards NP practice for specialized in-patient services.

Limitations to enable full role implementation found here are consistent with previous studies involving NP roles in Ontario. These include lack of secure funding, legislation that unnecessarily limits NP practice and issues of role clarity. Further study of the impact of the NP role in hospitals is needed to determine the cost effectiveness and mechanisms through which patients, the system and other health care professionals benefit from the role. Recommendations arising from the study findings are directed to government and policy makers, hospital administrators and other members of the health care team to enable what we have identified as a key factor in the twenty-first century, evidence and team based patient focused provision of care.

RECOMMENDATIONS

The study has provided data that support recommendations related to hospital based NP roles. The recommendations have been grouped according to significant themes arising from the data. Since data were collected through a variety of tools and methods there may be several key data links to a recommendation. Two government commissioned reports on the role and integration of primary health care NPs reinforce these recommendations. The key themes arising from these reports were supporting NP transition to practice, promoting integration of NPs into healthcare teams, promoting effective utilization of NPs, funding issues, health information management and human resource planning. These are similar to findings here and therefore will be used to frame these recommendations.

Promoting Effective Utilization of NPs

1. Enable NPs to work to full scope of practice in hospital settings by removing legislative and regulatory barriers in the Nursing Act, Public Hospital Act and other legislation. To be effective, all NPs in hospital settings require:
 - a. full authority to prescribe drugs authorized in Ontario
 - b. admit, treat and discharge authority in hospitals
2. Develop and implement a five-year research strategy to quantify the impact of the NP role in hospital settings.
3. Undertake a follow-up study on the integration of specialty (hospital based) nurse practitioners to assess the impact of Bill 179 and accompanying regulatory changes with a focus on interprofessional care and system outcomes.

Promoting Integration of NPs into Hospital Systems

4. Fund the development and delivery of a provincial dissemination strategy to support a standardized approach to full role implementation. This strategy would incorporate a needs assessment to determine what role might best serve the population and system need in question and provide practical information and resources to senior leadership roles within LHINs and hospitals to assist with role implementation if the NP is the appropriate role for the setting.
5. Establish a provincial strategy for implementation of hospital based NP roles that includes time allocation for all practice domains, including committees, research, and input to evidence based practice change and/or clinical practice guideline implementation.
6. Provide funding to the Nurse Practitioners' Association of Ontario to develop and disseminate information materials that profile the NP role.

Supporting NP Transition to Practice

7. Expand the New Graduate Initiative to support transition and integration of new NP graduates across all health care sectors and specifically incorporate a mentorship/fellowship program for NPs.

Funding Issues

8. Provide funding for hospital based NP roles outside of the global hospital budget to stabilize these essential positions. Ensure funding is linked to full role implementation and patient outcomes related to key initiatives such as improved access, decreased readmission, decreased length of stay and avoidance of unnecessary hospitalization. Include in the funding resources to support the full implementation of all NP domains of practice.
9. Review competitive policies that inhibit growth of the NP role, including:
 - a. Ensure that funding for physicians and other roles to augment healthcare services do not create a competitive environment whereby roles are implemented based on funding sources rather than the needs of populations and the healthcare system.
 - b. Amend the Schedule of Benefits for Physician Services to recognize the NP as a direct referral source for which specialists can claim a consultation fee.

HR Planning

10. Encourage expansion of NP education programs with a focus on adult and paediatric NP specialization.
11. Expand opportunities for Ontario's education programs to develop permanent continuing education programs accessible to NP learners across the province with a focus on specialized NP practices and consistent with evolving population health needs and Ministry priorities.
12. Review the ongoing underutilization of general class nurses with advocacy of expanded scope of practice and encouragement of use of the existing scope of practice throughout the health care continuum.

13. Continue to promote joint interprofessional practice programs and support regular review of scope of practices for all professions in response to population needs and a changing health system environment.

