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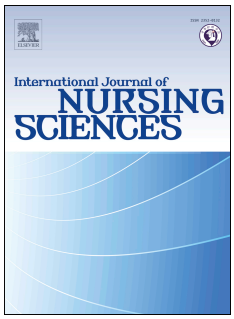

A qualitative study of nurse practitioner promotion of interprofessional care across institutional settings: Perspectives from different healthcare professionals

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Title: **A qualitative study of nurse practitioner promotion of interprofessional care across institutional settings: Perspectives from different healthcare professionals**

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A qualitative study of nurse practitioner promotion of interprofessional care across institutional settings: Perspectives from different healthcare professionals

Abstract

Objective

Interprofessional care, an aim of institutional healthcare settings globally, promotes safe, cost-effective, quality care. How professionals act to enable interprofessional care has not been described. The nurse practitioner role, with its expertise in both medicine and nursing, is known to enhance collaboration and promote interprofessional care delivery. The objective of this study was to identify, from the healthcare professionals' perspective, nurse practitioner strategies used to enhance interprofessional care.

Method

A hermeneutic phenomenology design was employed. Healthcare professionals from acute care hospitals and associated long-term care residences (n=6) in one Canadian province were invited to participate. Individual interviews were held with healthcare professionals (n=52) who regularly work with a nurse practitioner. The participants were asked to share experiences that held significance or value in promoting interprofessional care.

Results

Four valued role attributes were identified; consistent role presence, time to focus on the patient, effective communication, and respectful centrality. Identified strategies extending from the attributes included knowledge sharing, respectful negotiation, identifying patient issues, being open and transparent, listening to opinions, bridging professions, and working as the hub of the group. Multiple types of interprofessional relationships were perceived, with the hierarchical type as the most common.

Conclusions

Nurse practitioners in acute care hospital and long-term care settings have valued attributes that can promote interprofessional care. Effective strategies to promote interprofessional care emerge from these role attributes. However, the interprofessional relationship type perceived could enhance or impede the contribution of the strategies to interprofessional care promotion.

A qualitative study of nurse practitioner promotion of interprofessional care across institutional settings: Perspectives from different healthcare professionals

1. Introduction

Interprofessional (IP) care is comprehensive healthcare delivered by multiple professionals engaged in partnerships and collaboration to enhance care quality [1]. A number of studies suggest effective IP collaboration results in high-quality and cost-effective IP care delivery [e.g. 2, 3, 4]. While there have been conceptualizations of IP care in the literature [4-6], only recently have researchers operationalized IP care into six essential elements: interdependence, partnership or collaboration, collective problem-solving, professional relationships, communication, and shared decision-making [7]. Investigation has focused on how teams develop and are enabled to collaborate [8-10]. There is an increasing body of research on teams and teamwork [8, 11, 12]. However, the strategies through which individuals in institutional healthcare settings enable IP care have not been determined.

In this study, the nurse practitioner (NP) role was chosen as a focus because a hallmark of NP practice is sharing expertise (derived from education and legal authority) across two professions, medicine and nursing. It has been proposed that this dualism results in enhanced communication and greater IP collaboration [13]. To investigate this phenomenon, a self-report survey was developed to assess the six essential elements of IP care. The NPs were found to create respectful relationships among professionals, relay information through timely, open, and effective communication, and share decision-making activities to encourage critical discourse supporting a common plan of care. This provides one of the few studies where direct operational activities are described within the context of IP care delivery. Morgan et al. [11], in their integrative review of IP collaborative practice, argue that elements of IP collaboration may not be obvious from self-reports and other approaches to elicit this information must be considered. To address this

potential self-report bias in previous work, this current study explored healthcare professionals' (HCP) perspectives of the strategies in which NPs engage to promote IP care within hospitals and long-term care (LTC) residences.

2. Methods

2.1 Study Design

A hermeneutic phenomenological approach was employed to ensure the perspectives and meanings of healthcare professionals living the experience of working with the NP role was captured [14]. Interviews with professional colleagues regularly working with NPs in hospitals and LTC residences were gathered to identify everyday NP strategies and practices experienced by HCP's that held significance and value in promoting the implementation of IP care [14].

2.2 Study Aim

The aim of the study was to identify strategies that enhance IP care.

2.3 Setting and Sample

Participant recruitment occurred at six hospitals and affiliated LTC residences in different geographic regions of Ontario, Canada. Hospitals were purposefully selected to represent a balance of hospital types (small and large, single and multi-site and community and academic), who employed multiple NPs, and agreed to provide a site lead to assist in recruitment. A purposeful, convenience sample of HCPs was recruited through advertisement within the participating hospitals. Those HCPs with an interest in participating, and worked at least 50% of their time in a program employing a NP, met with a research assistant (RA) to establish an interview time.

2.4 Data collection

Semi-structured interviews were used to collect the HCPs' perspective of what IP meant to them and of their experiences of NP practice strategies related to IP collaboration and care [14]. Individual interviews took place at a time and location convenient to the participant. Participants were invited to describe positive and negative personal experiences of IP practice strategies related to working with NPs and their perception of the resultant care delivery. Interviews averaged 30 minutes to one hour in length and were audio recorded by a RA.

2.5 Data Analysis

The audio recorded interviews were explored for perceptions of the term interprofessional, and for themes and exemplars of strategies and contributions to IP care, using an interpretive analysis approach [14]. Thematic exploration was managed with computer software NVivo 10 and consisted of exploring participants' descriptions of their experiences working and interacting with NPs. The emerging interpretation was reviewed by the research team – consisting of nursing and sociology researchers to ensure the emerging analysis was credible and trustworthy [15].

2.6 Ethical considerations

The research ethics board of each participating institution provided ethical approval for the study. Written informed consent was obtained from participants before the interview and $10.00 was provided at the end as gratitude for their time.

3. Results

Fifty-two HCPs participated in interviews (Table 1). Education was predominantly college diploma (32%) or baccalaureate (50%) preparation. The remainder held graduate education (masters 14%, PhD 4%). Most were full time employees and had been working ten or more years in their profession. Over half of the participants worked in hospital settings (64%) while the remainder worked in LTC (nursing home), complex continuing, or veterans care. The most common program specialties included cardiology, geriatrics, medicine, and surgery. They had a mean of 8 years (± 6.2; range: 1 to 40) of experience working with NPs.

Table 1: Healthcare Professional Participants

Profession	Number
Nurse	20 [1]
Social Worker	6
Physician/ Medical Resident	6
Manager, Co-ordinator	5
Physiotherapist	3
Psychologist	2
Dietitian	2
Occupational Therapist	2
Pharmacist	2
Personal Support Worker	2
Recreation Therapist	1
Administrative Assistant	1

Note: [1]Registered Nurse n=16, Registered Practical Nurse n=4

Participant perceptions of the term interprofessional were compared with the essential elements of IP collaboration and IP care previously presented. Almost all participants' interpreted IP to include wording consistent with the definition of IP care presented above. Across all sites participants typically indicated IP meant several different professions were involved. For example one physician defined IP as "employing a multidisciplinary team … drawing from various professional groups" (physician, site 2). Some participants provided an additional element in their definition of IP. The most common element included was to achieve a goal as illustrated in this response:

> "…different disciplines coming together and working to solve an issue, to work on a problem, to address a goal." (physiotherapist, site 3).

Elements of IP collaboration, such as role clarity, conflict management, interdependent activity, and collective problem-solving, were rarely discussed. Some participants included a single element of IP collaboration such as open communication, shared decision-making, or shared responsibilities in their definition; however the necessity of multiple core elements was not described. This pharmacist's definition exemplifies the inclusion of the element of collective problem-solving "[IP is] involving a group of individuals with a broad spectrum of expertise and using the expertise to come up with a collaborative plan for the patient" (pharmacist, site 6).

The thematic analysis of the interviews resulted in three sets of themes; role attributes, contribution to IP care and types of IP relationships (Figure 1). Four valued NP attributes lead to multiple strategies that result in four contributions that enable IP care. IP relationship types either impede or enhance attributes and strategies.

<INSERT FIGURE 1 ABOUT HERE>

3.1 Valued Nurse Practitioner Role Attributes

The key attributes participants, across all sites, valued in relation to the NPs role in delivering IP care included consistency, focussing on the patient, effective communication, and a respectful, central role. NP role consistency was the most frequently described attribute valued by HCPs.

> "[The NP is] one consistent person on the unit from the start of the morning to kind of the end of the day that is available to answer questions, provide orders, to service the needs of the patients" (occupational therapist, site 3).

The issue of NP consistency within clinical environments where teams were constantly changing due to different shiftwork and rotas, was valued in two ways. First, the consistent presence on the units enabled the NP to build a comprehensive knowledge of the patient. The NP's comprehensive knowledge of the patient, and clarity and consistency of the plan of care, was an important contributor to IP care. As one participant commented: "on a daily basis [the NP] coordinates all the other colleagues' participation in the care of patients" (physician, site 2). Second, it was noted that it was often difficult for HCPs to find a physician in order to gain medical information about a patient's condition. When this occurred, the NPs were regarded as the "go-to person for medical questions" (physician, site 2). Having the NPs visible on the patient care area, available for questions, and "accessible to make those [medical] changes" (registered dietician, site 3) was described as central to reduced stress, coordinated care, and more timely care decisions. Participants indicated that NPs took time to answer their questions, explained intervention rationale, and influenced practice changes.

Yet a few participants found over reliance on the NP role. One participant commented on over reliance: “nursing staff call the NP to assess and do things that are really in their own scope” (registered dietician, site 3). Over reliance on the NPs to make clinical decisions promoted gaps in patient care when the NPs were not scheduled to be at work or were on vacation. Conversely, a lack of NP availability was highlighted as a challenge. Some commented the NPs were not always readily available on the unit due to the many demands on the role and being “shared between numerous people” (registered nurse, site 4).

A patient-focused approach was commonly discussed as a valued attribute of NPs. In particular, participants described NPs as having valuable knowledge and excellence in “identifying the [patient heath] issues” (social worker, site 6). To be patient focused required an amount of time that several HCPs implied they did not have.

The time NPs spent speaking with patients and their families was expressed as important.

> “[the NP is] managing the family’s questions, what’s going on, what’s not going on, how mom or dad is doing” (physician, site 6)

HCPs valued NP time spent focussing on direct patient care needs, educating patients, and connecting with patients and their families; yet they rarely discussed the NP role as promoting the central function of the patient or family as an active participant in the unit-based team.

NPs’ communication was described as frequent, encouraged shared decision-making, and respectful. NP communication was reported as significantly contributing to the delivery of IP care. Often participants commented on the use of communication and shared decision-making to enhance coordination of HCP activities and build IP team cohesion:

> "We tend to know more about our patients and more about the plan because when an NP is involved they're more involved with the team" (pharmacist, site 6).

Participants frequently expressed NP communication clarified information in the terms commonly used in their profession, thus enhanced the clarity of the plan of care. Participants also described NPs as taking time to answer their questions, explaining intervention rationale, and sharing knowledge to influence practice change.

The NP role was valued when it was central but in a respectful manner. Two styles of respectful centrality were described; hub, and bridge. The NP role was regarded as a hub with the NP as the central figure who created collaborative relationships among HCPs. One nurse described the NP as "the hub of the unit" where all the professions are "the sticks that poke out" (registered nurse, site 3). While an occupational therapist on the same unit stated a similar relationship adding:

> "[the NP] is very much on the same level … not higher than the staff."
> (occupational therapist, site 3).

As a bridge, the NP was reported to translate information and knowledge between the HCPs, where they listened to, and engaged the expertise of their colleagues from different professional groups. As one participant stated:

> "The nurse practitioner offers a really excellent resource and bridge between the doctors and the front line staff, especially interlaying different options or ideas… they are a good bridge between the different levels of healthcare professionals."
> (registered nurse, site 2)

Participants felt that translating and engaging with HCPs commonly resulted in promoting IP collaboration and enhanced group cohesion.

3.2 Perceived Contributions to Interprofessional Care

Four themes emerged as key contributions from NP attributes. Participants across the HCPs perceived timely care, seamless patient care, improved collaboration and cohesion, and smooth group functioning, as positively impacting the delivery of IP care. Many HCPs suggested that with the NP role in place there were fewer delays for the patient and themselves because of the availability, and legal authority to make medical decisions. This timeliness allowed HCPs to move their profession specific actions forward in a timely manner resulting in timely care delivery.

Many HCPs described care as seamless when they felt it could quickly address patient changes and move the plan of care forward, thus eliminating care gaps and waiting for physicians. They felt that the legal authority of the NP to make medical decisions enabled seamless care. In hospital settings this seamless care was believed to enhance patient flow through the healthcare system and reduce length of hospital stay. Within LTC, one nurse described the NP's impact on seamless care this way:

> "Residents [of the LTC home] are seen quickly and treatment initiated quickly [by the NPs]. It saves the resident from going out to hospital which is always a traumatic experience for them." (nurse, site 2 LTC).

Smooth group functioning, described by many participants, was an additional enhancement influencing IP care which was seen as a key contribution of the NPs. With this influence on

smooth group functioning, most HCPs felt this improved their efficiency and lowered their stress levels:

> "They [NPs] make it a lot easier for other healthcare professionals because you don't have to go through the whole thing again. They know the patient had this issue in the past…they know the family or whatever it may be. They have provided something that is more consistent and ultimately better." (pharmacist, site 5).

Participants felt clear communication and consistency of the NP role was necessary to enhance care coordination, and smooth group functioning.

3.3 Interprofessional Relationships

HCPs described four different types of IP relationships with the NP; hierarchical, triangular, independent, and equal. The hierarchical relationships were most common. Three hierarchical variances were described; physician-all other HCPs, physician-NP-other HCPs, and physician/NP-other HCPs. Physician participants commented on their role as the leader; others followed their orders. Several HCPs defined a nursing-medicine hierarchical relationship where the NP was seen as structurally below the physician but above the registered nurse. Some participants commented on hospital programs where the physician maintained a strict dominant position over the NP. One nurse commented "I don't believe that our doctors are utilizing NPs to their full potential" (registered nurse, site 2), while another nurse at the same site stated, "usually they [NPs] have to pass you off onto a doctor." (registered nurse, site 2). When this situation of enforced hierarchy by the physicians occurred, participants described the collaboration challenges for NPs and other HCPs as interfering with the ability to deliver effective care. In contrast, others described a hierarchy where HCPs, such as nurses, physiotherapists, dieticians,

social workers, pharmacists, personal support workers and others, as occupying one level while NPs and physicians were together on a level above.

Patients were included in a few descriptions. Within the physician/NP-other HCPs hierarchical relationship, patients and family members were thought to occupy a separate level somewhere between the HCPs and the physician/NP level. At other times the HCPs used a triangular metaphor with one point filled by a combination of medicine and nursing and other points consisted of the remaining HCPs and patients and families:

> "…we're valued as with the OTs I guess. I think it's kind of like a triangle, the OTs, PTs, and medical and nursing staff." (physiotherapist, site 3)

The two remaining relationships were mentioned less often. Independent working was regarded as a situation where professionals worked alone, in a largely isolated manner to "do what [they] know best" (dietician, site 3) in terms of delivering profession-specific care. Equal relationships were described as respectful relationships where all HCPs felt they held important roles and responsibilities.

4. Discussion

The manner in which HCPs form and create cohesive separate professional groups is well described [16, 17]. The hierarchical IP relationships which resulted from this professionalization process in western institutional healthcare have created a number of barriers to delivering IP care [18]. Using the NP role (a relatively new role) as a means to investigate this phenomenon allows descriptions of key attributes and strategies that enhance or impede IP care. The NP role, which spans traditional medical and nursing functions, has been seen to enable a change in the traditional patterns of communication and care delivery [19]. Previously, the consistency and

centrality of the NP role was perceived to positively influence IP collaboration through communication amongst HCPs, thus resulting in smoother group functioning, and effective coordination. Williamson [20] found that the NP role was the 'lynchpin' for other HCPs who enhanced communication and collaboration. Similarly, Hurlock-Chorostecki et al. [21] identified the central and consistent NP role as key to building a cohesive approach to IP collaboration. This study extends the literature by providing a more precise understanding of the strategies used by NPs within hospital and LTC residences to promote IP care.

In the current study, the consistent presence of the NP role was a highly valued attribute perceived as key to enhancing IP care. For example, HCPs shared stories of the consistent day-to-day NP presence as necessary to facilitate strategies of collaborative interactions based in consensus, relay timely information to move common goals forward, and create a culture of cohesive working and partnership among professional colleagues. The NP role consistency allowed for multiple essential IP strategies such as knowledge-sharing and respectful negotiation between professions. Knowledge sharing strategies, such as explanations of care rationale and implementing evidence-based practice change that enhanced HCPs knowledge and practice are illustrative of promoting IP care. NP communication was described as valuable - almost as commonly as their consistent presence. In previous studies, open and transparent communication, listening to others' opinions, and sharing information, were effective NP communication strategies [20, 22, 23]. In the current study, the consistent NP presence is one mechanism to increase the opportunity for transparent and consistent communication of changes in patient condition or plan of care among many professions. For example, HCPs discussed the NP's knowledge of the patient's history and responses to treatments eliminated repetition of

ineffective interventions. As a result, the patient's plan of care consistently moved forward and a sense of smooth functioning was experienced by HCPs.

Consistency and effective communication are essential in a group where the HCPs change frequently due to the structure of institutional care delivery in Ontario, Canada. Previous research of HCP interactions in an acute setting, without a consistent role, found communication to be fragmented thus resulting in independent working rather than cohesive IP care [24, 25]. However, some participants of the current study suggest there is caution for the consistent role. A few HCPs identified some NPs that could be "too available", thus inhibiting collective problem-solving and shared decision-making. This is consistent with Hurlock-Chorostecki and colleagues [26] who described scenarios where extended NP decision-making created an over-reliance on the NP role and the reappearance of care gaps when the NP was away. In contrast, Donald and Martin-Misener [27] found NP presence in LTC did not create this over-reliance on the NP. This dichotomy emphasizes a potential risk of gatekeeping within the development of the NP role that does not clearly enable the HCP group to actively problem-solve or allow interdependent function throughout the team.

Another valued attribute, positioning the role centrally, creates opportunities to communicate effectively thus enable timely and seamless IP care. As the "hub", the NPs could easily engage in strategies such as facilitating interdependent activities, enabling shared decision-making, and engaging others in collective problem-solving. Respectful bridging of professions was an attribute that ensured NP strategies to engage different professionals were effective. Bridging includes the strategies of authorizing changes to the medical plan of care and translating profession specific language to others to increase clarity of the plan of care. It also includes understanding and valuing different professions' specialty knowledge such that each professional

is involved in timely and appropriate decision-making and care delivery. Bridging relationships differ from shifting professional boundaries described in previous work. NP "boundary work", the work that shifts professional boundary lines, was determined as a source of professional conflict and challenge [28]. HCPs interviewed here suggest bridging strategies develop respectful IP relationships that enhance and enable IP care. Both the hub and bridge strategies were highly valued for improving timeliness of care and group cohesion.

The type of IP relationship was highlighted as impacting role attributes and strategies. Opportunities and limits within each IP relationship type could impede or enhance IP care. Several HCPs perceived the NP role remained within a traditional hierarchical division of labour, suggesting NP role integration variability may influence the degree of IP relationship experienced. For the NP, this role hierarchy may reflect the power enacted by the NP role as a result of a perceived extended authority, or it may represent limited NP role integration as a physician replacement. The subservient NP role in a hierarchy where there are strictly enforced dominant physician practice restrictions was not valued by HCPs and is unlikely to effectively promote IP care. Further exploration of IP relationship types is needed.

The HCPs perceptions of IP care are based in their understanding of IP. The absence of explicit discussion of multiple elements, essential for IP care, reflects a limited understanding of IP. The use of varied terms and a lack of standard definitions, have been identified as causes complicating the understanding of IP [9, 29]. In this study some of the essential elements of IP care were seldom or never mentioned. For example, while shared decision-making is stated in the literature as a key feature of effective IP collaboration [30, 31], it was not explicitly described; however comments that the NP was receptive to suggestions and would negotiate with team members may imply the activity. Indeed, one can regard the lack of a shared or consistent

definition of IP concerning, as arguably it leaves cohesive IP activity to an ad hoc process and relies on individual perceptions of what constitutes effective IP care.

There are limitations in these data. All data were collected in one province in Canada where many of the HCPs, including the NPs were likely educated to work together in similar ways. This may lead to role enactment and expectations that do not exist in other jurisdictions. In addition the legal authority afforded NPs in this province differs across jurisdictions; this may lead to changes in role implementation in key areas where it was identified that the NP role in patient management was part of what was seen as beneficial to IP care. Perspective-taking can enhance knowledge to improve professional interactions, social coordination, and enhance role clarity [32], and there is a risk these data contain personal and professional biases. The interviews themselves provide a single perspective of those who are professional colleagues of often a single NP; we did not discuss with the participants if their perceptions included exposure to NPs in various settings. As well, the HCPs were volunteers and it is possible that those who were not supportive of NP roles or who were neutral did not participate. However, the consistencies of responses across professions and settings suggest NPs do behave similarly in terms of IP care from the perspective of HCP. Future research to combine these findings with observations of IP interactions would deepen the understanding and provide richer knowledge.

5. Conclusion

Professional colleagues' perspectives provide valuable insights into understanding the strategies through which IP care is promoted in hospital and LTC settings. Four valued role attributes set the groundwork for effective strategies. A consistent role presence enables continuity and seamless care, while taking time to focus on the patient ensures smooth group function and

collaboration. A centrally positioned, respectful relationship with other healthcare professionals supports effective communication and results in timely care delivery, and improved group collaboration and cohesion. Hierarchical IP relationships remain common despite the push for equality between professionals. This may be the result of limited understanding of IP. The NP role advantage for enhancing IP care lies within their education and legal authority across two professions. Yet informal structures such as relying on a single role to maintain IP collaboration raise concerns of whether IP care can be maintained without a more formal articulation of these activities across the team. The strategies used by these NPs to enhance IP care are of value beyond the NP role.

Attributes and strategies that impact IP care need to become a focus of education for NPs and other healthcare professionals if we are to fully embrace IP care as high quality, collaborative healthcare. Integration of strategies supportive of IP care into educational curricula strengthens role attributes and ensures these strategies become purposeful. The findings presented here provide the groundwork for adjusting curricula of those entering the healthcare workforce. Furthermore, this groundwork can be used for professional development activities for practicing healthcare professionals and senior leaders who may not have a clear understanding of how to enable or support IP care.

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Conflict of Interest

None.

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Figure 1: Thematic framework of nurse practitioner attributes and perceived contribution to interprofessional care.