Educational role of nurse practitioners in a family practice centre

Perspectives of learners and nurses

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Abstract

Objective To examine the role of nurse practitioners (NPs) as educators of family medicine residents in order to better understand the interprofessional educational dynamics in a clinical teaching setting.

Design A qualitative descriptive approach, using purposive sampling.

Setting A family practice centre that is associated with an academic department of family medicine and is based in an urban area in southern Ontario.

Participants First-year (8 of 9) and second-year (9 of 10) family medicine residents whose training program was based at the family practice centre, and all NPs (4 of 4) who worked at the centre.

Methods Semistructured interviews were conducted, which were audiotaped and transcribed. An iterative approach was used for coding and analysis. Data management software guided organization and analysis of the data.

Main findings Four interconnected themes were identified: role clarification, professional identity formation, factors that enhance the educational role of NPs, and factors that limit the educational role of NPs. Although residents recognized NPs’ value in team functioning and areas of specialized knowledge, they were unclear about NPs’ scope of practice. Depending on residents’ level of training, residents tended to respond differently to teaching by NPs. More of the senior residents believed they needed to think like physicians and preferred clinical teaching from physician teachers. Junior residents valued the step-by-step instructional approach used by NPs, and they had a decreased sense of vulnerability when being taught by NPs. Training in teaching skills was helpful for NPs. Barriers to providing optimal education included opportunity, time, and physician attitudes.

Conclusion The lack of an intentional orientation of family medicine residents to NPs’ scope of practice and educational role can lead to difficulties in interprofessional education. More explicit recognition of the evolving professional identity of family medicine residents might decrease resistance to teaching by NPs and ensure that interprofessional teaching and learning strategies are effective. Faculty development opportunities for all educators are required to manage these issues, both to ensure teaching competencies and to reinforce positive interprofessional collaboration.

EDITOR’S KEY POINTS

• This study found that residents’ opinions about teaching by nurse practitioners (NPs) were different among junior and senior residents.

• Family medicine residents recognized the value of NPs in team functioning and areas of specialized knowledge. However, senior residents expressed discomfort with clinical supervision by NPs and believed that NPs solved clinical problems differently than physicians did; they also found the broad, detailed nursing approach challenging owing to time constraints.

• Nurse practitioners viewed themselves as a more approachable source of help for residents; thought they were well trained for their teaching roles; explained they were less available for educational activities owing to their clinical roles; and believed that physicians’ attitudes toward their teaching roles influenced residents’ opinions.

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Le rôle éducatif des infirmières praticiennes dans une clinique de médecine familiale

Ce qu’en pensent les étudiants et les infirmières

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Résumé

Objectif Examinez le rôle des infirmières praticiennes (IP) qui enseignent aux résidents en médecine familiale afin de mieux comprendre la dynamique de la formation interprofessionnelle dans un milieu d’enseignement clinique.

Type d’étude Étude descriptive qualitative à l’aide d’un échantillonnage dirigé.

Contexte Une clinique de médecine familiale située dans un milieu urbain du sud de l’Ontario, qui est associée à un département universitaire de médecine familiale.

Participants Des résidents en médecine familiale de première (8 sur 9) et deuxième année (9 sur 10) en stage de formation dans cette clinique de médecine familiale ainsi que les 4 IP de cet établissement.

Méthodes Des entrevues semi-structurées ont été enregistrées sur ruban magnétique et transcrites. On a utilisé une méthode itérative pour le codage et l’analyse. Un logiciel de traitement de données a servi à organiser et à analyser les données.

Principales observations Quatre thèmes inter-reliés ont été identifiés : la clarification des rôles, la formation de l’identité professionnelle, les facteurs qui favorisent le rôle d’enseignantes des IP et les facteurs qui limitent ce rôle.

Même s’ils reconnaissaient l’importance des IP comme membres de l’équipe et appréciaient leurs connaissances dans certains domaines spécifiques, les résidents n’étaient pas bien renseignés sur leur champ de pratique. Selon le stade de leur formation, les résidents avaient des opinions différentes sur l’enseignement par les IP. C’est ainsi qu’une majorité de résidents seniors croyaient qu’ils devaient penser comme des médecins et préféraient que les cours cliniques soient donnés par des médecins. Les résidents juniors appréciaient la méthode de formation par étapes utilisée par les IP et ils se sentaient moins vulnérables lorsque des IP leur enseignaient. Selon les IP, il était utile d’avoir une formation pour enseigner des habilités. Parmi les facteurs qui nuisent à une formation optimale, mentionnons la possibilité de le faire, le temps disponible et l’attitude des médecins.

Conclusion Le fait de ne pas intentionnellement éduquer les résidents en médecine familiale quant au champ d’activités des IP et à leur rôle éducatif peut engendrer des difficultés en matière d’éducation interprofessionnelle. Une reconnaissance plus claire des changements de l’identité professionnelle des résidents en médecine familiale pourrait atténuer cette résistance à l’enseignement par des IP, et faire en sorte que l’enseignement interprofessionnel et les stratégies d’apprentissage soient efficaces. Il y a lieu de créer occasions de formation professorale pour tous les enseignants si on veut régler cette question, tant pour s’assurer de la compétence des enseignants que pour favoriser une collaboration interprofessionnelle positive.
Although health care requires interprofessional collaboration, there are considerable challenges in educating health professionals for this practice. At the same time, trainee physicians are now taught by other health professionals in clinical settings. Registered nurses extended class, often referred to as nurse practitioners (NPs), undertake a wide scope of practice within family medicine. Their broad clinical expertise provides an opportunity for informal clinically based interprofessional education and collaboration, in addition to formal teaching of many aspects of family medicine.

Nurse practitioners in family practice units in Canada are well positioned not only to provide direct care to patients but also to teach learners in other health professions. The nature of this teaching can include formal rounds and presentations, clinical instruction in specific areas of NP expertise, and supervision of day-to-day care provided by family medicine residents to patients in the office and on home visits. In an academic teaching unit, this supervision could also involve direct observation with teaching about resident-patient interactions, case discussions, and chart reviews. A review of non-physician medical educators examined nurses, including NPs, working in this role and found that they effectively contributed to learning through direct teaching, as well as through evaluation of medical learners. The distinct but complementary teaching skills of nurses and physicians were also noted in this review to expand teaching capacity and provide help for physician educators, but there were some challenges owing to the traditional silos of professional education and practice.

The purpose of our study was to examine the educational role of NPs in an academic family practice unit in order to better understand the interprofessional educational dynamics in a clinical teaching setting where collaborative care is delivered. In 2012, Drummond et al described the challenges of educating medical students and residents about team-based care in very similar settings, but they did not include a description of the teaching of these learners by other professionals. Although they explained that the health care professionals and leaders in the department highly valued the educational work of the NPs, it was not clear what the views of the residents were or how the NPs perceived these tasks. In addition, we aimed to better understand the factors that enhanced or impaired the teaching roles of NPs in an academic family medicine teaching site.

The D’Amour and Oandasan model, which describes the interprofessional education process and outcomes in collaborative practices similar to many family practices, provided guidance for this study. This model incorporates learner competencies regarding knowledge of roles, respect, and willingness to collaborate. The professional beliefs and attitudes of both the educator and the learner are considered important, as is the learning context.

**METHODS**

**Design**

A qualitative, descriptive approach was used for this study. Decisions around sampling, data collection, and data analysis were guided by the principles of fundamental qualitative description. Ethics approval was obtained from the McMaster University Health Sciences Research Ethics Board.

**Sample and recruitment**

Participants for this study were recruited from a teaching family practice clinic that was associated with a department of family medicine at a university. Purposive total population sampling was sought to elicit all possible perspectives from 3 distinct groups: NPs, first-year family medicine residents, and second-year family medicine residents. The focus groups were structured to consist of homogeneous peer groups in order to increase the comfort level and openness of discussion, and to be able to discriminate between any potential different viewpoints among the 3 groups. All 4 NPs, 8 of 9 first-year residents, and 9 of 10 second-year residents participated in the focus groups, with the 2 non-participating residents unavailable owing to scheduling difficulties.

**Data collection**

Interviews were conducted by a research assistant using a semistructured interview guide with probes to explore ideas in greater depth and to allow for unanticipated responses. The questions asked participants about their experiences with teaching interactions between NPs and residents, perceptions of factors that enhanced and limited the educational role of NPs, and attitudes toward interprofessional practice.

**Procedure for data analysis**

All of the recorded data were transcribed verbatim and later reviewed for accuracy by the research assistants who facilitated the focus groups. Conventional content analysis was used to derive codes from the data. Coding and analysis were loosely guided by the D’Amour and Oandasan model and the semistructured interview questions. The research assistants used data management software (NVivo 8) to organize the data. Transcripts were read independently by the 4 research investigators who then met to reach consensus on final coding scheme and definitions.
Four interconnected themes were identified: role clarification, professional identity formation, factors that enhance the educational role of NPs, and factors that limit the educational role of NPs.

Role clarification
Both senior residents (R2) and junior residents (R1) indicated that they were unclear about NPs’ scope of practice apart from the uniform agreement about the usefulness and importance of the NPs in facilitating team functioning. Senior residents understood that they were expected to learn about NPs’ scope of practice; however, many expressed frustration with this learning objective.

We function within a team environment but we don’t understand, like, the full information of each team player. (R1)

One of the reasons we were told that we were going to be monitored by nurse practitioners in this clinic is so that we learn their scope of practice, but that’s really quite futile when it’s going to be different depending on which practitioner you are working with because they are all different. (R2)

Residents recognized the value of working with NPs because of their specialized knowledge and skills.

[I]deally they shouldn’t be monitoring us but be there as resource if we need to ask them [a question]. (R2)

In another rotation ... the nurse practitioners that are working there are specialized .... [T]hey have a different scope but they were very helpful and they did noon rounds and they did talks in education; they were great but they were specialized in that area. (R2)

First-year residents tended to express more positive views and, in particular, noted NPs’ important role in team functioning.

I think they’re often more accessible than the physicians are sometimes ... so if I knew more of their scope that would be helpful, but they’re very available and willing to help, which is nice and adds to [the] team. (R1)

They also have a lot of knowledge about resources that are available in their area out in the community .... They can direct you in the right place to make things efficient as well. (R1)

Nurse practitioners noted that there was no formal education about their scope of practice for residents and believed that learning it in the course of clinical work was more useful than presentations or written documentation. “You know we sort of expect them to absorb it in lots of ways as they go .... There’s so much to orientation … so they sort of learn slowly over time.” (NP)

Professional identity formation
Senior residents identified a need to become similar to the family physician teachers. They believed that NPs approached clinical problem solving differently than family physician teachers did and thought it was important that they learned to work in a similar manner to the family physicians. This resulted in some discomfort and, at times, actual avoidance of NPs in providing supervision of the day-to-day care of patients.

I generally would try to ask the physician since I’m trying to think like one and trying to angulate [sic] their scope. (R2)

We are taught to think a certain way from, like, the beginning of medical school, through our clerkship, our residency; we’re taught to think the same way and the physician has probably been through the same education. (R2)

Often the nurse practitioner answers more like following an algorithm. Like you do this, you do this, you do this, but the physician will provide more of an in-depth background explanation as to why you do these steps. (R2)

I think why I feel a little bit more comfortable with a physician monitoring me, per se, is that it almost gives you a sense of you’re progressing towards where that physician is. (R2)

Enhancing factors
Both junior and senior residents identified the expertise of NPs in a specific area, and found this expertise to be helpful to their education, as well as in team functioning and clinical care.

I felt that nurse practitioners were very good in counseling ... they were excellent resources in that .... For the medical part, I wouldn’t go talk to them; I would go straight to the physician. (R2)

I would like to tag along with ... the ones with the wound care knowledge ... one nurse that does the diabetic foot care so I would like to spend some time ... with them. (R1)
The NPs indicated their awareness of the residents’ appreciation of their specific areas of expertise and explained that they worked to raise awareness of these areas. “We try and educate the residents ... that we have specialities and to come to us ... to sort of double book.” (NP)

The more junior residents thought that the clinical teaching by NPs was very helpful, particularly because of their accessibility and the detailed nature of their teaching.

So much of our teaching is, like, just go and give it a shot ... that’s what a lot of the physicians, how they were trained. Sometimes a nurse practitioner [will] probably give you those details and for practical hints on things that would be helpful. (R1)

Nurse practitioners viewed themselves as a safer and more approachable source of help for residents. “The residents if they’re in second year and they think ‘Oh I should know that but I can’t go to my supervising physician because they think I should know that.’ So you’re a little safer for them to come to.” (NP) One resident concurred with this view:

I feel very comfortable approaching them because I found that their expectation from us is not that high as my staff .... [They are] more eager to help us, more compassionate, and so I feel comfortable with them. (R2)

Nurse practitioners also thought that their preparation as teachers was important and they believed they were well trained for this role. “We’ve had lots of opportunity for clinical knowledge and keeping up to date.” (NP)

Limiting factors

Nurse practitioners and residents identified a number of barriers to optimal education provision, including opportunity, time, training, and attitudes. Nurse practitioners perceived differing attitudes among physicians that influenced residents’ views of their role as teachers.

Some physicians are very comfortable with our role and then [with] others I can see that it’s not the case and it’s not as well supported. (NP)

And I think that [physician’s degree of comfort with the educational role of NPs] does get reflected to the residents. (NP)

Nurse practitioners also reported that their integral clinical role within the team meant that they were less available for educational activities.

We’re, you know, basically running the ship, meaning we’re not able to free up time. (NP)

We don’t have quite as active a part in the resident evaluation as we could ... logistically that would be a nightmare to try to pull us in [to resident behaviour science evaluations]. (NP)

There was a common belief among senior residents—who have less time to spend with each patient—that time was a barrier when being supervised by NPs, primarily because if the patient problem was outside the NP’s scope of practice, it became necessary to consult with a physician. They also expressed challenges with the broad and detailed nursing approach during the critical time of transitioning to shorter appointment bookings and experiencing new time pressures. “You are booked solid and you have patient after patient, and when you go back to review they want to talk about all things and you really don’t have time.” (R2)

This qualitative study examined the perceptions of both family medicine residents and NPs of their educational interactions. Both groups found value in the education NPs provided residents, particularly in areas of their clinical specialization. It has previously been reported that medical learners appreciate nurses’ teaching of general skills and knowledge in areas such as well-child visits, women’s health, and psychosocial and preventive health care. Specialized nursing expertise in areas such as geriatrics, smoking cessation, and counseling has also been identified as having educational value. The appreciation of the NP role in facilitating team function that these first-year residents spoke of is consistent with other reports. In addition, these family medicine residents recognized the value of understanding NPs’ scope of practice; indeed, some residents thought that the main purpose of being taught by NPs was to help them understand the NP scope of practice.

However, not all perceptions were positive. Well into their second and final year of training, residents did not think they had achieved an understanding of the NPs’ clinical roles or had received any formal education about teamwork. A qualitative study in a similar academic family medicine clinic has identified this as an ongoing challenge for practitioners, as well as for learners. Furthermore, NPs noted that some of the faculty physicians seemed less supportive of their teaching roles than others, an issue identified decades ago in a US report.
problems differently than physicians did. They believed they needed to learn from teachers who employed the “in the moment” strategies seen as common to physicians rather than NPs who employed attention to detail and protocol. This concern among the senior residents might reflect a need to model the clinical thinking and problem solving that they associate with physician teachers. Theories of professional identity formation suggest that young physicians (and other professionals) need to both talk and think like their role models as they develop their identity.15,16 Senior residents who were transitioning to shorter appointment schedules and were experiencing time pressures found the broad, detailed nursing approach to be challenging. Junior residents were more concerned with getting assistance and step-by-step instruction during clinical supervision; this was perceived as an advantage to teaching by nurses. Learners also found interactions with NPs less hierarchical and threatening.

Previous studies have not identified this differential response to teaching by nurses among different levels of residents. In a survey conducted in a US family practice setting, medical students preferred physician educators for complex medical illness or rare diseases, rating nurses more positively for teaching in psycho-social areas4; however, the reasons behind this preference were not clear. It is possible that directing NP teaching in a different fashion depending on the professionalization process of the learner might lead to more effective and better-accepted teaching, but this would require further examination. Further exploration into the interaction between interprofessional teaching and the development of professional identity could be fruitful.

Limitations
This study is limited to the views held by residents and NPs at a single academic family practice centre, at one point in time. While participation in the study was very high, 1 second-year resident and 1 first-year resident were not able to attend the focus groups owing to scheduling issues and might have had different perspectives. However, the findings do elucidate some themes identified in earlier studies of this type of interprofessional teaching.

Conclusion
The lack of an ongoing and intentional orientation of residents to NPs’ scope of practice and educational roles can lead to difficulties in interprofessional education. More explicit recognition of the evolving professional identity of family medicine residents might decrease resistance to teaching by NPs and ensure that interprofessional teaching and learning strategies are effective. Faculty development opportunities for both NPs and physician teachers are required to manage these issues, both to ensure teaching competencies and to reinforce positive interprofessional collaboration.

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Contributors
Dr Walsh conceived the original idea for the study, led development of the grant proposal and the interview guide, helped code the interview responses, and wrote the first and subsequent drafts of the paper. Dr Moore and Ms Barber contributed to the original idea for the study and to the development of the grant proposal and the interview guide; helped code the interview responses; and edited drafts of the paper. Ms Opsteen reviewed the participants’ responses, helped code the responses, and reviewed drafts of the paper. All authors contributed to the data interpretation.

Competing Interests
None declared.

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