Medical Student Evaluation of Family Nurse Practitioners as Teachers

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Background: Demands on family medicine faculty to generate clinical revenue may negatively impact the undergraduate medical education program. To minimize this possibility and better model interprofessional education, family nurse practitioners (FNPs) were hired as clinicians and teachers as part of a longitudinal family medicine clerkship. This paper reports the results of a pilot study of student evaluations of nurse practitioner teaching. Methods: All M3 and M4 students were asked to evaluate one of three FNPs who had precepted them multiple times during their previous year of ambulatory care practice. Two previously studied closed-ended questionnaires were used to assess quality of teaching by the FNPs. Students also responded to a series of open-ended questions. Results: Ninety-one percent of 97 students responded to the survey. Responses to the closed-ended questions as well as comments by the students and physicians were positive regarding the teaching by FNPs. The teaching skills most highly regarded by the students tended to be different than those most highly regarded in physicians. Conclusions: This pilot study suggests FNPs can be successfully integrated into undergraduate medical education settings, offering teaching strengths that complement those of physicians. Integrating the two professions in a family medicine clerkship may prove beneficial to students and expand departmental teaching resources without further straining finances. Efforts at evaluating the teaching contributions of FNPs at other institutions are needed to substantiate the present study results.

Changes in medical school finances have placed increased pressure on family medicine departments’ undergraduate medical education programs to move student training to ambulatory sites, while at the same time increasing the demands for reimbursable clinical services. Among the effects of these changes is increasing economic pressure on both full-time and volunteer faculty to generate income in a teaching environment. In response to this reality and to also better model interprofessional collaboration, the Department of Family and Community Medicine at the University of Illinois at Rockford (UIC-R) implemented a project to involve family nurse practitioners (FNPs) in clinical care and in the precepting of medical students at the department’s ambulatory training sites.

Nurse practitioners have been recognized as capable providers of primary care services,1 and most states have expanded the scope of their practice to include license recognition, prescriptive authority, and reimbursement eligibility.2,3 Still, most FNPs practice collaboratively with physicians and, in fact, FNPs have increasingly joined with family physicians to provide clinical services.4 FNPs have also joined family practice training programs as clinical educators, yet there is limited literature on this role in the medical education process. Past studies have largely focused on their teaching of multidisciplinary groups of students or teaching in targeted clinical areas.5,8

As part of an overall departmental evaluation of clinical teaching, we surveyed third- and fourth-year medical students (M3 and M4) to learn their attitudes toward FNPs and physicians as teachers. This study reports the results of the FNP evaluations and represents an initial effort at assessing the value of FNPs as teachers in the ambulatory setting.

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Methods

Setting

At UIC-R, the Department of Family and Community Medicine’s clerkship is organized as a longitudinal experience at one of three teaching primary care clinics (PCCs). Beginning in the fall of their second year of medical school, students spend 1/2 to 1 full day per week at the same site for the duration of their medical school education (ie, for nearly 3 years). Each site has a stable faculty of family physicians and internists. A clinical pharmacist faculty member was added to each site in 1995–1996, and one FNP was added to each site in the fall of 1996. The FNP’s role was to expand clinical options for patients and to gradually share in the precepting of students’ clinical encounters. Of the three FNPs selected, two had been clinical nurses for 15–20 years with previous Master’s degrees in health-related fields before completing a 1-year clinical program to become an FNP. The third had entered nursing as a second career after (nonmedical) teaching for 9 years. She practiced as a nurse for 6 years prior to obtaining a Master’s degree and becoming an FNP and joined UIC-R with 1 1/2 years of FNP practice experience.

At each PCC, students first see patients by themselves and present the case to a faculty preceptor. The student and preceptor then see the patient together, and final diagnostic and treatment strategies are determined. Discussion with the patient regarding clinical recommendations is done by the faculty and/or the student. Students have flexibility in determining the preceptor to which they present cases, and they base this decision on numerous factors, including faculty availability and knowledge of a particular patient, patient preference for a particular provider, issues in the encounter that the student thinks are best handled by a particular preceptor, and personal comfort or fit with an individual preceptor’s style.

Survey

We developed a survey instrument to measure students’ assessment of their preceptors at each PCC. The survey combined two previously developed and tested sets of closed-ended questions: 14 questions pertaining to preceptor experiences that are part of the MedIQ developed by James and Osborne9 and the 25-question Clinical Teaching Effectiveness Questionnaire (CTEQ) developed by McLeod et al.10 Answers to the MedIQ are based on 5-point Likert scales; those for the CTEQ are on a 6-point scale, thus allowing for responses to be quantified. The two tools are somewhat complementary, measuring faculty precepting characteristics in the areas of affect, knowledge, and skills. The CTEQ is subdivided into domains, each representing a different aspect of teaching ability. Open-ended questions were added to further clarify students’ views of physician and FNP preceptors.

Data Analysis

Results of the closed-ended questions were tabulated using the software package SPSS.® To allow for quantification of answers to the closed-ended questions, point values from 1–5 for the MedIQ questions and...
The total M3/M4 class size was 97. Eighty-nine surveys were completed and returned for a response rate of 91%. Each FNP was evaluated by 25 to 30 students. Analysis of the responses to the closed-ended questions showed no difference in the student evaluations by either gender or class (M3 versus M4).

Overall, students were very satisfied with nurse practitioner precepting. For each of the 14 items on the 5-point MedIQ scale, with 5 being the most positive value, FNP scores ranged from an average of 3.84 to 4.72. On the 25-item CTEQ scale, with 6 being the most positive value, FNP scores ranged from an average of 4.09 to 5.86 for each item. Tables 1 and 2 present mean scores for each item in the two questionnaires along with the percentage score for the entire MedIQ and each domain of the CTEQ.

In response to the closed-ended questions, the nurse practitioners were rated most positively for interest in psychosocial issues, being helpful and enthusiastic, listening, and giving suggestions. They scored lower in the areas of subject-matter expertise and problem-solving emphasis. In the MedIQ, FNPs were rated most highly for offering suggestions without being critical and for listening to the student. For the CTEQ, the domains of humanistic orientation and attitude to teaching were most highly evaluated.

Of the 89 surveys returned, 80% contained at least one qualitative comment. The comments dealt mainly with types of visits and specific skills and behaviors. Students felt the FNPs were most effective as preceptors for well-child visits, women’s health, preventive health, simple acute problems, and psychosocial issues. They were evaluated as being strong in communication skills and as being valuable in dealing with “difficult” patients or those struggling with “sensitive issues.” Additionally, FNPs were viewed as strongly supportive and respectful of the students’ learning process. Typical comments included “open to student ideas,” “encouraging to students,” and “fosters independence.” Professional behaviors that students identified as being valuable included recognizing knowledge limitations and using consultants and reference material. In their comments, students indicated a preference for physician preceptors for patients with complex illnesses or rare diseases.
Discussion

The FNPs at these medical student teaching sites were well regarded as teachers by third- and fourth-year medical students. Generally, the FNP teaching skills that students valued highly were different than those skills valued in the physicians. In addition, students’ written comments suggested that they viewed physicians and FNPs as being most helpful for different kinds of patient issues. These results suggest that FNPs can be acceptable to medical students as clinical preceptors and provide a set of teaching skills that may complement those of physicians. The results support previous studies of practice comparisons that showed nurse practitioners were more likely to provide preventive health counseling and education1 and to adapt medical regimens to patients’ preferences, family situation, and environment.11

The strengths of the present study are the high response rates for both M3 and M4 students, the use of previously validated questionnaires for the survey, the large number of precepted encounters on which the student evaluations were based, and the consistently positive student and physician assessment of the FNPs at all three sites. Study limitations are that only three FNPs were evaluated, all of whom had only recently completed their FNP training (though they had many years of prior nursing experience). Thus, the study results may not be generalizable to all FNPs. Also, the nature of the UIC-R longitudinal family medicine clerkship allows students to become more familiar with faculty over time. This may enhance student views of new types of faculty such as FNPs. Additional studies of nurse practitioners as clinical educators in other family medicine settings will be important to confirm these results.

Conclusions

Nurse practitioners have received increased acceptance as providers from state legislatures, hospitals, managed care organizations, and physicians.12 Our small study suggests that FNPs can successfully fill a role as clinical educators of medical students in the context of a collaborative practice with physicians. In addition, their involvement in this effort demonstrates interprofessional collaboration for students, a goal supported by the American College of Physicians13 and the Pew Health Professions Commission.14 While a detailed financial analysis goes beyond the scope of this paper, administrative reports indicate that the FNPs have generated sufficient patient revenue to support their cost at the primary care clinics under study. While they do not perform all the functions of physicians (eg, call, rounds), they have reduced the need to hire additional physicians to staff the ambulatory teaching sites. Therefore, the development of a role for FNPs in undergraduate education may represent an opportunity for family medicine departments and other primary care units to enhance their educational efforts without compromising their financial well-being.

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REFERENCES