Impact of Family Practice Residents on Obstetrics and Gynecology Basic Clerkship: Medical Students' Perceptions

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Increasing numbers of family practice residents and medical students require training in obstetrics and gynecology. The effect of these residents on medical student learning in a basic obstetrics and gynecology clerkship at the University of Washington was examined. Results of a questionnaire completed by 314 medical students revealed that family practice residents had a positive although highly variable impact on student learning. Individual differences in residents and students seem to account for much of the variability. Suggestions are made for enhancing the learning experience in obstetrics and gynecology for both medical students and family practice residents.

Providing adequate clinical experience for trainees in obstetrics and gynecology has become an increasingly difficult problem. While the number of deliveries has remained relatively stable over the past decade,[1,2] the number of students and residents competing for these deliveries has risen dramatically. Since 1970 medical school graduates have increased from approximately 8,000 to over 14,000,[3] and the number of family practice residents in training increased from 300 to over 6,000.[4]

Medical students and family practice residents need a broad base of knowledge in obstetrics and gynecology. To develop technical proficiency in obstetrics and gynecology, they need opportunities to perform deliveries and other specialty oriented procedures.[5] A medical student generally spends six to eight weeks on obstetrics and gynecology clerkships[6] while a family practice resident spends four to six months on rotations in this field.[7] With such a limited amount of time in obstetrics and gynecology, competition for patients may occur.

As demonstrated in this study, educational needs of medical students and family practice residents are most likely to compete in the labor and delivery room. Other health care professionals such as anesthesiologists, nurses, and midwives receive parts of their training in this area also. A tremendous effort is required by obstetrical and gynecological services to supply educational opportunities for all these groups.[8]

Students electing to take obstetrics and gynecology at the University of Washington can do so

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0094-3509/80/131071-05$01.25

Table 1. Characteristics of Obstetrics and Gynecology Basic Clerkship Sites University of Washington

Site Number and Type of Facility	Faculty MDs	Students per Rotation	Total Students at Site During Study	Ob/Gyn Residents Assigned to Obstetrics	Family Practice Residents Assigned to Obstetrics	Year of Training of Family Practice Resident	Deliveries per Month at Facility	Ratio of Learners (Residents and Students) to Deliveries
1. University hospital	fulltime teaching	8	129	7	1	1	133	1:8
2. Private hospital	private	3	44	0	2	1-3	250	1:50
3. Military hospital	military	3	43	3	1	1	240	1:34
4. Private hospital	private	3	41	3	1	1-3	225	1:32
5. Private hospital	private and full-time teaching	1	19	2	2	1-3	180	1:36
6. Prepaid medical plan hospital	salaried	3	38	0	4	1-3	250	1:36

at six different sites, each of which has a family practice residency program. At these sites, the residents receive their training in the same facilities as the medical students. The sites include a tertiary obstetrical care university hospital, a private hospital, and a health maintenance organization all in Seattle, a nearby military hospital, and two private hospitals remote from the university. The private hospitals and health maintenance organization provide student outpatient experience in physicians' offices while the other sites provide such experience in hospital clinics. All supervising faculty at these sites are certified by the American Board of Obstetrics and Gynecology. Other characteristics of the sites are shown in Table 1. Clerkship requirements are the same at all sites but each site provides a unique set of learning opportunities for the students. Examination of student performance across the six sites reveals no significant differences on the clerkship pretest, Third-Year Comprehensive Examination, nor on the obstetrics and gynecology subsection of National Boards Part II.[9]

Since medical students usually have the least amount of knowledge and skill as well as the shortest time in obstetrics and gynecology, they are most likely to be relegated to an observer role with residents performing the majority of deliveries and other procedures. Therefore, student perceptions of the impact of family practice residents on their obstetrics and gynecology clerkship were investigated along with comparisons of student perceptions among the six different hospital sites. Suggestions are made to help solve apparent problems.

Table 2. Student Perceptions of the Presence of Family Practice Residents' Overall Effect on Their Obstetrics and Gynecology Clerkship

	Frequency	Percent
Helpful	152	48.4
Of no effect	88	28.0
Harmful	70	22.3
No response	4	1.3
Total	314	100.0

Methods

Upon completing the Obstetrics and Gynecology clerkship at any of the University of Washington clerkship sites, medical students evaluate the overall experience and the faculty's teaching effectiveness. From August 1977 to August 1979, two questions relating to the impact of family practice residents on the clerkship were included in the evaluations. These questions were: (1) viewed from an overall perspective, was the presence of the family practice resident helpful, harmful, or of no effect to your clerkship? and (2) did family practice residents influence your learning during this clerkship in: (a) didactic sessions, (b) delivery room, (c) clinics, and (d) surgery? Comments were also solicited. During this time, 314 questionnaires were completed by the students who participated in the clerkship at the six sites.

Results

About half (48 percent) of the medical students perceived family practice residents as being helpful. Twenty-eight percent viewed them as having no effect on the clerkship. Twenty-two percent felt that they were harmful (Table 2).

The specific areas of interaction (didactic sessions, delivery room, clinics, and surgery) were rated by students using a five-point scale from strongly hindered (1) to strongly helpful (5). The results are shown in Table 3. Students reported greatest contact with family practice residents in the delivery room, with next most frequent contact in didactic sessions, and less contact in clinics and surgery. Overall, students perceived family practice residents to be somewhat helpful in the didactic session ($\bar{x} = 3.5$), in clinic ($\bar{x} = 3.4$), and in delivery room ($\bar{x} = 3.3$) and neither helpful nor harmful in surgery ($\bar{x} = 3.0$).

To determine if there were differences in medical student perceptions among the six hospital sites, analysis of variance and the Scheffe multi-range test were computed at the .05 level of significance. Table 4 shows mean scores by site. There were significant differences among the six sites on the overall helpfulness of family practice residents to the clerkship learning experience ($P = <.01$). Using the multi-range test, student perceptions at sites 1 and 2 (where residents were perceived to be less helpful) were found to be significantly different from the perceptions at sites 5 and 6 (where residents were perceived to be more helpful). As measured by analysis of variance, there were no significant differences among sites in student perceptions of didactic sessions, surgery, or clinic, but there was a significant difference in the delivery room ($P = <.01$).

Student comments provide insight regarding these ratings. If the family practice resident was interested in teaching and sharing deliveries, the contact was a positive one for the student. The family practice residents' broad perspective on patient care, sensitivity to patient needs and concerns, and patience in teaching were mentioned as positive aspects of their presence in obstetrics and

Table 3. Student Perception of How Family Practice Residents Influenced Their Learning in Specific Areas of Their Obstetrics and Gynecology Clerkship (on a scale of 1 to 5)

Area of Interaction Within the Clerkship	Student Ratings of Impact on Learning	Number of Students Responding who had Contact with Family Practice Residents	
	Mean	Number	Percent
Didactic sessions	3.5	187	59.6
Delivery room	3.3	288	91.7
Clinic	3.4	109	34.3
Surgery	3.0	94	29.9

Table 4. A Comparison of Student Ratings of the Overall Effects of Family Practice Residents on Obstetrics and Gynecology Clerkships by Six Sites (scale: 1=harmful, 2=no effect, and 3=helpful)

Clerkship Site	Mean Score for Overall Effect	Number of Students Responding	Number of Students Not Responding
1	2.09	128	1
2	2.02	44	0
3	2.27	41	2
4	2.67	40	1
5	2.42	19	0
6	2.61	38	0
Total		310	4

gynecology. Positive comments such as these were most frequently related to third-year family practice residents.

The students associated learning hindrance most often with first-year family practice residents. Many problems resulted from competition for hands-on experience, such as in deliveries. In some cases, family practice residents actively followed the faculty physicians who were most willing to involve residents and students in teaching and deliveries, leaving the students with physicians less willing to teach or delegate responsibility for patient care. Sometimes family practice residents took over the care of a patient with an uncomplicated labor whom the student had been following and had expected to deliver. Such actions tended to create strong negative reactions in the students. On the other hand, if residents actively involved the student in instruction and deliveries, student response was positive.

Discussion

From an overall perspective, students felt family practice residents were more helpful than harmful to their learning experience in obstetrics and gynecology. The relationship between student perceptions of family practice residents and the type of training hospital, type of faculty, total number of hospital deliveries, or number of family practice or obstetrics and gynecology residents at the site is difficult to assess from this study. The

highest level of contact and competition was between the students and resident in the delivery room. In some cases the students' perceptions of family practice residents were found to be negative even at sites with few residents and many deliveries. In general, these negative perceptions seemed to be dependent on the personality of the involved resident, and first-year family practice residents appear to be less helpful than second and third year residents.

Student suggestions for improving the relationship between family practice residents and medical students on an obstetrics and gynecology rotation were also obtained from the questionnaire. Development and use of specific learning objectives for students and residents in labor and delivery would be helpful to delineate the responsibilities of the students. Such objectives would also acquaint the nursing staff, faculty, and residents with what the student was expected to do. Vontver describes such objectives.[10]

Other suggestions included specific assignment of patients to avoid last-minute usurping of lower ranking members of the medical team unless the patient's condition warrants a more highly trained practitioner. Active incorporation of family practice residents into the student teaching program by having conjoint seminars or by assigning residents specific didactic sessions could also help to improve the relationship. Obstetrics and gynecology faculty and residents should also respect the added dimension of patient care offered by family practice residents.

When problems arise, student perceptions should be relayed to the faculty so that problems can be resolved. During the first three months of the study, only 23 percent of the initial 40 students felt family practice residents helpful. Feedback was provided to the clerkship faculty following which student perceptions reversed dramatically.

As another example of how this information was useful, a family practice resident at one site was uniformly felt to be harmful to learning by the students, which markedly altered student perceptions of that entire site. These data were instrumental in obtaining specific counseling for this resident by the Department of Family Medicine. Sites with low ratings for the helpfulness of the family practice resident can be specifically evaluated to determine the cause of the discontent so that remedial measures can be taken.

Conclusion

The impact of family practice residents on obstetrics and gynecology clerkships appears to be positive although highly variable. The predominant factors influencing students' perceptions appear to be the family practice resident's level of training, personality, interest in teaching, and willingness to share opportunities for deliveries and other procedures. The authors feel that positive measures can be taken to strengthen the student/resident interaction and enhance the learning experience for both medical students and family practice residents.

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