Preceptor Development in Residency Training Through a Faculty Facilitator

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To address the demand for training preceptors, a community hospital-based residency program is using a part-time preceptor in a consultative capacity as a faculty facilitator to model, assess skills, and generally improve the level of teaching. Direct observation of resident-patient interactions and subsequent preceptor critiques are followed by feedback to the preceptor on the cogency and effectiveness of comments made. Goals, objectives, and teaching style are jointly examined by the preceptor and faculty facilitator. Evaluation of videotaped resident-preceptor interactions before and after six months' experience with the faculty facilitator shows significant increases in preceptor skills. Greatest improvement is in comments related to resident's clinical assessments, the resident-patient relationship, and in the quality of the resident-preceptor interaction. Scores by the faculty facilitator are significantly lower but parallel those of an independent, blind evaluator. Preceptor, resident, and administration reactions to the project are all positive.

This ongoing program assures the continued upgrading of preceptor skills and provides for faculty attrition. A faculty facilitator providing direct feedback in the clinical setting is a low-cost and viable alternative to workshops and conferences for training effective teachers of family medicine.

With the proliferation of residency training programs in family medicine over the last few years, there has been a growing demand for well-qualified and effective teachers of family medicine. The need to develop innovative and comprehensive programs for preparing these teachers has been widely addressed.[1-3] Among the most used strategies for developing the faculty members, workshops have been seen as highly successful.[4,5] Also, there are national programs of two-year fellowships and three-month to one-year traineeships,[6] and at least one program to provide teaching skills through a series of half-day workshops aimed at physicians prior to their first preceptor experience.[7]

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Recently initiated is a novel and effective program, which employs the skills of a talented part-time preceptor in a consultative capacity to model, assess skills, and make interventions in the teaching process of a medical school affiliated community hospital family medicine residency program. This type of program should be generally applicable to a wide variety of residency programs, especially those based in community hospitals.

The ambulatory unit at the Somerset Family Practice Program has a complement of 21 residents, and 3 full-time and 11 part-time family practice faculty. There are approximately 20,000 patient visits per year. There were several serious problems with respect to the development of faculty members. The preceptors were a diverse group with varied levels of skill and experience. There were limited lines of communication among the preceptors, between the preceptors and the directors, and almost no feedback regarding preceptor performance. There was also a lack of formal preceptor evaluation of residents and minimal structured group interaction.

At the request of the program director, the Department of Family Medicine at the College of Medicine and Dentistry of New Jersey (CMDNJ)-Rutgers Medical School decided to support a program of faculty development employing the talents of a skillful, experienced, residency trained preceptor as a principal means of addressing these problems in the teaching program. This practicing family physician who related well to residents and faculty alike was given a mandate and eight hours of time per week to pursue the improvement of the quality of communication and level of teaching among the full-time and part-time preceptors. In his role of faculty facilitator, he was asked to delineate residents' needs in terms of the preceptor experience and to attempt to impart certain teaching skills to his peers.

The faculty facilitator developed his skills and plan of intervention as the program progressed. The fundamental value of direct preceptor observation of resident-patient interactions was a basic principle underlying the faculty development plan. Preceptors were to observe residents on a regular basis and schedule feedback sessions directly following resident-patient encounters observed. Feedback on the preceptor-resident interaction was to be provided by the faculty facilitator. The plan developed included an assessment of the existing skills of the faculty member, the development of a communication system with the facilitator as intermediary, the development of performance criteria in the area of precepting, the provision of feedback on resident-preceptor interaction, and the construction of a preceptor job description with the participation and commitment of the total group. Videotaped recordings of resident-patient interactions and the preceptor-resident interactions were to be used to enhance the feedback and also to assess the effectiveness of the program.

Methods

During the first few weeks of the project, the faculty facilitator met individually with each of the faculty members, listened, shared ideas, and identified himself in his new role. The diversity of the faculty group necessitated varying approaches. Three of the faculty members were recent graduates of the program and seemed to have some difficulty interacting critically with the residents in their new capacity because of the previous close peer relationship. These preceptors had specific ideas on how the program should be improved. Three of the faculty had been in practice for three years, others had been in practice for up to 15 years. Levels of confidence and teaching skills varied. Time spent at the program by the faculty members varied from one half-day per month, four half-days per month, eight half-days per month to full time in the residency program.

The need for direct observation of resident-patient interactions as a teaching technique was established. The faculty facilitator and the preceptor viewed resident-patient interactions jointly through one-way mirrors. The faculty facilitator then viewed the critique by the preceptor of the resident-patient interaction. After the resident left, the faculty facilitator gave feedback to the preceptor. This afforded him the opportunity to help the preceptor establish goals and objectives for the teaching process as well as to look at his teaching style. In order to evaluate the effects of having a faculty facilitator interact with preceptors, resident-patient interactions and resident-faculty interactions were videotaped. The faculty facilitator evaluated and scored the cogency and effectiveness of the preceptor's comments and the relationship established between the preceptor and the resident. The following categories were devel-

oped. The first nine focus on the preceptor's reaction to the resident-patient interaction and the last five evaluate the preceptor-resident interaction.

1. *History*: Focus on the process and content of information gathering related to patient's problem and related background
2. *Physical examination*: Focus on the thoroughness and specificity of the physical examination
3. *Assessment*: Focus on the formulation of an assessment by the resident with alternatives and priorities established
4. *Plan*: Focus on the adequacy of management plan, to include diagnostic evaluation, treatment, and patient follow-up
5. *Time*: Assess the utilization of time by the resident during the interview
6. *Physician extenders*: Assess the appropriate utilization of extended personnel, to include office staff
7. *Psychosocial*: Focus on proper integration of psychosocial issues
8. *Health maintenance*: Focus on proper balance of health maintenance vs acute problem
9. *Patient relationship*: Focus on the establishment of a therapeutic relationship between resident and patient
10. *Resident relationship*: Establish effective relationship; gain respect, rapport, credibility
11. *Teaching method*: Vary teaching approach according to awareness as manifested in resident's behavior to handle information and criticism
12. *Problem solving*: Allow more general exploration of problem; concentrate on approach to problem rather than immediate solution to problem
13. *Flexible methodology*: Allow flexibility in management plan; diagnostic evaluation; allow resident experience of different methodologies
14. *Experience*: Effectively draw on own clinical experience

Videotapes were made of all except one preceptor, who was uncomfortable being filmed. This preceptor was very responsive to direct observation and intervention by the faculty facilitator, but did not want videotaped recordings to be made. After seven months of observation and feedback by the faculty facilitator, tapes made during the early months of the program and tapes which had been made at least six months later were reviewed and scored by the faculty facilitator and by a psychologist working in the program as a consultant psychosocial educator. The tapes were coded and the psychologist scored the preceptor-resident interactions blindly without reference to whether they occurred before or after the faculty development intervention. The tapes were scored in terms of the effectiveness with which preceptors commented on the residents' performance in the categories established and the process of the preceptor interaction with the resident. A maximum of four points was assigned to each category with the maximum score being given if the item was constructively discussed and if, in the opinion of the reviewer, an appropriate amount of time was spent focusing on the area. A zero was scored where the category was not mentioned. Scores of 1, 2, or 3 were assigned for intermediate performance. For patient-resident interactions in which specific categories were not relevant or appropriate, no score was given. Percentages of the maximum score attainable per interview were then calculated.

Results

The before and after scores provided by the independent rater and the faculty facilitator for the eight preceptors for whom complete data were available were tabulated (Table 1). An analysis of variance with repeated measures using time and rater as the factor, or independent variable, shows significant improvement over time for the group of preceptors ($F=47.65$, $P<.001$) and significant differences between the two raters ($F=77.81$, $P<.001$). The scores of the independent rater who was blind to the condition of before and after paralleled those of the faculty facilitator who set more stringent criteria. Each rater, however, independently scored the preceptors more favorably after the faculty development intervention, although in general, the "blind" rater gave significantly higher scores in both conditions.

A breakdown of the 14 categories scored in the preceptor-resident interaction again points out the differences between the raters, although their judgments are generally in the same direction (Table 2). Both evaluators scored assessment as showing great improvement. Comments relating to the resident-patient relationship and all categories of the preceptor-resident relationship were scored much more positively by both raters after the preceptors' experience with the faculty facilitator. Differences in category performance over time and between the raters were both significant

Table 1. Mean Ratings of Videotaped Preceptor-Resident Interactions Before and After Faculty Development Program

	Independent Rater		Faculty Facilitator	
	Before	After	Before	After
Preceptor				
1	56	62	33	43
2	58	73	21	43
3	60	71	38	50
4	62	69	32	50
5	61	70	45	70
6	84	79	50	70
7	61	84	34	62
8	40	67	30	36
Total Group	60.25	71.88	35.38	53.00

Analysis of Variance

Source	F*	Significance
Rater	77.81	P<.001
Time	47.65	P<.001
Rater by Time	1.62	N/S**

*F=Ratio of variation attributable to source effect over error
**N/S=Not significant

(F=12.54, P<.005; F=18.43, P<.001). Interaction between rater and time was not significant.

Discussion

An experienced preceptor serving in the role of faculty facilitator was effective in improving preceptor performance as demonstrated by videotaped recordings of the interactions between preceptors and residents. Independent ratings shows that there is improvement in preceptor skills. The preceptors reported great satisfaction with the program. They felt that having the faculty facilitator to discuss their own personal style, and focusing on parts of the interview according to preestablished goals and objectives was useful. It is important to note that the faculty facilitator need not necessarily be the most effective preceptor, but must have well-developed communication and observation skills. He must also be open to the exchange of ideas and be comfortable acting in the role of low-key consultant.

Feedback from residents suggests that the program had a positive impact on their learning process. As preceptors become more comfortable with direct observation and feedback, their efficiency increases and satisfaction levels rise.

One of the more interesting outcomes of the faculty development project was the more committed involvement of the part-time preceptors. They were interested in helping to develop a preceptor job description. As a result of their experience, they requested that more clear criteria be established for specific preceptor-resident interactions. The faculty facilitator is continuing in his role in helping formulate these specific criteria.

The residency program directors are also highly satisfied with the results of the project. The total cost of the faculty development program during the first year was less than $10,000. The medical school supported two thirds of this cost under a Robert Wood Johnson Foundation Grant. The cost included installing about $1,000 of videotape equipment, which is also being used for other educational purposes. In the second year of the project the cost was about half. The medical school continued to provide one third of the funding, as well as guidance with effective educational strategies, experimental design, and analysis.

Table 2. Mean Percentage Ratings by Categories of Videotaped Preceptor-Resident Interactions Before and After Faculty Development Program

	Independent Rater		Faculty Facilitator	
	Before	After	Before	After
History	41	31	33	64
Physical Examination	71	75	39	50
Assessment	66	94	36	42
Plan	75	78	33	33
Time Utilization	19	31	17	22
Physician Extenders	10	28	14	14
Psychosocial	50	53	47	42
Health Maintenance	32	14	31	11
Patient Relationship	72	81	42	64
Resident Relationship	63	78	42	69
Teaching Method	56	75	28	44
Problem Solving	66	86	31	50
Flexibility	63	75	36	58
Experience	41	61	28	44
Total Score	51.8	61.4	32.6	43.4

N=8

Analysis of Variance

Source	F	Significance
Rater by Category	18.43	P<.001
Category by Time	12.54	P<.005
Rater by Category by Time	.07	N/S

It is anticipated that in the future the program will be supported entirely by the Somerset Family Practice Program. The faculty facilitator will continue to be used to upgrade skills of existing faculty and to accommodate faculty attrition by training new preceptors.

Conclusion

The use of a skilled preceptor as a model and faculty facilitator in a community hospital program has been found to be highly satisfactory to preceptors and residents alike and instrumental in improving preceptor teaching skills. This innovative format, not requiring preceptors to attend workshops or conferences, but providing feedback in the actual clinical setting is an alternative for faculty development at a time when the need for recruiting and training more teachers of family medicine is critical.

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