

Faculty Evaluation as a Means of Faculty Development

Neal Whitman, EdD, and Thomas Schwenk, MD
Salt Lake City, Utah

Although there is little evidence that evaluation actually helps improve teaching, some conditions increase the likelihood of evaluation leading to improvement, including a combination of student ratings with educational consultation, comparison of student ratings to self-ratings, feedback early enough to provide time for improvement, and linkage of faculty development to the promotion-retention-tenure process. These conditions were built into a family practice faculty development program.

The faculty development program was carried out in steps analogous to a medical model with which faculty already were familiar. An educational consultant took an instructor's teaching "history" and conducted a "physical examination" of his teaching. The evaluator collected "laboratory" data regarding the instructor's teaching and made a "diagnosis." He provided "treatment" in terms of educational consultation and "assessed" the changes in the instructor's teaching. A repetition of the data collection and consultative process demonstrated improvement in clinical teaching, particularly with regard to the skill of leading a collaborative group discussion during resident teaching rounds.

Faculty development and faculty evaluation are related processes: the former aspires to improve faculty performance, and the latter aims to make judgments regarding its worth. Although sometimes these judgments are made to make personnel decisions (promotion, retention, tenure), other times these judgments are made to give faculty feedback regarding their performance. When judgments are used to give faculty feedback, faculty evaluation is a form of faculty development, since its aim is improvement. The purpose of this article is to describe a model that integrates faculty development and faculty evaluation in a family medicine residency program.

From the Department of Family and Community Medicine, University of Utah School of Medicine, Salt Lake City, Utah. Requests for reprints should be addressed to Dr. Neal Whitman, Department of Family and Community Medicine, University of Utah School of Medicine, 50 North Medical Drive, Salt Lake City, UT 84132.

This model provides an approach to the improvement of individual teachers that is specific and concrete. In particular it offers opportunity for immediate improvement. This approach is recommended to chairmen of departments of family medicine or directors of family medicine residency programs with the hope that the model will be tailored to fit their particular program needs.

Background

According to one definition,¹ faculty development is "an institutional process which seeks to modify the attitudes, skills, and behaviors of faculty members toward greater competence and effectiveness." Using that definition, faculty evaluation would be considered a form of faculty development *if* it improved teaching. In fact, there is reason to think this to be the case. For example, one belief is that if faculty are provided with feedback

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regarding their deficiencies in teaching, they will take action to remediate the deficiencies.²

Unfortunately, there is little evidence that faculty evaluation improves faculty performance.² There are studies, however, that provide insight into the conditions under which improvement of teaching might take place. Student ratings alone, for example, are not likely to improve instruction; nevertheless, according to a literature review conducted by Levinson-Rose and Menges,³ seven studies support the contention that a combination of student ratings and personal consultation favors instructional improvement. In these studies, personal consultation included interpretation of ratings and suggestions for improving teaching skills.

In addition, Levinson-Rose and Menges found that faculty most likely to change are those whose student ratings are less positive than their own self-ratings. This condition also was identified by Rippey² in a literature survey that did not overlap the studies reviewed by Levinson-Rose and Menges. In addition, Rippey found that evaluation conducted early in a course favored instructional improvement because it allowed faculty adequate time to make modifications.

In a third literature review, Stordahl¹ identified another factor that favored improvement of instruction: reward for participation. Specifically, she reviewed a study conducted by Jabker and Halinski supporting the hypothesis that the success of a faculty development program is contingent on an effective reward system, including linkage to promotion, retention, and tenure.

Based on what was learned from the three literature reviews, the Department of Family and Community Medicine (DFCM) at the University of Utah instituted a faculty evaluation program in July 1981 for its Family Practice Residency Program in Salt Lake City. To increase the likelihood that evaluation would lead to improvement, four conditions were built into the program:

1. Combine student ratings and educational consultation
2. Compare and contrast student ratings to self-ratings
3. Begin data collection early in the instructional process
4. Link faculty development to the promotion-retention-tenure process

These conditions, which the higher education literature indicates favor improvement of teach-

ing, have been deliberately applied in a clinical setting. Although others have not reported this application, experience confirms that these conditions are conducive to improving teaching in the clinical setting.

Methods

The AIMS model (Advanced Instruction to Medical Settings), developed by the University of Kentucky College of Medicine, was adapted by the DFCM to evaluate clinical faculty. According to the AIMS model, the assessment and improvement of instruction parallels the physician-patient encounter: history taking, physical examination, laboratory testing, diagnosis, and treatment. Using this analogy, an educational consultant takes a "history" of an instructor's teaching experience and conducts a "physical examination" of current teaching practices. Furthermore, the consultant collects "laboratory" data regarding the instructor's performance, eg, student ratings. Based on "historical," "physical," and "laboratory" findings, the consultant "diagnoses" the instructor's teaching problems and "treats" the instructor by means of suggestions for improvement and practice teaching. A benefit of using this model is that physicians feel comfortable with its familiar terms.

During the summer of 1981, the DFCM Director of Educational Development and Director of the Holy Cross Component of the Family Practice Residency Program collaborated to adapt the AIMS model for the family practice teaching rounds conducted at Holy Cross Hospital. Holy Cross Hospital is a 353-bed hospital in which DFCM family practice residents rotate for most inpatient services, including the Family Practice Service. Since the Director of the Holy Cross Component was the faculty member on service during the summer of 1981, this was a good time to adapt the AIMS model for the first time.

History Taking

Teaching rounds are conducted Monday, Wednesday, and Friday mornings for approximately one hour. To implement the first step of the AIMS model, *history taking*, the Director of Educational Development interviewed the Director of the Holy Cross Component on July 8. (Henceforth, the Director of Educational Development and the Director of the Holy Cross Component will be

referred to as Consultant and Teacher, respectively.) The purpose of the history taking was for Consultant to elicit from Teacher his memory of past teaching and perception of teaching improvement needs. Also, Consultant asked Teacher to define the educational goals for teaching rounds and to anticipate potential discrepancies between intended and actual impact of teaching rounds. Teacher already had conducted four teaching rounds since July 1, so the history included discussion of early impressions of how the rounds were going. The following abbreviated version of the written history is representative of the written documentation made possible by the history taking:

Teacher's History

Teacher is a 31-year-old man with informal teaching experience in the ambulatory setting. He has the following educational goals for the teaching rounds:

- sharpen problem-solving skills
- assess management of patients
- increase medical knowledge
- relate hospital care to pre- and postoffice care

With regard to sharpening problem-solving skills, Teacher feels limited success so far. He anticipates that there would be more problem solving if he could encourage more collaborative discussion.

With regard to assessing the management of patients, Teacher feels he has accomplished little. Because he lacks teaching experience, he has been reluctant to criticize the resident presentations. He hopes that with more teaching experience, he will overcome this reluctance.

With regard to increasing medical knowledge, Teacher feels moderately successful. In particular, he feels successful in relating internal medicine to family medicine, a sensitive issue for many family physicians. Teacher anticipates he could further increase medical knowledge by making more use of consultants present at the teaching rounds, ie, the third-year internal medicine resident, the family medicine fellow, and the clinical pharmacist.

With regard to relating hospital care to office care, Teacher feels that he has done little. He anticipates becoming more attentive to this goal as he improves progress toward the other educational goals.

In general, Teacher looks forward to gaining more teaching experience, and, in particular, to increasing collaborative group discussion.

Physical Examination

To implement the second step, *physical examination*, Consultant observed teaching rounds on July 10. With the approval of the house staff, the Consultant remained in the conference room and took notes to describe nonjudgmentally the group discussion. The following abbreviated version of the "physical examination" is representative of the written documentation made possible by the observation:

Teacher's Physical Examination

On July 10, 1981, Consultant observed Teacher on rounds with family practice residents at Holy Cross Hospital.

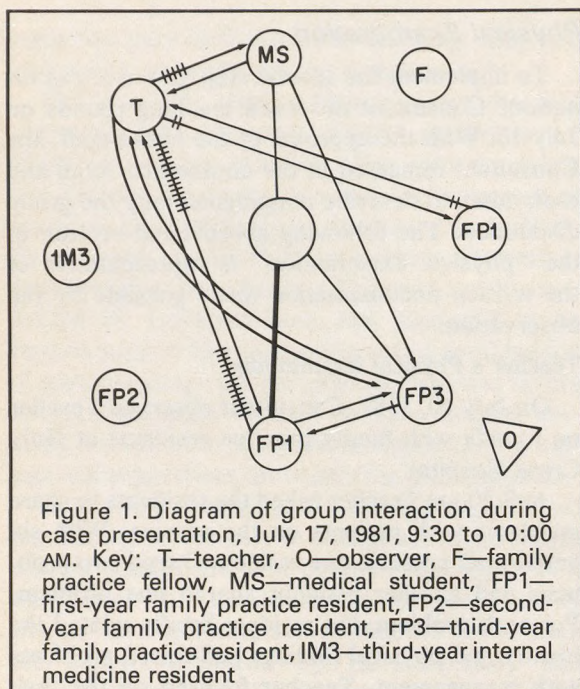
At 9:30 AM Teacher asked the residents to share problems with patients on the service. With six house staff present, one resident shared two problems and another resident shared one problem. For each problem, the resident briefly related the history and physical findings and raised problems with management. Teacher focused on the resident who shared the problem and did not seek participation from other group members. However, group members asked questions and offered advice on their own.

At 10:10 AM Teacher asked for presentation of newly admitted patients. One resident presented two new cases and another presented one new case. Again, Teacher focused on the presenter, but other group members elected to become involved. For example, two residents debated the medical vs surgical management for a patient with heart disease. Teacher asked the residents to arrange a special session to continue the discussion. Rounds ended at 10:40 AM.

Overall, rounds were highly interactive for roughly half the group: Teacher, the presenting resident, and the two or three others who chose to participate. Teacher focuses primarily on the presenting resident with eye contact, verbal and non-verbal feedback, and questioning. His voice is low; at times he mumbles. Often, there is humor, initiated by Teacher or a resident. Response to humor is widespread and appears to be genuine. As a peer group, residents seem open with one another. Questioning and advice giving is frequent.

Laboratory Testing

To implement the third step, *laboratory testing*, Consultant observed teaching rounds on July 17



and constructed diagrams of interaction to help describe the relationship among group members. As described by McBeath and Lane,⁴ when a member speaks, an arrow is drawn from his or her position toward the position to whom the remark is addressed. If a person speaks to the entire group, an arrow points to the center circle, and subsequent remarks are indicated with hash marks. The resident who is presenting a case is depicted with a heavy line to the center circle and hash marks are not used, since subsequent remarks by the presenting resident to the group are continuous. A diagram was constructed for each case presentation. The diagram for one of the five cases presented on July 17 is shown in Figure 1.

Additional "laboratory data" were collected with a four-question feedback survey administered to teaching rounds members at the end of the session. Teacher also was asked to complete the survey, anticipating the responses of the house staff.

In general, the house staff and Teacher felt that the goals of the discussion were clear and that the group made reasonable progress toward those goals. Personal sense of achievement and satisfaction, however, was moderate or limited for participants, whereas Teacher anticipated it would be high. In addition, everyone agreed that not all members of the group participated in the discussion.

Diagnosis

To implement the fourth step, *diagnosis*, Teacher and Consultant met on July 20 to synthesize and analyze all information gathered and to focus on needs for teaching improvement. Based on the data collected in the "history taking," "physical examination," and "laboratory testing," it was determined that collaborative group discussion needed to be increased by doing the following:

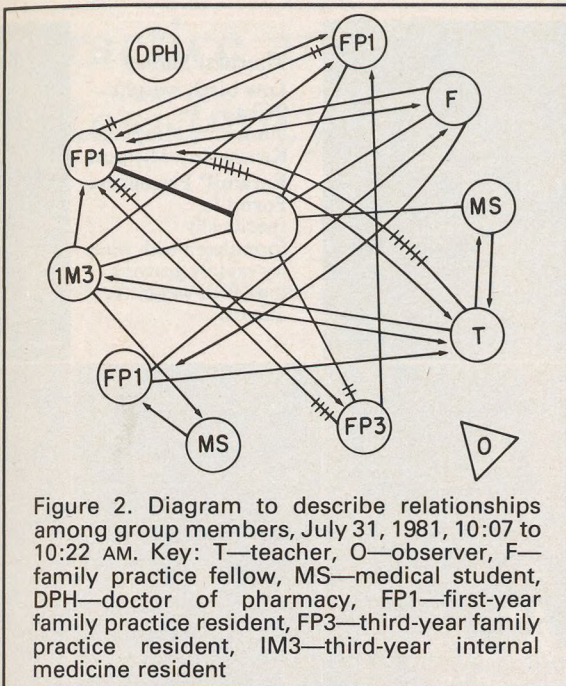
1. Calling on second-year residents to critique patient management
2. Asking group members to agree or disagree with a resident's answer to Teacher's questions
3. Using the third-year internal medicine resident, the family medicine fellow, and the clinical pharmacist as consultants

Treatment

To implement the fifth step, *treatment*, Teacher committed himself to implementing recommendations at the July 20, 22, 24, 27, 29, and 31 teaching rounds. Consultant observed the July 31 teaching rounds, constructed diagrams to describe the relationship among group members, and surveyed the members with the same four-question tool used on July 17. In addition Consultant conducted an open-ended interview with the group members *minus* Teacher. This assessment of treatment by Consultant is not explicitly included in the AIMS model developed at the University of Kentucky College of Medicine, although continued monitoring by a consultant is described as an available part of treatment. In the University of Utah DFCM adaptation of AIMS, *assessment* is considered the sixth step.

Results

One of the four diagrams constructed to describe the relationships among group members is shown in Figure 2. The differences shown between Figures 1 and 2 are typical of differences between the sets of diagrams constructed for the July 17 and 31 teaching rounds. At the July 31 rounds, more group members actively participated, and there was more interaction between group members without Teacher. Teacher found that the diagrams provided him with a vivid picture of increased collaboration.



A comparison of the July 31 feedback data to the July 17 feedback data demonstrates that more members of the group contributed to the group's progress and more progress was being made toward the group's goals. There was some indication of improved sense of achievement and satisfaction, although the change from July 17 was not dramatic.

From the open-ended interview, Consultant learned that the participants felt Teacher uses a good clinical approach. Consultant also found, however, that they felt the large number of patients tempers the value of teaching rounds. The participants did not view Teacher as responsible and accepted the large number of patients as a problem of all teaching rounds.

The participants detected changes in Teacher since July 17, including his deliberate involvement of more participants and use of more directive questioning.

With regard to Teacher's first goal (to sharpen house staff problem-solving skills), the participants felt that they do this all the time as residents anyway, but that teaching rounds was a good time to observe each other's problem-solving skills. With regard to the second goal (assess management of patient), they felt that little was done in

teaching rounds to evaluate patient care and that this aspect of teaching rounds was weak and in need of improvement.

With regard to the third goal (increase medical knowledge), the participants felt that teaching rounds were successful and could be even more effective if Teacher assigned specific group members to investigate for the group areas of knowledge in which the whole group seemed weak. Finally, with regard to the fourth goal (relate hospital care to pre- and posthospital care), they felt that assessment of admissions was comprehensive but that areas of discharge planning and discussion of posthospital care in the office were weak.

It should be noted that for this study qualitative and quantitative data were used. For example, the feedback surveys and the group discussion diagrams provided quantitative results, whereas the historical and physical data were qualitative descriptions of experience. The combination of both provides in-depth information about Teacher.

These findings indicate that evaluation of Teacher has led to improvement. In particular, greater collaboration in group discussion can be attributed to deliberate efforts by Teacher to improve this condition. Of course, the process of evaluation and improvement is continuous. The data collected in step 6, assessment, should be included in Teacher's next "history taking," step 1 of a new cycle. Each cycle will be reported in Teacher's personnel file, thus linking faculty development to the promotion-retention-tenure process. Teacher reported recognition of his effort to improve through evaluation as a strong motivator.

As a result of this experience, it is strongly recommended that evaluation can improve clinical teaching if (1) student ratings, such as the feedback survey, are combined with consultations, (2) the teacher compares and contrasts student ratings to self-ratings, (3) data are collected early enough to give the teacher time to change, and (4) teacher's efforts to improve are recognized.

References

1. Stordahl B: Faculty development: A survey of literature of the '70s. *AAHE Bull* 33(7):7, 9, 1981
2. Rippey RM: *The Evaluation of Teaching in Medical Schools*. New York, Springer, 1981, pp 20, 22, 23
3. Levinson-Rose J, Menges RJ: Improving college teaching: A critical review of the literature. *Rev Educ Res* 51:412, 1981
4. McBeath RJ, Lane JM: *Conducting Discussions*. San Jose, Calif, San Jose State University, 1977, p 33