

## Defining Differences in the Instructional Styles of Community Preceptors

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**Background and Objectives:** *Variability exists in the instructional experiences of medical students in clinical settings. As relationships between community-based physicians and medical students expand, it is important to promote instructional styles that enhance teaching and learning. This study identified attitudes and approaches toward teaching that distinguish preceptors with high student ratings from those with lower ratings. **Methods:** Interviews were conducted with a purposive sample of 14 preceptors who had received either high or low scores from first-year students on the MedEd IQ,<sup>®</sup> a standardized tool for assessing ambulatory clinical training experiences. Transcripts were analyzed using a qualitative approach. **Results:** High-scoring preceptors were distinguished by six attributes: welcoming novice clinicians as legitimate participants in a community of practice, creating a central role for students in patient care and teaching, regularly engaging students in self-reflection to monitor their progress, helping students discover learning opportunities in routine patient encounters, using feedback to shape rather than evaluate student performance, and creating an environment where novices felt comfortable practicing new skills with patients. **Conclusions:** The results suggest that high-scoring preceptors provide a decidedly different experience through their approach to the challenge of training inexperienced students. These findings have implications for preceptor selection criteria and faculty development curricula.*

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Medical students in clinical clerkships increasingly are being placed in community physicians' offices, where clerkship objectives emphasize early experience with patients, physician-patient communication skills, physical examinations, and clinical reasoning.<sup>1-5</sup> Teaching in these clerkships relies on volunteer faculty in diverse training sites, raising concern about variability in instructional quality<sup>6-8</sup> and spurring interest in its assessment.<sup>8</sup>

One response has been development of the MedEd IQ,<sup>®</sup> a standardized 25-item tool for assessing students' clinical training experience outside the teaching hospital.<sup>9,10</sup> Tested for predictive validity,<sup>10</sup> reliability, and generalizability across multiple training sites,<sup>11,12</sup> the MedEd IQ measures four constructs important to ambulatory instruction: preceptor activities that facilitate

learning, the role of the site as an effective learning environment, the availability of learning opportunities, and learner involvement in clinically relevant experiences. The instrument goes beyond traditional student ratings of teacher effectiveness by capturing a spectrum of experiences and processes that influence learning, and so it can be useful in identifying training sites in which improvements might be made. To effect such improvements, however, it is necessary to better understand preceptor perspectives on teaching. The research reported here explored differences in teaching strategies that distinguish preceptors with high MedEd IQ scores from those with low scores.

### Methods

A purposive sample of the 10 preceptors with the highest scores on the MedEd IQ preceptor subscale (preceptor activities that facilitate learning) and the 10 with the lowest scores was drawn from among the 59 preceptors participating in the first-year "Clinical Practice of Medicine" course at the State University of New York at Buffalo in 1998 and 1999. Approval was first

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obtained from the university's Institutional Review Board. The 20 preceptors had received an average of two MedEd IQ evaluations (a range of one to four). Fourteen of the 20 preceptors agreed to participate, of which eight were in the high-scoring group, and six were in the low-scoring group (preceptors were blinded to their ranking). Reasons for nonparticipation included relocation, scheduling difficulties, and lack of interest. Approximately half of the preceptors in both the high- and low-scoring groups were in academic community practices, and half were in private practices (three academic, four private, and one emergency room practice among the high scorers; three academic and three private practice among the low scorers).

#### Data Collection

An interview protocol was developed, consisting of four open-ended questions derived from the MedEd IQ subscales reflecting preceptor activities, learning opportunities, and learner involvement. The questions were (1) How do you encourage participation? (2) What strategies do you use to assess students' learning? (3) How realistic is it that each patient encounter is a learning opportunity? and (4) How do you give students specific tips to improve? Questions were pilot tested by the interviewer with an experienced community-based preceptor not involved in the study for face validity, clarity, and relevance.

To ensure that an investigator blinded to the preceptors' scores conducted the interviews, a medical student in the school's summer research program was trained in the use of clarifying probes through participation in mock interview scenarios with three of the investigators. Interviews occurred in preceptors' offices over 4 months.

#### Data Analysis

A total of 210 minutes of taped interviews were transcribed and analyzed manually. An "editing style" of analysis<sup>13</sup> was used.

Five reviewers (two course directors, two medical education researchers, and the interviewer) worked individually and as integrated members of an analytic team. Each reviewer first read each transcript, highlighting key passages and noting observations. Next, each reviewer analyzed the responses within a single question-based theme, and, in later stages, they reviewed as a group, debating observations and identifying broad overarching themes. Themes were compared to identify similarities and

differences in instructional styles between the two preceptor groups (Table 1).

#### Results

##### Overarching Themes

Clear differences were found suggesting that high-scoring preceptors had discernable instructional strategies regarding enhancing learner participation, monitoring student progress, recognizing learning opportunities, and providing feedback. Across these areas, two overarching themes stood out: (1) the problem of the novice and (2) the manner in which preceptors conceptualized the process of instruction.

**Problem of the Novice.** First-year students are eager to acquire technical skills but often find the balance between observation and participation skewed toward observation and find opportunities for active involvement insufficient.<sup>14</sup> Yet, in ambulatory settings where quick problem solving is critical, allowing students to experiment and sometimes fail may be inappropriate. While both high- and low-scoring preceptors clearly valued the presence of students in their practices, students' lack of knowledge and clinical experience challenged preceptors' repertoires of teaching strategies, as evidenced in comments such as:

First-year students are tough to teach. You can't really expect them to do much. They are still developing their communication skills.

High-scoring preceptors approached this problem by crafting learning opportunities to develop students' limited skills. As one preceptor suggested:

Table 1

Patterns of Differences in Instructional Approach Between Preceptors Rated High and Low on the MedEd IQ<sup>®</sup>

Theme	High-scoring Preceptors	Low-scoring Preceptors
Learner participation	Early and meaningful involvement	Observation
Monitoring progress	Listening to students	Questioning students
Learning opportunities	All patients represent learning opportunities	Limited to patients with interesting findings
Feedback	Shape performance	Evaluate performance
Problem of the novice	Encourage hands-on practice	Encourage observation
Conception of instruction	Integrate students into the professional community	Achieve curricular goals

To get over the fear of asking questions, [students] need to feel that they are the ones to go in [the exam room] initially.

They also encouraged students to take small risks in overcoming their lack of confidence, urging them to:

. . . auscultate the heart, the lungs, examine the patient, even if you are not sure of what you are looking at. There is nothing like that for getting . . . started.

Low-scoring preceptors had few proactive strategies to offset students' lack of experience. Acknowledging the conflicting priorities of seeing patients and trying to create an interesting experience for students, they suggested that the burden of learning falls primarily on the student. As one preceptor asserted:

They . . . learn just by being here. It's immersion in the culture. I don't think there needs to be an . . . emphasis on clinical medicine.

**Conceptions of Instruction.** Medical education research has narrowly characterized teaching as a one-to-one relationship between teacher and learner. Community-based instruction, however, requires an expanded view of teaching. When experiential learning theory<sup>15</sup> is used to examine the process of instruction, a view emerges in which not all teaching takes place when teachers talk to students or lead a discussion. A teacher who provides access to patients, and guides students to use patients as resources, is engaged in teaching.

Consistent with the paradigm of situated learning,<sup>16-18</sup> high-scoring preceptors conceive learning as a social process. In their offices, medical students become temporary members of a community of practice.<sup>19-21</sup> Here, teaching and learning occur collaboratively, with the preceptor leveraging opportunities to connect students, staff, and patients who naturally work together in informal, impromptu ways. As stated by high-scoring preceptors:

Our goal is to include [students] in the office routine and the care of patients. We make it clear to patients we are a teaching site. The patients know it, and they love it. [They] do not feel put upon and want to help students.

A medical student is just as important as an attending from the patient's point of view.

Patients are more at ease with students. They sense the student wants to listen to them. I have actually been given valuable information [about patients] from students.

From this perspective, learning is less about absorbing information than it is about becoming part of a community. It is a social process built around informed participation in which students learn to handle problems that may not be addressed in the official curriculum. As one preceptor described it:

Students will see things that are not in the syllabus . . . interactions with the staff, what happens when the patient is sitting in the room feeling frustrated, . . . the daily workings of a practice—scheduling conflicts, fitting patients in, late arrivals, challenging personalities, insurance companies, formularies, and the realities of life in medicine.

Another explained how office-based training differs from the classroom:

Seeing a [standardized] patient, you may have to feel for a liver . . . or listen for a heart murmur. But in the office you may actually get a whopping heart murmur or a big liver. Seeing a [standardized] patient, you know it is a [standardized] patient. Here, we give you a chart and say, 'Go in and see a real patient. You've got a kid who is sick and a mom who is complaining. Go figure it out. We [preceptors] are backup.'

Hearing stories of sensitive issues and difficult patients exposes students to the accumulated wisdom of the preceptor, taking them beyond the official curriculum.

I give them tips on how I might have resolved [an] uncomfortableness or deficiency in myself. I might say, 'Asking sexual questions is hard. Here are some techniques that I use to make it more comfortable for me and the patient.'

The responses of low-scoring preceptors did not reflect this integrated view of the triad of teaching, learning, and the environment. Rather than seeing learning as a social process in which students are colleagues in a community of professionals bound by common responsibility, they see their role as supplementing book and classroom training with on-the-job practice, providing a laboratory where students develop confidence in the required curricular objectives. They rely heavily on the apprenticeship model to structure and manage day-to-day instruction. For example, one low-scoring preceptor noted:

Students go in to see patients, they tell me what they found, the history and exam findings they have. I listen to see if it makes sense. Then I go in to see the patient with the student and review the history and do the exam, making sure we match up . . .

Although an important curricular goal for students is assimilation in the culture of medicine, low-scoring preceptors described few strategies for engaging students in the implicit, informal learning opportunities required to do this, other than "allowing students to learn just by being there." This stands in stark contrast to the dialogue, coaching, and shared practice described above in the stories of high-scoring preceptors.

#### *Interview Responses*

In terms of preceptors' responses to the four specific interview questions, differences emerged in preceptors' approaches to learner participation, monitoring progress, learning opportunities, and feedback.

**Learner Participation.** Students value active involvement with patients.<sup>14,22,23</sup> Learning theories demonstrate that students need meaningful roles in caring for patients.<sup>24-26</sup> A challenge for community-based teachers is integrating students into their offices with minimal disruption to patient care.<sup>27,28</sup> The preceptor's role in facilitating participation is an important factor that affects instructional quality.<sup>9,14,23</sup> The preceptor coordinates a learning experience by defining expectations, selecting patients for students, and providing information.

In approaching this task, high-scoring preceptors not only stressed early involvement of students in the care of patients and in the functioning of the office, they also emphasized meaningful involvement. Two preceptors explained:

As quickly as possible, we get them to see patients on their own.

I encourage them to, in between patients, go and see some patients on their own to practice skills like using the oto-ophthalmoscope.

The high-scoring group further described a willingness to integrate students into the practice, despite their inexperience:

[Students] are as much the primary caregiver as possible . . . I . . . have them go in, take the history, do as much of the physical as they are capable of at whatever level they start, and continue with the care until the patient leaves.

Low-scoring preceptors seemed reticent to actively involve students in the health care team. Instead, they have students observe as they demonstrate. As one preceptor noted:

I usually take them in with me to see patients; as they get a little bit more experienced, I let them try to do it on their own.

**Assessing Student Learning.** Students stress the significance of preceptors' accurate assessment of their skills and knowledge as an important component of instructional quality.<sup>23</sup> Moreover, the preceptor's ability to assess trainees' knowledge and skills and to provide focused instruction has long been the goal of faculty development programs.<sup>29</sup> One description of teaching styles emphasizes that a facilitative and less-assertive approach encourages the exploration of students' ideas and self-reflection.<sup>30,31</sup> High-scoring preceptors used such a learner-centered approach to monitor student progress. For example:

[I monitor progress] by the questions they [students] ask.

I love to go in and just watch what [students] are doing, ask for their feedback.

Low-scoring preceptors, in contrast, depend on the teacher-centered style of Socratic questioning to monitor student progress:

I ask standard questions.

I have a comfort level of what I think they ought to know . . .

**Learning Opportunities.** Ambulatory training is a process of preparing for, learning from, and reflecting on patient encounters.<sup>32</sup> Patients play an active educational role beyond being objects of clinical examination for specific diseases. While learning opportunities may happen by chance, they are more likely to occur when preceptors and students seek them in every patient.<sup>23</sup>

Low-scoring preceptors said they did not believe that all patients presented learning opportunities. For them, unless patients have "interesting findings," student learning is limited. As one preceptor exclaimed:

From each patient they expect to learn something new?  
You may not always see something new!

In contrast, high-scoring preceptors viewed all routine patient encounters as potential opportunities for students to practice communication skills and build relationships:

The more 'normals' they see, the more 'abnormals' they will pick up.

Every time they see somebody, they learn something, a different way of asking questions or seeing how different people react to the same question.

**Feedback.** Performance-specific feedback is highly valued by students; non-specific evaluative feedback (eg, “good job”) is less valued, doing little to improve students’ skills.<sup>29</sup> High-scoring preceptors used a collaborative and motivational style of delivering feedback. They perceived it as an opportunity to teach, not simply to identify shortcomings:

I tell them not to feel that they failed, go back and ask the patient that question. You do that all through medicine.

What you did was really great, although you might want to try it this way next time.

When asked how they give students specific tips to improve, some low-scoring preceptors said they did not see the need to do that. Others considered feedback to be evaluative, explaining that they focus on what students overlook in patient encounters:

If it is something they said or a physical finding I mention it to them . . . I demonstrate exactly what is needed.

I pull out my book and explain to them what they missed . . . I make sure they didn’t forget ‘GYN’ or psychiatric issues.

## Discussion

These qualitative findings elucidate the meaning of the quantitative MedEd IQ ratings, adding breadth to understanding of the learning experience in medical offices. The interviews suggest that there are identifiable differences in teaching strategy between high- and low-rated preceptors, which could inform preceptor selection criteria and faculty development curricula. Specifically, highly rated preceptors welcome students, as novice clinicians, into a community of practice as legitimate participants; create a central role for students in patient care and teaching; regularly engage students in self-reflection as a way of monitoring their progress; help students discover learning opportunities in the more-routine patient problems; use feedback on their performance to shape rather than simply evaluate students’ practice; and create an environment in which novices feel comfortable practicing new skills on patients.

## Limitations

Because differences may exist that were not identified in this study, a further exploration of high- and low-rated preceptors utilizing a larger sample is warranted. Through replication across other institutions and programs, it will be possible to determine if differences identified in this study indicate a general trend. This study is based on a limited number of interviews; the

findings may not be generalizable to other preceptor groups. Although the results are specific to one particular educational program, they suggest features of community-based instruction that deserve further investigation.

## Conclusions

The present study represents an additional step toward a more comprehensive understanding of the variability of instruction in community-based settings. Our findings have implications for the type of skills and expertise that community preceptors may need to develop. Resultant faculty development should emphasize interventions that help preceptors develop strategies for early and meaningful student involvement, listening to as well as questioning students, helping students recognize learning opportunities in all patients, shaping student performance, encouraging hands-on practice, and integrating students into their professional community.

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