A Problem-Oriented Precepting Method

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An organized method of clinical precepting may increase preceptor effectiveness. Problem-oriented precepting is an organized teaching method directed not only at achieving high-quality care for the presented patient, but also at solving the problems of the medical provider that block that goal. The precepting method consists of the following steps: (1) identify initial impressions, (2) confirm or refute these impressions, (3) identify the problem, (4) develop teaching goals, (5) devise methods to achieve these goals, and (6) evaluate outcome. The use of this step-by-step process permits earlier definition of resident problems, which can improve the resident's problem-solving ability.

The precepting of residents is often unplanned and undirected, a situation that becomes apparent both from casual observation and from reading formal research reports. Preceptors are more likely to give impromptu lectures than to question skillfully, more likely to provide their own answers than to focus attention on the process of arriving at answers, and far more likely to concentrate on immediate patient management issues than on the learning problems of the resident. Preceptors are often unaware of their teaching objectives or their teaching style.

To change this situation, there must first be the conviction that present precepting can be improved. Pointing out what is wrong, in and of itself, will not necessarily help. There is the need for more support for preceptor training, more rewards for good precepting, and more structured precepting to guide clinical teaching. In this article a structured method of precepting will be presented. With structure there exist possibilities for more definitive research, more administrative emphasis, and a concrete way for faculty to improve their teaching efforts.

Background

The problem-oriented medical record provided an active means for organizing the components in managing patient care. The keystone of Lawrence Weed's method was his insistence on getting an adequate data base before defining problems and planning management. A similar case can be made for clinical precepting.

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A review of the literature in medical education, especially that related to teaching residents, revealed precepting is in need of a rational structure that would begin by assembling a broad data base and would at the same time provide the preceptor with a means to enhance awareness of his or her teaching interventions. The structure should also emphasize problem solving while encouraging the preceptor to be more collegial in the consultative relationship with the resident.

Geyman[1] stated in 1978 that "a didactic teacher-oriented style of teaching pervades, with less attention to the real needs of the student." He called for a reorientation of medical education in which attention would center on learning rather than on teaching by facilitating the resident's participation.

Collins and colleagues[2] observed the role of the attending physician and found little attempt to challenge, stimulate, encourage, or correct. In their study the house staff said that neither was their feedback on their formulations adequately assessed, nor were they skillfully guided to improve.

In 1977, Stritter and Hain[3] reported similar findings. The teaching behaviors most often cited as least effective were those that failed to provide feedback; instead, preceptors dwelt on specific content (lecturing) rather than a problem-solving approach to patient care.

Observing precepting behaviors in community health centers, Bazuin and Yonke[4] found the faculty were lecturing far more than engaging in problem solving. When students presented cases in a haphazard way, the faculty indulgently filled in the necessary pieces. The authors concluded from their study that the faculty did not approach their task of clinical teaching in any systematic way.

The Problem-Oriented Precepting Method

Although the term *problem solving* is overused and perhaps abused, the act of engaging in fruitful clinical problem solving can be said to involve the ability to sense problems, obtain an adequate data base, cluster information, form hypotheses, test hypotheses, formulate and execute appropriate interventions, and finally evaluate the effectiveness of the interventions.

These abilities do not work in a linear relationship; rather, they are components of a process that is likely to return several times to previous components during the course of solving a single problem. If a similar set of components for precepting were developed, it could provide preceptors with a structure for teaching interventions that would utilize a problem-solving process.

Six important components of problem-oriented precepting were identified that could operate within the time constraints necessary in most precepting arrangements. Using these steps, the preceptor is asked to (1) identify initial impressions of the resident's patient management from the resident's presentation of the patient, and then to (2) confirm or refute these initial impressions. If initial impressions are not confirmed, others will have to be generated. During this process a focusing will occur that enables the preceptor to (3) identify the resident's problem(s) clearly. With clear problem definitions, the preceptor can now move toward (4) developing teaching goals and (5) devising or selecting methods to achieve the goals and objectives. Finally, the preceptor must (6) evaluate the effectiveness of his interventions and decide whether the methods produced the desired outcome.

Case Example

The following example, taken from a precepting encounter, illustrates the use of this method.

You are precepting. A second-year resident enters your office speaking in a hurried manner . . .

> I just saw a 25-year-old woman, a secretary who has had a decreased appetite and a 5-pound weight loss in the past three weeks. She has no other complaints and has not been dieting or taking any medications. She denies any recent stress. A complete review of systems and physical examination are normal. I saw her last week and did a complete blood count with differential, SMA-18, T_4, VDRL, urinalysis, urine culture, and Pap test and planted a PPD. Everything is negative. Would you do any other tests?

You sense that the resident is in a hurry, and you decide to take a few minutes to stress the need to obtain a good psychosocial history before proceeding further. You also speak briefly on the costs and benefits of laboratory testing.

The resident thanks you and returns to the patient to repeat a psychosocial history. During the resident's

questioning the patient again denies any emotional problems, but states, "I think there must be something seriously wrong with me."

The resident is anxious and not sure how to proceed. She decides to order a chest x-ray examination and gives the patient an appointment to return the following week.

The precepting in this case reflects a reasonable analysis of the patient and the resident's problem; the patient in fact was depressed, and the resident did not get an adequate psychosocial history. However, more could have been done to understand the reasons for the resident's omissions in taking a more complete psychosocial history.

Using the problem-oriented precepting method expands the preceptor's understanding of the resident's problems and would have revealed that the resident could not obtain an adequate psychosocial history because she did not yet have full command of skills in taking a psychosocial history and thus missed important patient cues revealing depression. In addition, it was discovered that the resident was anxious that day because she had three patients still waiting as a result of her inability to manage office time efficiently. These problems prompted her to rely on laboratory tests as a quick way to arrive at a diagnosis.

A more detailed examination of each step illustrates how the problem-oriented precepting method can be used.

Identify Initial Impressions

It has been shown that experienced clinicians frequently generate hypotheses that are used to orient and guide further explorations for additional information.[5] It is also natural for the preceptor to begin formulating questions and hypotheses as the resident is presenting the patient. In the case example, the resident was presenting rapidly. There could be several possible impressions: "She is speaking rapidly, she must be nervous about something," "She hasn't taken an adequate psychosocial history and has missed a depression," or "She recited every laboratory test because she is depending on the laboratory to resolve this problem."

It is important that the preceptor identify his or her initial impressions because the testing of these initial impressions or hypotheses is critical to identifying accurately the problem-solving difficulties of the resident. In the example, the preceptor formulated some initial impressions, but did not test them further, a critical omission that precluded more accurate problem definition.

Confirm or Refute Impressions

Initial impressions must be confirmed or refuted to test their validity. This can be done in a number of ways. The preceptor may pose a question or ask the resident for clarification or for more history. In addition, the preceptor may wish to check a physical finding or observe or question the patient directly.

The process of confirming or refuting impressions often leads to new impressions and finally to problem identification. In the case example, the preceptor could have confirmed or refuted his impressions that the resident was anxious by asking, "You seem upset today, is anything the matter?" This question may have opened a dialogue that would have revealed the resident was anxious because she had three patients still waiting. Such questioning may have unraveled the difficulties the resident was having organizing her time in the office.

The impression that the resident did not obtain an adequate psychosocial history could have been confirmed or refuted by asking the resident for specific components of the patient's psychosocial history. The resident's response would have indicated the variety and depth of information the resident obtained. A scanty response to this question would have confirmed the initial impression of an inadequate psychosocial history, and might have prompted the preceptor to observe the patient directly, thus revealing to him the cues of body language and speech indicating depression that the resident missed during the interview.

Finally, asking the resident to review her rationale for ordering individual laboratory examinations would have confirmed or refuted the impression that too many tests were ordered.

Confirming or refuting initial impressions is essential if the preceptor wishes to avoid being led astray by his own initial impressions. Although it is reasonable in this example to assume that the resident had not taken a psychosocial history, the

following scenario could also be constructed from the same presentation:

The resident had taken an adequate psychosocial history that revealed no unusual stress. The patient was not depressed, but had been weighing herself on a defective scale and became concerned that her weight was falling. Not aware of this history, the resident had ordered a battery of tests searching for organic disease. The resident had no problem managing her office time, but was anxious that day because she had to get back to the hospital, where she had an admission waiting.

It is important, when attempts are made to confirm or refute impressions, that the preceptor avoid the danger of making the resident feel that he or she is being grilled. When questioning a resident, explain the reasoning behind the question to defuse a defensive reaction and maintain a collegial spirit. Sometimes it is useful to explain to the resident there are several hunches but the questions related to them cannot be answered directly until more information is obtained. Empathizing with the problems or frustrations of the resident is also helpful in opening dialogue to understand the difficulties the resident is having with problem solving.

Identifying the Problems

Having gone through a process of confirming or refuting impressions, the preceptor is left with a broader and more accurate understanding of the resident's problems.

In the example the following could be a possible list of identified problems:

1. Cannot detail components of a psychosocial history
2. Misses important patient cues
3. Relies excessively on laboratory tests
4. Manages office time inefficiently

Develop Teaching Goals

After problems are identified, they can be reframed in terms of goals for teaching. In the example given, the teaching goals would be to (1) improve skills in obtaining a psychosocial history, (2) increase awareness of patient cues, (3) increase understanding of the appropriate use of laboratory tests, and (4) enhance skills in efficient use of office time.

Since precepting time is limited, only one or two teaching goals should be attempted in each encounter. In this example, if the resident has three patients waiting, it is most important to guide her toward exploring the problems of the patient in her office and in seeing her remaining patients efficiently.

Devise Methods to Achieve Goals

Having defined the teaching goals, it is easier for the preceptor to concentrate on ways to accomplish them both immediately and for the future. In the example cited, teaching methods might include a discussion of what areas to include in a psychosocial data base or an actual demonstration by the preceptor of using patient cues to obtain a psychosocial history. To help the resident develop these skills, it would be useful at a later date for the preceptor to observe while the resident interviews a patient. Asking about the patient's body posture and tone of voice would also help sensitize the resident to those cues. Methods of teaching management of office time could include teaching the resident to satisfy the chief complaint early in the session or to plan ahead for each patient visit to improve efficiency during the session.

Evaluation

It is important that the preceptor evaluate not only his understanding of the resident's learning needs but also the success of teaching methods in accomplishing teaching goals. Asking the resident whether he or she feels comfortable with the conclusions drawn from the encounter may sometimes be a useful indicator of how well learning needs were addressed. To evaluate the success of teaching methods in achieving goals in this example, the resident's ability to obtain a psychosocial history and order laboratory tests conscientiously could be observed in subsequent precepting encounters. Modification of teaching methods may be necessary when they do not result in enhanced resident skills. Poor response may also reflect a need to reassess the accuracy of the identified problem.

Experiences With Problem-Oriented Precepting

The problem-oriented precepting method has been used by members of the faculty of the Department of Family Medicine of Montefiore Medical Center in their precepting, in teaching third-year residents to precept, and in workshops for the Society of Teachers of Family Medicine.

Using this method, the faculty have found themselves speaking less and listening more. With the use of this method, residents come for precepting more often and report that the precepting experience is better when the method is used.

In an elective in preceptor training offered to third-year residents, the residents find this method helps them organize their thoughts, improve their understanding of the precepted resident's problem-solving behavior, and increase their confidence in their ability to teach.

At regional and national workshops both experienced and inexperienced preceptors who are members of the Society for Teachers of Family Medicine evaluated the method very favorably. Many participants said they planned to use it with residents with whom they recognized difficulty in precepting and were also going to use it to teach their third-year residents in preceptor training.

The problem-oriented precepting method has not been verified scientifically as a method that will improve teaching. Preliminary experience has been extremely favorable, but more evaluation and research is necessary.

Discussion

Most precepting in ambulatory medicine occurs when the resident brings a question about a clinical problem to the preceptor. The preceptor and the resident often focus attention on the clinical problem while paying less attention to the resident's problem-solving process. The resident is expected to learn problem solving without being engaged in the process with the preceptor.

Frequently, the preceptor does not use a problem-solving process and jumps prematurely to conclusions about the residents' knowledge, skills, and attitudes, which results in precepting that is superficial and misdirected. In addition to spending time inefficiently, teaching in this manner can result in providers who have not developed problem-solving skills and therefore render inadequate patient care.

Deliberate attention to the problem-solving ability of providers is essential to good precepting. Ignoring this process may result in a resident who cannot solve problems adequately, even after three years of training.

Evaluation of residents occurs periodically in family practice programs, but residents often complain that their evaluations are too vague and do not detail both their strengths and their weaknesses. The use of observable behavior to define both achievements and areas that require improvement will increase the value of evaluations.

The use of a problem-oriented precepting method also encourages dialogue among preceptors as they begin to develop a common understanding of residents' problems. This benefit can lead to more intensive and creative efforts by preceptors to improve residents' skills in problem solving.

Conclusions

Preceptors have been exhorted to teach better, to be clearer in their objectives, and to use a variety of teaching interventions. Although the components of the teaching and learning process are being addressed, no one has come forward with a step-by-step process a preceptor can learn to follow. The problem-oriented precepting method is such a process. It assumes that problem-solving capabilities can be taught and sharpened. Using this method will require less apprenticeship teaching by demonstrating and lecturing and more teaching interventions designed to sharpen the residents' thinking and problem-management skills.

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