

## Arrows in the Quiver: Being on Target

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### *Introduction*

The physician's role as preceptor is an extension of his role as a diagnostician. However, here the focus is on the preceptor's student rather than on the patient. As physicians we have developed skills to diagnose individual patients and determine how best to meet their needs. These skills include observing, questioning, discussing, and then determining an action plan. These same skills can be applied just as well to teaching students. In other words, the target of diagnostic observations is the learning student, rather than the patient and the plan of action is how and what to teach rather than how to treat.

A metaphor that is helpful in thinking about the diagnosis and treatment of learners is that of the archer. The archer selects a target, determines what is required to hit the bulls eye by assessing distance, wind, speed, and visibility; then selects the best arrow from among many in the quiver to reach the goal. For the preceptor, being on target means accurately assessing the learner's abilities, knowledge, and readiness. The arrow represents the choice of teaching approach - and there are many - to maximize the chance of a bull's eye for learning.<sup>1</sup>

Being on target means selecting the target, determining the context of the target, selecting which of the arrows in our quiver to use, and where to aim the arrow for the best effect. When this process is done correctly, the interaction between the patient and the doctor does not need to be substantially different from normal. "Teachable moments" can be useful to both the patient and the learning student - if an effective strategy for teaching is used.

The other articles in this sequence on teaching have focused on the basic skills of being a preceptor: introduction and orientation of the medical student to the preceptor's practice, the One-Minute Preceptor as an effective means to create teachable moments, and the concept of using RIME as a way to effectively critique the learner by diagnosing the stage the learner occupies, giving positive feedback, and providing corrective feedback. Adding additional arrows to the quiver of the preceptor is the focus of this paper. Checklists for each of these arrows are included so that the preceptor can identify essential components for each.<sup>2</sup>(Appendix)

### *Choosing and Priming the Patient*

I remember my first patient interview. I was assigned to interview a young woman who had been a mother for only a month. The resident staff suspected that she had multiple sclerosis. She did not know the diagnosis and I was not told of their suspicions. When I blithely got to the review of systems about neurologic conditions, I focused in on each new positive symptom she said she had. By the time I had exhaustively demonstrated to her how sick she was, both of us had lost composure. In retrospect it was unfair to the patient and to me, an unsuspecting novice, to expect us to keep composure.

In choosing a patient appropriate for the learner one must take into account the level the learner has reached. The age of the patient is a factor in choosing the best patients. Some patients may be too young or inexperienced and some too old or confused. Gender may be an issue in some cases because some patients are very modest and would find certain settings embarrassing or intrusive. The complexity of the patient is an issue in matching the anticipated level of the learner. It is always helpful to find a patient who has developed a trusting and grateful relationship with the preceptor. It is much more likely that such a patient will understand that the preceptor will be an appropriate supervisor. Patients with good communication skills who are able to list problems by priority would be excellent candidates. Such articulate patients are valuable assets to medical education. Patients with teaching experience or those who have participated before are especially helpful. A patient who has had other good experiences with students is often eager to help again.

Patients who are not especially appropriate are those who wander when giving a history. Other poor choices include patients whose review of systems is always positive no matter what. These patients are especially difficult for learners at the most basic level since these learners will never see through the chaff. Patients who are especially ill tend to be difficult until the learner is much more experienced. Finally, some patients have issues they judge too sensitive to allow them to participate comfortably. For example, issues involving marital problems, substance abuse, psychiatric problems, issues of abuse, and certain end of life problems.

Once a patient has been identified, it is important to obtain consent to work with a student and to prepare them for the encounter with the student. There are several good ways to prime the patient for the interaction with the learner. The patient who has been chosen in advance for an examination will already know what to expect with a student. I think it facilitates the process to have a formal notice posted for patients explaining that the preceptor is pleased to be participating in supervised clinical learning for medical students. Most patients understand that becoming a physician has a true apprentice component. Some offices will post notices for patients about learners participating in the office in prominent places in the reception area, at the front desk, or in the waiting rooms. Patients selected for learners to interact with can benefit from a short biography describing the learner's background, level in the medical school, future goals, and student's responsibilities in the office.<sup>3</sup> The preceptor can provide a fact sheet for patients that discusses the objectives of student encounters, the reasons the office was chosen for teaching, the preceptor's reasons for participating, the level of education of the students, and the expected changes in routine of the visits relating to schedule and to supervision by the preceptor. (Table 1) The preceptor can make it clear that the physician-patient relationship is not threatened by the "new" type of visit.<sup>4</sup>

**Table 1: Sample Fact Sheet**

**Facts about today's medical student**

Our office is pleased to introduce Lawrence Tucker, who is in his third year of medical school. Lawrence Tucker joins us today with the immediate goals of learning interviewing skills for common medical problems, accurately telling his preceptor about the problems, and reaching the best treatment plan. In the future, he hopes to be practicing as a surgeon in Orthopedics. Lawrence Tucker graduated from UCLA with a degree in Physiologic Sciences and Neuroscience. He was in the Marine Corps for six years before attending college.

**Activated Demonstration**

Activated demonstration refers to the situation in which the student observes the preceptor in some aspect of patient care. This approach may be particularly appropriate when the student is new to a clinical setting or inexperienced with the problems to be addressed in this patient visit. Activated demonstration is not synonymous with tagging along. The

preceptor has selected a specific event to be observed because it offers something this particular student needs to know. The preceptor has prepared the student for the observation: what is going to happen, where to focus one's attention, and what role, if any, the student is expected to take during or after the encounter. During the observation, the teachable moments can be significantly augmented if the preceptor points out findings while examining the patient or verbalizes the rationale for a particular clinical decision or approach. Activation also requires discussion of the learning points following the observation.

**Two-Minute Observation**

The two-minute observations allow the preceptor to observe the student during two-minute encounters with patients. For those preceptors who have recently observed different medical students performing history and physical examinations on hospitalized patients, it is easy to see the value of a two-minute time period. In the ward setting, the preceptor moves from room to room observing short snatches of time without being obtrusive while providing feedback to the learning student.

This same strategy used in physical finding rounds can be applied in the ambulatory setting. The preceptor first determines what aspects of a student's performance are most in need of feedback then sets up an observation to gather data. The two-minutes might be taken from any aspect of the encounter. For example, the preceptor may observe the student establish rapport during the first two minutes of an encounter then slip out of the room while the student completes the history. Or the preceptor might have the student conduct the interaction with a patient when they both go into the room after having heard the student's presentation and discussed next steps in the hallway. In preparing for the observation, the preceptor will need to make sure both the student and patient understand the goals and procedures to be followed. After the observation, there will need to be time for discussion and feedback of the student's performance.

**Case-Based Teaching**

Case based teaching is the most familiar teaching format to preceptors. In this approach, the student first sees a patient alone then presents the case to the preceptor outside of the room. A discussion ensues (using the one-minute preceptor model) and usually

the two see the patient together to complete the visit.

### ***Presenting with the Patient Present***

Allowing the student to present in front of the patient is a strategy associated with preceptor efficiency.<sup>5,6</sup> When using this approach, it is especially important to ascertain the student's level of knowledge prior to entering the patient's room. The learner at the most basic level is usually not ready for this presentation format. For example, if the learner is only at the most basic reporter level or barely at the interpreter level, then the learner and the patient may be in an uncomfortable position if the student is asked to produce a detailed plan of action when it is beyond the student's skill to do so. However, if the patient has been primed to the fact that the student is at a very basic level and that it is part of the learning process for the student to present what has been gleaned from the patient, then presenting in front of the patient may be done.

It is important for the preceptor not to take over unless the student has clearly missed the mark: the more naïve the student, the greater the tendency to take over. The preceptor should confirm the student's findings and plan of action in front of the patient in a way that meets the patient's expectations so that the patient feels that the information is correct and does not feel left out of the decisions. This is the appropriate moment to tactfully give feedback in regards to the student's diagnosis and management because the patient views the preceptor as the supervisor. The art of teaching is to confirm or correct the learner in a way that recognizes the value of the student's knowledge and effort. Balancing the needs of the learner and the needs of the patient requires an artful preceptor. Students are often reluctant to present in front of the patient because of the fear of embarrassment if the preceptor finds fault or corrects without tact. A student's conclusions can be respected even when other alternatives are suggested as better answers.

It is important in priming the student for such presentations to emphasize the power of words on patients. Many patients remember things said by their doctors for years, even when the doctors have long forgotten saying anything. Most students would never intentionally cause a patient to worry but when under stress, the student may blurt out a diagnosis without realizing the impact. For example, the preceptor could ask the question, "What do you think is going on?" and the student could give the following awful answers: "I read that this is how AIDS starts." or "It could be

cancer!" or "This must be heart failure." Some diagnoses carry such emotional impact that they have to be presented delicately to the patient. If the most likely diagnosis is serious, the patient will be devastated. If the diagnosis is very unlikely, then unnecessary concern may be created. If the learner suspects serious diagnoses, encouragement to alert the preceptor in advance of entering the room is essential.

The patient who has been primed in advance for the presentation will expect the student to be on center stage while the facts are related. The student should be encouraged to say, "As I tell the doctor what you have told me, please feel free to correct or add to anything I say, to make sure I'm as accurate as possible."<sup>7</sup> This approach will save time in the end. Students should take the lead in talking with the patient. They should be prepared to use regular English when possible rather than difficult medical terms. If the student is uncertain, it is best to acknowledge the uncertainty and explain how corrections will be made. Explain to the student in advance that you do not expect perfection because you remember yourself how much anxiety is engendered when presenting in front of an audience. The student should be allowed access to notes because accuracy is crucial. However, the more advanced the student, the less likely that notes would be required.

In a survey of ambulatory patients, Ferenchick identified several suggestions for more effective bedside presentations.<sup>5</sup> Don't cut off the patients, and encourage them to say more. Physicians should be attentive at all times; they should not be doing other things. Physicians should be seated during the presenting. Permission to present at the bedside should be obtained. The fewer the number of physicians present, the better. Everyone should be introduced. Explain confusing medical terminology, and remember that the patient is the one who needs help. Focus on the patient even though teaching is perceived as the goal of the presentation.

In their article entitled "Including the Patient in Student Presentations," Le Baron and Schillinger listed several advantages to student presentations.<sup>7</sup> Time is saved because the preceptor does not need to repeat the history, and it can be confirmed by the patient at the time of presentation. Accuracy is thus improved because the patient can add points if they were omitted. The preceptor can also assess the student's skill at establishing rapport and interacting with the patient. The patients generally declare their

satisfaction with the added attention.<sup>8</sup> The patients appreciate the chance to participate in the education of new doctors learn along with the students about their particular diseases and the reasons for the proposed treatments.

### ***Expanding the Differential Diagnosis***

In the One-Minute Preceptor, the student is asked to make a commitment to a likely diagnosis and support that diagnosis by synthesizing the data from the history, physical exam, or laboratory tests. Most of the time, students have no difficulty generating a likely diagnosis or even a very short list of differential diagnoses. There are times when the opposite task is appropriate for the student - expanding the possible diagnoses beyond the most likely. Here the goal is to teach the student how to generate, critically appraise, and prioritize all of the possibilities. Even though the context in which the patient is being seen might make some of these possibilities unlikely, the exercise provides the student with a useful tool for avoiding the personal bias created by the context of care and personal experience. For example, chest pain in the preceptor's office is much more likely to be innocuous than chest pain that would have caused the patient to go to an emergency room. A sore throat seen in the office is usually a simple pharyngitis rather than a symptom of meningococemia or leukemia. However, in briefly considering other possibilities, the physician avoids premature diagnostic closure.

Based on an assessment of the level of competence of the learner (e.g. using the RIME method to stratify), the preceptor can prompt the learner to move up to the next highest level at the time. Correctly identifying the most likely diagnosis is the essence of practicing medicine, but simultaneously assessing other possibilities is what expands the learner's potential for growth.

I favor having the students choose and support the most likely diagnosis first - as in the One Minute Preceptor. Once the most likely diagnosis is espoused, then I attempt to get at least one unlikely diagnosis as a way to set an agenda and opportunity for future learning. The question to the student after getting a commitment to the most probable diagnosis could be, "Can you think of an unlikely but consistent diagnosis for this case?" The mnemonic MINTS provides a simple framework to help the student move from a specific diagnosis to more general possibilities.

- M:** metabolic causes including hormonal (acid-base, diabetes, endocrine, lipid disorders, etc.)
- I:** infectious, inflammatory, or idiopathic causes (don't forget TB, Lupus, HIV)
- N:** neoplastic or nervous system
- T:** toxic or traumatic (drug-drug interactions, etc)
- S:** systemic including storage (collagen disorders, vasculitis, hemochromatosis, etc)

### ***Conclusion***

The ambulatory setting is a busy, often hectic, location for teaching. The preceptor can become more efficient as a teacher if he/she learns the skill of quickly diagnosing the learning needs of the student prior to selecting an appropriate teaching approach. Too often as preceptors, we fail to realize that options other than sending in the student alone then hearing the case presentation in the hallway are available to us. The checklists in the appendix can serve as reminders that each combination of student, patient, problem, and situation demands the careful selection of an arrow that will maximize learning from the teachable moment.

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## *Appendix*

### **Checklist for Choosing a Patient**

- Match the patient to the level of the learner.
- Consider the age and gender of the patient.
- Choose patients who communicate well.
- Choose patients who have participated before.
- Identify patients with teaching experience.
- Recall which patients are especially grateful and trusting.

### **Checklist for Priming a Patient**

- Provide a fact sheet introducing the student.
- Provide the educational goals of the program.
- Describe how the schedule will change.
- Emphasize that the preceptor supervises and approves each visit.

### **Checklist for an Activated Demonstration**

- Set up the observation.
  - Determine the learner's relevant knowledge.
  - Indicate what the learner should acquire from the observation.
  - Provide guidelines for what the student should do during the observation.
- Introduce the student to the patient.
- Include the student in the discussions with and examination of the patient.
- Provide for a brief discussion of learning points after the observation.
- Negotiate an agenda for future learning.

### **Checklist for the Two-Minute Observation**

- Discuss the purpose of the observation with the student.
- Explain to the student how the observation will be conducted.
- Once in the room, explain or have the student explain to the patient what will take place.
- Observe the student-patient encounter without interrupting.
- Leave the room without disrupting the student-patient exchange.
- Provide feedback to the student based on observation.
- Negotiate an agenda for future learning.

### **Checklist for Case-Based Teaching**

- Use questions to establish the student's understanding of the patient problem.
- Ask for the most likely diagnoses.
- Ask for a management plan.
- Probe for supporting evidence for the diagnosis and plan of action.
- Clarify student and preceptor roles before seeing the patient.
- If the preceptor and student saw the patient together, include the student in discussions with and examination of the patient.
- Provide constructive feedback on the student's performance.
- Negotiate an agenda and opportunity for future learning.

### **Checklist for Presenting with the Patient Present**

- Discuss the purpose of the presentation with the student before he/she works up the patient.
- Ask the student to alert you in advance about sensitive information or potentially serious diagnoses.
- Explain to the student how the presentation will be conducted.
- Once in the room, explain or have the student explain to the patient what will take place and invite them to participate.
- Listen to the student presentation without interrupting.
- Provide enough time (3-5 seconds) for the student to answer questions.
- Avoid usurping the case from the student unless clearly off base.
- Prompt the student for additional possibilities without alarming the patient.
- After the encounter, provide feedback to the student.

### **Checklist for Diagnostic Possibilities**

- Ask the student to identify the most likely diagnosis.
- Ask the student to support this decision with reference to patient data.
- Ask for two to four other possible diagnoses.
- Determine why these diagnoses are less likely.