The Seven Habits of Highly Effective Medical Educators

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What traits do effective clinical teachers possess? What things do they do that make them so effective and so popular? What characteristics of effective teachers have been found in the medical and education literature? How can you incorporate these traits into your clinical teaching skills armamentarium during an extremely busy emergency department environment? Lastly, why is teaching worth the time? The purpose of this presentation and handout is to prove to you that effective clinical teaching can be done by anyone who follows some very simple rules. In addition, taking the time to become an effective educator in the emergency department is a meaningful endeavor because it will indirectly lead to the care of a patient in the future.

What I hope you take away from this is that by incorporating the traits we will discuss into your practice you will make an impact on learners and the quality of care of future patients.

Ever wonder why certain people get all of the teaching awards? Ever look at a really popular teacher and wonder why you can’t do what they do? This presentation is being given for one reason and one reason only: to offer you hope, to convince you that teaching isn’t a popularity contest, and finally, to convince you that incorporating simple strategies into your clinical practice will result in you becoming the teacher you always wanted to become. Remember that we are talking about being an effective educator, which by definition, means you are making a difference in the educational life of the learner. Consider the difference between the educator who happens to teach a lot and the one who teaches the learner how to take good care of patients and become a life long learner. There is a tremendous difference between the two.

“Good learners” versus “good teachers”

There is a tremendous effort in academic medicine to make people good teachers. There are numerous faculty development courses, and it seems everywhere you look, people are discussing the topic “how to be a better teacher.” What we should consider, however, are the following facts about the teaching environment we work in:

- The act of teaching doesn’t always lead to learning
• Sometimes our best teaching falls on deaf ears
• Teaching in the ED is frequently done without learner involvement
• More focus on the learner, and not the act of teaching, may yield more effective learning.
• Teaching is frequently the easy part. It is making the teaching hit its mark that is the most challenging.

*Popularity vs. effectiveness-definitions*

There is a common misconception among academic physicians that those who teach the most are the best, most effective clinical educators. But, sheer volume of teaching doesn’t translate into being an effective teacher. Consider other aspects of education that play an important, if not vital, role in the development of the learner. What about feedback, being a role model, being a helpful mentor, and teaching with enthusiasm and with the learner’s needs in mind? The teacher who is always teaching may not employ any of these, or few of these, in their clinical teaching. Without adding in things like feedback to the teaching methods, how can this educator be considered effective? If you want to be considered someone who teaches a lot, the answer is simple: teach a lot in the ED and you will be perceived as someone who teaches a lot. *If your goal is to become effective and actually shape the learner into a competent, caring physician, then consider the seven habits your ticket to becoming the effective teacher you always dreamed of becoming.*

*Defining effectiveness*

The whole point of discussing the “seven traits” is to highlight what effective medical educators do in the teaching arena. Clearly, being a popular teacher isn’t the same as being an effective one. If it is a teaching award you are after, simply teach all of the time. Simply teaching with great frequency may get you the award you seek, but have you been effective? In other words, have you educated the learner to be a caring, competent physician?

*Teaching as an extension of direct patient care*

Some argue that they are too busy to teach or that they don’t think they are a good teacher or have any potential to become one. Others claim that the ED is too busy and that there is no time to teach. One should remember that, despite the obvious obstacles, teaching students, residents, or other health care professionals in the ED is a direct extension of patient care. That is, your instruction has the ability to change the way someone will treat a future patient. Thought of this way, teaching becomes a very powerful tool. And despite the inherent lack of monetary gain in teaching, the ultimate reward is that your role as an effective educator can make a significant difference in the life of a patient. Thus, “teaching in the ED is treating in the ED.” Consider how powerful this is.
Impediments to Teaching in the Emergency Department (Bandiera et al.)

What are some of the impediments to teaching in the ED? We are all familiar with how difficult it can be to teach during a shift.

- Competing demands
  - Patient care
  - Professional interruptions
  - Lack of understanding
- Time
  - Lack of time
- Lack of interest
  - Lack of trainee interest
  - Lack of faculty interest
- Lack of resources
  - Lack of funding
  - Lack of space
  - Crowded clinical environment
- Educational structure
  - Rapid trainee turnover
  - Nature of emergency medicine practice
  - Large number of faculty
- Poor preparation
  - Lack of instruction about teaching
  - Lack of feedback about teaching

Benefits of Being an Effective Clinical Educator

Why care? Why take the time to teach at all? What is it that drives people to teach?

- Money?
- Prestige?
- Personal satisfaction
- Making a difference in the lives of future patients

What do academic faculty think effective teachers do?

- “Respect. Treat your students with respect and they will like you.”
- “Lead by example.”
- “Enthusiasm is a must.”
- “No problem admitting that you don’t know the answer.” (this suggestion came up multiple times)

What do residents think an effective teacher does?

- “With every patient presentation, having the ability and the motivation to choose a teaching point, and something to take away from the encounter.”
“An effective teacher teaches in a conversational tone—they don’t lecture and simply distribute facts.”

**Habits of Effective Medical Educators**

A perusal of the medical education literature reveals numerous traits, or characteristics of effective teachers. Many of these we are familiar with. For example, effective teachers are knowledgeable, well organized, enthusiastic, and are models of professional behavior. Truly effective educators are also available, approachable, and have infinite patience. But, which traits or patterns of teacher behavior are mentioned most frequently in the literature and which ones are the most powerful at affecting change in our learners?

**What are the seven habits?**

T - e a c h i n g in the ED  
E - nthusiasm  
A - ppropriate feedback  
C - enteredness (learner)  
H - elpful  
E - levates to become independent  
R - ole model  

1. **Teaching**

“Undoubtedly the student tries to learn to much, and we teachers try to teach him too much, neither, perhaps, with great success.”

Sir William Osler  
After Twenty-Five Years, In Aequanimitas, 201.

Teaching in the emergency department can be a very challenging endeavor. We all are aware of how difficult it can be to accomplish this. With an out of control work environment, how can instruction take place? What does the literature say about how to teach effectively? What about in the emergency department?

The Microskills of Clinical Teaching (Neher, et al.):

- Microskill #1-Get a commitment  
  - Don’t give the learner the answer  
  - Wait for their response  
  - “What do you think is going on?”
“Why do you think the patient is here?”
“What workup would you like to initiate

- **Microskill #2-Probe for supporting evidence**
  - Why does the learner think the way they do?
  - What led them to a particular conclusion?
  - Why did you rule out ____?
  - Avoid giving them the answer

- **Microskill #3-Teach general rules**
  - The “educational hit and run” (Hayden)
  - Teach “digestible” chunks
  - Avoid taking over the case
  - Don’t teach too much…it won’t work.

- **Microskill #4-Reinforce what the learner did right**
  - Be specific. Tell them exactly what they did well.
  - Make it behavior specific
  - This builds on the learner’s self-esteem
  - Avoid at all costs: “Good job.”

- **Microskill #5-Correct mistakes**
  - Begin by having learner self-evaluate: “What could you have done differently?”
  - Offer specific observations and suggestions for improvement
  - Very useful to say,” Let me give you some feedback.” Announcing that feedback is being given might be more effective.

- **Microskill #6-Identify the next learning step**
  - Fosters self-directed learning
  - Offer specific resources for them to learn from
  - “Teaching prescriptions”-give assignments

**11 teaching techniques based on educational theory and expert experience**
(Heidenreich et al.)

- Orienting the learner
- Prioritizing learner needs
- Problem-oriented learning
- Priming: preparing the learner for bedside teaching
- Teaching pattern recognition-the “Aunt Minnie” model
- Teaching in the patient’s presence (TIPP)
- Limiting teaching points
- Use of reflective modeling-learner observes preceptor actions complemented by explanations
- Use of questioning
An effective teacher is armed with information and how to find it

An effective clinical educator knows how to access useful teaching material during a clinical shift. There are several ways to accomplish this. When questions arise that faculty can’t immediately answer, online resources can serve as a great resource. In addition, your ability to search for answers during an ED shift will show the learner that you are actively engaged in the learning process and that you care about the learner’s education.

- Keep a teaching file of interesting articles or abstracts
- Have at your disposal a list of web sites that can be used for teaching (EMRAP, EM Abstracts, Radiology sites, Dermatology atlases, Journal Watch Emergency Medicine, etc)
- Try to have online access to pertinent emergency medicine journals (Annals of Emergency Medicine, JEM, AEM) and other specialty journals
- Use online resources like Up-To-Date

One to two focal teaching points

One of the biggest mistakes made in clinical teaching is to try to teach too much. All of us have probably been in the situation where we ramble on for minutes (with good intention to teach) only to realize that real teaching pearls haven’t struck their target, the learner. Multiple authors have cited this as one of the most important aspects of clinical teaching. For some of us this might be difficult. In a sense, “less teaching leads to more learning.”

- Focus on one teaching point or general rule.
- Clinician-teachers often have too much to teach and are “eager to share all of their pearls of wisdom.”
- Give the learner a clear, concise teaching point on each case, then stop.

Finding the teachable moment

Every case has a teaching pearl. The key is in finding it. Even cases that appear mundane have a teaching moment waiting to be discovered. The most important aspect... is simply finding something to teach about the case. An example would be a patient who presents with chest pain. One teaching pearl (which takes a few seconds) that could be discussed could be: “Remember that older patients with cardiac ischemia may not have chest pain and may only have dyspnea.” Don’t tackle too much. For example, if teaching about a patient with asthma on a ventilator, don’t spend 10 minutes during a busy shift to discuss PEEP and its relationship to auto-PEEP. Instead, spend a minute discussing the general concept of permissive hypercapnia and how it can lower plateau pressures and reduce the incidence of ventilator-induced lung injury.
• Every case has a teaching point.
• Don’t try to teach too many teaching pearls at once.
• *The most important aspect of successfully using teaching moments is interpreting the learner’s readiness.* Don’t waste your time trying to impart knowledge if it won’t be effective. A learner who is hungry or who is looking over their shoulder at the chart rack isn’t ready for a didactic session on the etiologies of hypotension.
• Teaching must be tailored to the situation. How busy is the ED? How overwhelmed are the residents and students? What method you use and how long you spend teaching will depend on many factors that are out of our control.

**Listen more and talk less**

Some studies show that as much as 75% of the time spent with learners is used up by the teacher talking. This is important because listening to our learners will prompt what we teach. Studies show that that average amount of time faculty allow a student to answer a question is 2-3 seconds. What has also been shown is that increasing wait times will significantly increase the number of student responses. The literature actually suggests 17 seconds as the optimal wait time. Although this amount of time seems impossible, it simply highlights the fact that waiting even seconds longer for the student to formulate an answer will work. So, simply wait and don’t give them the answer. Resist the natural urge to say after the learner’s presentation, “Why don’t you go ahead and get an ECG, a CXR, and order a CBC.” *Good listening skills are vital to being an effective clinical teacher.*

**The four levels of learner sophistication** (Schwenk and Whitman 1984)

There are four levels of learner sophistication when it comes to learning new skills. The primary reason this is important is that *teaching at a level of understanding greater or less than that of the learner is unproductive, frustrating, or both.* What is the point? Know what level a learner is at.

• Unconsciously incompetent
• Consciously incompetent
• Consciously competent
• Unconsciously competent (faculty)

**What do emergency medicine learners want from their teachers?** (Thurgur et al.)

What do resident physicians think?

• Has a positive teacher attitude
  o Attentive to the learner
  o Enthusiastic
  o Approachable
  o Communicates
  o Encouraging/supportive
  o Open to questions

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- Flexible
- Sense of humor
  - Takes time to teach
  - Uses teachable moments well
  - Tailors teaching to the learner
  - Gives appropriate feedback

How do the results of this study relate to adult learning theory?

How accomplished teachers get it done in today’s emergency department?
What do faculty in emergency medicine think?

- Tailors teaching to the learner
- Optimize teacher-learner interaction
- Tailor teaching to the situation
- Actively involve the learner
- Actively seek opportunities to teach

2. Enthusiasm

*This is perhaps the most important of the seven habits.* Think back to teachers who inspired you. Were they excited about their topics? Of course they were. Odds are, most memorable teachers possessed an enthusiasm for their topic that many teachers don’t.

What is the “Dr. Fox Effect”?

In 1973, Dr. Myron L. Fox (a psychiatrist) delivered a lecture on *Mathematical Game Theory as Applied to Physical Education* to three separate audiences (55 people in all) composed of educators, school administrators, psychiatrists, psychologists, and social workers. Each lecture (one hour) was followed by a 30-minute question and answer session.

According to evaluations completed after each session, nearly 80% of the attendees rated Dr. Fox “an outstanding psychiatrist,” and agreed that “he used enough examples to clarify the material,” that “the material was well organized,” and that the lecture “stimulated their thinking.” No one criticized Dr. Fox or his presentation, nor did anyone question his authenticity.

This is interesting because “Dr. Myron Fox” never studied psychiatry in his life nor did he have a doctorate in the subject. He was an actor, trained for the task by the three men who wrote the lecture and set up the presentations: Dr. Donald H. Naftulin, Dr. John Ware, and Dr. Frank A. Donnelly.

What is the point? This actor presented a made up topic and was judged to be a very effective teacher. Remember that enthusiasm can make or break you. You can and will
have more of an impact on the learner if you are enthusiastic about what you teach. Think back for a moment and try to recall a teacher in your life who was enthusiastic.

3. Appropriate feedback

“Giving feedback, both positive and negative, is a critical part of the teacher’s responsibilities. Christian observed that Osler was particularly good at this. His criticisms of students and their work were incisive and unforgettable, but never harsh or unkindly; they inspired respect and affection, never fear.”

Christian, H. “Osler: Recollections of an Undergraduate Medical Student at Johns Hopkins.” Archives of Internal Medicine 1949;84:77-83

Well, admittedly, this is one of the least favorite aspects of clinical teaching. And, of course, you know as well as I do that giving feedback can at times be difficult, even excruciating. Many do not want to give negative feedback to learners. It is believed that the student might think less of the teaching or that the instructor will be construed as a negative person and “not a good teacher.” Remember, however, that we as educators have a vital role in training future physicians. Giving appropriate feedback has been cited in the literature as one of the most important attributes of an effective clinical teacher. Without feedback to the learner, how will they improve?

- Feedback needs to be timely (on the spot) and clear.
- Performance of consistent, timely, and objective feedback is more likely to have an impact on the learner’s development than any other teaching method you do.
- Feedback is rarely provided to professionals in training.
- Feedback is real-time “coaching.” Do you think a baseball coach would ignore a poorly performed swing? No. Most coaches will give “on-the-spot” feedback to help mold the learner. We should be doing this in medicine as well.
- Allow for self-evaluation. Ask the student/resident what they think about their performance.
- “Praise in Public, Perfect in Private.”
- Often helpful to start with “I am going to give you some feedback now.” This approach alerts the learner that feedback is coming.

**Why is feedback sometimes ineffective?**

- The learner doesn’t know they are actually receiving feedback
- Failure to effectively deliver feedback (poor methods). Effective feedback contains caring, trust, acceptance, openness, and concern.
- Faculty fear of being negative
- Remember to always finds ways to give positive feedback along with any negative feedback. Adult learning theory is pretty clear about the fact that adults tend to take errors personally and more likely to let them affect their self-esteem. In addition, positive feedback helps adult learners to maintain one’s sense of self-
Esteem. This typically helps or motivates adults to further engage in learning experiences. Giving some positive feedback may make it easier on the learner to take the negative feedback and make constructive changes.

“The best way to head off defensiveness is to catch people doing something right as soon as possible so that you can give deserved positive feedback.”

Blanchard and Johnson, 1982

**How do students rate feedback as an effective teaching tool?**

- A total of 2,671 teaching encounters were rated by 170 3rd year medical students during their required inpatient medicine rotations.
- Feedback on case presentations and differential diagnosis highly rated among lectures, bedside teaching, case-based conferences, and learning electrocardiograms and chest x-ray interpretation.

**4. Centeredness (learner)—tailoring the teaching to the learner**

“Good teachers possess a capacity for connectedness. They are able to weave a complex web of connections among themselves, their subjects, and their students so that students can learn to weave a world for themselves.”


In a study by Bandiera et al., this was the most commonly cited successful teaching strategy from clinical faculty in emergency medicine. But what does it really mean? Know whom you are teaching. One of the most common mistakes is to teach based on a poor understanding of the learner and their needs.

- Takes the time to teach
- Tailors teaching to the learner
- Treats the learner (resident) as a colleague
- Challenges the student
- Sets expectations
- Provides independence
- Address specific desired skills
- Tailor the amount of supervision

Time spent getting to know and understand the learner make teaching more efficient and effective. In other words, take some extra time to get to know whom you are teaching. Are you teaching an emergency medicine or OB-Gyn resident? Your approach will obviously be very different. Make an attempt to get to know something about them. This will improve rapport and lets the learner know you are interested in them as a person.
5. Helpful

“The successful teacher is no longer on a height, pumping knowledge at high pressure into passive receptacles... When a simple, earnest spirit animates a college, there is no appreciable interval between the teacher and the taught—both are in the same class, the one a little more advanced than the other. So animated, the student feels that he has joined a family whose honor, whose welfare is his own, and whose interests should be his first consideration.”

Sir William Osler
The Student Life, In Aequanimitas, 399-400

Effective medical educators are helpful to their students.

**What is professional intimacy and why is it so important?** (Whitman and Schwenk 1984)

Professional intimacy describes being emotionally close without being necessarily personal friends with your learners. But what does this really mean? A teacher who is professionally intimate with a leaner is able to share their thoughts and values in a manner that encourages the learner to share their views with the teacher.

“When teachers are professionally intimate, the psychological distance between teachers and learners lessens so that medical students, residents, and faculty can teach each other and engage in the conversation of medicine in which all participants become learners.”

Whitman, Creative Medical Teaching

**Helpful clinical teachers do the following:**

- Approach teaching with enthusiasm
- Explain the basis for their actions and decisions
- Strive to make difficult concepts easy to understand
- Correct students, residents when wrong without belittling
- Demonstrate a genuine interest in students
- Emphasize conceptual comprehension rather than merely factual recall

6. Elevates to become an independent, critical thinker

“The mediocre teacher tells, the good teacher explains, the superior teacher demonstrates, the great teacher inspires.”

William Arthur Ward

Truly effective teachers strive to develop a sense of “academic independence” in the learner. All of us are capable of asking lots of questions and performing the art of
pimping. But what separates the great teachers in medicine from all others is their ability to teach the learner how to practice independently, develop critical thinking skills, analyze complex patient problems, and solve clinical problems. Many physicians in medicine teach but few have the innate ability to skillfully sculpt learners into competent physicians. Consider this the next time you teach about a case in the emergency department. What is it that you really want the learner to walk away with? Is it the fact that they simply know and can recite a detailed differential diagnosis or is it the ability to multitask multiple patients and develop plans for them. The obvious thing to keep in mind is that what we teach or learners will ultimately affect the care of a patient in the future. Consider how you ask questions

*Use of questions to stimulate independent thought and higher-order thinking*

This is a technique that most of us are very familiar with. During the discussion of a case we ask the resident or student probing questions to test their comprehension of concepts. What we should all realize is that independent, higher order thought, can be tested and taught by asking the right questions.

*The following are important aspects of the use of questioning:*

- Promotes higher-order thinking in our learners
- Assesses the learner and helps guide teaching methods
- Allow at least 3-5 seconds for an answer, longer if possible
- Ask only one question at a time
- Must be done in the right environment

*The following questions may be useful in promoting higher-order thinking:*

- Why do you think that?
- How did you come to that conclusion?
- What if this were to happen?
- Why do you believe that to be true?
- What if you don’t do X?
- What is the association between X and Y?

*Although it is appropriate to ask knowledge questions, try to avoid this as your sole questioning technique.*
7. Role model

“Example is not the main thing that influences others, it is the only thing.”

Albert Schweitzer

“So what makes a good teacher? Knowledge is necessary, but hardly sufficient. Every bit as important is how you impart information. How effectively you communicate is more important than how much you know; if you cannot get ideas across, you will not be an effective teacher and thus cannot be an effective physician. The ability to motivate and stimulate is critical to a successful teacher...because most effective teaching is by example. Teachers are role models for their students, demonstrating knowledge, clinical acumen, and other qualities of a good physician.”

Miller, 1990

This is an often forgotten aspect of effective clinical teaching. We tend to focus most of our teaching efforts on what we say to learners on the department. What we often forget that what our learners see us do in the ED is sometimes more effective than what we actually teach. Although a bit of cliché, it is true that actions speak louder than words. In essence, effective teachers in medicine are good role models. Don’t ever underestimate the power of this.

Critical behaviors that clinical teachers can model in daily practice:

- Demonstration of taking a good history
- Demonstration of performing a physical examination
- Thought process, analytical reasoning, and deductive reasoning
- Ability to organize and synthesize data
- Prioritize treatment
- Time management/multitasking skills
- Communication skills
- Collaboration with consultants
- Life-long learning
- Mentorship

Use caution, since demonstration of unprofessional behavior, etc. can also be role-modeled.
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3. Whitman, N. Creative Medical Teaching. 1990


Any questions or comments please e-mail me.

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