Beyond Shadowing: Providing Meaningful Clinical Experiences for Early Clinical Learners

TRADITIONALLY

Early in medical school, medical students traditionally received little instruction in patient care settings. The transition to clinical instruction was often abrupt. Kolb's model of experiential learning states that "learning is the process whereby knowledge is created through the transformation of experience."[1] This belief that learning best occurs in the setting of experiences, not a vacuum, is consistent with the recent national push toward including more clinical experiences earlier in the course of medical education. To help better develop students' ability to function effectively in the clinical settings, we suggest going "beyond shadowing" during early clinical experiences.

MOVING FORWARD

- Ensuring that early clinical experiences are beneficial to the learning process can be difficult within the context of limited medical knowledge during the first and second years of medical school.
- The emergency department (ED) provides an excellent location to allow early medical students valuable learning experiences with minimal interruption to workflow or patient care.
- There are many patients with a wide variety of conditions and disease severity in the ED. Biologic and psychosocial aspects of medicine are readily apparent.
- Inexperienced students are able to practice specific portions of history or physicals with consenting patients in a real-world clinical setting.

HOW TO IMPLEMENT

Before core clerkships begin, students are very enthusiastic about opportunities involving patient interaction, and many welcome the opportunity to spend time in the ED and gain hands-on exposure.

- For faculty, clearly articulate the level of the students and what expectations are present. Faculty need to understand the limited skills of the student. These students are not finished with their foundational coursework and are expected to have sizable gaps in their knowledge base. (see Figure 1).
- Placing pairs of students with a single faculty member over time allows the students to collaborate and assist each other throughout the learning experience.
- Students learn the most from the patients they see. Set expectations that they must be looking up what they don't know. Expect self-directed learning.
- As students gain experience, more advanced tasks can be asked of the students, which can allow the "beyond shadowing" sessions to evolve rapidly.
- Students can also engage in interprofessional learning, such as collaborating with social workers, pharmacists, and nurses.

Table 1 is a list of tasks faculty can give students (note that these take nearly no faculty time).

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ISSN 2472-5390

doi: 10.1002/aet2.10012

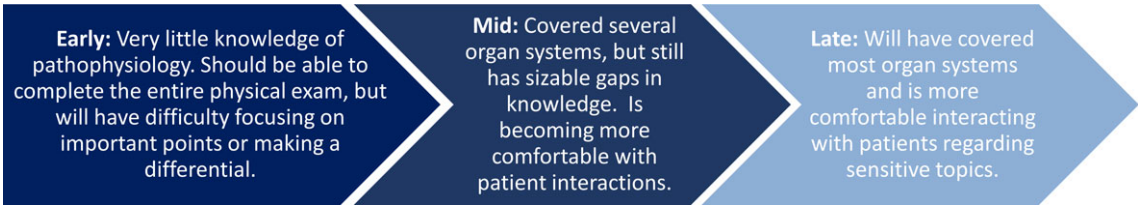

Figure 1. Expected Student Abilities.

Table 1
List of Tasks Faculty Can Give Students

Early Clinical Students	Developing Clinical Students
Take a classic history: Focus on conditions the students have learned about (e.g., classic chest pain).	*Casting a wide net:* Take a history without a clear diagnosis and try to make sense of it.
System-focused physical exam: Cardiac exam, neurologic exam, etc.	*Compare and contrast:* Assess patients with the same condition but two different presentations.
See abnormal findings: Students regularly are taught about, but will not have seen, common findings such as edema, wheezes, and ascites.	*What do you see?:* Student enters the room, does not take a history, and by exam or observation reports back on observations.
Find the findings: Have the student find a given number of abnormal physical exam findings (cirrhosis, heart failure, etc.).	*Scavenger hunt:* Review the patient history to find the missing piece of information (i.e., a patient on coumadin but no note of why).
How does it work (drug): Research the drug a patient is taking and discuss its perceived impacts and side effects.	*Fully assess a patient:* Take a complete history and physical, make a differential diagnosis, and make a preliminary assessment and plan.
How does it not work (disease): Research the disease, then see it for real. Begin to appreciate variability within disease.	*Teach me something:* The student researches a topic and teach the physician (i.e., background for a patient with a rare chronic disease).
Read this result: Have the student get practice reading CXRs, ECGs, or blood work results they've learned about previously or find the fracture.	*Review guidelines:* Determine what the next step of management is based on institutional guidelines.
Present a patient: Early clinical students typically have very little experience presenting (in 5 minutes).	*Which for which:* Investigate which drug to use for specific related conditions and understand the rationale.
Collaborate with nurses/staff: Spend time with other members of the care team to appreciate the scope and responsibilities of nonphysician staff.	*Let the patient know:* Convey lab results or diagnostic information and next steps.
Watch a resuscitation: An important first step in exposure to severe disease and emergent situations.	*Motivational interviewing:* Assess readiness for lifestyle changes such as smoking cessation.
Why I wanted to be a doctor: Have students see that patient where you say to yourself, "this is why I wanted to be a doctor" (little old ladies or smiling children).	*The intoxicated/altered patient:* Practice communicating with or examining patients with altered mental status.
Directed observation: Watch the attending manage a difficult situation. Prompt the student what to look for (i.e., argumentative family member).	*Barriers to care:* Determine what resources a patient has available and what barriers to care brought them to the ED (consider involving social work).

Reference

1. Kolb DA. Experiential Learning: Experience as the Source of Learning and Development. Englewood Cliffs, NJ: Prentice-Hall, 1984.