

Session 1. Foundation in Education Theory and Goals

Overview and Objectives

In this session, residents will be introduced to broad concepts relevant to teaching adult learners. The goals of the clerkship are shared to give them an understanding of the topics to be teaching. At the end of this session, residents will be able to

1. Recognize and act in accordance with their role and responsibilities as educators
2. Infer appropriate content to teach from the medical student surgery clerkship curriculum
3. Apply principles of adult learning theory to learning interactions

Readings

Residents should familiarize themselves with their institution's respective clerkship curriculum. We use the Boston University School of Medicine Surgery Clerkship Curriculum.¹⁰

Activities

Activity 1.

The session starts with baseline assessments. We use a survey (Attitude and self-efficacy survey) to determine how residents view their own teaching role and abilities.

Additionally, we make a baseline assessment of knowledge about teaching by distributing a quiz (Quiz). The quiz includes 12 items, combining multiple choice, Yes/No, and True/False questions. Each institution should adapt the quiz to reflect the content of their local surgery clerkship curriculum were applicable.

Assessment: Survey and quiz.

Activity 2.

This activity is designed to generate a conversation about teaching in surgery among the group of residents. As a prompt, we use the following statement, "Teaching does not seem to be inherent to the culture of surgery. There were a few good teachers, but for the most part, students are seen more as a service to the team than as people who are present to learn." The statement was actually provided by a medical student when completing their clerkship evaluation; we are happy to add this was before the introduction of this curriculum and we have not seen this kind of strong negative feeling since. As the statement is a strong indictment of the (lack of) culture of teaching, it is a jumping off point for residents to explore what was said and why or why not they think the statement is accurate. It is also an opportunity for them to consider how they contribute to the problem or the solution regarding paucity of teaching on surgical services.

At the conclusion of this discussion, share data about the important role teaching by residents plays in medical student education and highlight the governing body mandates. Specifically, it is estimated that 10-25% of residents' time is devoted to teaching and residents do report that teaching is an important responsibility. Medical students recognize this effort on the part of residents and estimate that 30-40% of what they learn comes from teaching by residents.¹¹⁻¹³ Good teaching by residents has been shown to translate to student's clerkship performance, improves their overall clerkship experience, and can, in fact, prompt students to seek surgery residency training.¹⁴⁻¹⁷ Given the importance of the residents' role in teaching, the LCME mandates that residents be prepared for the role both by providing them with teaching related instruction and with the objectives of the clerkship.¹ The ACGME included the practice domain of 'teaching' as part of the problem-based learning competency in the previous milestones and teaching remains a component of the updates milestones as well.²

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Assessment: There is no formal assessment for this activity. The instructor should, however, moderate the discussion in such a way that junior and senior residents contribute as they will have different perspectives. Also, prompts should be used to have residents reflect on their own experience as medical students to encourage them to take the medical students' perspective and emphasize with them. Examples include, "What do you remember from your clerkship experience?" or "If you were a medical student now, what could be done to improve your learning experience on the clerkship?". Self-assessment and self-empathy should also be fostered by asking

questions such as, “What are challenges you face when teaching medical students?” or “How do you view your role as a teacher?”.

Activity 3.

Explore the concepts of adult learning theory and motivation as they relate to the residents’ teaching role. Familiarity with the concepts will allow residents to leverage teaching opportunities and tailor them appropriately to the students they are working with. The organizer for the session should be provided for resident to take notes during this activity. [Organizer 1]

Broadly, learning is the acquisition of knowledge, skills, and attitudes.

An expansion on Kolb’s learning cycle is a useful way to use to conceptualize how learners learn.¹⁸

Existing knowledge is challenged or found lacking when a task is encountered for which knowledge is insufficient.

The learner will then reflect on the experience, develop new concepts, use what they have newly acquired to build on their previous knowledge.

The teacher can facilitate this process by providing feedback, helping refine concepts, and reflect with their learner.

Individual learners will go through this cycle differently, influenced by external influences, including the available resources, their own motivation, their own learning style, and the effectiveness of their teacher.

Teachers can best help facilitate their learners’ progress by understanding the principles of adult learning theory, which posits that adults:

- have experience and knowledge
- have established values, beliefs, opinions
- expect to be treated as adults
- want to know applicability of material
- have a problem-centered approach
- have different learning styles

Therefore to effectively engage adult learners, teachers should

- build on previous knowledge; you must get to know the learner to understand what their background is
- set expectations; be clear about what you expect the learner to do and get out of the experience
- create supportive environment; prioritize the learner’s needs; provide timely and constructive feedback on performance
- allow active participation; allow the learners autonomy commensurate with experience, skill, and preparation
- use a ‘need-to-know’ factor; tie concepts to clinical examples

Forces that motivate learners to learn can be harnessed. This included extrinsic motivators, such as grades, and intrinsic motivators, such as the desire to improve.¹⁹ Residents thus should set up their learners for success by defining the learning context and expectations so students have goals to work toward and can use feedback to hone their performance.

Assessment: Note resident engagement with this activity. Completion of the organizer demonstrates the residents’ ability to recall and make meaning of the materials provided.

Activity 4.

A common concern raised often, particularly by junior residents, is that they have nothing to teach the medical students or they do not know what the medical students are expected to know. The first, of course, is not true and the latter, is easily addressed. Giving residents an opportunity to explore the clerkship curriculum¹⁰ is an important step in empowering residents to prepare for, recognize, and seize teaching opportunities. To inform our residents about appropriate content to teach, we highlight the performance tasks students should learn, e.g. obtain a complete history and physical examination, as well as the knowledge domains they are expected to cover, e.g. diagnosis and management of cholelithiasis. For transparency, we also inform the residents what criteria are used to evaluate their performance vis-à-vis the medical students and how their teaching is rewarded, if appropriate.

Individual institutions will want to adapt this content to align with their clerkship curriculum and resident evaluations.

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Assessment: There is no formal assessment for this activity.

Exit items – Instructor: Baseline survey (Attitude and self-efficacy survey); Knowledge quiz (Quiz); Session survey (Session survey)

Exit items – Residents keep: Completed organizer