Session 2. Practical Tips for Teaching Outside of the Operating Room

Overview and Objectives

This session focuses on teaching outside of the operating room, i.e. in the clinic, on the wards, or during rounds. Techniques that can help shape these encounters will be discussed. At the end of the session, residents should be able to

- 1. Create a positive learning environment by considering and optimizing the parts of the learning environment they can control
- 2. Design and communicate clear expectations for learners
- 3. Effectively apply different teaching strategies in the clinical setting
- 4. Design impactful mini lectures

Readings

Neher et al. A Five-step "Microskills" Model for Clinical Teaching.⁶ Wolpaw et al. SNAPPS: A Learner-centered Model for Outpatient Education.⁷

Activities

Activity 1.

This activity should serve to highlight the important aspects of the learning environment²⁰ over which the residents have control in their role as teachers. There are four broad categories. The first is the physical environment in which teaching and learning take place. This facet includes such items as where one should stand or sit and what attire is appropriate. The second is the organization of the environment in which teaching and learning take place. This includes who the other members of the team are and what roles they play, where one might find relevant information, who is the correct person to ask questions of, and how long an encounter might take. The third is building relationships. This included introducing oneself to the learner and making an effort to learn and use their name in interactions. If there are other members of the team, the learner should also meet those members. Furthermore, harking back to the concepts of adult learning theory, building relationships requires that one gets to know the learner, asking them about their prior experiences and knowledge and what their goals for the learning event are. This is also the time when the resident should set their expectations for the learner. Finally, how to deliver content must be considered. Different teaching moments call for different teaching styles or methods of delivery.²⁰

To explore these topics, break residents into groups (up to 4 residents per group). Provide them with the task design challenge to prompt them to explore the concept of the learning environment.

Task Design:

Your task is to design an introduction to the operating room for an engineering student.

You have been asked to ensure that the student can effectively observe and ask questions in the operating room. The engineering student's goal is to identify an instrument or process that they can optimize as part of a bioengineering innovation project.

The engineering student has never been in an operating room before.

You need to develop a comprehensive introduction, considering all relevant aspects of participating in the operating room. You should ensure physical comfort as well as preparation for the social facets of the operating room.

Your work will be judged by how thoroughly it addresses the objectives.

Allow the member of each group to discuss amongst themselves and complete the task design challenge for approximately 5 minutes. Ask each group to share how they approached the task and to explain their thinking. Use the blackboard or PPT to take notes to help organize responses into the broad categories that comprise the learning environment: physical environment, organization, relationships, delivery of content. As needed, add your own examples to make sure all categories are covered at the conclusion of the task design challenge and the debriefing session.

[PPT Session 2]

Assessment: Note residents' engagement with the activity. Completion and discussion of the task design challenge demonstrates the residents' ability make meaning of their own experiences. As the instructor, you help organize their thoughts to arrive at a shared understanding of the learning environment.

Activity 2.

Several tools have been described that allow framing teaching moments in the clinical learning environment. Specifically the 'Microskills' model for clinical teaching⁶ and the 'SNAPPS' model.⁷ In this activity, these approaches are reviewed in detail and examples of how to use each step are provided. The premise for both models is that a student has seen a patient and they are now presenting the patient. The models frame how one can explore the student's thinking; each model places the primary burden of teaching slightly differently. In the 'Microskills' model, the resident shoulders the teaching responsibility⁶; in the 'SNAPPS' model, the responsibility is shifted to the student.⁶ For either to be successful, setting expectations about how patient encounters are to be discussed should be set up front.

The 'Microskills' model incorporates five steps, each of which has a specific goal for the learner in mind. The first is to get a commitment from the learner about what they think maybe the diagnosis or what other information is needed to move the patient encounter along. This is meant to encourage processing of information. Once the student has made a commitment, the resident should ask them what evidence supports their commitment; what information from the history, exam, or other available data has led to their conclusion. This step serves to probe the student's knowledge and allows insight into how the think about and manipulate information. Once the student has made their commitment and explained their reasoning, the resident should deliver a teaching point. Ideally, this would be one that the student can apply in future patient interaction. The resident should then wrap up by providing feedback that incorporates reinforcement for what was done well and constructive criticism of that which should be improved in subsequent encounters.⁶

The 'SNAPPS' model begins with the student summarizing the patient's history and other relevant findings or data. The student should then present a differential diagnosis and narrow down the possibilities by using the available information. The student then identifies their uncertainties and asks the resident how they view the case. Finally, the student outlines a management plan and identifies an area related to the case for which they will do additional reading or engage in other self-directed learning behaviors.⁷

Provide an organizer for residents to take notes during the presentation that accompanies this activity. [PPT Session 2]

[Organizer 2]

Assessment: Activity 3 serves as an assessment of Activity 2.

Activity 3.

Approximately 15 minutes should be devoted to this activity. Break residents into groups (minimum of 2 residents; up to 4 residents per group). Ask the group to designate a 'learner' and a 'teacher'. Orient the residents to their roles. The 'learner' is provided a clinical scenario and will present the case to the 'teacher'. The 'teacher' should select one of the approaches reviewed in Activity 2 to guide the 'learner' through the case presentation. Additional residents in the group observe; at the completion observing residents are asked to critique the encounter. The 'learner' also provides feedback to the 'teacher'. Have residents reassign roles and explore a different approach.

Clinical Scenario 1

You just saw a patient in the emergency room.

The patient is a 45-year old man. He has experienced nausea and vomiting for the past 3 days. He developed a fever today as well as pain localized to the right upper quadrant; the pain is why he decided to present to the emergency room. He has never had pain like this before. He has lost his appetite.

He is otherwise healthy and has not prior surgery.

He takes Ibuprofen as needed for joint pains.

He denies allergies to medication

His mother has high blood pressure. His father has diabetes and coronary artery disease.

He does not smoke. He drinks up to two beers in the evenings. He works in construction

VS show temp 100.3F, HR 95, BP 145/80, RR 12, O2 sat 98% on RA **BMI 45** He appears slightly uncomfortable Sclera are icteric; no jaundice Lungs are clear to auscultation No extra heart sounds or murmurs Abdomen without surgical scars, obese, tender to palpation in epigastrium and RUQ with equivocal Murphy's sign Laboratory data includes WBC 13K, AST/ALT elevated, bilirubin is 2.3mg/dl An US was obtained, showing cholelithiasis and pericholecystic fluid **Clinical Scenario 2** You just saw a patient in the emergency room. The patient is a 41-year old woman. She has noticed progressive redness over the left breast; the breast has become somewhat firm and uncomfortable, which is why she came to the emergency room. She denies fevers at home. She denies injury to the breast. She denies a personal history of breast cancer. She has not yet had a mammogram. She is otherwise healthy. She had a Caesarian section when she was 36-years old; no other surgeries. She takes Ibuprofen as needed for joint pains. She denies allergies to medication Her parents are both healthy; one of her maternal aunts had breast cancer. She smokes ½ pack of cigarettes daily. She does not usually drink alcohol. She is not currently working. VS show temp 98.6F, HR 85, BP 115/80, RR 12, O2 sat 98% on RA BMI 32 She appears comfortable Sclera are anicteric; no jaundice No palpable lymph nodes in the neck, by the clavicle, or the axillae The left breast is slightly larger than the right breast and there is some dimpling of the skin; there is pale erythema extending from the peri-areolar region; the breast feels firm to touch Lungs are clear to auscultation No extra heart sounds or murmurs Abdomen with well-healed Pfannenstil incision; obese; soft; not tender to palpation Assessment: Residents receive feedback from their peers. The 'learner' and 'teacher' also rate the teaching. Survey – 'Learner': How satisfied were you with the quality of teaching? Not satisfied at all 0 0 It was adequate 0 Very satisfied Survey – 'Teacher': How would you rate your own teaching?

- o Needs improvement
- o It was adequate
- o Done well

Activity 4. In additional to teaching in the clinical environment, i.e. on the wards, in the emergency room, and in the outpatient clinic, residents spend unstructured time with medical students. This may be during breaks in handon patient care or as part of sit-down rounds. These present opportunities for residents to teach discreet content that may or may not otherwise be addressed in the discovery learning environment that is clinical learning. Residents can prepare for these opportunities by thinking about content to deliver ahead of time. In this activity residents are shown how to do this, using examples of mini lectures. These should be brief, interactive lectures anchored in a diagram or picture, covering a single topic.²¹ Residents can use the medical student clerkship curriculum to identify appropriate topics for which to design mini lectures. Additionally, residents can think about recurring questions or misconceptions that arise on the wards as a starting point for designing a mini lecture. For this activity, after the concept of the mini lecture is introduced, residents are asked to spend approximately 5 minutes to sketch a mini lecture on a topic of their choosing. Ask for volunteers to demonstrate their work. [PPT Session 2]

Assessment: Note residents' engagement with the activity.

Activity 5. To wrap up the session residents are asked to complete a brief reflection piece on teaching in the clinical setting. This is an opportunity for residents to reflect on their own teaching behaviors, recognize opportunities for improvement, and be open to incorporating approaches they may have not previously been aware of or considered in their own teaching practice.

Prompt: Please think about the most recent experience you had teaching. In a few sentences, please describe the circumstances and the topic. Please explain how you engaged your learner. Please discuss how the experience felt to you. Please gauge how your learner would describe the experience. How, if at all, would you do things differently next time?

Exit items – Instructor: Task design challenge; Teaching rating; Reflection piece; Session survey (Session survey) Exit items – Residents keep: Completed organizer; mini lecture