TUSM Resident-As-Teacher Guide
Tufts University School of Medicine

Table of Content

Tufts UNIVERSITY
School of Medicine

TUSM Residents-As-Teacher Guide

Purpose

The purpose of this guide is to support and inform resident's teaching roles and responsibility by providing an introduction to key medical educational concepts and corresponding practical tips. The examples provided may come from a specific discipline, but the concepts are general and applicable across disciplines. The guide is based on a summary of relevant educational literature and the designer's insights.

We hope that you enjoy this guide!

Maria Alejandra Blanco, Ed.D.
Associate Professor, Department of Psychiatry
Associate Dean for Faculty Development
Office of Educational Affairs

In collaboration with:

Sarah Catalano, TUSM '13
Nikhil Sikand, TUSM '13
Annirudh Balachandran, TUSM '19
Philip Tracy, TUSM '19
Sami Hamdan, TUSM '19

For feedback and/or questions, contact Maria Blanco at maria.blanco@tufts.edu, (617) 636-6588.

Setting Expectations and Learning Agenda

Current educational theories view learning as an active, constructive, social and self-reflective process. A supportive learning environment builds trust between the teacher and the learner and involves collaborative efforts focused on the learner's personal and professional development needs. Following are suggestions for establishing a supportive learning environment focused on learner's needs and are applicable to individual and group teacher-learner encounters.

Set-up

- Clarifying learning objectives and expectations
- Overviewing learning tasks
- Establishing individual/group ground rules (manner of conduct, individual's/member's role, dynamic, peer critique, individual's/group confidentiality)
- Clarifying individual/ group schedule
- Explaining the context of the learning environment (code; confidentiality; patient/trainee relationship; department/hospital policy; teamwork; department routines/activities/schedule)
- Introducing the learner into the context of the learning environment

Learner-centeredness

- Knowing the learner
- Engaging the learner in activities that promote lifelong learning and reinforce learner's responsibility for his/her own learning. For example:
  - Independent learning
  - Self-reflection and assessment
  - Identification of his/her own needs
  - Design of action plan for improvement
  - Follow-ups on action plan
- Allowing the learner to practice skills/share knowledge/disclose honestly without feeling threatened/belittled
- Welcoming learner's uncertainty/mistakes as opportunities to promote learning
- Engaging the learner in collaborative efforts
- Encouraging the learner to solicit others' opinions and feedback
- Promoting peer feedback

Teacher Role Model

- Showing enthusiasm for the profession and his/her own professional development
- Promoting dialogue and listening
- Taking the learner's perspective into account
- Encouraging learner's questions/opinions/thoughts
- Avoiding judgment when soliciting learner's opinions and reactions
- Providing relevant information and opportunities for choice
- Offering constructive feedback
- Sharing challenging personal and professional experience with the learner
- Sharing thought-processes/reflective practice out loud
- Admitting knowledge limitations and/or uncertainties
- Acting with professional conduct and good manners
- Maintaining good relationships with patient/colleagues/staff
- Performing teamwork
- Soliciting feedback
- Demonstrating commitment to lifelong learning

Effective Presentations

Creating effective presentations is an important aspect of teaching. Successful presentations include careful **preparation, organization, effective use of audiovisual aids** and a **dynamic delivery**.

Preparation:

- Select **3-5 main points** as the most essential information to learn [learner's have a limited ability to attend and process mass quantities of information]
- Connect the content of the presentation with the needs and interest of the target audience
- Take into account variables such as the time frame, available facilities and the type of presentation required
- Prepare as far in advance as possible and practice the presentation
- Arrive early at the venue and check if the equipment is correctly set up
- **Relax!**

Organization

- **Introduction:**
  - Identify yourself with your credentials
  - Capture the audience's attention by using a concrete and interesting case, telling a story or using an analogy or examples
  - Offer a preview of the entire presentation, including objectives, questions to be answered or an outline of the key points
  - Connect new ideas presented to prior knowledge the audience may have about the topic
  - Establish an open atmosphere and the tone of the session early on by inviting questions in order to create an environment of active participation
- **Body:**
  - Eliminate all extraneous information and focus on a limited number of points [3-5 main points]
  - Arrange the main points either chronologically or logically using a problem-solution format
  - For each major point, add sub points, examples or supporting materials
  - Vary the method of delivery every 15 minutes by using questions, discussion points, demonstrations, video clips, illustrations, task assignments or self-tests [maximum audience attention levels are attained between 12 and 15 minutes]
  - Use a close-ended style when asking questions to a large group. *For example:* What specific entity is associated with this behavioral pattern?
  - Use open-ended questions when speaking to a small group. *For Example:* Can you formulate a problem list for this patient?
  - After asking a question to the audience, allow 3-5 seconds of thinking time before responding
- **Conclusion:**
  - Summarize points periodically throughout the talk and use as transitions
  - At the end, summarize key points and attempt to assess how much the audience has learned
  - If there will be a subsequent presentation or topic to be covered, create a bridge by previewing readings, assignments or key concepts to come

Effective Use of Audiovisual (AV) Aids

- **General:**
  - Aids must be simple, uncluttered and clear
  - Provide handouts if there are complex images
  - Talk to the audience [do not read the slides]
- **Whiteboard:**
  - Plan how you will use the whiteboard prior to the presentation
  - Use large and legible writing and multiple, visible colors to emphasize points or draw diagrams
- **Powerpoint:**
  - Chose a light background with dark print or vice-versa

- Type in phrases rather than complete sentences
- Use large type, size 36-40 for titles and 24-30 for major points, and a readable font such as a san serif (Arial or Helvetica)
- Target 1 point per slide, with a maximum of 7 lines and 7 words per line
- Use bold or colored text for emphasis rather than uppercase text
- Plan to devote 2 minutes per slide
- Use electronic pointers sparingly

Dynamic Delivery

- **Enthusiasm:**
  - Incorporate humor, exude energy and passion to motivate the learning
- **Movement:**
  - Use movement to increase interest and emphasize key points. Avoid stereotyped movements
- **Gestures:**
  - Reinforce interest in a topic and are particularly useful in the presence of larger audiences
  - Keep hands away from pockets, keys, microphone cords or other objects that may be distracting
- **Voice:**
  - Vary tone, time pauses, project voice to the back of the room, enunciate and repeat questions.
- **Eye Contact:**
  - Maintain eye contact to connect with the audience. Scan the room from side to side

Following the presentation

Once you have completed your presentation, always ask yourself

- What went well?
- What are areas in which I can improve?

Reference

Irby, D. (2004). Practical teaching: great presentations every time. *The Clinical Teacher* 1: 5-9.

Clinical Teaching Frameworks

Roles and Expectations

Review roles and expectations when you meet with the learner for the first time and throughout the rotation. Explain, clarify and determine the following for the learner:

- Learner's schedule
- Time and place to report
- Agenda for each day
- How the day ends (where, how, what time)
- Call Schedule
- Notes and Charting: Explain the format for progress and admission notes, when, where and how notes should be entered and co-signed and how to write an appropriate assessment and plan.
- Patient presentations: format, type and time
- Dynamics of the team
- Approach to evaluation and formative assessment, i.e. forums for feedback
- Suggestions for outside readings
- The role of self-learning (research and report back strategy)
- Pre-Rounding: have the learner see patients, get critical labs, vitals and overnight events, write notes and form A&Ps.
- Process of assigning patients(try not to have the learner shadow the teacher)

Reference
Deza, C, Dickstein, A., Dmytrasz, K., Freebern, E., Kendale, S., Lucke, M., Meyer, C., Nathenson, M., Ritze, P., Sarges, P., Scaffidi, R., Silverman, E., Stafford, T., Taghizadeh, N., and Teplinsky, E., "Overcoming Common Clinical Teaching Challenges", Faculty Development Handout. Tufts University School of Medicine, March 2009.

Management & Working with the Learner

- Plan ahead for each day by organizing the number patients, afternoon clinic responsibilities and accommodating learner's needs
- Hold work rounds earlier in the day if possible and make a list of work to be done and distribute the list to the team
- Group and divide tasks to promote efficiency
- At the end of each day, hold a meeting to plan the following day
- Be sure to emphasize to learners that they should feel comfortable asking for help
- Motivate the learner by appealing to their current and future interests while placing them in the role of a practicing physician
- Remind the learner to prepare broadly for their future medical career regardless of their intended specialty
- Attempt to arouse and address conflicting thoughts the learner may be having
- Always display high expectations for the learner and, accordingly, **lead by example**
- Acknowledge your own knowledge gaps to the learner (be willing to say, "I don't know")
- Provide direction in finding the answer, pointing out specific resources that may be relevant
- Turn the question back and follow up on the answer
- Read up before teaching and report back on results
- Use the patient as an example whenever possible
- Associate and elaborate ideas being taught and organize those ideas for the learner
- Encourage the learners to reflect on each case and to develop his/her understanding through outside reading on the topic
- Think and reason out loud e.g. "I'm debating whether or not we should send this patient for cardiac catheterization"
- Have the learner gather information independently and formulate a differential diagnosis

References

Edwards, J., Friedland, J. and Bing-You, R. (2002). *Residents' Teaching Skills*. Springer Series on Medical Education.

Deza, C, Dickstein, A., Dmytrasz, K., Freebern, E., Kendale, S., Lucke, M., Meyer, C., Nathenson, M., Ritze, P., Sarges, P., Scaffidi, R., Silverman, E., Stafford, T., Taghizadeh, N., and Teplinsky, E., "Overcoming Common Clinical Teaching Challenges", Faculty Development Handout. Tufts University School of Medicine, Medical Education Elective, Class 2009.

Role Modeling

- Be aware of your role as a teacher
- Be explicit about what is modeled
- Make time for teaching
- Respect the needs of the learner
- Provide feedback in a timely fashion
- Encourage the learner to reflect
- Reflect upon clinical experiences together with the learner
- Work together with pertinent staff to continually develop role skills and improve the culture of the institution.
- Exhibit the following set of personal qualities:
    - Compassion and caring for others
    - Honesty and integrity
    - Enthusiasm about practicing medicine
    - Effective interpersonal skills
    - A commitment to excellence
    - A sense of collegiality
    - A sense of humor
    - A positive attitude

Reference

Cruess, S. Cruess, R., Steinert, I. Role Modelling-making the most of a powerful teaching strategy. BMJ 2008:336; 718-21.

Teaching Skills and Procedures

1) Explain the procedure
2) Demonstrate the procedure
3) Provide supervised support
4) Give immediate feedback

Reference

Edwards, J., Friedland, J. and Bing-You, R. (2002). *Residents' Teaching Skills*. Springer Series on Medical Education.

The One-Minute Observation

- Explain the purpose of the observation to the learner
- Explain how the observation will occur
- **Select one skill for the observation (e.g. a component of the history or physical examination)**
- Inform the patient of your plan and purpose
- Observe for a brief period of time without interrupting (try to write down exactly what the learner says and does to give focused effective feedback)
- Leave the room and have the learner join you when finished with the patient
- Provide immediate feedback
- Use the information gained about the learner to plan your teaching
- Repeat the process, observing other skills

Reference
Alguire, P., DeWitt, D., Pinsky, L. ,Ferenchick,G. (2008). *Teaching in Your Office. A guide to Instructing Medical Learners and Residents* (Second Edition). Philadelphia, Pennsylvania: American College of Physicians.

The Five-Steps Microskill Model: The One-Minute Preceptor

1. Get a commitment – what's the diagnosis, what's the plan.

What do you think is going on with this patient?

2. Probe for supporting evidence – knowledge, understanding.

What were the major findings that led to your diagnosis?

3. Teach general rules – take home points.

Chronic Obstructive Pulmonary Disease exacerbations are characterized by 1. Increased sputum volume, 2. Purulence, and 3. Dyspnea. The evidence supports antibiotic treatment only for severe COPD exacerbations, which meet all three criterion. First-line treatment is narrow spectrum coverage including amoxicillin, bactrim, and doxycycline.

4. Reinforce what was done well.

You discussed smoking cessation with the patient and have correctly identified that he is precontemplative, and as such have made a plan to continue to revisit this in future discussions. Your sensitivity and understanding of the stages of change will help your patient identify you as a person with whom he can discuss smoking cessation once he is ready to quit, and your identifying smoking as the cause of his symptoms sets the stage for the process that will need to occur for him to move from precontemplative to contemplative.

5. Correct mistakes – constructive feedback with recommendations for improvement.

You could be right that the patient's chest pain is associated with a COPD exacerbation, but in a 60 year-old male with diabetes, family history of CAD, and a forty-pack-year history you need to consider CAD in your differential. Whenever you evaluate someone with chest pain, it is important to consider their risk factors and ask questions to help you sort out what type of chest pain they are having.

Reference
Neher, J.O., Gordon, K.C., Meyer B. and Stevens, N. (1992). A five steps "microskills" model of clinical teaching. *Clinical Teacher* 5:419-24.

SNAPPS

The learner will:

1. Summarize briefly the history and findings
2. Narrow the differential to two or three relevant possibilities
3. Analyze the differential by comparing and contrasting the possibilities
4. Probe the preceptor by asking questions about uncertainties, difficulties, or alternative approaches
5. Plan management for the patient's medical issues
6. Select a case-related issue for self-directed learning

Reference
Wolpaw, T.,Wolpaw, D. And Papp,K.(2003). SNAPPS: A Learner-centered Model for Outpatient Education. *Academic Medicine* 78 (9):893– 898.

Active Observation

- Explain rationale for observation: *"You should watch me do this because you need help with cardiac auscultation."*
- Tell learner what to observe: *"Notice how I listen to the patient's heart in several positions and use both the bell and diaphragm."*
- Ask the learner to review with you what was observed: *"Tell me how I examined the heart."*
- Tell the learner to practice the skill just demonstrated: *"When you see the next patient, I want you to practice cardiac auscultation."*

- Give feedback to the learner on how she/he performed on the skills

Reference
Alguire, P., DeWitt, D., Pinsky, L. ,Ferenchick,G. (2008). *Teaching in Your Office. A guide to Instructing Medical Learners and Residents* (Second Edition). Philadelphia, Pennsylvania: American College of Physicians.

Self-regulated vs. self-directed learning

The terms self-regulated learning (SRL) and self-directed learning (SDL) are frequently used interchangeably in the literature, however this is incorrect as they represent two distinct concepts. SDL arose from adult education theory, while SRL is based on cognitive psychology theory.

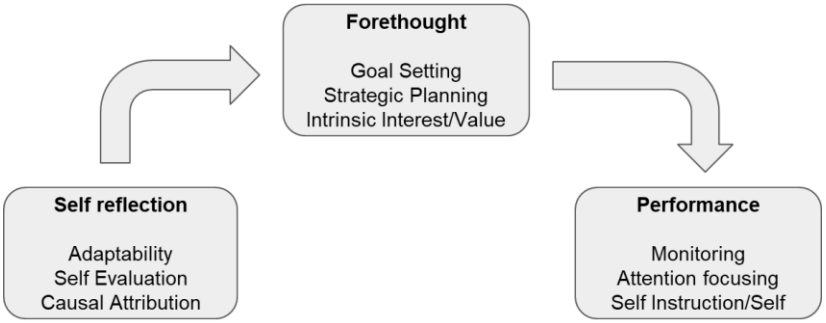
The central elements of self-regulated learning are:

1. Goal setting (Forethought)
2. Self-monitoring
3. Feedback and adaptation

To be successful, self-regulated learning requires both intrinsic efforts (by the student) and a positive learning environment. A learning environment requires support from residents and attendings, which includes feedback on learning goals and reviewing progress in attaining goals and suggestions for learning while on clinical rotations.

One way to help students to develop their own SRL skills is by walking them through the following questionnaire. Introducing students to this early in the rotation (and encouraging them to review it themselves) often allows for better self-regulation and improvement.

1)What was my plan
2) Did I follow my plan? If not what did I end up doing.
3) What worked well? What didn't work?
4) What will you try differently? What will you continue to do in the future?

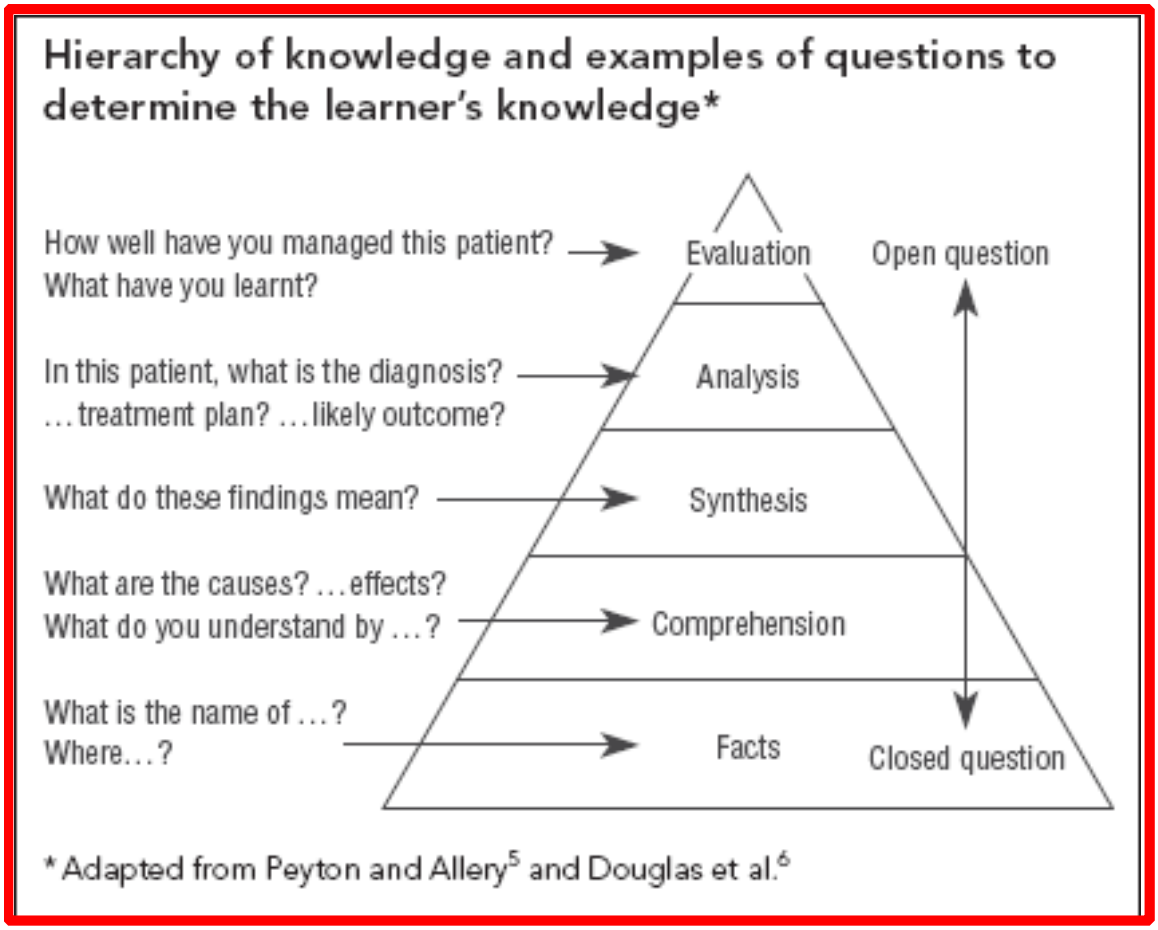


References:
Cho, K. K., Marjadi, B., Langendyk, V., & Hu, W. (2017). The self-regulated learning of medical students in the clinical environment–a scoping
review. *BMC Medical Education*, 17(1), 112.

Zimmerman, Barry J (1989). "A social cognitive view of self-regulated academic learning". Journal of Educational Psychology. 81(3): 329–339.

Teaching through Questioning

Questioning is an effective method to teach learners at all levels when it is not confrontational, and focuses on helping learners advance the development of their knowledge-based thinking process. The following graph illustrates a hierarchy of questioning matched to a well-known taxonomy of knowledge development (Bloom et al., 1956).



Questioning tips:

- Let your learners know that you will be using questions to advance their learning so that they are ready to address your challenging questions in a supportive (and not confrontational) context
- Restrict the use of close-ended questions to assessing factual or baseline knowledge
- Use open-ended or clarifying questions predominantly
- Allow time for response
- Ask learners to paraphrase what they learned, e.g. "So tell me what you learned about this disease from this patient's history"
- Follow a weak answer with a clarifying question, e.g. "Can you tell me more about what makes you think about this differential diagnosis with this particular patient?"

References

Bloom, B.S. (Ed.), Engelhart, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: The classification of educational goals*. Handbook 1: Cognitive domain. New York: David McKay.

Spencer, J. (2003). Learning and teaching in the clinical environment. *British Medical Journal*, 326: 591-4.

Small Group & Case Based Teaching

Role of Small Group Leaders

- Not to lecture
- Listen
- Question
- Make visible and challenge underlying assumptions
- Encourage balanced discussion
- Allow silences
- Speak judiciously
- Pay attention to: learning climate, group process, and learner's concerns, interests and experiences.
- Allow learners to express uncertainty
- Admit knowledge limitations
- Encourage further group/self-study
- Promote active discussion by:
    - Preparing for the session
    - Previewing the content and process of discussion
    - Actively involve all learners while monitoring the group process
    - Cover content
    - Summarize the discussion

Learning and Teaching Strategies:

- Be cognizant of time (plan how you will use the session time in advance according to the material that needs to be covered and the learning points you want to convey)
- Encourage learners to review the case materials before the session
- Set some ground rules for participation/discussion, e.g. emphasize that the analysis of the case will be a group project, and that no one will be criticized for raising naïve questions or uncertainties (learners must understand that they will work collaboratively toward the goal of analyzing the case and that they are free to experiment with hypotheses)
- Start the discussion with questions that require learners to review and organize the case information, i.e. what are the relevant facts and how do they translate into major issues
- Once the basic information is reviewed, the discussion can move to the case analysis
- Use open-ended questions to ensure that all the angles of the case are considered
- Probe learners for their reasoning behind their arguments/hypotheses/conclusions to prevent them from jumping too quickly into a statement/conclusion without carefully examining the evidence or their assumptions
- Pose a different hypothetical scenario than the one the case presents to have learners explore other alternatives, e.g. learners" What if this patient were also suffering from…?"
- List identified key problems on the board along with a separate list of possible actions
- Listen carefully to responses
- Paraphrase learners' responses to check group understanding whenever necessary
- Give learners sufficient time to reflect on questions/issues that are raised
- Check with the group about their understanding of the case before moving on to the next
- Summarize the group discussion to wrap up or ask learners to pull together the key points of the discussion
- Assign research tasks to find the answers to questions that demand more information or explore a topic further
- Gather learners' questions throughout the discussion to develop a handout on FAQ for each particular case
- After the session, reflect on the group interaction and progress, and on learners' use of the case to consider whether the case can be developed further or whether more background information can or should be provided

Challenges of Leading a Case Discussion

- Learners who are uncomfortable with ambiguity and/or interested in having the section leader answer all the questions and offer the appropriate facts may be unwilling to participate (Suggested teaching strategy: prepare learners for what is expected of them and ensure participation of all learners)
- Some learners might fear suggesting inadequate solutions (Suggested teaching strategy: prepare learners for what is expected of them and communicate/reinforce ground rules mentioned above)
- The discussion can go off on tangents that are inappropriate (Suggested teaching strategy: keep the group discussion focused on issues relevant to the case)

References

Muller, J. & Irby, D. (2005). Practical teaching. How to lead effective group discussions. The Clinical Teacher 2(1): 10-15.

Stanford University Center for Teaching and Learning. Speaking of Teaching. Teaching with Case Studies. *Stanford University Newsletter on Teaching* 5(2): 1-3. Available at: http://ctl.stanford.edu/Newsletter/case_studies.pdf.

Bedside Teaching

Planning

- Be prepared and review each case ahead of time
- Determine the amount and type of teaching to be performed at the bedside vs. other teaching modalities, such as conference and other forums
- Clearly define learning goals and clarify expectations prior to each bedside teaching session
- Brief the team prior to entering the patient room

Patient Involvement

- Determine which team member will lead the interaction
- Involve the entire team in the patient discussion
- When providing instruction, teach at various levels of need, being cognizant of the patient's level of understanding of his/her condition
- If appropriate, have the learner explain the plan to the patient

Participation

- Create a comfortable learning environment for patients, learners and teachers to interact
- Make sure to engage all members of the team
- At the end of the bedside interaction, debrief the team and give the learner the opportunity to ask questions

Reference

Ramani, S. (2003). Twelve tips to improve bedside teaching. *Medical Teacher* 25: 112-15.

Teaching in the OR

- Hold an interactive orientation session with learners in order to introduce them to the OR and teach them how to properly prepare for each session by:
    - Learning proper hand washing, scrub and gloving technique
    - Following proper infection control measures
    - Knowing operating room protocols
    - Practicing basic surgical skills
    - Scrubbing on "must-see" procedures
    - Knowledge of the common instruments and their utility
    - Understanding what typically annoys team members
- State and outline learning objectives and expectations
- Brief the OR staff and prepare for learners arrival
- Provide a template for guiding learning during observations (See also *Active Observation in Clinical Teaching Frameworks)*
- Instruct the learners by **briefing, intra-operative teaching, debriefing** methodology outlined in the table below

Table 1. *Adapted from Roberts et al.(2009), "The Briefing, Intraoperative Teaching, Debriefing Model for Teaching in the Operative Room."*

Step	Subcomponents	Example
Briefing (2 mins), can be conducted while scrubbing in	Identify objectives for the operation	Attending: What would you like to focus on today? Learner: I would like to focus on mastering the pathophysiology of acute appendicitis and identifying key structures during the operation
Intra-Operative Teaching (brief, focused interactions of 1-5 mins)	Focused teaching based upon learning objectives, use of "teaching scripts"	Why does RLQ pain occur in appendicitis? How does the pain evolve?
Debriefing (1-3 mins)	1) Stimulate reflection 2) Teach general rules 3) Reinforce what was done well 4) Correct mistakes	-How do you think you did today? -What will you take away from this case? -Your description of the workup for RLQ pain was well thought out -I noticed you had difficulty identifying the difference between small and large bowel, we'll cover that in the next case

References
Lyon, P. (2003). Making the most of learning in the operating theatre: learner strategies and curricular initiatives. *Medical Education* 37:368-88.

Lyon, P. (2004). A model of teaching and learning in the operating theatre. *Medical Education* 38:1278-1287.

Roberts NK. (2009) The Briefing, Intraoperative Teaching, Debriefing Model for Teaching in the Operating Room. *Journal of American College of Surgeons* 208(2):299-303. .

Giving and Receiving Constructive Feedback

Definitions

There are two forms of assessment:

- **Formative Assessment**: ongoing assessment of the learner's progress towards educational goals, such as continuous feedback (assessment *for* learning)
- **Summative Assessment:** final assessment to judge the learner's achievement of goals, such as an OSCE or the evaluation that is sent to the clerkship or program director (assessment *of* learning)

Feedback can be **informal** or **formal**:

- **Informal feedback:** Given on a regular basis, short and straightforward, spontaneous
- **Formal feedback:** Given episodically at a planned time and place, at mid-point and end of rotation, hybrid of feedback and evaluation—the learner's overall performance should be assessed at this time

Characteristics of Effective Constructive Feedback

- Ongoing/frequent: promote a culture of your feedback in your department!
- Set as expectation: involve the learner and set it as an expectation of the rotation
- Safe environment: focus on the learner's needs
- Timely: provide immediate feedback to promote learning
- Specific: focus on observable behaviors
- Behaviors that can change: explain consequences of incorrect and correct behaviors
- Limit amount: share 2-3 observations at a time
- Suggestions for future behaviors: help the learner create an action plan

Seven-Step Approach to Giving & Receiving Constructive Feedback

1) Explain the purpose.

I am going to give you feedback on this patient's interview

2) Invite self-assessment

Tell me what you think went well and what needs work

3) Reinforce the positive with specific examples.

You elicited a thorough and appropriate history that included the patient's current concerns, the patient's past medical history, social history, nutrition and activities.

4) Suggest areas for improvement with specific examples.

Since you took such a detailed history and learned that the patient eats a lot of junk food, does not get any regular exercise, and has expressed interest in losing weight, you could have used this discussion as an opportunity to talk to the patient about nutrition, exercise and weight loss. For example, increasing physical activity, fiber, fruits and vegetables, and decreasing junk foods, processed foods and soda will help this patient lose weight, and may help with their glucose control and their hypertension.

5) Create action plan together (follow-up).

So tell me how you are thinking of including a nutrition, exercise and weight loss discussion in your future encounters with patients.

6) Ask for questions.

Do you have any questions?

7) Ask for feedback on your feedback.

Now tell me how you think I did with my feedback.

(Chandler et al., 2009)

Time Saving Strategies

- Take feedback notes—keep an index card in your coat pocket and jot down feedback as the learner presents, interviews, or examines a patient
- Focus on one specific skill area each week to keep feedback focused
- Set feedback as an expectation to ensure that you will commit an adequate amount of time to this crucial part of educating

At the end of your day :

- **Ask yourself:**

  Have I given any effective feedback today?

References

Alguire, P., DeWitt, D., Pinsky, L. ,Ferenchick,G. (2008). Teaching in Your Office. A guide to Instructing Medical Learners and Residents (Second Edition). Philadelphia, Pennsylvania: American College of Physicians.

Archer , J. State of the science in health professional education: effective feedback. Med Ed. 2010;44:101-108.

Bing-You R.G. ,Trowbridge R.L. Why medical educators may be failing at feedback. JAMA. 2009;23;302(12):1330-1.

Boehler ML, Rogers DA, Schwind CJ et al. An investigation of medical learner reactions to Feedback: a randomised controlled trial. Med Educ. 2006;40:746-749.

Clay AS, Que L, Petrusa ER, Sebastian M, Govert J. Debriefing in the intensive care unit: a feedback tool to facilitate bedside teaching. Crit Care Med. 2007;35:738-754.

Chandler DM, Snydman LK, Rencic J. (2009). Implementing direct observation of resident teaching during work rounds at your institution. Academic Internal Medicine Insight 7(4):14-15.

Gaster, B., Edwards, K.,Trinidad, S., Gallagher, T., Braddock, C. (2010). Patient-Centered Discussions About Prostate Cancer Screening: A Real-World Approach. Ann Intern Med. 153:661-665.

Torre DM, Simpson D, Sebastian JL, Elnicki DM. Learning/feedback activities and high-quality teaching: perceptions of third-year medical learners during an inpatient rotation. Acad Med. 2005;80:950-954.

Vickery, A. ,Lake, F. (2005). Teaching on the run tips10: giving feedback. The Medical Journal of Australia183(5):267- 268

Assessment and Evaluation

Types of Assessment

There are two types of assessment—**formative** and **summative**.

- **Formative assessment**: ongoing assessment of the learner's progress towards educational goals. This is also known as feedback
- **Summative assessment**: final assessment to judge the learner's achievement of goals. This can be completed by an OSCE, exam, or final presentation.

George Miller introduced a framework for the assessment of learners in the form of "Miller's Pyramid" (see image below.) The base of the pyramid consists of "knows," followed by "knows how," which can both be tested by basic written or oral exams. Miller argued that the true demonstration of clinical ability is reflected by the learner's performance in the top two categories—"shows how" and "does." These reflect the learner's ability to perform certain skills. Competency in these higher categories implies that the learner has mastered the acquisition and application of knowledge. The evaluation of the top tier must be done during observation of actual patient care.

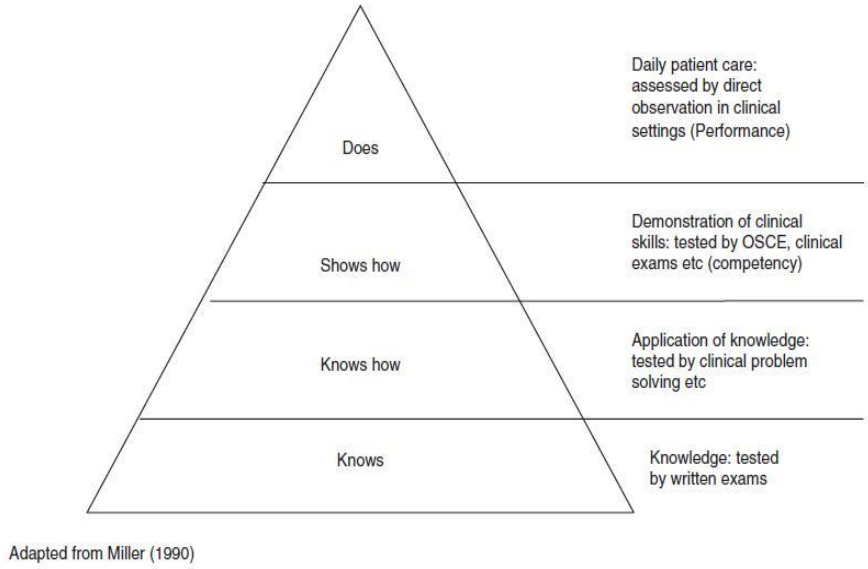


Figure 2. Miller's pyramid of assessment.

Methods of Assessment

- Written exercises: multiple choice questions, short answer questions and structured essays
- Assessment by supervising clinicians: global ratings with comments at the end of the rotation, structured direct observation with checklists for ratings, or oral examinations
- Clinical simulation: Standardized patients and high-technology simulations are two such options.
- Multisource "360 degree": assessments from peers, patients, and self

Principles of Evaluation

Evaluation should occur only after previous ongoing feedback (ie. summation assessment.) As emphasized before, feedback should be continued throughout the rotation so there will be no surprises during the final evaluation. The evaluation should:

- Be a two-way street—ask for self-assessment and an assessment of your performance as well
- Include recommendations for the future by selecting a few key constructive recommendations as positive comments

When grading a learner:

Remember that grading is subjective

- Follow the rotation evaluation criteria to explain the grade
- Write down specific positive and negative observations to provide examples and justifications of the grade with below average learners, average learners and above average learners
- Document poor performance with specific examples

Common Evaluation Errors

- **Halo effect**—biased by past rating/performance: An attending heard a learner is outstanding, and submitted and excellent evaluation despite average performance in the rotation. Another attending, however, highly graded a learner for presentation and assumed the learner takes an excellent history and exam without directly observing performance.
- **Restriction of Range:** An attending circles the same rating for all competencies.
- **Rating nonperformance attributes:** A nice learner with poor physical and presentation skills is given high ratings.
- **Identifying competencies inaccurately:** An evaluation of a lazy, bright learner reflected in cognitive section rather than in attitudinal.

References

Edwards, J., Friedland, J. and Bing-You, R. (2002). *Residents' Teaching Skills*. Springer Series on Medical Education.

Epstein, R. (2007). Assessment in Medical Education. *New England Journal of Medicine* 356(4):387-396

Learners with Difficulty

Types of Learner's Difficulties

A learner in difficulty is a learner with an academic performance that is significantly below performance potential. The various types of difficulties are:

- **Affective:** trouble dealing with personal adjustments, e.g. transition into clinical rotations, marital or relational difficulties, illness, death in family, poor grades, low self-esteem, feelings of being overwhelmed and inadequacy, fear of failure, depression, anxiety, guilt. Because of this, they may display an avoidance to learning, failure to perform, memory loss, withdrawal, and lower aspirations.
- **Cognitive:** poor performance in one or more cognitive skills, trouble with written or oral communication, spatial-perceptual problems, poor integration of materials, or a poor fund of knowledge.
- **Structural:** problems with organizational skills, poor time management, poor study habits, find it difficult to keep "on top" of things.
- **Interpersonal:** shy or nonassertive; bright and knowledgeable but have poor social skills; manipulative; overeager; ethnic, racial or gender prejudices; inappropriate grooming or dressing habits; substance abuse or other overt psychiatric problems.

Approaches to learners with difficulties

When approaching a learner who has difficulty, use the "**S-T-P**" model:

1. **S**pecify the problem: Ask yourself how you as a preceptor could be contributing to the situation. Identify if the learner has similar learning problems across settings and specific ways in which the learner fell short of expectations.
2. State the **T**arget: Investigate which resources/strategies/approaches can remedy the situation and prevent recurrence of the situation. Identify what the expected outcome is from the determined approach.
3. Make a **P**lan: Determine what actions the learner will make to move towards the target state, as well as what you as the preceptor can do. Be sure to make a plan for follow-up.

Tips for Managing Learners in Difficulty

- Identify the problem early
- Communicate with and provide feedback to the learner
- Promote sense of trust and safe learning environment
- Work in collaboration with the learner and encourage peer-and self-assessment
- Monitor progress through communication, regular feedback and formal evaluations.
- Know your own limitations in helping the learning and when to seek outside help (e.g. referral to clerkship/program director)

Reference

Vaughn, L., Baker, R. and DeWitt, T. (1998). The Problem Learner. *Teaching and Learning in Medicine,* 10(4):217 222.

Teamwork & Exemplary Leadership

The two main components of the teamwork framework are: **core components** and **coordinating mechanisms** that feed the core components.

Core Components:

- **Team leadership**: direct and coordinate activities, assess team performance, motivate team members, plan and organize, establish positive atmosphere, mutual performance monitoring, backup behavior, adaptability, team orientation
- **Mutual performance monitoring:** develop common understandings of the team environment (discuss teammate workload, fatigue, skills & external environment)
- **Backup behavior:** anticipate members' need through knowledge about their responsibilities
- **Adaptability:** adapt team strategies and alter course of action based on information
- **Team orientation:** take other's behaviors and input into account, remember importance of team's goals over individual's goals

Coordinating Mechanisms

- Shared understanding: similar mindset
- Mutual trust: believe that members will perform their roles and protect interest of teamwork
- Closed-loop communication: exchange of information

Five Practices of Exemplary Leadership:

1. **Model the way:** model behaviors you expect of others.
2. **Inspire a shared vision**: communicate an exciting picture of how things could be for others to see and embrace.
3. **Challenge the process:**
    - Look for opportunities to innovate, grow and improve
    - Propose to work on new initiatives to change the status quo
    - Remember: innovation comes more from LISTENING than from TELLING!
    - Experiment and take risks
    - Make incremental steps to avoid potential risks (look for little victories)
4. **Enable others to act:** grand initiatives require a team effort based on trust, deep competence, cool confidence, group collaboration and individual accountability.
5. **Encourage the heart**: tasks can be arduous, long, exhausting, frustrating and disenchanting; provide genuine acts of caring, recognize contributions, celebrate victories by creating a spirit of community.

References

Kouzes, J., Posner, B. (2008). The Five Practices of Exemplary Leadership. In *The Leadership Challenge* (5th ed). New York, NY: Jossey-Bass.

Salas, E., DiazGranados, D., Weaver, S. and King, H. (2008). Does Team Training Work? Principles for Health Care. *Academic Emergency Medicine* 15 (11): 1002-1009.

Resources medical students use during clinical rotations

Medical Students usually supplement their clinical with multiple resources to best prepare for the boards and wards. Often students use a combination of a review/video lecture program (Online Med Ed), with review books (Step Up to Medicine, First Aid, Blueprints, Case Files), as their primary source of education. In order to prepare for the shelf exams students will consolidate their learning by using question banks (UWorld, UWise). Bolded Items are most commonly used by students across rotations as of the most recent version of this document.

Question Banks
-UWorld: most commonly used QBank
-Kaplan: less frequently used, in depth QBank
-UWise: Created by ACOG, strictly for the OB/Gyn rotation
-OnlineMedEd: Same company as below
-Practice NBME Shelf Exams: For preparation for board style questions

Video Lectures
-Onlinemeded: video lectures covering clinical topics, also has "intern" level content
-WISE-MD: Clinical videos for surgery
-Master the Boards: Videos covering clinical topics
-Pathoma: Used primarily for pre-clinical years covers the underlying pathophysiology behind disease
-Sketchy Medicine: Newer videos that teach microbiology, pharmacology, and pathology with images and sketches as a memory hook
-Picmonic: The older version of Sketchy Medicine

Reference Books
-**First Aid:** Similar to First Aid for Step 1, details important topics for preparation for Step 2 CK, as well as important topics for each clinical rotation (ie FIrst Aid for Psych)
-Step up to Medicine: Predominantly used for the medical clerkship, big reference book commonly used by students
-**Case Files:** A series of books in all subjects (FM, Medicine, Psych, OB/Gyn) that uses cases to teach important concepts of each field
-Blueprints: A reference book used for OB/Gyn
-Surgical Recall: A quick Surgical review book with commonly asked questions in Surgery
-NMS Handbook: A Surgical review book that uses a case based approach to learning