Speaking Skills Guide for Medical Educators
Your Role as a Medical Educator

Overview
The focus of this section is on you as a teacher. By the end of it, you should be able to:

• Identify how adults learn.
• Use visual aids effectively.
• Construct a high quality lesson.

How Adults Learn

As a medical educator, you will be called on to help other physicians learn. Understanding the special learning needs of adults will help you to do this.

Adults learn best by actively doing something. For example, if you simply read this material, you will, according to research, learn about 10% of the content. When you actually use the skills described, your retention will jump to about 90%.

Your learners have needs that are similar to your own. Think back to the best and worst learning experience you’ve had as a doctor. What made them seem so good or bad?
What Do We Retain?

10% of what we read
Example: Read a book

20% of what we hear
Example: Listen to lecture

30% of what we read and hear
Example: Lecturer reads slides to you

50% of what we hear and see
Example: Watch demonstration as someone explains

70% of what we say ourselves
Example: You discuss concepts

90% of what we do ourselves
Example: Do the skill (either psychomotor or cognitive)
Principles of Adult Learning

- Adults must want to learn. Adult learning is affected by adult experience. Most adult learning comes from making use of others’ experiences.
- Adults want respect. They want an instructor who has taken the time to ask what they need to learn and then tailored the learning specifically to them.
- Adults learn best by doing. They prefer to deal with “real-life” examples and like a variety of presentation aids and teaching techniques.
- Adults need feedback about their progress, but may fear tests and the possible results.
- Adults learn best when they actively participate in the learning environment. The teacher must organize teaching activities that require students to share responsibility for mutual inquiry and response.
Very Brief Guide to Planning Presentations

Any good presentation has three elements: an Open, a Body, and a Close. Each element should be structured and sequenced. This Guide incorporates one approach to structuring and sequencing a presentation, including the four principles known to enhance retention and recall in adult audiences.

Open
Attracts attention, states educational objectives and gives a rationale or statement of relevance.

- **Attention** – A mere greeting, brief synopsis, experience, or question – usually something related, but not essential. Intended to let audience stop talking and start listening.
- **Objectives** – Tell the audience what they will be able to do differently after your talk.
- **Relevance** – Show the learner why he needs to know.. Stress practical application, clinical management or treatment.

Body
The information your audience came to hear. Make a distinct transition from the opening.

- **Review** – Bring your audience to common ground. Review briefly what you think they already know.
- **Structure** – New material is retained best when delivered in a particular sequence. Plan the sequencing in advance and share it with the audience. Re-use the outline throughout the presentation when beginning new sections.
- **New Material** – Offer new material in lecture or discussion format depending on the size of the audience.

Close
Offers interaction. Important to your presentation’s success so allow sufficient time.

- **Summarize** – Review key points.
- **Questions** – Leave enough time for questions and give brief answers. This interaction with the audience is crucial.
Tips for Effective Presentations

Speak Extemporaneously
Don’t read a speech or presentation. Rely on charts or audio-visual aids to keep your place and to maintain organization of your presentation.

Stay Within Your Time Limit
Tune-blindness may be a sign of other ills. It can mean incomplete preparation, poor organization, and/or a lack of respect for your audience.

Consider the Makeup of Your Audience
Know your audience and use this information to make your presentation more effective. Recognize the efforts and accomplishments of members of your audience or their organizations as examples in your presentation.

Be Sure You Can Be Heard
If people have to concentrate on hearing you, they will not remember what you are saying. Speak into the microphone and talk to the audience, not to the screen. If you are animated and enthusiastic, you usually will be loud enough to be heard.

Keep Eye Contact
When you are talking to one person, look at their eyes and maintain contact. When before a small group, look at the individuals or the whole group. Before a larger audience, focus on certain sections, and switch to another section. When you turn your eyes away from your audience, you break an important psychological bond.

Use Visual Aids Effectively
Visual aids demonstrate major points and give organization and variety to your oral presentation. The visual aid must be brief, clear, and to the point Use the pointer with care – don’t wave it around.

Use Meaningful and Natural Gestures
Your gestures should be sincere, natural, and meaningful. It’s estimated that between 50% and 80% of communication is non-verbal. For your gestures to be effective, they must convey the same meaning as the words you are using.
Use Examples to Make Your Explanations Clear
Next to providing exercises or short interactive videos, examples are the most effective way to tell your story. Keep your explanation short, simple, and to the point, then follow it with a short, simple, and meaningful example.

Be Enthusiastic
If you are interested and enthusiastic about your subject, most of your audience will also become enthusiastic and will listen to you, and remember what you said. An old saying goes, “They don’t care how much you know, until they know how much you care.”

Learn to Live with “Stage Fright”
Virtually all the best speakers and teachers feel stage fright and learn to use it to make their performance better. Good speakers use this emotion to help prepare themselves. Be intense, sincere, enthusiastic, and entertaining and you will give a good presentation.

- Casual positions are distracting. If there is a lectern, stand behind or away from it; don’t lean against it. Make your movements purposeful – don’t talk while you walk.
- Rules can be broken.
  At the right time and place, any of these rules can effectively be broken.
You will find many occasions to use various instructional aids. An understanding of the purpose and proper use of instructional aids is helpful.

**Functions of Instructional Aids**
- To prompt.
- To gain interest.
- To enhance or clarify.
- To convince.

**Effective Instructional Aids Should Be:**
- Readable
- Appropriate
- Understandable
- Accurate
- Supplemental
- Skillfully presented

**Commonly Used Instructional Aids:**
- Slides
- Flipcharts
- Overhead transparencies
- Chalkboard/dry erase board
- Charts, posters
- Videotapes, videodiscs, films
- Handouts
- Models, simulations

**Guidelines for Effective Slides**
Remember this rule:

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NO MORE THAN SEVEN WORDS PER LINE
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NO MORE THAN SEVEN WORDS PER SLIDE
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Guidelines for Effective Slides (continued)
• Slides should illustrate and/or summarize using pictures or words.
• Dark, cool colors (blues and greens) tend to recede, and light, warm colors (yellows, oranges and white) come forward. Thus, cooler colors make better backgrounds while warmer colors are best for lettering. Avoid the use of red.
• Avoid copying printed material, as there is often too much information present on a typed page for legible projection.
• Slides should be horizontal in format; vertical images may project over the edge of a horizontal screen.

Flipchart Guidelines
• One idea per page.
• No more than 20 words/6 lines.
• Readable from anywhere in the room.

Overhead Transparency Projector Guidelines
• Make sure that everyone can see the screen.
• Provide handouts of your transparencies for taking notes.
• Read from the projection table, not facing the screen.
• Don’t block the projected image; watch for shadows cast on the screen.
• Pre-focus the projector before using it in front of the class.
• Turn the projector off when a transparency has served its purpose; don’t leave it projected while talking about other things.
• Keep a spare bulb with the projector.
• Put notes on transparency frame.

Chalk/Dry-Erase Board Guidelines
• Lettering must be legible.
• Make only one point at a time. Don’t pre-write all lesson material.
• Erase any information that is no longer needed.
• Use only the upper half of the board. Your class may not be able to see the lower half.

Avoid
• Reading every word that appears on the screen!
• Dirty, scratched, or out-of-focus slides.
• Becoming “tied” to the projector.
• Turning your back to the class and talking to the screen or board.
• Glare from windows. Adjust window shades or lighting as necessary.
• Using red markers except to highlight points.
## 12 Do’s and Don’ts

**Do:**

1. State your objectives at the beginning.
   - What will you say?
   - Why are you saying it?
2. Distinguish between major and minor points.
3. Organize your lecture in a conversational form.
4. Use many examples, both positive and negative.
5. Use appropriate vocabulary.
   - Descriptive terms and definitions
6. Use visuals or handouts for complex tables, data, diagrams, or graphs.
7. Refer back to your outline to keep your audience on track as you move on to the next main point. Do write key words on the board as you go.
8. Ask questions, even if only rhetorical.
9. Speak loudly and clearly.
10. State when and how you expect participation.
11. Show your enthusiasm for the topic.
12. Be yourself.

**Don’t:**

1. Make more than 5 main points in a one-hour lecture.
2. State major points just once.
3. Organize your lecture like a journal article or CPC.
4. Assume that just one example will adequately present a concept.
5. Use technical terms or diagnostic labels without explanation.
6. Use illegible slides, overhead transparencies, or blackboard writing.
7. Go on without summarizing.
8. Talk to the chalkboard or the window.
9. Read to the class.
10. Write and talk at the same time.
11. Ignore apparent confusion or distraction.
12. Speak in a monotone or “journales.”
<table>
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<th>LEVELS OF LEARNING*</th>
<th>Descriptions of the Major Categories in the Cognitive Domain</th>
<th>Illustrative Behavioral Terms for Stating Learning Outcomes</th>
<th>Sample Questions</th>
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<tr>
<td>1. Knowledge</td>
<td>is the remembering of previously learned material. This may involve recalling a wide range of material, but all that is required is bringing it to mind. Knowledge represents the lowest level of learning outcomes in the cognitive domain.</td>
<td>Defines, describes, identifies, labels, lists, matches, names, outlines, reproduces, selects, states.</td>
<td>1. What is the arthropod vector for Rocky Mountain spotted fever? 2. Name three ganglionic blocking agents used in the treatment of hypertension. 3. List four causes of aplastic anemia.</td>
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<td>2. Comprehension</td>
<td>is the ability to grasp the meaning of material. This may be shown by translating material from one form to another (words to numbers), by interpreting material (explaining or summarizing), or by estimating future trends (predicting consequences or effects). Comprehension goes one step beyond the simple remembering of material and represents the lowest level of understanding.</td>
<td>Converts, defends, distinguishes, estimates, explains, extends, generalizes, gives examples, infers, paraphrases, predicts, rewrites, summarizes.</td>
<td>1. Give an example of the effect of a strong alkali reacting with human tissue. 2. Tell me in your own words why a Bence-Jones protein is found in myeloma patients. 3. Distinguish between orthostatic hypotension and vasovagal syncope.</td>
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<td>3. Application</td>
<td>is the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws, and theories. Application requires a higher level of understanding than comprehension.</td>
<td>Changes, computes, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.</td>
<td>1. Calculate the amount of intravenous fluid necessary to replenish a patient 10% dehydrated. 2. Predict the arterial oxygen tension one might find in a normal person at an altitude of 10,000 ft.</td>
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<td>4. Analysis</td>
<td>is the ability to break down material into its component parts in order to understand its organizational structure. This may include identifying parts, analyzing the relationships between them, and recognizing the organizational principles involved. Analyzing requires an understanding of both the content and the structural form of the material.</td>
<td>Breaks down, diagrams, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, points out, selects, separates, subdivides.</td>
<td>1. Is the problem list justified by the data, which were presented by student A? Give the reasons for your response. 2. What other inferences can you draw from the data, which have been presented about the patient? Give reasons for those inferences. 3. Why is it incorrect to assume that the diagnosis is certain at this point?</td>
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<td>5. Synthesis</td>
<td>is the ability to form a new whole by putting parts together. This may produce unique communications, a plan of operation, or a set of abstract relations. Synthesis stresses creative behaviors, with major emphasis on the formulation of new patterns or structures.</td>
<td>Categorizes, combines, compiles, composes, creates, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.</td>
<td>1. Give a succinct summary of the data base and the conclusions you reach from that summary. 2. Describe an experiment, which would explain the abnormal data found in this case. 3. (Given a problem list) tell me your management plan for each problem.</td>
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<td>6. Evaluation</td>
<td>is the ability to judge the value of material based on definite criteria. These may be internal criteria (organizational or external criteria (relevance to the purpose) and may be determined by the evaluator. Evaluation is highest in the cognitive hierarchy because it contains elements of all other categories, plus conscious value judgments based on clearly defined criteria.</td>
<td>Appraises, compares, concludes, contrasts, criticizes, describes, discriminates, explains, justifies, interprets, relates, summarizes, supports.</td>
<td>1. Given the known coronary risk factors of blood pressure, smoking, diet, and others, evaluate the data that led to these conclusions. 2. Criticize the problem list and plan developed by your peer. 3. Justify your plan for the evaluation of this anemia based upon the criteria you believe are most important.</td>
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Scripting Your Presentation: A Worksheet

Presentation Script

Open

- Attract Attention

- Set Objectives

- Establish Relevance

Body

- Review What Is Known

- Explain Structure

- Deliver New Material

Close

- Summarize Key Points

- Q & A