

# Five Steps for Delivering an Effective and Educational Lecture

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*This article highlights 5 essential components of creating and effectively delivering an educational lecture in the medical arena. Optimizing the transmission of knowledge is ideal for fostering an atmosphere that is conducive to all learners and helps physicians pursue their goal of lifelong learning.*

*Cutis.* 2017;99:E10-E12.

As lifelong learners, physicians are encouraged and expected to share their knowledge base with budding residents and students. Effective communication is essential to the utmost delivery of clinical knowledge and pearls. Lecture delivery is important for all stages of learning, and adapting efficient techniques early in one's career is critical for the transmission of ideas and teaching points. These tips were created to help formulate guidelines for physician presentations and are open for interpretation. These well-meaning suggestions can be integrated into one's toolbox to foster an enthusiastic educational arena.

## Step 1: Know Your Key Message

First and foremost, one should ruminate over the overall message of the lecture. Consider at least 3 main points you want the learner to gain and remember on completion of the lecture. Additionally,

it is crucial to think about the audience who will be present for your message and how to deliver your ideas clearly and effectively. Be cognizant of the knowledge base of your listeners and gauge how much initial background information is needed; conversely, if the audience is familiar with the material, excessive introductory material may be unnecessary and cause inattentiveness. Simplicity, both within the inherent message itself and the content and layout, can ameliorate the transmission of data regardless of the audience. A mentor once told me that no slide should contain more than 13 lines of text. Furthermore, if you are counting the number of lines, then you likely need to reduce the text and simplify the slide. Each slide should contain a maximum of 3 or 4 bullet points.<sup>1</sup> Convolved figures should be avoided and key points should be highlighted. Overall, know your take-home message and provide the listener with simplistic text and images to convey the key ideas at their educational level.

## Step 2: Prepare

Preparation is of utmost importance. Reading over the slides several times prior to the presentation is vital. You are the assumed expert on the topic and meticulously knowing the subject matter helps with the confidence of your delivery. Ease of subject matter also helps you, as the presenter, to rely less on verbatim reading of the slides and allows you to interact more with your audience. It is important to be familiar with the order of your presentation as well as the phrases and figures provided.<sup>2</sup> Flipping back and forth through slides can be distracting to the audience and can make the order of your presentation seem incongruous, presenting as a hastily constructed lecture. If you are prepared, you can engage your audience and provide additional information that

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The author reports no conflict of interest.

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is not on the slides to maintain interest. Remember that reading the slides can reduce your voice to a monotone, subtracting enthusiasm and energy from the delivery of your talk.<sup>2</sup> Rehearsal helps give you the freedom to confidently and proudly present your subject material.

### Step 3: Be Animated

You are the main attraction and the performer of this lecture. Radiate the confidence you gained from being prepared with the ability to engage in eye contact and gestures as needed to convey your point. Regularly shift your focus around the room to attempt to involve as many people as possible in your talk.<sup>2</sup> Your main focus should be your audience and not your slides; the slides should simply help guide your talk.<sup>3</sup> During your presentation, you also can ask rhetorical questions that you can then answer to keep the group engaged (eg, “So, what does this tell us?” or “What would you do next?”). These questions demonstrate to your audience that you are interested in their attention and can help reciprocate the enthusiasm. Use language that involves your audience as a group participant. For example, when looking at visual aids, introduce them by saying “If we look at this table, we can see that . . .” or “This figure shows us that . . .”<sup>2,3</sup> Additionally, be cognizant of the volume and pace of your voice. During key points, you may want to slightly raise your voice and slow your pace for emphasis. Anxiety can make all presenters speed through their material; however, try to be mindful of the rhythm of your speech. With preparation you should be able to accurately gauge the length of your presentation but also adapt to the necessary time constraints if too much time is spent on one point early on. Most would believe that all good lectures end at least a few minutes early to allow for questions and comprehension of the material as well as to provide your audience with time to move on to their next engagement or clinical duty.

### Step 4: Encourage Active Participation

Active audience participation is shown by a multitude of studies to provide the highest level of comprehension.<sup>4,5</sup> In a crossover study conducted by Bleske et al,<sup>4</sup> 30 students were divided into 2 groups and were taught 6 therapeutic topics, with 3 topics provided by conventional lecture and 3 topics taught by team-based learning. At the end of the educational series, the students were surveyed to evaluate their confidence and attitudes. Students demonstrated not only higher examination scores with team-based learning but higher confidence in their ability to transmit the information garnered through therapeutic recommendations.<sup>4</sup> Although

small, this study highlights the intuitive notion that active learning with subject material, either by sharing ideas with colleagues or having small brainstorming discussions throughout lectures, helps consolidate the information for long-term memory and comprehension.

Additionally, teaching in a medical environment can present unique challenges, as participants may feel anxiety over having right or wrong answers due to fear of inadequacy among their scholarly peers. Neher et al<sup>6</sup> proposed a 5-step “microskills” model for teaching young physicians, and although it is intended for a clinical setting, it also can be applied to engaging and answering questions from a medical audience in general. Their model focuses on the teacher, or in our case the lecturer, asking a question and then applying the following model: (1) get a commitment, (2) probe for supporting evidence, (3) teach general rules, (4) reinforce what was done right, and (5) correct mistakes.<sup>6</sup> After asking your question, the student commits to an answer and must then provide supporting details for their choice, thus feeling more responsible for their collaborative role in problem-solving. Based on their answer, you can then teach your general rule, provide positive feedback on what the student said accurately, and ultimately correct any erroneous information. This prototype of learning is best utilized in the clinical setting but also can enhance participant engagement in lectures while maintaining an inviting educational environment.

### Step 5: Summarize

Lastly, conclude your presentation with at least 3 memorable points. What was the point of the presentation? What message do you want your audience to take with them and apply to clinical care? Reiterating the key points through repetition is crucial for long-term memory. Leave the audience with additional thoughts for exploration and subsequent discussion. How can your work or topic be further translated into additional projects for investigation? If the lecture material contains abundant clinical information beyond 3 points, a handout can be helpful to avoid having learners struggling to keep up with notes. This piece of take-home material can serve as a tool for subsequent study and to stimulate enhanced memory of the subject material provided. A strong concluding message can consolidate and remind learners of the scope of the topic and highlight the vital information that should be retained.

### Final Thoughts

In summary, the clinical lecturer provides a unique teaching experience, and all physicians should feel

proficient in formulating and delivering an educational lecture. These simple tips that call for the teacher to know and prepare his/her key message to deliver an animated and engaged presentation and then to summarize key findings are suggestions for the utmost transmission of data and ideas for all learners.

*Acknowledgment*—A special thank you to Joan E. St. Onge, MD (Miami, Florida), for her help providing resources for this topic.

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