

Leading Case Based Discussions for Synthesis & Integration Sessions

Techniques and Strategies for S & I Case Discussion Leaders

The purpose of this PowerPoint presentation is to help S & I case discussion leaders skillfully lead a case discussion that helps student bring together and apply knowledge they have acquired during the week.

Overview

- Overview/Background Information
- Function of the S & I Case Discussion in a Module
- Description of Discussion Method
- Advantages
- Characteristics of Skilled Discussion Leaders
- Planning the Case Discussion
- Leading the Case Discussion

Overview/Background Information

- The case discussion is a component of the weekly Synthesis & Integration (S & I) for each module.
- The case for the case discussion should be based on a patient presenting with the disease/condition that is the theme/clinical presentation (e.g. jaundice) for the module
- The case should be written by a clinician in collaboration with basic scientists and social scientists.
- The case discussion should be lead by a clinician with basic scientists and social scientists also asking questions and involved in the discussion. Students should see a team approach.

The case discussion during the S & I session is a vital component of a module. It is the case discussion that pulls everything together for that module. The case for the case discussion should be based on a patient presenting with the disease/condition that is the theme for that module. Ideally, the case should be written by a member of the block team working in collaboration with basic scientist and social scientist block team members.

The case discussion could ideally be lead by a team (clinician, basic scientist, & social scientist) or by a clinician who has planned the discussion in collaboration with a basic scientists & a social scientist).

Overview/Background Information Cont'd

- The case is revealed to the students one step at a time (progressive disclosure).
- The steps in revealing the case should follow the standardized clinical behaviors (formerly Performance Objectives) for that module.

The “standardized clinical behaviors” depict the ideal approach the clinician would take with a patient presenting with the disease or condition that represents the theme (e.g. Jaundice) of the week’s module. During the case discussion, students should be able to see the discussion leader following the steps (SOAP) depicted in the “standardized clinical behaviors.”

The Standardized Clinical Behaviors for each module are the direct link/connection from years 1 and 2 to years 3 and 4. When the students are discussing a case representing the approach to a patient presenting with the module’s presenting disease/condition (e.g. jaundice) they are practicing the S, O, and part of A of the SOAP clinical thinking model they will use in years 3 and 4. Ideally, by studying the clinical presentation of jaundice for a week and ending that week with a case discussion that pulls information together, the student will be better prepared to intelligently take a clinical solving problem approach with a real patient presenting with jaundice in years 3 and 4.

Functions

- **The case discussion as a component of the S & I session serves several functions:**
 - **Brings information from several different cases together.**
 - **Provides learners opportunity to apply their knowledge of the enabling objectives to a realistic case.**
 - **Allows the students to see and practice the sequence of steps in working through a case that represents a sound clinical reasoning approach.**
 - **Allows students to see how to apply the biopsychosocial approach to a patient problem.**

A primary aim of any module is to facilitate the student's ability to take an undifferentiated patient presenting in the clinical setting with a particular clinical presentation (e.g. jaundice) and to go through the steps, with understanding, depicted in the standardized clinical behavior. By getting the practice of doing this via the weekly S & I case discussion is therefore a first step in gaining the skill to do this.

It is important that the case discussion provides the students the opportunity to bring information together from the various cases they have studied in the small groups and to also integrate the biological, psychosocial, and clinical sciences. You as the case discussion leader can make this happen via skillful questioning and skillful responding.

Definition/Characteristics

- **Definition/Characteristics of Medical Case Discussion Method**
 - Real or fictional case or a mixture of both
 - Discussion leader
 - Case revealed sequentially
 - Discussion leader asks questions
 - Participants work toward solutions
 - Participants learn from each other

The medical case discussion teaching/learning method is one in which students, usually led by a leader/facilitator, discuss a case and exchange knowledge, experiences, and opinions with one another.

The leader usually shares the chief complaint and some portion of the history and then asks the learners what additional information they would like and why. The leader then reveals some more information about the case and asks a question to stimulate discussion. This continues through the SOAP aspects of the case.

Some Advantages

- Learners get chance to examine the thinking process of peers & themselves.
- Instructor has chance to examine thinking process of learners.
- Learners improve at expressing themselves in group.
- Provides interesting context for learning.
- Consistent with adult learning theory.

The S & I case discussion at the end of a module is the only way teachers and learners have the opportunity to assess their abilities to apply information learned during the week to a case problem. It is also a wonderful opportunity for the faculty to “hear” how the students are thinking. Likewise, it is a wonderful opportunity for the students to “hear” how their peers are thinking which also makes it an opportunity for comparison and self assessment.

Since case discussions are an important component of clinical education at our CORE sites, the case discussion provides an opportunity for students to become skilled in this area before they leave Athens.

Adult Learning Theory

- **Adults:**
 - Like to solve problems.
 - Want feedback ASAP.
 - Bring experiences to the learning table for sharing.
 - Want to apply what they have learned as soon as possible.

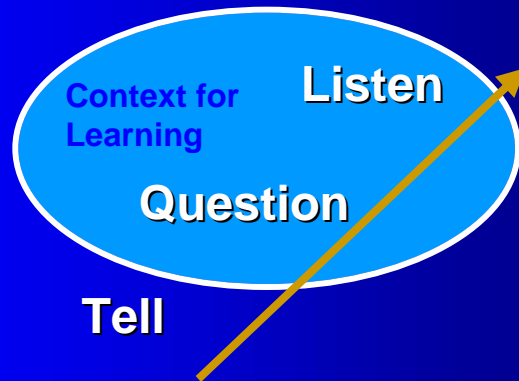
The S & I case discussions fit well into the principles of adult learning theory.

Effective Discussion Leaders

- **Good discussion leaders:**
 - Believe in the value of personal interaction as a teaching/learning method.
 - Believe that with regard to learning, the “process” is equally important as the “product.”
 - Are comfortable with “questioning and listening” as opposed to “telling.”
 - Do things to **minimize teacher talk** and **maximize student talk**.

We probably all came through an educational system based on the philosophy that “teaching is telling” and that the purpose of teaching is to transfer information from the teacher to the learner. The case discussion helps change this traditional paradigm because an effective discussion leader views him/her self as one who serves to help create a context for learners to create their own knowledge. Leading a discussion is basically a process of “questioning and listening” over and over.

Teaching: A Different Paradigm



This is a visual for reinforcement of the ideal of the process of moving from the “telling mode” to the “listening mode” as a teacher. It is within the “questioning and listening” mode that you as the teacher create a “context for learning.”

Planning/Creating the S & I Case

- **One of the first steps in creating the case is to become familiar with the students learning activities and content materials for the week of the module.**
 - **Become familiar with the cases studied in small groups that week.**
 - **Become familiar with the questions that were common to these cases.**
 - **Become aware of the presentation topics for the week as well as the skills labs.**

The things you need to do as listed on this slide are critical to creating a case that will be perceived as valuable to the students. This steps will be especially important if you are in a position of having to lead the students through the discussion of a case that you did not create.

Planning/Creating the S & I Case

- A logical next step is to become familiar with the “Standardized Clinical Behaviors” and the schema for that module.
 - Remember that the standardized clinical behaviors will be the basis for the sequencing of the events of the case and that they will be a major source for the development of the questions you will be asking to stimulate and guide discussion.

There are usually 6 to 8 major components (e.g. elicit appropriate history, conduct appropriate physical, etc.) to the standardized clinical behaviors for a weekly module and that each major component (e.g. conduct appropriate physical) is broken into several sub-components(inspection, palpation, etc.)

Planning/Creating the S & I Case

- The nature of the patient and the case
 - The patient chosen for the case should be not be described in a way that promotes the formation of stereotypes. Patients should be presented in a positive and respectable way.
 - The case should be realistic but it should not be so complex that students' attention can be diverted to issues and content areas that are outside the perspective of the week's objectives.

Students can form negative images of patients very quickly in medical school. Certain groups of patients can become stereotyped. A patient case for a case discussion should not serve to perpetuate stereotypes. If we want to students to see patients as individuals with whom they can form helping relationships, it is important to portray patients in positive ways.

A case can be too detailed and complex and can have too many issues going within it. It is better if the case contains only complexity to help students focus their attention on content relevant to the objectives or major themes for the module.

Planning/Creating the S & I Case

- **As you create the case, remember the overall purposes of the case discussion for the week.**
 - **To help learners apply their knowledge of the enabling objectives to the a case.**
 - **To help learners integrate information from three important domains (clinical, basic science, and behavioral/social).**
 - **To help learners begin the process of acquiring clinical reasoning skills.**
 - **To help learners learn from each other.**
 - **To help learners create their own knowledge.**
 - **To help learners self assess their knowledge level as well as the ability to apply that knowledge.**

As you begin to create the case, recall the overall purposes of the case discussion for that week.

Helps learners apply their knowledge of the enabling objectives to a case. Recall that the purpose of the enabling objectives is to enable the learners to “perform the standardized clinical behaviors with understanding.”

Planning/Creating the Case

- Plan for revealing the case in sections via transparencies or computer projected PowerPoint slides.
- Actually place the questions you are going to ask on the slides.
- Include necessary exhibits (e.g. x-rays) on your slides.

[View a set of PowerPoint slides](#) used in a case discussion by Stephen Clay, D.O.. Dr. Clay's slides are a positive example of a case that is:

1. Revealed in a logical sequence
2. Follows the components/sequence of the "standardized clinical behaviors."
3. Has thoughtful questions that elicit thinking at several different levels of Bloom's taxonomy.
4. Has questions phrased in the words the patient would use.

Effective Discussion Leaders

- **Good discussion leaders:**
 - Are aware of their instructional intent/purpose(s).
 - Are comfortable not knowing all the answers.
 - Believe they can learn from the learners
 - Know their learners.
 - Have a collaborative non-threatening style.
 - Know and practice techniques (e.g. effective use of questions) that make discussions effective.

Techniques for Making Case Discussions Effective

- **Create atmosphere of collaboration.**
 - **In a collaborative context/atmosphere:**
 - Learners are treated as valuable contributors to their own and to each other's learning.
 - Teachers and learners learn together.
 - Trust is established among learners and between the discussion leader and the learners.
 - Teachers and learners feel it is okay to say "I don't know, can someone else help me?"
 - Learners feel free to take risks.

Much of the work on creating collaborative learning contexts has been done by Jane Westberg and Hill Jason. Their 1993 book entitled Collaborative Clinical Education is available on loan from Dennis Baker's office (Grosvenor 222) and it is also available for check-out the the Learning Resource Center (LRC.)

Techniques for Making Case Discussions Effective

- **Introduce the case with enthusiasm and interest.**
 - Voice inflection.
 - Facial and body expression.
 - Personal story.
 - Picture of patient.

David Irby, Ph.D., a medical educator, conducted a study in 1978, in which he identified enthusiasm as one of seven important characteristics of effective clinical teachers. There is abundant educational research at all levels of education to support the importance of “enthusiasm” as an important teacher characteristic.

A picture of the patient can sometimes help the learners “connect” to the patient for the case but if one is not available a verbal picture can also be effective.

Techniques for Making Case Discussions Effective

- **Take learners through case in logical sequence**
 - **Provide initial information about case (patient name, sex, age, chief complaint)**
 - Ask question
 - Obtain responses
 - Reinforce responses
 - **Provide additional information**
 - Ask question
 - Obtain responses
 - Reinforce responses

In most cases the “standardized clinical behaviors” point you in a sequence as follows:

Chief Complaint

History of Illness

Past History

Review of Systems

Physical Findings

Lab

Differential

Treatment

Patient Education

Techniques for Making Case Discussions Effective

- **Use the “Standardized Clinical Behaviors” as one base for your questions.**
- **You will also want to generate some questions from the basic science, social/behavioral science and clinical questions that are common to the cases discussed by the small groups for the week.**

Techniques for Making Case Discussions Effective

- **Know your audience.**
 - It is advantageous when the discussion leader knows the learners.
 - Ways you can become familiar with the students.
 - Obtain student pictures from Angie Degnan.
 - Review student pictures/names either before teaching encounters other than the S & I session.
 - Visit small group (CBL) sessions.

It is not always possible to know the names of all the learners in a large class during the first year. However one could argue that if you have contact with the students as a presenter, a skills lab instructor, and/or a facilitator, then the systematic learning of most of the students names is possible. Knowing students and being able to call on them by name is one step in forming helping relationships that encourage and facilitate learning.

Techniques for Making Case Discussions Effective

- Strategies for asking questions.
 - Ask the question to the group as a whole and provide the opportunity for someone to respond.
 - Ask the question to a small group (e.g. CBL group number 5)
 - Ask the question to a specific individual

Students in our new curriculum are already using the word “pimping” and it is rumored that some skip the S & I sessions in part based on their fear of being called on and feeling that they are judged negatively if they do not give a correct answer. One way to help with this situation is to ask a question to the entire group and wait for an individual to respond. Another strategy is to ask a question to a particular group and ask anyone of them to answer. You might even suggest they confer before an answer is given. In some cases you may know a particular student who is not threatened by a question and perhaps early in the case discussion that person could be the one to whom you direct a question.

Techniques for Making Case Discussions Effective

- Asking questions

- Use “Wait-time I”

Teacher Question	3- 5 Seconds Silence	Student Response
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- Use “Wait-time II”

Student Response	3- 5 Seconds Silence	More Student Response
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Wait-time I--for more information on wait-time visit <http://id-www.ucsb.edu/IC/TA/tips/wait.html>

Research conducted in school classrooms indicates that teachers frequently give students less than 9/10 of a second to answer a question. If an answer is not given by that time the teacher verbalizes something. This may be a repeat of the question or a request of another student to answer the question. Additionally, those students the teacher expects a response from usually gets more time to answer while those for whom the teacher has low expectations, get less time to answer. Many classrooms are rapid fire question and answer sessions with the teacher's expectations of certain learners becoming fulfilled. When teachers are trained to wait 3 to 5 seconds (wait-time I) before saying anything after asking a question, everything changes. For example, learners not expected to answer a question, do. Learners answers are longer and more thoughtful. There are more responses from more learners, etc. Using wait-time is not as easy as it might seem. It is something you have to practice and it is helpful to have someone observe you and provide you with feedback on your use of wait-time I.

Techniques for Making Case Discussions Effective

- Asking questions

- Use “Wait-time I”

Teacher Question	3- 5 Seconds Silence	Student Response
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- Use “Wait-time II”

Student Response	3- 5 Seconds Silence	More Student Response
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Wait-time II

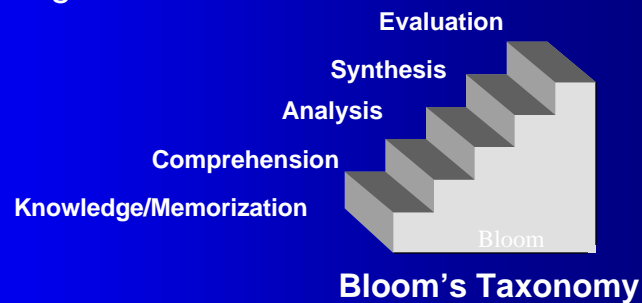
Wait-time II is a 3 to 5 second period of silence by the teacher after a learner answers a question. Frequently, teachers either correct or reinforce an answer too quickly. If the teacher will instead provide no response after the student answers some exciting things happen that acts to facilitate discussion. If the teacher does not immediately respond to a student answer, the student will tend to expand on his/her answer (a desirable thing for a good discussion). Sometimes another student will add to the first student’s answer, etc. Ironically, by saying nothing in response to a student answer (using wait-time II) the teacher will be doing exactly what it takes to facilitate student to student interaction(learners learning from each other) which is a vital characteristic of an effective case discussion.

For more extensive information on wait-time and the concept of “think-time” go to:

http://www.ed.gov/databases/ERIC_Digests/ed370885.html

Techniques for Making Case Discussions Effective

- Asking questions
 - Use questions that stimulate higher levels of thinking



Questions can be asked to purposely stimulate a certain level of learning in Bloom's taxonomy. This taxonomy was described by Benjamin Bloom in 1956. Ideally in a case discussion it is good to ask questions at a variety of levels. If you would like to see a description of each level and examples questions that elicit particular levels of thinking, visit

<http://a41064.west.asu.edu/students/dfields/96-598/b.bloom.html>

It is probably best not to think too much about the exact cognitive level your question is eliciting but instead write a question and then ask, "Does this question elicit a higher level of thinking than the mere recall of facts/details?" For example, the question, "Is this patient's CBC abnormal?" is basically only asking for memorized (recall level) information. Whereas, if you asked, "Why would that information be helpful to us at this time?" elicits a higher level of thinking; somewhere "up the steps" on Bloom's Taxonomy.

[View some nice examples of questions placed on PowerPoint slides used in a case discussion led by Dr. Steven Clay.](#)

Techniques for Making Case Discussions Effective

- Additional thoughts:
 - Discourage the dominating student
 - Encourage the reluctant student

Discourage the dominating student.

In an open case discussion in a freshman class it is not likely that you will have a student who wants to dominate a discussion. How you respond to that student may depend on how well you know him/her. If you know him well you might just use a very direct approach and say something like, "John, you seem to know a lot about this, lets give some others a chance." If you know someone well then you can probably predict how they will take or respond to what you say and how you say it. The key is to be positive and reinforcing with the person and avoid at all costs making the person look bad. If you do not know the person well, you might consider trying some less direct strategies such as avoiding eye contact with the person or physically moving away from the person so that your attention is harder to draw.

Encourage the non-participating student

Making eye contact with the person after asking a question is one strategy. Moving toward the person might be another. Asking the person a question they really can't get wrong might be another strategy. Asking for an opinion would be an example. If you are being friendly and relaxed and have created an accepting atmosphere you are much more likely to get the reticent student to take a risk.

Techniques for Making Case Discussions Effective

- Additional thoughts:
 - Redirect questions directed at you
 - Periodically summarize or ask a participant to summarize
 - Achieve closure for the discussion

Redirect questions directed at you

This is an easy one. Since you will probably be at the front of the group you are a tempting target for questions during a case discussion. After all, if they ask you a question, the pressure is off them. The easy way to respond to a question is to say, "That is an excellent question. Does anyone in the group have an answer?" This keeps the discussion going and directs attention back to the students.

Periodically summarize

It is easy for students to get lost in the maze of a case discussion. You can provide some help to them by periodically summarizing or you can ask a student to summarize. Maybe a simple question such as, "Okay, what are the important things we have established thus far about this case?" would serve a summarizing function

Achieve closure.

The important strategy here is to leave enough time at the end of the discussion for some closure or summary to occur. You can provide the closure by restating main learning points from the case or perhaps elicit some summarizing information from the students.

Techniques for Making Case Discussions Effective

- Additional thoughts:
 - Evaluate your effectiveness as a discussion leader.

There are several ways to evaluate the effectiveness of the case discussion. Here are some thoughts.

1. Ask the students to write down on a blank piece of paper 3 important things they have learned from the discussion. Have them turn in the piece of paper (no names please). Reading their responses may be very helpful in judging your effectiveness.
2. Pass out a simple evaluation form on which you have listed some behaviors of effective case discussion leaders. Keep it short and simple (e.g. 5 questions).
3. In advance of the discussion, ask a colleague or colleagues to observe and give you feedback on how you did. Ask them to answer some specific questions about your skills that you feel you need feedback on.
4. Ask a faculty development person to give you feedback.