CASiES 101: Learning to Teach with Cases

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ABSTRACT

There is little information in the nursing literature regarding how best to develop and implement cases as a teaching strategy. This article takes the reader through the process of developing a case and implementing its use in a nursing classroom.

CASiES WERE FIRST USED as an educational strategy more than 100 years ago at the Harvard Business School (1). Since then, the disciplines of law, education, and medicine have successfully incorporated cases as teaching tools. The literature in these fields is replete with examples of cases, as well as information regarding how to construct and use cases. Although cases are used in nursing, a literature review reveals a comparative dearth of recent information on the topic. The reasons for this may be twofold. Silverman and Casazza (2) suggest that when most faculty prepare for teaching, they design lessons based on their own learning experiences, or to meet their own learning needs. Since many nurse educators have been taught predominantly through lectures, it is not surprising that most would, in turn, use lectures to teach their students (3,4). In addition, the pressure to cover content when the content is continuously expanding and becoming more complex leads many educators to focus on improving the effectiveness and efficiency of their teaching strategies.
to help their students learn more. This leads to an additive curriculum. The assumption with this strategy is that knowledge of content leads to thinking and application (5-7). Contrary to this assumption, Paul and Elder (8) note that how to teach is as important to critical thinking as what to teach.

Advantages/Disadvantages of Using Case Studies Case studies encourage critical thinking. Students must process information and make decisions, just as they will do in real situations. As patients are sicker than ever before, the possibility of error on the part of both nursing students and inexperienced nurses is high. The use of cases allows students to begin developing clinical judgment without risk to real patients. This learning process requires the student to move from a passive role to an active one, which encourages learning and integration rather than simple memorization.

By giving realistic details and sequencing events, case studies bring a reality to clinical topics that simulates the actual clinical experience (9,10). In addition, the use of the narrative form - that is, the age-old story - may improve student retention of concepts (11).

Teachers may find certain aspects of using cases to be disadvantageous. For example, students may be poorly prepared, resistant to change, and reluctant to participate, or they may drift from the topic. And teachers may perceive a loss of classroom control. A big disadvantage for many faculty is the increased time requirement for both the development and utilization of a case. Cases can take from hours to weeks to develop, depending on their complexity. Fewer topics are covered with cases during an allotted amount of time than could be addressed with a lecture.

What follows is a description of the two-step process required to teach with cases: developing a case and then implementing its use in a classroom. The discussion is limited to clinical situations and does not address the development of case studies specific to leadership, community, or research.

Developing a Case THE BEGINNING Development of a case begins with determining clear objectives. What is the student supposed to learn? For many teachers, objectives will include increasing factual information, such as nursing care for a specific disease, as well as developing critical thinking skills. (See Sidebars 1 and 2.)

Sidebar 1. Four-Month-Old with Bronchiolitis
Sidebar 2. Six-Year-Old with Tonsillectomy and Adenoidectomy

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textbooks and journals usually contain ready-made cases and can be a good place to start. Faculty may modify published cases to fit their teaching goals and time allotment. However, some cases may be too short and lack details necessary to present a realistic scenario, while others may be too long and complex. Many published cases can be improved by adding thought-provoking questions.

Occasionally, a teacher may not find a suitable case. While frustrating, this may provide the stimulus for writing an original case study. Although the focus of this article is on developing new cases, the information provided can be used for modifying existing cases.

Central to the case method is the use of a story (4,12-14). A story gives the teacher an opportunity to bring a person or situation to life. It is the hook to capture a student's interest, providing motivation to engage the material. The inspiration for the topic may come from clinical experience and/or a review of the literature. It is recommended that instructors start with a topic with which they are familiar, which facilitates the inclusion of realistic details in the case and increases the teacher's comfort level when teaching. NCLEX review questions may provide additional concepts to be included in a particular case.

Unique cases, sometimes available in journals, are usually detailed and interesting and consequently enticing to use. However, if a course objective is for students to learn about typical presentations, the use of these cases may be distracting. It may be better to minimize their use or avoid them altogether (12,15).

RESOURCES Current, reliable resources are essential for the development of a case. Medical and nursing textbooks and pharmacology, laboratory, and diagnostic references are obvious choices. Depending on the details, some cases may also use nursing skills, nutrition, and ethics resources. For naming the people in the case, a book of baby names is useful.

COMPLEXITY Cases can range in complexity from brief scenarios or vignettes that represent one instance in time to highly complex cases that represents hours, days, or even years. Length and complexity are determined, in part, by the disease or condition and by teaching objectives.

Short scenarios are sometimes useful to emphasize priority actions in an emergency situation. An example would be a child brought to the emergency room with an allergic reaction. Short scenarios may also be used to highlight a single concept. For example, in a case of two infants presenting with low temperature, one due to a cold environment and the other due to sepsis, the assessment data would be used by students to differentiate between the causes for the abnormally low temperatures.

If several cases will be used in a semester, beginning with less complex and more predictable cases will orient students to the process and the teacher's expectations. As students become more familiar with the process, cases can become increasingly multifaceted. Longer cases lend themselves to incorporating the complexity associated with real clinical settings.

SITUATION The situation establishes a scene. The physical location could be a hospital unit,
emergency room, clinic, office or home visit, school or camp, or even the grocery store. Using alternative settings expands boundaries beyond the traditional institutional walls. In addition, the situation describes the circumstances of the case, whether a new admission on a hospital unit or a frantic mother calling for help in a parking lot. The situation may also include a reference to time of day or season of the year. For example, a reference to hay fever might be set during the spring or fall.

CHIEF COMPLAINT AND HEALTH HISTORY The history may be brief or detailed. At a minimum, students are usually given the chief complaint. A case could be constructed in which the student happens upon an emergency situation in the community and no history is immediately available. This situation would lend itself to questions directing the student to identify essential history components.

Detailed histories may be used to present students with a clear picture of relevant information and a typical presentation. In contrast, a more complex history may provide irrelevant or conflicting information, requiring students to differentiate between what is pertinent and what is extraneous (10).

Shorter history presentations may be made in the form of a report from the emergency room, operating room, intensive care unit, or a previous shift. These lend themselves to case questions regarding what information is missing. Cases can also be used to expose students to different methods of history gathering. For example, cases could use Cordon's functional health patterns (16) or the course's clinical care plan as the format.

History is an area where a case can be personalized. Developmental information may be included, such as the favorite toys of a six-year old or the regression of function in an elderly person with Alzheimer's disease. Using abbreviations for names, such as "C.J. (with a check mark)," has value in students in identifying a case. Information about families can be included to illustrate coping strategies used by family members. An example would be a child with a chronic illness in a family consisting of a single parent and a jealous sibling. Illustrations of functional and dysfunctional patterns, such as substance abuse or abandonment, may also highlight. Finally, the history is an ideal section for adding cultural components, such as folk remedies, family structure, and health beliefs.

PHYSICAL ASSESSMENT FINDINGS Physical assessment findings may be thorough or incomplete. A thorough listing of physical exam findings will give students a clear picture of the assessment typical for the problem. The case could be made more complex by including confounding information and asking students to interpret the findings. Conversely, partial or absent physical assessment details could require students to identify the missing essential components.

Physical assessment may include findings pertinent to the age of the person - eight month old versus 80 years old - or culturally significant information such as assessment of darker skin or results of cultural practices such as "cupping" or "coining." These details can incorporate important family and cultural concepts and also serve to personalize the case.
LABS AND DIAGNOSTICS As with the history and physical assessment, the lab and diagnostic information can be detailed, brief, missing, or confounding. Detailed and realistic lab and diagnostic results give students the opportunity to analyze and identify significant findings. This is often a difficult skill for students to master and thus may be desirable to include.

INTERVENTIONS An intervention section of medical orders and/or nursing interventions may or may not be included. Listed interventions could be typical, incorrect, missing, or vague. 'Students could then be instructed to identify orders that should be questioned or to prioritize their implementation. This section can also be incorporated into the case questions.

UPDATE OF SITUATION Although not always included in a case, the update section is used to indicate the passage of time. Students are given a view of the case at a later point in time that illustrates how a problem may develop.

CASE QUESTIONS The case questions are the key to using the cases and the basis for class discussion. This is where students can be directed to:

- Identify missing assessment data: history, physical exam, labs/diagnostics
- Analyze assessment data
- Identify nursing diagnoses, problems, or concerns
- Develop a plan
- Develop goals with measurable outcomes
- Identify and prioritize actions
- Evaluate outcomes and intervention effectiveness
- Identify possible revisions

Questions can include new assessment findings that highlight possible changes due to different causes, such as disease complications, results of interventions, or drug reactions. The possibilities are limitless; however, it is advisable to avoid questions that are too abstract or too leading (1,4).

PROOFING The last stage of developing a case requires careful proofing. Besides the obvious need to check for spelling and grammatical errors, one must pay attention to the internal consistency of the story. Is the timeline logical? Do the lab findings fit the pathophysiology? Do the patients' actions/behaviors match their developmental level and the acuity of their problems? Having another faculty person review the case will help identify inconsistencies or errors that may have crept in. In any event, invite students to point out errors and inconsistencies for future revisions.
LOGISTICS Although it may seem obvious, once one or more cases have been developed, the logistics of distribution must be considered. Posting on a website or use of email for distributing cases is a relatively easy method, especially if only a few cases are being used. Other options include using a university or a private printing service.

Case Implementation Teaching with cases is not for the nursing instructor who is faint of heart. There is definitely the potential for loss of control. When students are encouraged to think and interact, one can never be sure what they will say, and the teacher must learn how to encourage discussion and handle unexpected situations.

CLASS INTRODUCTION The first step in using cases in the classroom is to set the stage, sell the idea, and decrease confusion for the student. A brief handout summarizing the information can be used during this stage (Sidebar 3).

Sidebar 3. Child and Family Nursing Guide to Case Studies

If students are not accustomed to using cases, anticipate that they will experience some degree of discomfort and confusion regarding the faculty's expectations. This is especially true of students who are more accustomed to the structure of a lecture format. Informing students of the advantages of using cases and openly discussing their possible discomfort can decrease their resistance and improve their willingness to participate.

STUDENT CONCERNS Students are frequently concerned about the perceived increase in time commitment associated with the use of cases. It is not uncommon for students to attend a traditional lecture ready to receive information, with no previous preparation (17). When using the case method, however, preparation prior to class is imperative. At a minimum, students should read the cases. Ideally, they should complete all related assignments (textbook, videos, computer) and complete the case questions. Students should know that their ability to follow the case discussion will be impeded if they have not prepared for the class (4,10,18).

Students, especially those who are confident about their ability to memorize information for tests, may also be concerned about whether this teaching strategy will decrease their grade. It should be pointed out to these students that learning through cases can have significant benefits for end-of-semester comprehensive finals and the NCLEX exam (18).
SETTING THE TONE Students should be encouraged to share experiences, ask questions, and generate possible answers to case questions. Thus, the instructor must promote a safe, stimulating, supportive environment for learning with the expectation that students are courteous to each other as well as to the instructor. Students should be aware that there is not always a right answer. It is helpful to give reassuring examples of what type of instructor reaction may result from a particular solution. The instructor may use this opportunity to emphasize a particular concept. If students do not feel safe, discussions will be brief or nonexistent (15).

Finally, the teacher should identify the framework for how cases will be used in the classroom. Give students an idea of what to expect and emphasize the need for preparation. Be sure to introduce and summarize each case as it is covered. You may also wish to designate how and when questions can be asked. For example, should students raise their hands to be called upon or may they speak at any time? Will you call on students who do not volunteer (4)? The discomfort that results from calling on students could be decreased by preparing them for the outcome in advance consulting with others before responding.

PREPARATION FOR CLASS Faculty should reread the cases prior to each use and be familiar enough with them to not require the extensive use of notes (15). Taking time to identify possible directions that the discussion may take improves the teacher's preparation. Reviewing the case from both the student's and teacher's perspective can prepare the teacher for possible misinterpretations or misdirections and identify important points to be discussed (4,13,14,18).

Thought should be given to identifying follow-up questions. For example, if a case question gives assessment data that lead the student to correctly surmise that the individual is hemorrhaging, a logical follow-up question would be to identify nursing interventions. Good questions are often the key to a good case discussion (1).

Once material is in students' hands and the use of case studies has begun, the instructor can expect to experience some of the same uncertainty as the student. An ability to interact comfortably with students is a valuable asset. Most important, however, it is helpful to be open to the idea that teaching with cases is a dynamic process and both students and teacher will most assuredly learn from the process.

CLASSROOM PLAN It is helpful to follow a plan for how cases are reviewed. This plan might include:

- Introduction and initial questions: Introduce the topic and ask for questions to clarify information in the case such as medical terminology, jargon, and abbreviations.
- Pathophysiology: Faculty may choose to include a brief review, ask for questions, or request student input.
- Chief complaint and health history: Use the case to identify both typical findings and missed information.
• Physical assessment findings: What exam findings are significant? Are they typical? What other findings are commonly found?

• Labs and diagnostics: Identify the significance of the findings or identify expected findings.

• Treatments and nursing care: What treatments were used or are expected? Are they typical? What nursing care should be provided?

• Case-related questions: Review all questions.

• Closure: Summarize the case and ask for any final questions.

STUDENT RESPONSE When eliciting student involvement, it is important to develop one’s ability to listen and hear students. Ideally, student questions, answers, and related experiences will be pertinent, well formulated, and encourage thinking. Recognizing that this will not always be the case, it is important to be able identify, moments of lesser than sterling thought as teachable moments. Possible response options could include requesting clarification or more information from the student, asking for opinions from other students, asking another question to help reframe the issue, or restating or interpreting the information.

Since it is probable that questions will be posed that the teacher will find difficult to answer, it is recommended that the instructor anticipate how to respond to questions with no answers, questions that are poorly formulated, and questions that lead the class astray. Acknowledgement of the situation and humor are often useful in responding to these situations. It may also be helpful to practice lines such as, "I don't know the answer, but...." The best general rule is to be prepared for the unexpected and remain respectful.

The case may also stimulate an emotional response from students. For example, if a parent is portrayed as neglectful, students often have very reactive reactions that should be discussed. Faculty should provide guidance and encourage students to verbalize their feelings (4,19).

REVISIONS. One benefit of using cases over time is that the teacher will begin to notice patterns in responses. For example, in cases involving a child with a chronic illness, students typically want to know how a disease or problem affects the child as an adult. The instructor can anticipate these questions and plan for their inclusion in the discussion.

Finally, after each class, the teacher should engage in reflection. What went well? What could be improved? This is the best time to identify inconsistencies and areas of confusion for future case revisions. It is also a time to consider the dynamics of the discussion. Were students engaged and interested? Were they willing to participate? Did anyone - either teacher or student monopolize the discussion? What can be done to improve the dynamics and improve the quality of future class discussions (12)?

Conclusion After years of using cases in place of traditional lectures, this author is convinced that teaching with cases is the best way to teach nursing students to think like nurses. An added
benefits that increased interactions with students has led to my becoming a better teacher. Despite the ongoing commitment of time and energy required to use cases, the resulting personal and professional satisfaction has supplied ample motivation to continue the process.

References


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