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White Paper

Using Case Studies to Develop Clinical Judgment and Ensure Next Generation NCLEX[®] (NGN) Success



USING CASE STUDIES TO DEVELOP CLINICAL JUDGMENT AND ENSURE NEXT GENERATION NCLEX® (NGN) SUCCESS

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Background

In 2010, the results of a large study of nursing education in the United States were summarized in *Educating Nurses: A Call for Radical Transformation* (Benner, et al., 2010). One of the key findings was that nurses entering practice do not know how to use the knowledge and skills needed for today's dynamic and complex healthcare environment. Therefore, a major recommendation by Benner, et al. (2010) was that nurse educators should “develop pedagogies that keep students focused on the patient's experience” (p. 220). Examples of these pedagogies are case studies and simulations to help develop “clinical imagination” in the classroom. Effective pedagogies enable students to rehearse patient situations to develop the clinical judgment skills needed to make safe patient care decisions (Oermann & Gaberson, 2017; Ignatavicius, 2019).

Lack of clinical judgment by nurses often leads to actual or potential negative patient outcomes (Kavanaugh & Szweda, 2017; NCSBN, 2018). The National Council of State Boards of Nursing (NCSBN®) is planning to launch a new nursing licensure examination, known as the Next Generation NCLEX, in 2023 to “close the gap between what is [currently] measured on the exam and what is taught in clinical nursing education” (https://www.ncsbn.org/NGN_Spring19_Eng_04_Final.pdf). A portion of the NGN will be based on the NCSBN's Clinical Judgment Measurement Model (CJMM). The six cognitive skills in the CJMM that will be assessed include (Dickison, et al., 2019):

- **Recognize Cues:** Identifying relevant data in a clinical situation that require the nurse's attention.
- **Analyze Cues:** Organizing and linking the recognized cues to the clinical situation.
- **Prioritize Hypotheses:** Evaluating and ranking hypotheses according to priority (e.g., urgency, likelihood, risk).
- **Generate Solutions:** Identifying expected outcomes and using hypotheses to determine interventions to meet the expected outcomes.
- **Take Action:** Implementing the intervention(s) that address(es) the highest priorities.
- **Evaluate Outcomes:** Comparing observed outcomes with expected outcomes.

To effectively measure new graduates' ability to apply these skills, the NCSBN plans to include new test item types on the NGN that will be based on specific patient situations. According to Dickison (2019), these clinical situations will be presented as both Single-Episode and Unfolding Case Studies. Therefore, nurse educators should replace their multiple hours of lecture and slides with *meaningful* case studies in the classroom, simulation, and clinical learning environments (Benner, et al., 2010).

Overview of the Case Study as a Nursing Education Pedagogy

A nursing case study can be described as a student-learning activity that tells a story about a patient/family (clinical scenario) and requires thinking to translate knowledge into nursing practice through the use of questions related to the story (Oermann & Gaberson, 2017; Ignatavicius, 2019). Billings and Halstead (2020) state that completing case studies in groups is especially appropriate for adult learners who desire peer interaction and validation of their thinking. However, case studies can be very time-consuming to develop and time-consuming to complete.

Oermann and Gaberson (2017) differentiate three types of cases that focus on the patient experience:

- **Case Method:** Short clinical scenario (1-2 sentences) that provides only the essential data; 1-2 related questions (usually do not require high-level thinking).
- **[Single-Episode] Case Study:** Comprehensive clinical scenario that requires analysis and decision-making; multiple related high-level-thinking questions.
- **Unfolding Case Study:** Initial comprehensive clinical scenario that changes over time (several phases of care) as the patient's condition changes; requires analysis and decision-making; multiple related high-level-thinking questions for each phase of care.

Because *Case Method* presents minimal patient information, this case type is most appropriate for beginning students who have limited nursing knowledge. Most of the current NCLEX® items for both the NCLEX-RN and NCLEX-PN reflect this case type because only the relevant patient information for each clinical scenario is presented. Hermann (2016) describes these short cases as critical thinking exercises (CTEs) that are not typically used for higher-level thinking.

Using Single-Episode Case Studies to Develop Clinical Judgment

Effective case studies help students rehearse clinical patient/family situations in a safe learning environment. Hermann (2016) referred to these cases as Single-Episode Case Studies that are comprised of:

- **Concept focus**
- **Decision-making (clinical judgment)**
- **Patient/family context**
- **Supporting patient/family data**

The example below describes a clinical situation at one point in time in a patient's care. Included in this situation are the **patient/family context** and **supporting patient/family data** for the **concept focus** on Mobility, Pain, Perfusion, and Mood and Affect.

(continued)

Example of a Single-Episode Case Clinical Situation

A 24-year old woman was a passenger in her boyfriend's car when their car was in a motor vehicle crash. The damage to her side of the car resulted in severe injuries to her right leg and arm. She was admitted yesterday to the hospital with a fracture of her tibia and fibula ("tib-fib" fracture), massive soft tissue and leg muscle damage, and a right wrist fracture. She also has multiple contusions and superficial lacerations. Both her leg and wrist are in temporary splints and elevated on pillows with ice packs until she is cleared for surgery. The client is right-handed. The night nurse reported that her parents are staying with her and that the client has been crying most of the night. The day nurse performs a shift assessment and documents the following:

- Reports that her pain level has increased from a 5 to a 9 even though she recently received morphine via IV push.
- Reports numbness and tingling in her injured leg and foot
- Toes on her right foot are colder and paler than those on the left foot
- Right pedal pulse not palpable or located via Doppler
- Oral temperature = 98.4 degrees F (36.9 degrees C)
- Apical pulse = 88 BPM
- Respiratory rate = 28 breaths/minute
- Blood pressure = 132/84 mmHg
- States that she "wish she had died in the accident"
- Has difficulty answering questions because she is very emotional and crying
- Refuses to eat stating that she is not hungry
- Has a urinary catheter in place which is draining amber urine

Decision-making (clinical judgment) requires high cognitive-level questions to stimulate student thinking. One approach to help students apply the six cognitive skills of the NCSBN Clinical Judgment Measurement Model is to structure the questions to reflect each of those skills (indicated in brackets). Consider using these open-ended questions for Single-Episode Cases:

1. What assessment information in this patient situation is the most important and of immediate concern for the nurse? (Hint: Identify the **relevant** information *first* to help you determine what is most important.) [**Recognize Cues**]
2. What patient conditions are consistent with the **most relevant** information? (Hint: Think about priority collaborative problems that support and contradict the information presented in this situation.) [**Analyze Cues**]
3. Which possibilities or explanations are **most likely** to be present in this patient situation? Which possibilities or explanations are the most serious or priority? (Hint: Consider all possibilities and determine their urgency and risk for this patient.) [**Prioritize Hypotheses**]

(continued)

4. What actions would most likely achieve the desired outcomes for this patient? Which actions should be **avoided**, are **irrelevant**, or are **potentially harmful**? (Hint: Determine the desired outcomes first to help you decide which actions are appropriate and those that should be avoided.) [**Generate Solutions**]
5. Which actions are the most appropriate and how should they be implemented? In what **priority order** should they be implemented? (Hint: Consider health teaching, documentation, requested primary health care provider orders/prescriptions, nursing skills, collaboration with or referral to health team members, etc.) [**Take Action**]
6. What patient assessment would indicate that your actions were **effective**? (Hint: Think about signs that would indicate an improvement, decline, or unchanged patient condition.) [**Evaluate Outcomes**]

Another option for high-level questions to accompany the Single-Episode Case Study is to develop some of the new NGN test item types for student practice. For instance, for the cognitive skill of **Recognize Cues** (which aligns with question #1 above), you might want to ask the students to “**Highlight or place a check mark next to the assessment findings that require follow up by the nurse.**” This added statement at the end of the clinical situation would create an example of the new Highlighting/Enhanced Hot Spot test item type.

For the NGN, an enhanced multiple-response (select all that apply) item may have up to 10 choices. This item type might be used as an alternative to question #5 above for **Take Action**. Using NGN-style test items with the clinical patient situation provides more structure and direction for students but could limit their group discussion.

Single-Episode Case Study pedagogy can be used in the classroom, online, or as a focused learning activity in clinical simulation or off-campus experience as part of the clinical day or post-conference. Assign students to work in groups of 2-4 to complete the case study to foster collaboration and learning.

Using Unfolding Case Studies to Develop Clinical Judgment

As the name implies, the Unfolding Case Study presents a clinical patient/family situation as it evolves over time — minutes, hours, weeks, or months (Oermann & Gaberson, 2017). For that reason, it may also be called an Evolving or Continuing Case Study. This teaching/learning strategy reveals information about a patient/family situation incrementally. Unfolding Case Studies better reflect actual nursing practice when compared to Single-Episode Case Studies.

Practicing nurses are usually able to predict changes in a patient’s condition, but students typically do not have the knowledge or experience to be prepared for the unpredictability of patient care. Clinical judgment requires *forethought* — the ability to look ahead proactively to prevent patient problems and negative clinical outcomes. Unlike Single-Episode Case Studies, Unfolding Case Studies enable students to develop *forethought* and therefore are the most challenging and difficult to develop and complete (qsen.org/using-unfolding-case-studies-to-develop-clinical-forethought-in-novice-nursing-students/).

Kim, et al. (2006) referred to Unfolding Case Studies as Teaching Cases because they are active learning strategies that replace lecture. The authors identified five attributes of this type of case study:

- **Relevant:** Meets the levels of the learners and allows them to meet student learning outcomes.
- **Realistic:** Discloses information over time with some data missing, requiring students to make inferences (predictions).
- **Engaging:** Allows learners to use inquiry to explore multiple concepts and perspectives.
- **Challenging:** Provides complexity of concepts and student thinking.
- **Instructional:** Directs and assesses student learning and thinking.

Although Unfolding Case Studies represent learning primarily in the cognitive domain, they offer robust and meaningful simulated experiences for students to create clinical imagination and develop high-level thinking in classroom, online, or clinical learning environments (Bowman, 2017; Marques, 2017). Below is an example of an Unfolding Case Study that focuses on the concepts of Mobility, Pain, Perfusion, and Mood and Affect.

Example of an Unfolding Case Study: Care of the Patient Experiencing Trauma

Phase 1: Critical Care

A 24-year old woman, Cheryl, was admitted to the trauma unit following a motor vehicle accident as a front-seat passenger. She does not have any apparent brain, spinal cord, or internal organ injury. Her right leg sustained multiple compound fractures that are stabilized by an external fixator and extensive soft tissue damage, especially below her knee. Her right leg and foot are very swollen. She also has a right wrist fracture which is immobilized by a splint and multiple superficial lacerations and abrasions. When you first encounter Cheryl, she is crying and trying to talk with her parents, who are with her. When you introduce yourself, she tells you that the doctor told her that she might “lose her leg.” She is also in severe pain and says she “wishes she would have died in the accident.”

1. What is your best response to Cheryl at this time?
2. What priority assessments will you need to perform and why?
3. What nursing interventions will you likely need to implement and why?
4. For what potential complications is Cheryl at risk and why?
5. What action will you take if she experiences any of these complications?

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Example of an Unfolding Case Study: Care of the Patient Experiencing Trauma, *cont.*

Phase 2: Acute Care

Two days after admission to the critical care unit, the vascular surgeon determined that Cheryl had adequate peripheral perfusion and was ready for a muscle flap graft followed by another surgery in two days to perform an open reduction, internal fixation of her tibia. After these two surgeries, Cheryl's pain remains uncontrolled with a pain intensity rating of no lower than 6 on a 1-10 scale at any time. Her pain level at night is always higher than in the daytime. One or both of her parents stay with her continuously and tell you that she has become very "emotional" about her situation.

6. What priority assessments are needed postoperatively for Cheryl? Are they different than they were in the first phase of care? If so, why?
7. What additional subjective data do you need from Cheryl and her family at this time?
8. What referrals might be helpful for the patient to help her cope with the accident and why?

Phase 3: Rehabilitation Phase

After a two-week stay in critical and acute care for four total surgeries, Cheryl was transferred to an acute rehabilitation unit on Saturday evening. As Cheryl's acute care nurse, you communicate her needs to the evening charge nurse of the rehabilitation unit, being sure to provide specific instructions in the plan of care about her surgical wound care, skin graft site care, pain management regimen, and mental/emotional support.

On Monday morning, Cheryl's parents report to the nurse manager of the rehabilitation unit that the weekend care for their daughter was less than satisfactory. Specific concerns about the lack of quality care included:

- Insufficient dressing supplies to follow the surgical wound care instructions provided by the hospital.
 - Lack of knowledge by the nursing staff about how to redress a surgical wound with grafting.
 - Inadequate pain management by refusing to give medication that was prescribed PRN for breakthrough pain. (The nurse stated that she was already getting oxycontin on a regular basis and could therefore not have additional medication.)
 - Lack of knowledge by nursing staff on how to insert an intermittent urinary catheter for retention; procedure took over an hour to locate her meatus.
9. If you were the nurse manager hearing these patient care concerns, how would you respond?
 10. What might be the possible explanation for these issues and how can they be prevented in the future?

Although the questions in the Unfolding Case Study example are different than the structured questions for the Single-Episode Case Study that are designed to address each of the six clinical judgment skills, any of the above questions could be aligned with one of the cognitive skills. For example, question #3 is “What nursing interventions will you likely need to implement and why?” This question aligns with the CJMM cognitive skill of **Generate Solutions**. As an alternative to the questions presented in the Unfolding Case Study example, consider using the six structured questions for the Single-Episode Case Study example as they apply to each phase of care.

One of the concerns that nurse educators report is finding the time or having the expertise to develop complex case studies to help students develop clinical judgment. A number of textbooks and learning assessment companies have resources for case studies of varying types and complexity. Consider selecting case studies that align with expected student learning outcomes and revise them to meet your needs. Kavanaugh & Szveda (2017) suggest soliciting case study patient/family situation ideas from clinical agencies where you take students. Challenge yourself to use your own clinical experiences and the ideas in this paper to create new case studies that promote student learning and thinking. No matter where you get your ideas for case studies, remember to develop high-level-thinking questions that guide students to use clinical judgment skills.

Using Debriefing: An Essential Thinking Activity to Develop Clinical Judgment

In health professions education, debriefing is an activity that is typically conducted following clinical simulation activities. However, debriefing should be an essential part of any learning activity, including case studies. In their position paper on debriefing, the National League for Nursing (NLN) (2015) states that debriefing must be integrated across the curriculum to shape student thinking and promote clinical judgment. The NLN defines **debriefing** as a “critical conversation to reframe the context of a [patient/family] situation to clarify perspectives and assumptions...” (NLN, 2015, p. 3). It is a collaborative interaction between the nurse educator and students to construct knowledge, skills, and attitudes.

Apply this commonly used debriefing model to ensure effective use of case studies for your students (Agency for Healthcare Research and Quality, 2019):

- **Setting the Stage:** Place students in groups of 2-4 using whatever method you feel will be productive. Provide a timeframe for completion of the case study while ensuring support for learning and psychological safety (reassurance that students are safe to be oneself without fear of retaliation or incivility).
- **Description:** Before groups begin to work, review the case study with the students to ensure understanding of the content and expectations for learning and thinking. Be available during the group activity to answer any questions, assess student participation, and offer guidance, if needed.
- **Analysis:** After the students complete the Single-Episode or Unfolding Case Study, ask them to share their answer to each question. Then, highlight the priority information and clarify or correct any misperceptions.
- **Application:** Summarize key points and add any new knowledge that enhances student learning and thinking.

In conclusion, educators should begin preparing now for the Next Generation NCLEX by using effective Single-Episode and Unfolding Case Studies in their nursing curricula to help students develop clinical judgment. In addition, all nursing faculty should stay up to date on the latest news from NCSBN related to the Next Generation NCLEX project.

References

Agency for Healthcare Research and Quality. (2019). *Debriefing for clinical learning*.

<https://psnet.ahrq.gov/primer/debriefing-clinical-learning>

*Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). *Educating nurses: A call for radical transformation*. San Francisco, CA: Jossey-Bass.

Billings, D.M. & Halstead, J.A. (2020). *Teaching in nursing: A guide for faculty*. (6th Ed.). St. Louis: MO: Elsevier.

Bowman, K. (2017). Use of online unfolding case studies to foster critical thinking. *Journal of Nursing Education*, 56(11), 701-702.

Dickison, P. (2019). *Next Generation NCLEX®* presentation at the National League for Nursing Summit on September 20, 2019.

Dickison, P., Haerling, K.A., & Lasater, K. (2019). Integrating the National Council of State Boards of Nursing Clinical Judgment Model into nursing educational frameworks. *Journal of Nursing Education*, 58(2), 72-78.

Hermann, J. (2016). *Creative teaching strategies for the nurse educator*. (2nd Ed.). Philadelphia, PA: F.A. Davis.

Ignatavicius, D. (2019). *Teaching and learning in a concept-based nursing curriculum: A how-to best practice approach*. Burlington, MA: Jones & Bartlett Learning.

Kavanaugh, J.M. & Szveda, C. (2017). A crisis in competency: The strategic and ethical imperative to assessing new graduate nurses' clinical reasoning. *Nursing Education Perspectives*, 38, 57-62.

*Kim, S., Phillips, W.R., Pinsky, L., Brock, D., Phillips, K., & Keary, J. (2006). A conceptual framework for developing teaching cases: A review and synthesis of the literature across disciplines. *Medical Education*, 40(9), 867-876.

Marques, P.A.O. (2017). Nursing education based on "hybrid" problem-based learning: The impact of PBL-based clinical cases on a pathophysiology course. *Journal of Nursing Education*, 56(1), 60.

National Council of State Boards of Nursing. (Winter, 2018). Measuring the right things: NCSBN's next generation NCLEX® endeavors to go beyond the leading edge. *In Focus*. Chicago, IL: Author.

National League for Nursing. (2015). *Debriefing across the curriculum*.

[www.nln.org/docs/default-source/about/nln-vision-series-\(position-statements\)/nln-vision-debriefing-across-the-curriculum.pdf?sfvrsn=0](http://www.nln.org/docs/default-source/about/nln-vision-series-(position-statements)/nln-vision-debriefing-across-the-curriculum.pdf?sfvrsn=0)

Oermann, M.H. & Gaberson, K.B. (2017). *Evaluation and testing in nursing education*. (5th Ed.). New York, NY: Springer Publishing.

*Denotes classic reference.