

Teaching Social Determinants of Health Through an Unfolding Case Study

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ABSTRACT

Background: The impact of social determinants of health (SDOH) was developed to educate nursing students through the use of an unfolding case study.

Problem: SDOH and population health are critical components of prelicensure nursing education. Unfolding case studies are a strategy to develop critical thinking and teach SDOH to nursing students.

Approach: A model was used to develop the case study including a community assessment, which follows a male veteran and family through life events. Implementation of the unfolding case study took place over 3 consecutive semesters in a community health nursing course.

Outcomes: This educational activity achieved standardized examination scores, which are intended to assess student preparedness for the National Council Licensure Examination (NCLEX), above the national averages. Student participation was above 90%.

Conclusion: Unfolding case studies can present realistic scenarios that are useful to teach critical thinking. As the Next Generation NCLEX moves to scenario-based testing, unfolding case studies are a teaching strategy to prepare students.

Keywords: case study, nursing education, population health, social determinants of health, unfolding case study

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The American Association of Colleges of Nursing (AACN) has identified the concept of population health as an essential component in baccalaureate nursing education.¹ Strategies to teach and guide students through critical thinking and clinical judgment prepare students for the National Council Licensure Examination (NCLEX) and for their transition to clinical practice. Clinical judgment includes recognizing and analyzing cues, prioritizing hypotheses, generating solutions, taking action, and evaluating the outcomes.² A case study is one method to teach critical thinking. The Next

Generation NCLEX will incorporate case studies into the examinations to evaluate clinical judgment.^{3,4} We describe the development of an unfolding case study to be used in the prelicensure educational setting. This unfolding case study is currently being piloted in community health nursing courses across the United States.

Background

The utility of unfolding case studies has been discussed in the literature.^{5,6} Parallels have been drawn between unfolding case studies and nursing practice, as they both progress gradually in real time.⁷ Unfolding case studies allow faculty to evaluate learning and clinical judgment at multiple specific time points.⁷ The evolving nature of unfolding case studies aligns with research that cites active engagement of students as being essential to learning and the need to have SDOH integrated into education and patient care.⁸⁻¹⁰ The literature also supports the use of unfolding case studies as critical tools in teaching students how to synthesize information and promote clinical reasoning.^{5,11} There is support for the integration of health care and population health with prioritization of SDOH as a basis for evidence-based care.¹² Many faculty members do not feel adept in teaching students regarding SDOH, nor are they trained in recognition of robust frameworks that apply the concept among populations.

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Problem

An unfolding case study was integrated into a didactic community health nursing course to promote student interaction and to teach SDOH. The unfolding case study was developed for use in a synchronous online setting using a PowerPoint (PPT) interactive format accompanied by a facilitator's guide. The central theme of the unfolding case study incorporates population health concepts, including SDOH. Healthy People 2020 SDOH topic areas and the AACN's Measurable Population Health Competencies for Baccalaureate Prepared Nurses provided the foundation of the unfolding case study.^{1,13} The student goals of the unfolding case study were to (1) assess for and determine the client's immediate needs; (2) analyze data regarding comorbidities associated with homelessness, veteran status, and disabilities; (3) advocate for the client and communicate using TeamSteps; (4) identify appropriate health promotion and health prevention strategies; and (5) determine goals of care, appropriate interventions, and evaluate the outcome of interventions.

The unfolding case study follows a family through life events over several months. The main character is a veteran with posttraumatic stress disorder from combat who is the custodial parent of his 5-year-old daughter who has autism. The students trace his story as he leaves the military, begins civilian life, and encounters various setbacks and hardships. The unfolding case study encompasses the life span and the inherent challenges of each life stage featuring a 5-year-old, an adult, and an elder adult.

SDOH are an essential component of the unfolding case study, and all aspects are integrated into the story. Economic stability is illustrated as the family encounters poverty, homelessness, lack of access to care, and food insecurity. The impact of education on health is illustrated as the main character struggles to gain employment without formal education. Students encounter the barriers to accessing public programs such as Medicaid, Supplemental Security Income, and Veterans Health Administration services. As poor as they are, the family's income is too high to qualify for Medicaid or food stamps. The students must determine the priority health risks for an elder adult and develop a health promotion plan for her. Students also explore the impact of substance abuse and addiction on a family. Students learn about the road to homelessness, as they are required to compute the family's monthly income and financial resources available to pay rent, utilities, and other expenses. Students explore health economics as the main character enters a public hospital for care and requires rehabilitative home care. Students practice communication skills through application of the Situation, Background, Assessment, Recommendation (SBAR) technique when the main character moves from inpatient to outpatient services.¹⁴

Another aspect of the unfolding case study is a virtual windshield survey. Windshield surveys are systematic

observations of a community made from a vehicle. The windshield survey is a tool used to assess environmental, economic, social, health, and educational resources and the formal and informal stakeholders within a community to assess what may impact the members of the community.¹⁵ Students use the community assessment wheel by Anderson and McFarlane¹⁵ as the framework to conduct a windshield survey. The community assessment wheel provides subsystems to guide students' assessment and observations. Using the community assessment wheel, students gather data and analyze a comprehensive assessment of a community. Questions regarding each community subsystem (eg, physical environment or communication) are posed to students. The impact of the physical environment and availability of resources are explored through questions and hyperlinks to sources of information. Through the unfolding case study, students practice applying the nursing process to a community. Students analyze the census, morbidity, and mortality data to arrive at a priority problem and formulate a community health nursing diagnosis. The students also suggest an intervention to address the priority problem. Students are encouraged to assess for community assets that can be leveraged to address community liabilities.

Educational Design

Five faculty members, each with unique expertise and experience in community health nursing, developed the unfolding case study. The diverse social issues stemmed from encounters each contributor experienced through their work with veterans, children, elderly, and disabled populations. The authors used a model by Page and colleagues⁹ to develop the unfolding case study. The steps in the model are as follows:

1. Select the topic of the unfolding case study and review the literature. SDOH were chosen as the primary topic due to the impact of these factors on individuals and communities. The Centers for Disease Control and Prevention website on SDOH was a primary resource for this unfolding case study.
2. Develop objectives for the case study. The primary objective of the unfolding case study is for the students to apply the nursing process to assess a community to determine how SDOH impact the health, health care, and needs of a community; analyze assessment data; and develop an intervention to address identified community health problems.
3. Outline the progression of the case, developing the narrative and timeline. This unfolding case study proceeds from introducing the main characters to following them through various life events. The unfolding case study proceeds from the individual to the family and to the community levels.
4. Create the story and narrative. Drawing from experience, the authors structured a story with a realistic narrative. The issues experienced by the family happen in real life.

5. Write the case. The unfolding case study was reviewed and revised multiple times to ensure that the characters and story were authentic and that the objectives were met. SDOH were embedded into the story as the characters encountered life events.
6. Write guidelines for facilitators. This step was the most difficult and time-consuming part of the process. Each slide in the unfolding case study was addressed in a facilitator's guide to adapt the case study for use by individuals or in a class setting. Resources to gather and analyze data pertinent to the unfolding case study were included for each slide.
7. Review the case study and manual to ensure that the objectives are met, essential information is included, and case study flows in a systematic way. The completed unfolding case study and the facilitator's guide were reviewed and revised to ensure congruence with one another and that the unfolding case study flowed in a natural, systematic way.
8. Review by content experts (an addition to the model). The completed unfolding case study and the facilitator's guide were reviewed by content experts and a diversity equity and inclusion expert. Suggestions made by the reviewers were incorporated into the unfolding case study.

Approach

The unfolding case study was first presented in an unstructured format in a 3-hour didactic synchronous online class. The unfolding case study replaced lectures on SDOH, population health, the health care system, and most of the content on community assessment and analysis. The unfolding case study replaced a major assignment to apply SDOH through producing a public service announcement.

The unfolding case study was implemented in consecutive semesters with successive cohorts of nursing students. The initial semester employing the unfolding case study (Table 1, fall 2020), the faculty presented it during class with no required preparation by the students.

Students were presented with questions from the unfolding case study but were reluctant to respond. The faculty determined that the students needed a more structured approach to enhance their learning from the unfolding case study.

In the second semester, the students were provided with a video giving directions on how to prepare for the discussion and were encouraged to review the case study (Table 1, spring 2021). Students participated in the discussion by using the chat function on the remote learning management system platform and by verbally answering and asking questions during a synchronous online class. Class participation was still not optimal.

Enhancements to the third trial using the unfolding case study included increasing the amount of time dedicated to two 3-hour didactic synchronous online class periods and assigning slides with questions from the case study (Table 1, summer 2021). Students worked in groups of 4 to 5. Each group was assigned a PPT slide from the unfolding case study and was responsible for answering the questions on the slide and presenting their work to the class. As the faculty guided the class through the unfolding case study, each group shared their findings and explained their conclusions. On this occasion, the students responded to the questions and led class discussion without needing prompting.

Outcomes

Application of the unfolding case study, with students being responsible for analyzing data and reporting findings, was successful in engaging active participation and discussion. Assigning the slides in advance allowed the students time to analyze the information presented in each hyperlink and apply the information to the characters. Class attendance was more than 95% for the class sessions with the unfolding case study. Using an active learning activity encouraged student attendance and participation. The end-of-course student evaluations remained at overall high satisfaction levels (Table 1). Students' grades and

Table 1. Presentation of Case Study and Student Course Evaluation^a

Item Evaluated by Student	Fall 2020	Spring 2021	Summer 2021
	Unstructured Discussion	Video Discussion	Video Assigned Questions
	3 h M	3 h M	6 h M
Assignments (papers, presentations, etc) contributed to learning course content.	3.76	3.50	3.45
Examinations and assignments had clearly stated criteria or a rubric for grading.	3.61	3.45	3.45
The course encouraged critical thinking.	3.64	3.55	3.55
The course helped develop competencies in specific skills.	3.58	3.50	3.31
Teaching methods used in my classroom course helped me to understand the course content.	3.58	3.35	3.31

Abbreviations: h, hour; M, Mean.
^aMean range: 1 = needs improvement through 4 = excellent.

Table 2. National Community Specialty Scores and Pass Rates

Semester/Year	No. Students	Mean National Specialty Examination Score (Mean Conversion Score)	United States Mean Scores of National Specialty Examination
Fall 2019 ^a	121	951 (86)	862
Spring 2020 ^a	105	1056 (91)	862
Summer 2020 ^a	104	949 (86)	862
Fall 2020 ^b	116	1017 (89)	862
Spring 2021 ^b	134	1115 (94)	862
Summer 2021 ^b	121	1087 (93)	851

^aSemester prior to implementation of unfolding case study.

^bSemester the unfolding case study applied in class.

scores on a standardized community health examination were tracked over the 3 semesters. All students passed the course, and the standardized examination scores were above national average (Table 2).

In an unfolding case study such as this one illustrating a vulnerable population, students applied the nursing process to a community as they determined a course of action and examined multiple variables impacting the characters. Students demonstrated mastery of the objectives as they answered the questions in the case study and presented their work to the class. Students were also provided the opportunity to study an at-risk population (veteran with disabilities and comorbidities) and analyze how SDOH influenced this population. An effective unfolding case study encourages inquiry-based learning and, in this case, elevated the learner's awareness of ethical and social justice issues such as homelessness, occupational injuries and unemployment, care of a child with autism, and substance abuse disorder.

The sequential development of the family's journey delivered in an online platform requires the student to prioritize problems, practice judgment, and cluster information. These concepts are essential components in clinical reasoning and translate to clinical practice.¹⁶

A facilitator's guide with answers to all questions and additional background information is available to support the faculty.¹⁷ Without facilitator or faculty guidance, students may struggle to recognize the impact of SDOH. For example, without faculty guidance, participating students were unable to identify the connection of disparities and SDOH among vulnerable populations.

Conclusion

As the unfolding case study replaced 2 lectures and 1 major assignment, faculty members were anxious to determine whether there was a change in student performance on examinations and student satisfaction with the course. Students' scores on a standardized community health nursing examination were above the national average. Student engagement in class was high as all students were required to contribute to the unfolding case study discussion. The unfolding case study allowed for active engagement with concepts and clinical reasoning.¹¹ Interaction with each cohort and feedback from the students have allowed the faculty to use the

case study in a variety of educational modalities. The unfolding case study is easily expanded to include other concepts in the course, and it can be presented over several consecutive classes. In end-of-semester evaluations, students reported that the assessment and windshield surveys provided context for the concepts congruently taught from the textbook. These elements also facilitated student understanding and enhancement of skills applied during their community clinical course.

Unfolding case studies can present realistic evolving scenarios, provide a rich learning experience, and put learning into context over time. They can also provide sequential snapshots of the changes experienced by the client, family, and community, and they can be tailored to focus on client care and the impact of SDOH and other relevant topics. As the emphasis on social justice and care inequities increases in nursing curricula, unfolding case studies built from real-world events can be a powerful teaching tool. Unfolding case studies are useful to teach clinical judgment and prepare students for the Next Generation NCLEX.

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TEACHING TIP

Nursing Rounds: Critical Thinking is “Vital” Important—A Flipped Classroom Approach to Teaching Vital Signs

Embedding critical thinking into classroom activities must be deliberate to improve clinical judgment and decision-making. During a vital signs learning module, a flipped classroom active learning experience was created to mimic nursing rounds, SBAR (Situation, Background, Assessment, Recommendation) report,¹ and critical thinking. Students were asked to listen to a recorded lecture prior to class. For the in-class activity, 5 mock patients were developed by the instructor. Pictures of mock patients with room number, age, diagnosis, history of present illness, and most recent vital signs were placed on the wall in SBAR format around the classroom. Students were placed into teams and asked to visit each patient. Each team was encouraged to review the SBAR report, critically evaluate the vital signs for any abnormalities, and discuss their thoughts. Students were asked 4 questions: (1) Which vital signs are abnormal? (2) Explain your thoughts on why this is happening? (3) List your concerns and assessment questions you want to ask the patient? (4) What is your plan of action? Following rounds, each group had an opportunity to share, discuss, and debate with the entire class. This activity allowed students to apply the knowledge gained to simulated real-world patients. By working in groups, students were able to evaluate and strengthen their own clinical judgment while actively analyzing the other group member's thoughts. In addition, the classroom instructor modeled reflective exploration of responses during open classroom discussion. Feedback from the students was positive and suggested the activity was more useful to learning than lecture alone.

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