Development of a Scripted Unfolding Case Study Focusing on Delirium in Older Adults

Julianne B. Page, MSN, RN, Vicki Kowlowitz, PhD, and Kathy Rhodes Alden, EdD, RN, IBCLC

abstract

This article describes the process of developing and implementing a scripted unfolding case study about delirium as part of a continuing education program for nursing staff. This innovative instructional strategy allows learners to evaluate a situation as it unfolds, practice assessment and communication skills, and reflect on potential problems and solutions. Using the detection and treatment of delirium as an example, the authors describe a template for developing a low-cost, low-fidelity case simulation that includes identifying the key concepts and competencies; writing behavioral learning objectives; creating the story; and identifying clinical decision-making points for discussion. Positive evaluations by program participants (registered nurses, licensed practical nurses, and nursing assistants) indicate that this methodology encourages interactive learning of key concepts in geriatric nursing among participants with varying years of experience.


The many improvements in health care have led to an increase in the average life expectancy of American men and women and in the proportion of the population older than 65 years. It is projected that by 2030, 1 in 5 Americans will be older than 65. The average life expectancy for children born in 2030 will be 80.7 years, an increase of almost 2 years compared to the 2010 projection (U.S. Census Bureau, 2008). This good news brings with it a looming crisis in health care, as the demands on the health care system will increase as the population ages. It is clear that the incidence of chronic conditions increases with age, and individuals with multiple chronic conditions are the most frequent users of health care services. Almost 80% of older adults have more than one chronic condition (Anderson & Knickman, 2008). As a result of acute exacerbations of these chronic conditions, older adults comprise almost half of the hospitalized population at any given time (Rieder, 2006). Although these trends indicate that the workload of the average nurse will include primarily older adults, few nurses are certified in gerontological nursing.

Delirium, also known as acute confusion, is a global cerebral disorder involving disturbances of consciousness, changes in cognition, and reduced ability to focus, sustain, or shift attention. When delirium develops in hospitalized older individuals, it results in increased morbidity, mortality, and length of stay and greater odds of nursing home placement. Inouye, Schlesinger, and Lydon (1999) cite delirium as a symptom of the failure...
of the current health care system and recommend “enhanced skilled nursing and geriatric expertise at the bedside” (p. 570) to remedy the problem.

BACKGROUND

Traditionally, continuing education has relied heavily on the lecture format to deliver content and has made minimal use of more experiential teaching strategies involving active learning. Education experts encourage practice-based learning as a means of improving the quality of patient care (Fletcher, 2008). Simulation is an experiential, practice-based teaching strategy involving activities that mimic the realities of a clinical situation and promote critical thinking and decision making (Jeffries, 2005). Simulations are often classified as low-fidelity or high-fidelity based on the technology involved. A low-fidelity simulation might be a problem-based learning activity or case study, whereas a high-fidelity simulation would involve the use of a human patient simulator that is fully integrated with computer software.

A variety of simulation learning activities were developed for use in continuing education programs for nurse educators, registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) as part of a federally funded project entitled “Improving the Nursing Care of Acutely Ill Elders.” Three types of simulations were used: scripted unfolding cases; online cases; and case scenarios using a high-fidelity human patient simulator. This article describes the process of developing, implementing, and facilitating a scripted unfolding case study for use in this continuing education workshop.

To appreciate how the scripted unfolding case study teaching strategy was used, it is important to understand how the workshops were designed and implemented. Each daylong workshop consisted of a didactic component in the morning and an experiential learning component in the afternoon. The didactic sessions included pertinent topics such as caring for culturally diverse geriatric patients, teamwork and communication, and common issues and problems affecting elders, including delirium, diabetes, and chronic heart failure. There were opportunities to apply the didactic knowledge in the afternoon simulation activities as workshop participants rotated through the simulations in small groups.

CASE DEVELOPMENT PROCESS

Case studies are an integral part of nursing education. Analysis of a case study gives learners the opportunity to consider multiple facets of a clinical situation, to expand their knowledge base, and to develop problem-solving and critical-thinking skills (Gaberson & Oermann, 2007). In an unfolding case study, learners can experience the clinical situation as it progresses over time; they are exposed to the full context and complexity of the evolving setting and disease progression (Glendon & Ulrich, 2001). The scripted unfolding case study adds an experiential component by including conversation. Learners read aloud what the characters in the case are saying to one another as the case advances. Questions are interspersed throughout the case to provide opportunities for discussion, critical thinking, and clinical reasoning. The learning activity concludes with a debriefing session and an evaluation of the case study.

To develop this scripted unfolding case on delirium, the education consultant (V.K.) provided a template from her previous experience with case development.

Step 1: Select Topic and Review the Literature

The first step in developing a scripted unfolding case study is to select the topic, review the relevant literature, and identify existing guidelines. Because of its prevalence among acutely ill elderly individuals, delirium was chosen as a topic for inclusion in the continuing education programs. Geriatric Nursing Protocols for Best Practice (Mezey, Fulmer, & Abraham, 2003) was a helpful resource for this case, as was the Hartford Institute for Geriatric Nursing resource Gero Nurse Online (American Nurses Association, 2007). The geriatric experiences and clinical expertise of the authors also provided background for case development.

Step 2: Develop Learning Objectives

The next step is to identify key concepts and competencies to include and to develop learning objectives. Consideration of the desired learning outcomes aids in identifying pertinent content for the case. The target audience for the case study necessarily influences the development of learning objectives, case content, competencies, language, and critical-thinking questions. Important considerations include reading level, medical terminology, and scope of practice. This unfolding case study was originally developed for RNs and was later adapted for LPNs and NAs. The case study for use with LPNs and NAs was based on their scope of practice and roles on the health care team. It addressed the competencies of assessment, clinical reasoning, teamwork and communication, patient-centered care, safety, and evidence-based practice, as well as core knowledge regarding recognition and management of delirium. The key concepts identified were knowledge about delirium, assessment of delirium using standardized assessment tools, communication skills, and nursing interventions to manage the patient with delirium while supporting...
family members. The key concepts and competencies were then specified in behavioral learning objectives.

**Step 3: Outline the Progression of the Case**

The next step was to outline the progression of the case. It is essential to base unfolding cases on actual clinical experience and to present information clearly to create an effective learning tool (Schuwirth et al., 1999). It may be useful to seek assistance from practicing nurses who are familiar with current care practices and protocols. It is also important to consider the time frame in which the case will be used, as that will influence how the case is developed. At this early stage in the development of the case study, it is advantageous to ask an expert, such as an experienced gerontological nurse, to review the case to ensure that the key concepts, competencies, learning objectives, and case outline are appropriate and include the critical aspects of providing care.

**Step 4: Create the Story**

The next step is to create the story surrounding the case. This process can be as simple as taking an existing case study and transforming it into a scripted unfolding case study or creating an original story based on the author’s prior patient care experiences. Characters for the case study are identified from the story and selected and developed based on the learning objectives. The primary author of the scripted unfolding case study on delirium based the story on an unforgettable patient she had encountered in her nursing practice. The characters included a geriatric patient, his wife, a RN, and a NA.

**Step 5: Write the Case**

**Introduction and Background.** The case begins with an introduction that includes the description of the patient, the setting, the primary problem of the patient, past medical history, family history, living situation, and other pertinent data. It is important to consider how much information will be disclosed to the learners at the onset. For example, if recognizing signs and symptoms of delirium in older adults is a learning objective, the term “delirium” should not be mentioned until after the learners have identified delirium as the patient exhibits it.

**Clinical Reasoning and Learning Issues.** As the case unfolds, important clinical decision-making points should be highlighted. Discussion questions placed at strategic points in the script allow the participants to discuss conclusions that can be drawn from the assessment data and interventions that are needed. The discussion questions are designed to prompt the nurse participants to consider the thought process necessary to recognize problems and plan care for a complex situation such as delirium. Multiple contributing factors are identified and nursing interventions for managing these factors are discussed as the case unfolds. For example, discussion questions in the delirium case included: “What additional information would be helpful in evaluating the patient’s mental status?” and “How would the nurse determine how much pain a confused patient is experiencing?” The participants also have the opportunity to use appropriate assessment tools, the Confusion Assessment Method (CAM) and the NEECHAM scale (Neelon, Champagne, Carlson, & Funk, 1996), to further assess the patient’s cognitive status. Nurse participants could then discuss the advantages of using a standardized assessment tool to improve their care planning. For the LPN and NA case studies, the discussion questions were modified for their scope of practice. For example, the RNs were asked to interpret laboratory values as potential factors contributing to delirium, but the LPNs and NAs were not asked to do so.

The case can include teamwork and communication through dialogue between characters. For example, in this case the nurse expertly reorients the patient and reassures his wife by explaining the nature of delirium (Sidebar). The nurse also provides information regarding the patient’s status to the nurse manager in SBAR (situation...
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case to determine its flow for facilitators and learners,
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removed.
identify any extraneous information, which should be
present, accurate, and consistent. It is also important to
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cal decision-making process is clear and accurate. The
competencies have been incorporated and that the clini-
final case. The reviewer should ensure that all of the
need to be deleted because it was not addressed in the
process the case themselves (Schuwirth et al., 1999). It is
important to review the discussion questions included in
the case to be certain that the answers can be determined
based on the information provided.
An independent reviewer with clinical expertise
should review the final case to evaluate the content and
the competencies. The learning objectives should be re-
viewed because sometimes an additional objective needs
to be added as the case is written or an objective may
need to be deleted because it was not addressed in the
final case. The reviewer should ensure that all of the
competencies have been incorporated and that the clini-
cal decision-making process is clear and accurate. The
clinical expert should make sure all the critical details are
present, accurate, and consistent. It is also important to
identify any extraneous information, which should be
removed.
An educational consultant experienced in writing and
teaching with case studies should also review the final
case to determine its flow for facilitators and learners,
if the appropriate amount and level of content and dis-
cussion questions exist, and if the information is clear.
The educator should also address strategies to encour-
age active learning by the participants. In addition, re-
sources should be reviewed for their accessibility, value,
and quality.

CASE IMPLEMENTATION
The case was designed for a small group of partici-
pants; ideally, no more than five or six individuals are as-
signed to one group. The two versions of the case study,
one for RNs and one for LPNs and NAs, were intended
for use with each distinct group of workshop partici-
pants. However, in a few instances, enrollment numbers
for the individual workshops were low; therefore, the
agency offered a combined RN/LPN/NA workshop.
Enactment of the case depends on the resources avail-
able. Ideally, the learning environment should resemble
the case setting as much as possible (e.g., the patient
would be in a hospital bed). However, if necessary, par-
ticipants may be seated in a circle or around a table.
The facilitator explains to the group how the case will
proceed and the time frame allowed. The participants are
told that this is a case about delirium; instead, they
are allowed to identify the patient’s problem as the case
unfolds.
The facilitator gives a brief description of each char-
acter in the case study and then asks participants to vol-
unteer for each role. If there are insufficient volunteers,
the facilitator assigns the roles. The props for the case
are openly displayed as the participants volunteer for
the roles so there are no surprises. Props are distributed
as appropriate for the roles. For example, the patient is
given a hospital gown. If the participants are asked to do
some type of assessment or evaluation of the patient using
a standardized form such as the CAM or NEECHAM,
forms and pencils should be available.
Tips for effective facilitation are included in the facili-
tator version of the case study. Before the case begins, the
facilitator takes a moment to assess whether the group
includes only RNs, or a combination of RNs, LPNs, and
NAs. Sample suggestions for the facilitator include al-
low the participants time to respond to questions and
situations before intervening; allow participants time to
support one another; recognize when participants need
prompting and offer hints if responses to the questions
are delayed; and keep the case moving.
At the conclusion of the case, the facilitator conducts
a debriefing session. As with other types of simulated
learning experiences, debriefing is an essential compo-
nent of the learning activity and adequate time is needed
for it to be done effectively (Beaubien & Baker, 2004).
Debriefing provides participants with an opportunity
for reflection and synthesis of their learning experience. Debriefing is a time to review key concepts and knowledge related to the case study, such as pathophysiology of patient symptoms, assessment, interventions, patient and family responses, and discharge planning. New information, unfamiliar procedures, and any standardized patient assessment or evaluation tools are reviewed. Debriefing concludes by asking participants if they have questions or comments.

**CASE EVALUATION**

The data presented are from the RNs, LPNs, and NAs who attended “Improving the Nursing Care of Acutely Ill Elders” workshops in which the delirium case was used and demographic data were obtained: 17 RN workshops, 6 LPN workshops, 9 LPN/NA workshops, and 3 RN/LPN/NA combined workshops. The participants’ demographic characteristics are listed in Table 1. During the second grant cycle, participants were asked to indicate their years of nursing experience and, specifically, their years of experience working with geriatric patients. For this subset of the workshops, the mean years of nursing experience was 15.7 (SD = 11.3, range = 0 to 60) and the mean years of experience working with geriatric patients was 12.2 (n = 413, SD = 9.2, range = 0 to 41).

Participants were asked to rate four aspects of each simulation experience from excellent to poor, and to rate the level of difficulty from much too easy to much too difficult on a 5-point scale. In addition, participants were asked whether they agreed with the statement, “My attendance at this conference increased my ability to identify strategies to improve the cognitive function of acutely confused elderly”; they rated their response on a 4-point scale, from strongly agree to strongly disagree.

Participants rated the delirium case very positively. More than 88.5% of the participants rated each aspect of the case either excellent or very good and more than 86.5% rated the difficulty level just right (Table 2). The participants strongly agreed or agreed (95.7%, n = 480) that they increased their ability to identify strategies to improve the cognitive function of acutely confused elderly patients. No differences in ratings by participants’ type of training were obtained for any of the outcome measures.

**DISCUSSION**

Developing the delirium case using the process described here resulted in an effective, realistic case. Although it is time-consuming to follow each step of the process, it was essential to take the time for development and review. The scripted unfolding case could be used to address a variety of learning needs and issues in infinite combinations. The script allows interactive learning, and the use of dialogue and enactment can give participants an opportunity to practice effective or ineffective communication techniques. Although implementation can be flexible for the setting and audience, the authors found it essential to provide guidelines for the facilitators to ensure that all participants experience the full value of

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**TABLE 1**

<table>
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<tr>
<th>Demographic Characteristics of Workshop Participants</th>
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<tbody>
<tr>
<td><strong>RNs</strong></td>
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<tr>
<td>Age (years)</td>
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<td>M</td>
</tr>
<tr>
<td>SD</td>
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<td>Race</td>
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<td>Black</td>
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<td>White</td>
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<td>Other</td>
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<td>Gender</td>
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<tr>
<td>Female</td>
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</table>

Note. RNs = registered nurses; LPNs = licensed practical nurses; NAs = nursing assistants. *NA participants significantly different from RNs and LPNs (p < .02). **All groups significantly different (p < .05).

**TABLE 2**

<table>
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<tr>
<th>Participants’ Evaluation of Delirium Unfolding Case</th>
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<td><strong>Item</strong></td>
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<tr>
<td>Clarity of the case</td>
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<tr>
<td>Accuracy of content</td>
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<tr>
<td>Flow of the case</td>
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<tr>
<td>Promoted integration of information</td>
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<tr>
<td>Difficulty level “just right”</td>
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</tbody>
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Note. RNs = registered nurses; LPNs = licensed practical nurses; NAs = nursing assistants. *Percentage of respondents rating each item “excellent” or “very good.” **All groups significantly different (p < .05).
key points

Delirium in Older Adults

1. Scripted unfolding cases use active learning to meet the increased need to teach geriatric nursing principles through continuing education.

2. Using a consistent case development process ensures accuracy and quality of the case.

3. Following the process outlined, nurse educators can develop scripted unfolding case studies to address the unique care needs of older patients. These can be adapted for various health care providers.

4. Workshop participants evaluated their experience very positively. They reported learning new information about the recognition and management of delirium in older adults that they can apply in their clinical practice.

CONCLUSION
The scripted unfolding case study is an innovative teaching strategy that can be used to promote clinical reasoning among various types of learners. This low-fidelity type of simulation learning activity is inexpensive and is limited only by the creativity of the author and the time frame for its implementation. It is practice-based and mimics a real clinical situation. Conversation among patient, family, and caregivers enhances engagement of the learners as they proceed through the unfolding story. This scripted unfolding case study focusing on delirium and older adults was rated highly by all levels of nursing staff who attended the continuing education workshops. Such experiential learning activities can be adapted to match the educational preparation, experiences, and educational needs of learners in meeting the growing need for geriatric nursing education.

REFERENCES