Postsimulation: Use of Wikis for Designing Care Plans

Nurse educators are challenged to effectively integrate classroom and clinical learning to better assimilate the complex knowledge, skills, and ethics required for professional practice (Benner, Sutphen, Leonard, & Day, 2010). Clinical skill laboratories with simulations can provide an intermediate zone between classroom learning and clinical experience (Benner et al., 2010) by allowing students to apply conceptual knowledge, practice skills, and use care technologies in a safe environment. Computer-based applications, such as a wiki, can be a useful tool to actively engage learners after a simulation. A wiki is a Web-based technology that creates an interactive learning community where students can share information, experiences, and resources, as well as collaborate on documents (Collier, 2010; Kardong-Edgren et al., 2009).

For this innovative assignment, baccalaureate nursing program students used a wiki as an interactive online tool for planning care following a high-fidelity, postoperative simulation experience. Before delivering actual inpatient care, baccalaureate nursing students, enrolled in their first medical–surgical course, participate in a simulation designed to prepare them for hospital patient care. During the week preceding the simulation, students are assigned related readings and attend a classroom lecture on surgical concepts. In the skills laboratory, clinical faculty demonstrate pertinent nursing skills and use of new medical equipment and review a case study using the course care plan forms (Maas & Flood, 2011).

Before beginning the simulation, the students are advised that the purpose of the experience is to prepare them to provide care for hospitalized patients, and they are assured that the simulation is being used as a teaching and learning experience and not as an evaluation method. The simulation objectives are discussed, which include the demonstration of (a) assessments and critical thinking, (b) proper use of equipment, (c) correct skill procedures, and (d) hand-off communication. Clinical faculty provide cues as needed, as well as ask questions to promote clinical reasoning and linkage with didactic concepts (i.e., postoperative care).

At the start of the simulation, students receive an oral hand-off (shift) report. Each student has the opportunity to perform part of a focused assessment using a human patient simulator. For example, one student might obtain vital signs and would then be questioned about how the findings compare to the report data and adult norms. Another student might decide to assess the respiratory system and, if necessary, would be prompted by faculty to use the pulse oximeter located on the bedside table. When the pulse oximeter indicates a low oxygen saturation level, the student “discovers” that the nasal cannula is not connected to the wall flow meter and he or she must demonstrate the proper set up. At one point in the simulation, an intravenous pump begins to alarm, and the student must troubleshoot and respond appropriately. (Note. The pump was preset to alarm by faculty.) Later in the scenario, another student is confronted with the manikin complaining, “I feel nauseated.” Students are encouraged to think about possible causes of nausea and should check for proper nasogastric tube placement and correct suction set up. (Note. Wall suction was not turned on.)

Additional assessments and related skills include changing an abdominal dressing with inspection of the surgical incision, hanging a new intravenous bag and observing the insertion site (which needs more tape), changing the manikin’s soiled gown, reapplying sequential compression leg wraps after assessing the legs, and providing instructions regarding the proper use of an incentive spirometer after auscultation reveals bilateral lung rales.

During the simulation, faculty offer situational coaching to help students recognize salient report data, identify pertinent assessments, prioritize their nursing care, and implement procedures correctly (Benner et al., 2010). Students learn experientially how to perform a focused assessment, which includes checking medical equipment, making necessary clinical decisions, and implementing postoperative interventions. Also, because students are encouraged to ask classmates for help, the entire simulation promotes collaborative learning and teamwork.

Throughout the simulation, one student takes notes related to pertinent assessment findings and interventions and then verbalizes a shift-end report using a course form designed to facilitate hand-off communication.

After the simulation, students are debriefed using opened-ended questions to encourage reflection on how they felt during the simulation, whether the simulation objectives were met, and how the knowledge and skills learned might transfer to the hospital setting. Students and faculty brainstorm to create a list of nursing diagnoses for the simulated patient.

The students then form small groups (2 to 3 individuals), and each group selects a different nursing diagnosis. The students are given a care plan template to use in their wiki pages to provide a uniform framework. The care plan template, which was introduced during the preceding week, prompts the students to support their diagnosis, develop expected outcomes, and plan interventions related to assessments, monitoring, treatments, and patient teaching. The students and faculty mutually agree on a due date, and the groups complete their care plans using a separate wiki page located on the course Web site.

Within the online course, faculty monitor wiki entries, provide constructive feedback, and assist with formatting to enhance the projects, such as identifying faculty comments with colored text. Faculty integrate classroom and simulation learning through their comments and rationales in the wiki care plans. For example, for a nursing diagnosis of “impaired gas exchange,” the faculty added the intervention “provide a splint pillow” with associated rationale and included instructions for the patient related to splinting. For the wiki with the nursing diagnosis “altered nutrition less than body requirements,” the students were reminded to assess for flatus and to auscultate for
bowel sounds with the nasogastric suction turned off, as emphasized in the simulation. Thus, students were able to begin to see the connections between classroom concepts, simulated assessments, clinical skills, and postoperative care planning. Although not graded, the wiki care plans with faculty comments are made available for the students to use as a resource for the remainder of the semester.

Anecdotal feedback, obtained via e-mail using open-ended questions from two clinic sections in different semesters, generated replies from 10 (71%) of 14 students. The students’ comments indicated the wikis were useful tools to facilitate care plan development and that they valued the online interaction with peers and real-time editing features. They found the faculty’s comments and peer care plans to be helpful. Students reported using the wiki care plans as a resource for future clinic assignments. Students’ suggestions to improve the wiki care plans included incorporating a message area for short notes, using an e-mail alert system to notify peers of editing changes, and providing clearer instructions for writing the nursing interventions.

From the faculty’s perspective, common care plan errors and omissions were addressed with the entire group, which saved significant time and resulted in improved care plans in subsequent weeks. For example, the faculty identified missing risk factors, proposed more measurable outcomes, and offered additional interventions while providing rationale to strengthen understanding and better integration between the classroom and simulation.

Future plans include requiring students to record their rationales, adding a wiki page for reference citations, embedding hot links to the university library’s resource for the Publication Manual of the American Psychological Association and care plan resources, and sharing the wikis with adjunct clinical faculty and nurse educator graduate students.

In addition, due to the positive feedback, the course coordinator will promote the use of wiki care plans following the postoperative simulation for all clinical sections within the course. However, the use of an embedded care plan template, which was piloted with the second group, proved to be problematic. Both students and faculty experienced difficulties with the template due to formatting problems. Thus, for future wiki care plans, the faculty will return to using simple care plan headings, instead of a detailed embedded template, to provide the needed structure.

The wikis proved to be useful tools to facilitate communication for a collaborative care plan assignment. The wiki care plans extended learning beyond the simulation by promoting reflection, peer interactions, and constructive feedback. Wikis, because of their potential for use with professional projects, such as evidence-based protocols, procedure manuals, patient resources, clinical decision tools, and multisite research studies, could prove a valuable addition to nursing students’ skill repertoires (Billings, 2009; Collier, 2010; Kardong-Edgren et al., 2009). Students who are exposed to wikis while in nursing school may be more likely to use this technology in their future clinical practice to share resources and to collaborate on multidisciplinary projects and interagency endeavors.

References


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