

Integrating Simulated Electronic Health Record Patients Across Multiple Nursing Courses

The electronic health record (EHR) is an integral tool used by nurses in a variety of clinical settings. Due to regulations imposed by The Joint Commission (2018), many clinical partners prohibit nursing students from charting on assigned patients in the EHR in order to avoid potential errors or substandard documentation. Restricted access to EHRs affects the ability of nursing students to develop documentation skills, thus impeding their transition into clinical practice as novice nurses (Kowitlawakul, Wang, & Chan, 2013).

Simulated EHRs allow undergraduate nursing students to develop proficiency in electronic documentation in a safe and controlled environment (Vana & Silva, 2014). Nurse educators are embracing this technology to support valuable and relevant learning experiences. Simulated EHRs bridge the gap between nursing education and practice, preparing students to function effectively postgraduation.

Innovative educational experiences support meaningful learning and prepare nursing students to function successfully in challenging clinical practice environments (Pepin et al., 2017). Faculty in a baccalaureate nursing program in southern New Jersey developed integrative learning activities using a simulated EHR for 49 junior-level nursing students enrolled in Fundamentals of Nursing, Nursing of the Childbearing Family, and Pharmacotherapeutics. The students were enrolled in these nursing courses concurrently during the fall 2017 semester, providing an opportunity for faculty to implement this educational strategy. The EHR Go platform, a simulated EHR tool by Archetype Innovations, was integrated into the undergraduate curriculum for this activity to support the development of electronic documentation skills. All students and faculty had EHR Go accounts; the cost for the student accounts was included in the students' annual fees. Four simulated EHR patients were customized to connect and reinforce key

concepts from the courses, including documentation skills, prioritization of nursing care, physical assessment, and medication management. Shared learner content (SLC) was developed collaboratively by course faculty, allowing students to use the same materials across multiple courses to facilitate transformative learning in undergraduate nursing courses.

The first patient, Patient A, was a 72-year-old male post-hip replacement with a history of hypertension and type 2 diabetes. Patient B was a 25-year-old woman with acute appendicitis and a history of type 1 diabetes. Patient C was a 51-year-old male with pneumonia and an exacerbation of congestive heart failure. Patient D was a 33-year-old female patient with a history of lupus who recently delivered a baby via cesarean section. In each of the three courses, learning activities based on these patients were assigned, allowing students to integrate content between the courses while interfacing with the simulated EHR.

In the Fundamentals of Nursing course, students documented in the simulated EHR for Patients A, B, and C in the clinical learning laboratory while practicing skills such as activity and mobility, intake and output, sterile dressing changes, and medication administration. In the Nursing of the Childbearing Family course, the students participated in a postpartum skills laboratory and documented a complete postpartum assessment on Patient D in the simulated EHR. Pharmacotherapeutics was the linchpin course for the SLC, incorporating group case study assignments from Patients A, B, C, and D. The intersection of the EHR cases in the three courses demonstrated the multifaceted issues and multimodal treatment options a single client may experience.

The SLC provided contextual meaning, reducing content isolation (e.g., the silo effect) during active learning and humanizing the "paper client" to foster the elements of caring, empathy, and an understanding of sociocultural differences nurses will encounter in the health care environment. For example, in the Funda-

mentals of Nursing skills laboratory, students administered pain medications to Patient A to manage postoperative pain. Using a case study based on this same patient, pain medications and postoperative pain management were presented in the Pharmacotherapeutics course. When completing their Patient A case study reports for the Pharmacotherapeutics course, students often included the knowledge and perceptions gained during their skills laboratory exercises, thus illustrating the meaningful connections forged through the use of the EHR-based SLC.

Through postlearning debriefings and informal focus groups, students repeatedly expressed perceived value in this educational strategy, believing that the SLC facilitated comprehension and retention of nursing concepts. Based on direct student observations, integrating simulated EHR patients across multiple courses in a single semester reinforced essential content and allowed students to become more familiar with electronic documentation. The cross-over content supported dynamic, transformative learning and begs further exploration and research into its efficacy in a baccalaureate nursing program (Pepin et al., 2017). This anecdotal educational intervention underscores the value of merging innovative technology, such as simulated EHRs, into classroom and clinical settings to promote positive student outcomes and prepare novice nurses for practice in today's challenging health care delivery environments.

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