Electronic Charting During Simulation
A Descriptive Study

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Informatics is a core competency for nursing students recognized by several national organizations in healthcare and nursing education. Nurses must be able to use information and technology to communicate and manage knowledge in support of clinical decisions. Many hospitals either limit or deny nursing students' access to the electronic health record during traditional clinical learning. Simulation-based learning experiences are an alternative to traditional clinical experiences. What remains unclear is how nursing programs are incorporating electronic health record platforms within simulation. This study used a descriptive design to survey nursing programs exploring electronic health record use within simulation-based learning experiences in the classroom, skills laboratory, or simulation laboratory settings. Findings of the survey show that 56.2% of participants used an electronic health record in the classroom, skills laboratory, or simulation laboratory for simulation. Electronic health record use is gaining momentum via simulation-based learning experiences and students are not only documenting but also gathering data and appraising patient data for meaningful use to inform patient care decisions and promote clinical readiness.

KEY WORDS: Documentation, Electronic charting, Electronic health record, Nursing education, Simulation

Historically, the medical record consisted of documentation of a patient's health history on paper, assembled in a file, and stored in one location. This system quickly became outdated because access to a medical record from a remote location, and/or transferring a medical record from one provider to another, was often difficult, slow, and insecure. Healthcare shifted to the digital age out of necessity and through advances in technology and computer applications.

The Institute of Medicine[1] and Quality and Safety Education for Nurses (QSEN)[2] have noted the need to improve nursing education and identified informatics and technology as core competencies.[2,3] As early as 2008, the American Association of Colleges of Nursing (AACN),[3] American Nurses Association,[4] and National League for Nursing[5] called for the incorporation of informatics into nursing curricula in order to prepare nursing students to use informatics in professional practice. Moreover, *The Essentials of Baccalaureate Education for Professional Nursing Practice*[3] articulated the requirement for practicing nurses to be literate in informatics and computer technology. The advent of meaningful use guidelines associated with health information technology also reinforced the importance of electronic charting in shaping the future of nursing education and practice.[6] Meaningful use is defined as using the electronic health record (EHR) to improve quality, safety, and efficiency; reduce health disparities; engage patients and families; improve care coordination; and maintain patient privacy in healthcare.[7] This involves making informed decisions based on trends and entries from other disciplines on the healthcare team.

The necessity for prelicensure nursing students to become competent in utilizing an EHR within the clinical environment has been well recognized. Incorporating informatics education with repetitive practice opportunities in an EHR would be beneficial and ultimately essential for entry-level nurses. Additionally, Benner et al[8] supported the recommendations and articulated how the inclusion of informatics and technology in nursing curricula would create a radical transformation within nursing education. Students' ability to practice EHR skills in the traditional clinical environment can be sporadic and limited. The National Council of State Boards of Nursing (NCSBN) simulation study demonstrated that simulation-based learning experiences (SBLEs) can be as effective as the traditional clinical experience.[9] What remains unclear is how nursing programs are incorporating EHR platforms within simulation. The purpose of this study

was to survey nursing programs to determine use of the EHR within SBLEs occurring in the classroom, the skills laboratory, or the simulation laboratory setting. The following research questions guided the study:

1. How is the EHR being used in the classroom, skills laboratory, and simulation laboratory settings for the purpose of SBLEs?
2. When the EHR is used in SBLEs, what orientation is provided to students?
3. When the EHR is used in SBLEs, what support is provided to faculty?
4. For programs not using the EHR, what were the contributing factors that informed the decision to not use the EHR for the purpose of SBLEs?

Background

Brooks and Erickson[10] reported how academic EHRs were utilized in approximately 1% of nursing programs across the United States. Despite the initiatives over the past decade, this literature review demonstrated a scarcity of research articulating the use of EHRs within academic settings. Many of the studies were conducted at a single site with a small sample, and did not address a research design, which limits the ability to generalize results to a larger population. The reviewed studies explored student attitudes toward and confidence in using the EHR, measured their navigation time, and documentation accuracy.

Warboys et al[11] conducted the largest study that focused on baccalaureate nursing students. They found that when nursing students practiced with an EHR a minimum of five times, they developed positive perceptions about using the EHR. Kowitlawakul et al[12] found that student attitudes toward using the EHR was the factor that most influenced acceptance of the technology. Baillie et al[13] investigated nursing students' and midwives' experiences with learning to use the EHR within the practice setting. Quantitative and qualitative findings identified barriers in lack of training, access, and ability to use EHRs in practice.

Research addressing the adoption and integration of EHRs within the academic setting was limited. Kowitlawakul et al[14] conducted a qualitative study testing a software program developed for incorporation within the simulation laboratory setting. The authors noted that it is necessary to educate faculty and students as to the purpose of electronic charting software within academia. Although faculty recognized that EHRs are innovative and facilitate transition, they felt integration required time and support from administration, faculty, and students to gain acceptance.[15]

Similarly, Herbert and Connors[16] linked successful integration of an academic EHR with having a champion, administrative support, and training support for both students and faculty. Barriers included training and support, funding,

and faculty release time. Additional research revealed how EHR systems assist nursing students to identify patient nursing diagnostic information and promote use for interprofessional education. Further exploration of EHR use within academia was noted.[17,18]

METHOD

Study Design

This descriptive study used a survey developed by the investigator and aimed specifically at answering the research questions. Content validity was determined by simulation educators and directors, and informatics specialists (N = 12) in the United States and Canada, who were identified by the research team as content experts. The content validity index of the survey is 0.97. The survey consisted of nine demographic questions with an additional 16 questions focused on the use of the EHR in SBLEs in the classroom, skills laboratory, and simulation laboratory settings.

Study Sample

Institutional review board approvals were obtained. A convenience sample of active registered nursing (RN) and practical nursing (PN)/vocational nursing programs in the United States and Canada listed with the NCSBN were randomly selected. Each state or province was represented equally; 50% of schools from each state were selected randomly, based on a coin toss. If the coin toss was heads, the odd-numbered schools (1, 3, 5,…) on the NCSBN list were selected, and if the toss was tails, the even-numbered schools (2, 4, 6,…) were selected. This yielded 2617 RN programs and 836 PN programs, with a total of 3453. The investigators searched each selected program's Web sites for publicly available email contact information for one individual in the nursing program. If no email contact was found, the investigators excluded the program. This resulted in 1070 schools for potential inclusion. Eighty-three emails were returned as undeliverable, leaving 987 schools eligible to participate.

Data Collection

A recruitment email containing an explanation of the study instructed the recipient to forward the email link to the anonymous online survey through Qualtrics (Qualtrics, Provo, UT) via a secure server to the simulation expert in the nursing program for completion. The survey was voluntary and completion indicated consent. Participants were able to exit the survey at any time. To maintain participant anonymity, Internet protocol addresses of the submitted responses were not collected. As a result, once responses were submitted, they could not be removed if participants wished to exit the survey early or have their responses removed. Each individual survey link expired when a participant submitted the survey to prevent more than one response per participant. Reminder emails were generated every 2 weeks for the next 3 months.

Data Analysis

Descriptive statistics were used to describe the sample and results to questions on the use of the EHR for SBLEs within the classroom, skills laboratory, and simulation laboratory settings. Results were reported as percentages, as calculated in Qualtrics.

RESULTS

Descriptive Data

There were 146 completed surveys resulting in a 14.8% response rate. Thirty-eight states (76%) were represented. The response rate for each state represented ranged from 1 to 13. One hundred thirteen participating schools (77.4%) were part of public institutions, and 33 (22.6%) were part of private institutions. Although Canadian schools were selected in the same random way, no responses were received from schools in Canada. All nursing academic degrees were represented, from 55 PN (14.5%) to nine PhD (2.4%). Average student enrollments were 198.1 prelicensure (n = 134), 110.1 RN to BSN (n = 54), 177 graduate (n = 41), and 70.5 other (n = 48) including certificates. One hundred seventeen programs (80.1%) were accredited by an approved nursing accrediting agency, including Commission on Collegiate Nursing Education (n = 45), Accreditation Commission for Education in Nursing (n = 56), and Commission for Nursing Education Accreditation (n = 3). Sixteen (10.2%) responded not applicable and 13 (8.9%) responded accreditation by a local or regional accrediting agency.

Electronic Health Record in Simulation

Eighty-two participants (56.2%) indicated that they used an EHR for SBLEs in the classroom, skills laboratory, or simulation laboratory. Of these participants, 35 (19.6%) used the EHR for SBLEs in the classroom; 71 (39.7%) in the skills laboratory; and 73 (40.8%) in the simulation laboratory.

Programs Using the Electronic Health Record for Simulation-Based Learning Experiences

In response to which programs used the EHR for SBLEs (a "select all that apply" response), prelicensure programs were predominantly chosen by participants: 37 traditional BSN (29.1%), 36 ADN (28.4%), 20 LPN (15.8%), 20 LPN to RN (15.8%), and 10 accelerated BSN (7.9%). Four postlicensure program options (2.7%) were chosen by the participants: one for RN to BSN (0.79%) and three for a master's program (2.7%). No participants reported using the EHR for SBLEs in their Associate in Applied Science to Masters, advanced practice certificate, DNP, or PhD programs.

Integration of the Electronic Health Record

Figure 1 compares the percentage of the EHR integration for SBLEs in the classroom, skills laboratory, and simulation laboratory. The classroom setting had the least percentage (1%–25%) of integration, and the simulation laboratory had the highest percentage (75%–100%) of integration.

Initiation of Electronic Health Record and Decision Makers

Forty participants (31.0%) indicated that the individual in charge of simulation in their program initiated the idea of using the EHR for SBLEs. This "select all that apply" response showed the other individuals who initiated the idea of using the EHR (Figure 2). Four participants chose "other" and wrote in laboratory coordinator. Committees responsible for initiating the idea included curriculum and program committees, along with simulation champions. In another "select all that apply" response, participants were asked who the decision maker was for EHR curriculum integration (Figure 3). Thirteen participants chose "other," which included individuals working in simulation, program coordinator, and simulation or laboratory coordinator.

How the Electronic Health Record Is Being Used for Simulation-Based Learning Experiences

Participants reported how the EHR is being used in the classroom, skills laboratory, and simulation laboratory for SBLEs (Figure 4). Nine participants chose "other" for the classroom setting and provided the following responses: core measures/chart audits; Situation, Background, Assessment, Recommendation (SBAR) and incident reports; and students enter patient cases from clinical, document care postclinical, and homework assignment for looking up information in the EHR. Four participants selected "other" for skills laboratory with the following responses: focused assessment, charting skills, and medication administration. Three participants chose "other" for simulation laboratory with the following responses: charting practicums, reading medication administration record, and care plan.

Length of Time Using Electronic Health Record

Eighty participants responded to the length of time the program has been using the EHR for SBLEs. Forty-five (56.3%) reported using it over the past 1 to 3 years; 27 (33.8%), for the past 4 to 6 years; and eight (10.0%), for the past 7 to 9 years.

Satisfaction

Forty-two participants (54.6%) reported satisfaction with the amount of time students spent using the EHR for SBLEs. Thirty-five (45.6%) reported dissatisfaction secondary to faculty resistance, leading to inconsistent practice, lack of time, EHR system "bugs," difficulty of use, only using when "pushed" by simulation staff, and limited use in clinical practicum. Others said they would like to see more integration in the curriculum or classroom. Twenty-seven participants (35%) reported their graduates are adequately prepared to use the EHR following graduation. Seven (9.1%) reported their graduates are not adequately prepared to use the EHR, and 43 (55.8%)
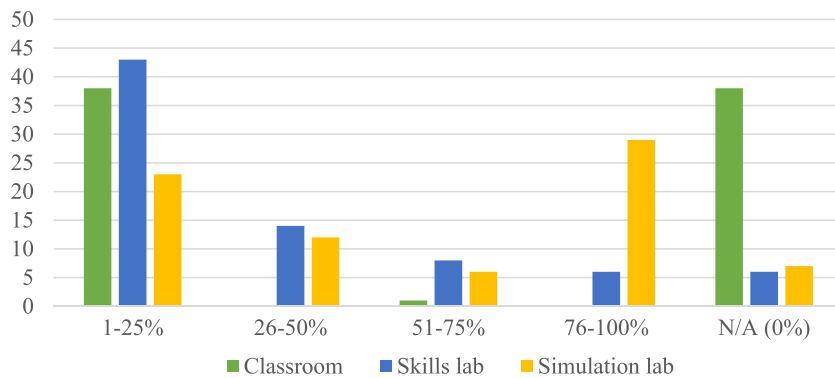
FIGURE 1. Integration of the EHR. A comparison of the percentage of integration of the EHR in the classroom, skills laboratory, and simulation laboratory.

reported their program does not collect this information on graduate surveys.

Other Comments

Participants were offered an opportunity to add any other thoughts they had about the use of the EHR for SBLEs. Themes noted were as follows: (1) an EHR adds to the fidelity of the simulation; (2) participants would like to see a hospital-based program, which would improve the realism; (3) time and issues with grading; (4) it assists in meeting gaps from limited access in clinical settings; (5) clinical sites have EHRs; and (6) a misunderstanding of the use and benefits of the EHR for SBLEs.

Orientation

Seventy-six participants (95.0%) provided students with an orientation to the EHR through hands-on practice, (28.4%), didactic teaching (12.9%), vendors (12.4%), video (11.44%), prebrief refresher before each simulation (9.5%), students reading the EHR manual (7%), Webinar training (3.5%), and an informatics class (2%). Only four participants (5.0%) offered no orientation; lack of time was the common reason (60%).

One participant responded that it was not necessary, and one participant wrote in "just trialing implementation."

TECHNOLOGY SUPPORT

Participants provided details about the type of technology and troubleshooting support offered to faculty and students. Fifty participants (36.8%) stated that the EHR vendor provided support and education, 28 (20.6%) had designated trained faculty, 22 (16.2%) used nursing program instructional technology, and 14 (10.3%) simulation trained nonfaculty personnel. Thirty participants (37.5%) purchased an EHR software program, and 28 (35.0%) purchased an Internet cloud-based program. Nine participants (11.3%) developed a "home-grown" EHR; five (6.3%) used the EHR provided by textbook publisher; four (5.0%) purchased a virtual program; and four (5.0%) had access to their existing local/regional hospital system. The type of devices students used to access the EHR included laptops (47%), tablets (28.2%), smartphones (8.7%), and desktop computers (15.4%).

Reasons for Not Using Electronic Health Record

Sixty-four participants (43.8%) indicated that they did not use an EHR for SBLEs in the classroom, skills laboratory,
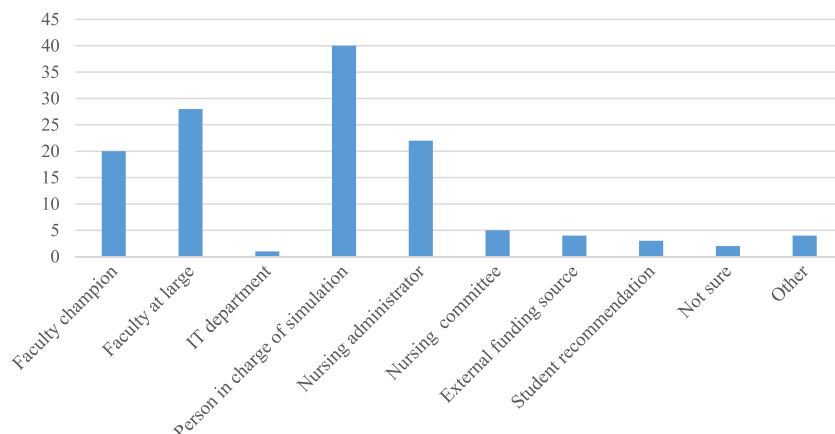

FIGURE 2. Initiators of the EHR. Representation by percentage of the person(s) initiating the idea for the EHR. IT, information technology.
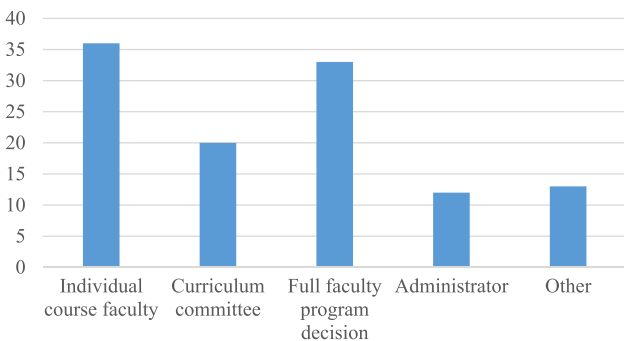
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FIGURE 3. EHR decision makers. Representation by percentage of the decision makers for EHR integration.

or simulation laboratory, most frequently citing cost (22.5%) and lack of funds (17.0%) as reasons. Figure 5 provides more details as to why some participants did not use the EHR. Twenty-five participants (13.4%) chose "other" and provided the following responses: lack of faculty/information technology/administrative support, not enough time, and students already getting enough practice in the traditional clinical setting. One participant responded that the results of a regional survey indicated "it does not promote/support critical thinking." Another participant reported having "an

EHR but students are not expected to document in any way." Eleven participants (6.0%) reported that they had an EHR but had discontinued use, for reasons including switching to another vendor, too difficult to use, not used enough to justify cost, not enough faculty time to research/implement, and lost funding.

DISCUSSION

Research question 1 examined how the EHR is being used in the classroom, skills laboratory, and simulation laboratory settings. Slightly more than half of participants (56%) reported using an EHR for SBLEs in the classroom, skills laboratory, or simulation laboratory. Study results revealed that the use of an EHR occurs primarily in the skills laboratory (89%) and simulation laboratory (92%). It is encouraging to see almost half of the programs using the EHR in the classroom setting for SBLEs. Findings support previous research that has shown the EHR is most beneficial when used as a teaching pedagogy and adapted to present curricular content within the classroom, skills laboratory, and simulation laboratory settings.[17,19] Use of the EHR in all three settings maximizes the benefit of exposing students to a variety of situations that may improve
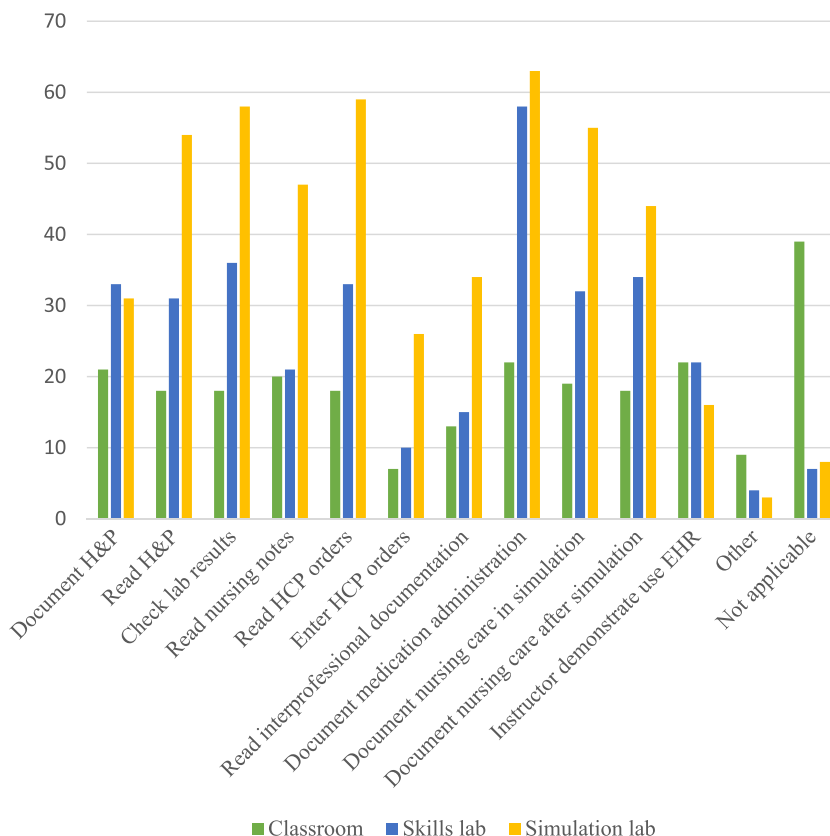

FIGURE 4. EHR use by setting. A comparison of how the EHR is being used in the classroom, skills laboratory, and simulation laboratory SBLEs. HCP, healthcare provider; H&P, history & physical.
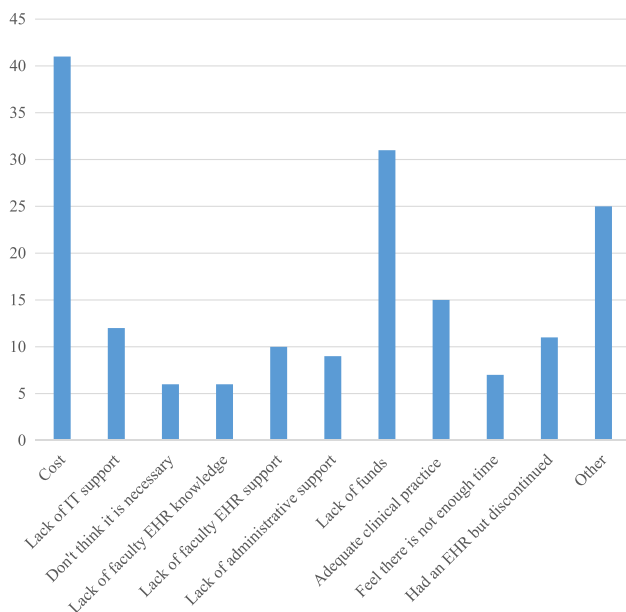
FIGURE 5. Contributing factors. Identification of contributing factors that informed the decision to not use the EHR. IT, information technology.

their clinical readiness. Further research is needed in this area.

Findings suggest that participants who used the EHR across all three settings have engaged students in meaningful use of the EHR while entering and gathering patient data. When nursing students learn how to efficiently and effectively retrieve patient information, they will learn how to recognize salient cues from the EHR to make appropriate clinical decisions.[17] This can be achieved by integrating the EHR in various settings throughout the curriculum.

Prelicensure nursing students are novices at nursing documentation and gathering information from the medical record to inform clinical decisions.[20] Consistent with *The Essentials* for baccalaureate degree programs,[3] the findings reveal that most prelicensure programs use the EHR to teach these skills to nursing students, although there was a large gap in postlicensure programs. Additionally, QSEN[2] includes scaffolding competencies within informatics and communication at all degree program levels. This left the investigators wondering how graduate-level nursing students gain the skills required for higher-level competencies, as well as meet the expectations set forth by QSEN[2] and AACN.[3] Perhaps there is an assumption that most graduate-level nurses work in the clinical setting and are competent in electronic documentation.

Adoption of the EHR has gained momentum over the past 6 years; 54% of participants stated that EHR implementation occurred within the last 3 years, compared to Brooks and Erickson[10] who found that only 1% of nursing programs in the United States used an EHR. However, since 95% of

hospital organizations and more than 60% of office-based physicians across the United States use an EHR system to comply with meaningful use requirements,[7] one would expect to see greater adoption of the EHR in nursing programs. It is essential for newly licensed and advanced practice nurses to train on EHR systems to develop the competencies identified by AACN and QSEN.

It was a surprise that 53% of participants cited the simulation director as having initiated use of the EHR for the purposes of simulation. Breymier et al[21] found that the simulation director, or individual considered to be the expert in simulation learning, was not involved in decisions about simulation with regard to the curriculum. Perhaps times are changing and simulation leaders are now considered essential to decisions made in nursing programs. Participants were asked how to integrate the EHR into a nursing program, and responses indicated that faculty are leading the process.

Research question 2 asked whether the program offered some type of student orientation to the EHR. It was promising to see that 96% of programs do provide orientation for students and for many (78%) this orientation is hands-on practice. Providing an orientation or prebrief meets the International Nursing Association for Clinical Simulation and Learning *Standards of Best Practice: Simulation.*[22] Kowitlawakul et al[12] found that the most influential factor regarding student intention to use an academic EHR was positive attitudes toward ease of use and benefits to learning. Providing an orientation to the EHR would most likely facilitate easy use for students, thereby increasing acceptance of the EHR as part of coursework. Even though informatics is identified as an essential in nursing education, most schools (94%) do not have a class specifically focused on informatics.

Research question 3 examined what type of support and troubleshooting is offered to faculty and students. Many programs use either a commercially available software program (37.5%) or an Internet cloud-based program (35%). This can be quite costly so one would expect vendor support and education as a part of that expense. However, only 36.8% of participants reported having vendor support and education. Since cost (22.5%) and lack of funds (17%) were cited as reasons for not having an EHR, perhaps nursing programs would reconsider their decisions if vendor support and education were included. Faculty training and support from either a vendor or an EHR champion could facilitate ease of adoption and increase integration.[15,16]

The final research question examined the reasons why some participants did not use the EHR (n = 64). Cost (22.53%) and lack of funds to purchase (17.03%) were the dominant responses. Although cost and lack of funds were cited as deterrents to EHR use, it was interesting that no participants offered additional insight in the open-ended comments. There is little doubt budget constraints have affected widespread adoption of

an academic EHR. While this survey reveals that cost prohibits EHR implementation, the focus of this study was to determine use of the EHR within SBLEs occurring in the classroom, the skills laboratory, or the simulation laboratory. Additional work is needed to identify what specific impacts cost has on integration. Nursing programs should consider innovative ways to manage program budgets to include the purchase of EHR for curricular integration.

Lack of faculty support (5.49%) and lack of faculty knowledge (3.30%) are consistent with the findings by Kowitlawakul et al[15]; faculty workshops and policies for professional development on health informatics are recommended to improve knowledge and change faculty perceptions. Faculty (3.85%) reported time is a factor when discussing how to incorporate the EHR. Time is precious to faculty who struggle to add new content and technology.[8] Based on participant responses, integration of the EHR in simulation is needed. Nursing education programs need to find innovative solutions to overcome the barriers to implementation identified in this study. Further research and work are needed to generate evidence supporting the use of the EHR in SBLEs in the classroom, skills laboratory, and simulation laboratory settings.

LIMITATIONS

Several limitations have been identified to this study. Although Canadian schools were included in the random sampling process, none responded, and the overall response rate from US nursing schools was low, which minimizes the ability to generalize findings. Additionally, some programs had to be excluded because no contact information was available on the Web site. There was no guarantee that the person who responded to the survey was the simulation expert at the institution. Since the list consisted of NCSBN active programs, graduate-only nursing programs were excluded from this survey. Schools with both PN and RN programs and schools with multiple campuses may have received two separate invitations to participate, resulting in more than one response from an institution.

CONCLUSIONS

Electronic charting is done almost exclusively in healthcare settings. Student use of the EHR in the traditional clinical setting is sporadic and varied. However, it is promising that use of an EHR in nursing programs is gaining momentum through SBLEs, and it appears students are not only documenting care but also gathering and appraising patient data. This momentum must continue; future research must follow successful integration of EHR use in SBLEs within the classroom, skills laboratory, and simulation laboratory settings to measure whether students are achieving the required informatics competencies. In addition, research must assess the impact of EHR use with SBLEs on documentation accuracy and meaningful use in the clinical practice setting for student and professional nurses.

A review of barriers that must be overcome to achieve successful adoption of the EHR for SBLEs can assist with integration throughout the curriculum among both pre- and postlicensure programs. Implementing an EHR program is time intensive, both for faculty to learn, and students to orient to, the specific software program. Nursing programs have various options such as vendors, faculty super-users, and university/nursing program information technology specialists to support and increase the capacity to adopt an EHR with ease. Finally, the EHR adds enhanced fidelity to the SBLE, which can support deliberate practice of the EHR to promote clinical readiness.

References

1. Institute of Medicine. *The Future of Nursing: Leading Change, Advancing Health*. Washington, DC: National Academies Press; 2011.
2. Quality and Safety Education for Nurses. The evolution of the Quality and Safety Education for Nurses (QSEN) initiative. http://qsen.org/about-qsen/project-overview. Accessed January 10, 2017.
3. American Association of Colleges of Nursing. *The Essentials of Baccalaureate Education for Professional Nursing Practice*. Washington, DC: AACN; 2008.
4. American Nurses Association. *Nursing Scope and Standards of Practice*. 3nd ed. Silver Spring, MD: ANA; 2015.
5. National League for Nursing. A vision for the changing faculty role: preparing students for the technological world of health care. NLN vision series. http://www.nln.org/newsroom/nln-position-documents/nln-living-documents. Updated January 2015. Accessed January 10, 2017.
6. Murphy LS, Wilson ML, Newhouse RP. Improving care transitions through meaningful use stage 2: continuity of care document. *The Journal of Nursing Administration*. 2013;43(2): 62–65. doi:10.1097/NNA.0b013e31827f2076.
7. Health IT. Meaningful use definition & objectives. https://www.healthit.gov/providers-professionals/meaningful-use-definition-objectives. Updated February 6, 2015. Accessed January 10, 2017.
8. Benner P, Sutphen M, Leonard V, Day L. *Educating Nurses: A Call for Radical Transformation*. Hoboken, NJ: John Wiley & Sons; 2010.
9. Hayden JK, Smiley RA, Alexander MA, Kardong-Edgren S, Jeffries PR. The NCSBN National Simulation Study: a longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation*. 2014;5(2): S3–S40. doi:10.1016/S2155-8256 (15)30062-4.
10. Brooks CL, Erickson LK. What is the solution for clinical nurse educators and the electronic medical record? *Teaching and Learning in Nursing*. 2012;7: 129–132. doi:10.1016/j.teln.2012.06.003.
11. Warboys I, Wai YM, Frith KH. Electronic medical records in clinical teaching. *Nurse Educator*. 2014;39(6): 298–301.
12. Kowitlawakul Y, Chan SW, Pulcini J, Wang W. Factors influencing nursing students' acceptance of electronic health records for nursing education (EHRNE) software program. *Nurse Education Today*. 2015;35(1): 189–194. doi:10.1016/j.nedt.2014.05.010.
13. Baillie L, Chadwick S, Mann R, Brooke-Read M. A survey of student nurses' and midwives' experiences of learning to use electronic health record systems in practice. *Nurse Education in Practice*. 2013;13(5): 437–441. http://dx.doi.org/10.1016/j.nepr.2012.10.002.
14. Kowitlawakul Y, Wang L, Chan SW. Development of the electronic health records for nursing education (EHRNE) software program. *Nurse Education Today*. 2013;33: 1529–1535.
15. Kowitlawakul Y, Chan SWC, Wang L, Wang W. Exploring faculty perceptions towards electronic health records for nursing education. *International Nursing Review*. 2014;61: 499–506.
16. Herbert VM, Connors H. Integrating an academic electronic health record: challenges and success strategies. *Computers, Informatics, Nursing*. 2016;34: 345–354.

17. Pobocik T. Using an educational electronic documentation system to help nursing students accurately identify patient data. *International Journal of Nursing Knowledge*. 2016;26(1): 26–34. doi:10.111/2047-3095.12032.

18. Titzer J, Swenty CF, Wilson GM. Interprofessional education: lessons learned from conducting an electronic health record assignment. *Journal of Interprofessional Care*. 2015;29: 536–540. doi:10.3109/13561820.2015.1021000.

19. Sorensen J, Campbell L. Curricular path to value: integrating an academic electronic health record. *The Journal of Nursing Education*. 2016;55(12): 716–719. doi:10.3928/01484834-20161114-10.

20. George NM, Drahnak DM, Schroeder D, Katrancha E. Enhancing pre-licensure nursing students' use of an electronic health record. *Clinical Simulation in Nursing*. 2016;12(5): e152–e158. doi:10.1016/j.ecns.2015.11.006.

21. Breymier TL, Rutherford-Hemming T, Horsley TL, et al. Substitution of clinical experience with simulation in prelicensure nursing programs: a national survey in the United States. *Clinical Simulation in Nursing*. 2015;11(11): e472–e478. doi:10.1016/j.ecns.2015.09.004.

22. International Nursing Association for Clinical Simulation and Learning. INACSL standards of best practice: simulation[SM]. *Clinical Simulation in Nursing*. 2016;12(S):S1–S50.

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