

Ambulatory Care Simulation: A Collaboration Between MSN and BSN Students

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ABSTRACT

Background: A university school of nursing initiated a pilot project to include Master of Science in Nursing (MSN) students in two existing Bachelor of Science in Nursing (BSN) student scenarios. The result was a valuable collaboration among the student learners. **Method:** Using a Zoom platform, students were introduced to their patient in a telehealth scenario. Students then encountered the same patient in an urgent care setting. The BSN student assessed the patient, then reported to the MSN student. The MSN student provided feedback and treatment orders. Individual BSN and MSN student pairs debriefed immediately after their scenarios and again at the end with other students and faculty. **Results:** Evaluation was conducted using an adaptation of the Modified Simulation Evaluation Tool (SET-M) and free-text questions developed by nursing faculty. Both SET-M responses and written comments indicated students were satisfied with the simulation experience, and students' confidence and skills in communication and collaboration improved. **Conclusion:** This simulation was beneficial for both MSN and BSN students and will become an ongoing addition to the simulations. [*J Nurs Educ.* 2021;60(5):293-297.].

At a private university school of nursing, three simulations have been part of an Ambulatory Care Nursing course since 2017, enhancing the content specific to telehealth, urgent care, and home health nursing. These simulations were adapted and integrated for fourth-semester Bachelor of Science

in Nursing (BSN) students for several reasons, including alignment with course didactic content, participation in clinical experience in varied ambulatory settings, and the opportunity for students to provide care at the highest level of RN scope of practice. Simulations also provided clinical time credit, which addressed the chronic challenge of site placement in ambulatory settings.

When the school of nursing was faced with clinical restrictions caused by COVID-19, Master of Science in Nursing (MSN) students had fewer face-to-face clinical options. Because BSN students already participated in these simulations as part of their Ambulatory Care course curriculum, this seemed an appropriate opportunity to expand the scope of this simulation experience to include MSN students for two of the three simulations. In this way, the MSN students acquired clinical hours and had the opportunity to apply clinical and delegation principles.

Simulation-based learning experiences (SBLEs) have long been recognized as an effective educational tool in BSN and graduate nursing education (Aebbersold, 2018; Rutherford-Hemming et al., 2016). Evidence to support the substitution of traditional clinical experiences for graduate programs is still being gathered (Rutherford-Hemming et al., 2016); however, many graduate nursing programs use SBLEs to enhance clinical education and report a desire to replace some clinical time with simulation (Nye et al., 2019).

In 2014, the National Council for State Boards of Nursing determined that BSN programs could replace up to 50% of clinical experiences with high-quality SBLEs without loss of educational outcome achievement (Alexander et al., 2015). Meeting the threshold of high quality requires that SBLEs are designed and implemented following standards of best practice as set forth by the International Nursing Association of Clinical Simulation and Learning (INACSL) Standards Committee (2016). SBLEs provide opportunities for interdisciplinary and interprofessional interactions that are generally more difficult to plan in traditional clinical experiences and educational institutions.

In the ambulatory care course clinical experience, BSN students often were assigned to single-focus care settings and were unlikely to experience the varied ambulatory care clinical options. In addition, students whose clinical experience had been primarily in the acute care arena sometimes found it difficult to adjust their skills and critical thinking to an ambulatory setting. The unfolding SBLE provided a controlled setting in which faculty could address these issues and provide opportunities for prelicensure students to practice at the top of RN licensure through the application of critical thinking skills.

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Objectives

The objectives for this pilot study incorporated the general curricular school of nursing conceptual thread of Teamwork and Collaboration as well as course-specific objectives for both graduate and BSN students. The nature of nursing education requires some degree of silo-type education; however, it benefits everyone when those who will practice as RNs understand the roles and responsibilities of their APRN counterparts, and when those who will be APRNs understand the ways that RNs can most effectively contribute to the health care team.

Although each group had cohort-specific objectives, a common objective was that the students would understand each other's roles and apply intraprofessional collaborative concepts. Effective communication between the "nurse" and "provider" was an essential objective for both groups of students, as was effective use of technology and informatics to enhance patient access to services. Confidence was a final objective that was shared by both groups—confidence in their respective skills and abilities, as well as confidence in using their knowledge to contribute to the collaborative goals for the patient.

Specific to the BSN ambulatory care course, in the three-part simulation, the faculty introduced different areas of ambulatory nursing, providing valuable insight for the student. Skills of assessment, history taking, and prioritization were emphasized. In addition to the clinical skills, the simulations were designed to enhance BSN student learning in the areas of communication, teamwork, patient safety, quality care, and critical reasoning.

The MSN students involved in this simulation were in the program for certification as family nurse practitioners. For these students, the format and content of the telehealth and urgent care simulations were natural fits for graduate nursing education. The experience allowed the students to gain experience and confidence in assessment and management of patients in these settings, while also obtaining needed clinical hours.

In summary, the graduate nursing students' objectives were focused on applying their specialty knowledge to treatment choices in this setting, whereas the BSN students addressed skills in assessment and prioritization. Both groups included the patient as part of the team, with different perspectives. The graduate students incorporated patient input as part of the decision making for diagnostic and treatment choices, and the BSN students incorporated patient input in the care plan to prioritize care and interventions.

Unfolding Simulation

With the onset of the COVID-19 epidemic and the change to virtual education, the setting for these simulations moved from an onsite simulation laboratory to access via Zoom. For the telehealth simulation, the change actually enhanced the experience; the students participated in patient care in a realistic telehealth situation. For the urgent care simulation, in a simulated setting of face-to-face interaction, a variety of creative methods were used to provide "hands-on" data for decision making.

For the simulation experiences, students were assigned one patient to follow through a total of three simulated settings (telehealth, urgent care, and home health), the first two of which included the involvement of MSN students. The patient's symptoms unfolded into specific health concerns that progressed

into these different ambulatory health care settings. In each successive simulation, the patient demonstrated symptoms that required students to apply critical thinking, offer recommendations, and provide nursing care.

For each simulation, a staff member served as the simulation operator and was responsible for placing participants into the breakout rooms and monitoring for technical issues. A faculty member provided oversight by visiting different breakout rooms during the simulation time.

Patients

The patients for the simulations included:

- A pediatric patient with cold symptoms who woke up extremely short of breath.
- A 60-year-old man with a history of congestive heart failure and hypertension who called complaining of chest pain, sweating, and fatigue after his morning walk.
- A 70-year-old with a fever who called for pain medication and eventually revealed she was undergoing treatment for cancer.

BSN Preparation

Prior to the first telehealth simulation, the BSN students were given an overview of the possible diagnoses they might encounter in the simulation and were expected to be familiar with these diagnoses. They were not given specific names or case studies. For urgent care, they knew their patient from the previous scenario and were expected to review the health issues and potential problems for that specific patient. For both simulations, they were told they would assess the patient and then report to the "provider," the MSN student, for orders and feedback.

MSN Preparation

For the telehealth simulation, the MSN students were told to review the common signs and symptoms for conditions that the patients might have. They also were told to review "red flag" information that the BSN student should assess for each of the conditions. The MSN students then were told they would advise the BSN student regarding the treatment plan, which might include determining how the recommendation might need to escalate: from a medication refill and treatment at home, to referral for follow up with a specialist or the primary care provider, to advising the patient to go to urgent care today, or at the highest level, to go to the emergency room immediately.

Simulation Schedule Overview

In each simulation, after orientation, the BSN student and patient were assigned to a Zoom breakout room. The BSN student would obtain an initial assessment, then collaborate with the MSN student for appropriate interventions, using the SBAR (Situation, Background, Assessment, Recommendation) format. The MSN student listened to the interaction between the patient and the BSN student but did not provide any feedback until consulted. If the MSN student thought that more information was needed, the MSN student would ask the BSN student to return to the patient and obtain the necessary information.

After the interaction with the patient, the MSN student would provide individual feedback to the BSN student. The MSN students then had further combined debriefing with their faculty. The BSN students also had a larger combined debriefing with their faculty.

Telehealth Scenario

The first scenario for these patients was in the telehealth setting. In this simulation, all interaction with the patient was by telephone, and all information was gained from the patient or, in the pediatric case, the parent. The BSN student collected the history and made an assessment, then collaborated with the MSN student to implement the plan of care for that patient. Each patient's scenario stopped at a specific point in care and was resumed when the students returned at a later date for the urgent care scenario.

Urgent Care Scenario

The urgent care scenario continued the patient stories from the initial encounter in telehealth. The students were considered to be with the patient in the urgent care setting, and appropriate laboratory results, vital signs, and physical examination results were provided. As needed, the BSN student indicated on a virtual manikin where to listen for heart or breath sounds, and was told of any abnormalities.

The MSN student ordered diagnostic testing and medications. After receiving the orders, BSN students were provided with information as needed about medication administration, oxygen therapy, and equipment choices.

Technical and Supplemental Support

For both simulations, documents were created to engage students in the scenario. These included physical assessment information, medication administration, laboratory results, oxygen therapy, and equipment choices. At the appropriate time, the monitoring faculty or staff would initiate a screen share of the documents. In some cases, students used the draw or stamp feature in Zoom to indicate specific landmarks for the patient physical assessment, such as listening for heart and lung sounds. They also had to make choices, such as the correct vaccination and dose, or the appropriate administration of oxygen. If needed, they talked through tasks or asked for items such as vital signs and physical assessment results.

Debriefing and Evaluation

Debriefing was accomplished in two ways: between the BSN student and the MSN student immediately after each scenario, and with the students and faculty within their cohort after the entire simulation was complete. During the debriefing immediately after the scenario, the MSN students provided feedback to the BSN students with specific suggestions for their particular patient, and the subsequent cohort-specific debriefing allowed students and faculty to discuss the simulation as a whole.

During the immediate debriefing, the MSN students would begin by giving their feedback to the BSN students as to what they had expected from the SBAR report provided by the BSN students and any additional general information that needed to be exchanged between the patient/nurse and nurse/provider.

The BSN students then were encouraged to provide feedback to the MSN students about what was most helpful in terms of the feedback they received and the style of communication that the MSN students used.

In the cohort-specific debriefing, the MSN students had a debriefing with their MSN faculty member to discuss what they learned, what went well, and further opportunities for growth in their role as a provider. Likewise, the BSN students met with their faculty and fellow students to discuss their feelings or reactions to the simulation, challenges, and any lessons learned.

Following the two scenarios, the BSN and MSN students were asked to complete an evaluation with two parts: a numeric scale and free-text questions. The numeric scale was adapted from the Modified Simulation Effectiveness Tool (SET-M) (Leighton et al., 2015), and the questions were developed by the simulation staff and faculty. The SET-M tool is a validated instrument used by the simulation faculty for both undergraduate and graduate evaluation. The adaptation for this simulation consisted of 13 questions that asked students to rank statements about their satisfaction with the simulation organization and debriefing, as well as their comfort in assessment, prioritization, communication, and interventions. The statements were ranked on a scale ranging from *strongly agree* to *strongly disagree*.

In the SET-M results, the satisfaction level for both the BSN and MSN students was high in all categories and for both simulations. More than 80% of both the BSN and MSN students responded *strongly agree* or *agree* for all of the statements related to simulation effectiveness and satisfaction. **Table 1** lists the highest and lowest scoring comments for the BSN groups. The MSN students' responses were more consistent than those of the BSN group. In the smaller MSN group ($n = 5$), 11 of 13 responses for the Telehealth simulation were *strongly agree*, with the remaining two responses being in the *agree* category. Although the responses for the urgent care scenario were slightly more divided, three of the five MSN students gave a response of *strongly agree* or *agree* for all of the statements in the survey.

For the free-text questions, feedback also was positive. Comments from the BSN students included, "They are RNs and were in our shoes once—they were able to give really good peer-to-peer feedback as well," and "I enjoyed working with the MSN students and practicing communicating with providers."

Comments from the MSN students included, "I learned that telehealth is not only feasible but instrumental during this time," and "...an adequate history can truly determine 90% of what needs to be done." Many of the MSN students noted that these simulations helped them to "find their provider voice."

Students noted that the telehealth simulation seemed more appropriate in the current virtual world of Zoom than did the urgent care simulation. This comparison between telehealth and urgent care also offered an opportunity for faculty to discuss when it is adequate to conduct virtual patient visits and when it is essential to be able to have a hands-on physical examination.

One limitation of this evaluation was the number of responses; students were not required to complete the form. All of the MSN students responded, but only 26% and 11% of

TABLE 1
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High-scoring BSN Comments: Telehealth (n = 26)	5	4	3	2	1
The session was appropriate for my level of learning	65%	31%	3%	0	0
Debriefing provided opportunities to self-reflect on my performance during simulation	65%	35%	0	0	0
I am more comfortable in my ability to report information to the health care team	62%	31%	3%	3%	0
Low-scoring BSN Comments: Telehealth (n = 26)	5	4	3	2	1
I am better prepared to respond to changes in my patient's condition	38%	46%	15%	0	0
I felt empowered to make clinical decisions	42%	46%	11%	0	0
I am more comfortable in my ability to prioritize care and interventions	46%	42%	8%	3%	0
I am more comfortable in providing interventions that foster patient safety	46%	42%	8%	3%	0
High-scoring BSN Comments: Urgent Care (n = 11)	5	4	3	2	1
I am more comfortable in my ability to prioritize care and interventions	73%	27%	0	0	0
The session was appropriate for my level of learning	64%	36%	0	0	0
I am more comfortable in communicating with my patient and/or family	64%	36%	0	0	0
Low-scoring BSN Comments: Urgent Care (n = 11)	5	4	3	2	1
I am more comfortable in providing interventions that foster patient safety	36%	55%	9%	0	0
I am more comfortable in my assessment skills	36%	64%	0	0	0
I felt empowered to make clinical decisions	45%	45%	9%	0	0

Note. Results scored on a 5-point scale (1 = strongly disagree and 5 = strongly agree). Percentages do not necessarily total 100 due to rounding. Adapted from "Updating the Simulation Effectiveness Tool: Item modifications and reevaluation of psychometric properties," by Leighton, K., Ravert, P., Mudra, V., & Macintosh, C., 2015, Nursing Education Perspectives, 36(5), 317-323 (doi:10.5480/1.5-1671). Copyright 2005 by CAE Healthcare.

the BSN students in telehealth and urgent care, respectively, returned the evaluation.

Discussion

Although this BSN/MSN student collaboration was in part the response to a need for clinical hours and experience within the MSN program, the pilot project has demonstrated its value past that initial need. Both groups of students learned from each other, gained greater confidence in their knowledge and roles, and were able to more fully appreciate the challenges and importance of clear communication between and among health care workers and patients.

In response to student feedback, changes will be considered for this simulation and may be recommended for other programs considering a similar activity. The larger Zoom debriefing will be modified to allow for more student interaction, and detailed, required preparation work will ensure that students feel more fully prepared for the simulation. Course changes also may be implemented to encourage a greater percentage of student evaluation response. In addition, some MSN students believed the experience would be more authentic to actual encounters if they had not been able to hear the discussion between the BSN student and patient; they would have had to rely completely on the BSN student's

SBAR report to gain a full picture of the situation. This would have increased the sense of reality for the simulation.

There is strong support for simulation as a useful tool in the education of both BSN and MSN students. However, in the construction of a meaningful experience, it is important to assess the effectiveness of the simulation carefully and to use the creative tools available for the most realistic experience. Based on the limited survey data from this pilot, the telehealth simulation was more successful, arguably because it was aligned more closely with a real-life setting. The urgent care scenario is challenging even in the traditional simulation laboratory. Even with the tools available within Zoom and other applications, changing this scenario to a completely virtual setting added yet another layer of distance from face-to-face care. Overcoming this barrier requires diligent and creative planning.

However, even in the limitations imposed by current circumstances, the benefits of collaboration may transcend the actual setting of this activity. The feedback indicated students in this type of collaboration can learn from each other in a safe environment and increase their own nursing confidence and competence. This benefit potentially could apply whether the setting is virtual, hands-on simulation, or face-to-face.

Conclusion

This pilot activity was successful in accomplishing the objectives and generated positive feedback from both students and faculty. Because of its clear value, the course leaders expect to continue this BSN-MSN collaboration in future simulations, with the possibility of expanding to other cohorts in the MSN program.

References

- Aebersold, M. (2018). Simulation-based learning: No longer a novelty in undergraduate education. *OJIN: The Online Journal of Issues in Nursing*, 23(2). doi:10.3912/OJIN.Vol23No02PPT39
- Alexander, M., Durham, C. F., Hooper, J. L., Jeffries, P. R., Goldman, N., Kardong-Edgren, S., Kesten, K. S., Spector, N., Tagliareni, E., Radtke, B., & Tillman, C. (2015). NCSBN simulation guidelines for prelicensure nursing programs. *Journal of Nursing Regulation*, 61(3), 39–42. [https://doi.org/10.1016/S2155-8256\(15\)30783-3](https://doi.org/10.1016/S2155-8256(15)30783-3)
- INACSL Standards Committee. (2016). INACSL standards of best practice: SimulationSM Simulation Design. *Clinical Simulation in Nursing*, 12(Suppl), S5–S12. <https://doi.org/10.1016/j.ecns.2016.09.005>
- Leighton, K., Ravert, P., Mudra, V., & Macintosh, C. (2015). Updating the Simulation Effectiveness Tool: Item modifications and reevaluation of psychometric properties. *Nursing Education Perspectives*, 36(5), 317–323. <https://doi.org/10.5480/15-1671> PMID:26521501
- Nye, C., Campbell, S. H., Hebert, S. H., Short, C., & Thomas, M. (2019). Simulation in advanced practice nursing programs: A North-American survey. *Clinical Simulation in Nursing*, 26, 3–10. <https://doi.org/10.1016/j.ecns.2018.09.005>
- Rutherford-Hemming, T., Nye, C., & Coram, C. (2016). Using simulation for clinical practice hours in nurse practitioner education in the United States: A systematic review. *Nurse Education Today*, 37, 128–135. <https://doi.org/10.1016/j.nedt.2015.11.006> PMID:26608389