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Targeted Simulation Instructor Course for Nursing Professional Development Specialists

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Abstract

Practical training for nursing professional development specialists in the facilitation of clinical simulations was implemented using a six-step curriculum development framework. General and targeted needs assessments were conducted; methods used to apply needs assessment findings into the course design and delivery, and the participant's responses via program evaluations are described. The process used to develop this training may be applied by other nursing professional development departments to prepare educators in the delivery of simulated-based learning experiences.

Nursing professional development (NPD) specialists, including clinical nurse educators and clinical nurse specialists, are often called upon to facilitate or develop simulations due to their clinical and teaching expertise. However, these individuals may not have acquired the necessary knowledge or skills for successful simulation instruction. At the University of Chicago Medicine, a need for simulation instructor training for clinical nurse educators and clinical nurse specialists in the Center for Nursing Professional Practice and Research was recognized; a desire to incorporate more simulations into training had been expressed, but inconsistencies in the delivery of simulated-based learning experiences were noted.

However, challenges to training nursing professional development specialists exist; nurses in these roles have multiple projects and competing priorities, and can have differing experiences with and interest in using simulation. The frequently encountered design of an intensive off-site five or seven-day simulation instructor course was neither practical nor cost-effective for this target group. The instructor course needed to be tailored to efficiently disseminate and standardize simulation instructor training, while balancing needs and individual interests. Therefore, to guide the development of this training, a targeted assessment of the learning needs of the educators was desired. The purpose of this project was to develop practical training in the facilitation of clinical simulations for nursing professional development specialists. The aim of this paper is to share the processes and methods used to assess learner needs and develop curriculum.

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Background

As simulation facilitators oversee and contribute to participants' achievement of learning objectives (Franklin et al., 2013; Jeffries, 2005), it is imperative that proper training is provided to them. It has been emphasized that clinical expertise is not enough for a simulation instructor to be effective (Boese et al., 2013; McGaghie, Issenberg, Petrusa, & Scalese, 2010). Yet, only 26% of nurses report a formal simulation instructor training program at their organization (Anderson, Bond, Holmes, & Cason, 2012). Successful implementation of simulation requires knowledge and skills specific to this teaching methodology, including an understanding of the pedagogy behind simulation, strengths and limitations of simulation modalities, actions to promote fidelity, and methods to facilitate debriefings (Boese et al., 2013). The import of instructor training is reflected in the International Nursing Association for Clinical Simulation and Learning's (INACSL) Standards of Best Practice (Simulation Standard V: Facilitator), calling for facilitators to have "specific simulation education provided by formal coursework, continuing education offerings, and targeted work with an experienced mentor" (Boese et al., 2013, p. S23).

Various methods to deliver simulation instructor training to nurses have been described in the literature such as web-based training, workshops, and webinars (Anderson et al., 2012; Jeffries et al., 2013; Taibi & Kardong-Edgren, 2014). In one survey of simulation conference attendees, respondents most commonly described becoming proficient in simulation via workshops, working with an expert, observing an expert, reading, and working alone through trial and error (Anderson et al., 2012). Similar to nursing, a review of simulation-based medical education literature (McGaghie et al., 2010) notes a lack of uniform methods to train simulation instructors.

Older research suggests that NPD specialists are less confident addressing learners' needs with simulation than other more traditional educational methods (Mailloux, 1998) and would benefit from formalized instructor training. However, a more current and comprehensive assessment of the learning needs of NPD specialists in the use of simulation is needed. Simulation instructor research often evaluates nursing faculty in academic settings; when nurses from hospital settings are included, they are inadequately represented, consisting of only 7% and 1% of the study samples (Anderson et al., 2012; Taibi & Kardong-Edgren, 2014). Furthermore, needs assessments conducted exclusively with NPD specialists either do not address simulation (Johnson & Puglia, 2012; McKinley, 2009), or are older and contain only one global item regarding simulation (Mailloux, 1998). Further complicating the issue, learning needs of NPD specialists are likely to vary across hospitals. In an assessment of organizations in a Midwest consortium, Jeffries et al (2013) noted that the simulation equipment available and its usage was "erratic and inconsistent" across sites (p. e186).

A targeted needs assessment is defined as "a process by which curriculum developers apply the knowledge learned from the general needs assessment to their particular learners and learning environment" (Kern, Thomas, & Hughes, 2009, p. 27). Many benefits of a targeted needs assessment are described and include: avoiding redundancy in what is being done and what is already known, using resources efficiently, fostering relationships with stakeholders,

providing insight into problems, identifying future goals/actions, and obtaining data to guide decisions (Hughes, 2009). The content of a targeted needs assessment is not only determined by the information that is desired by the learners, but also the resources available (2009). While an ideal needs assessment might include questions relevant to every imaginable aspect of a particular topic because it would yield the most information, such an exhaustive approach would neither be efficient nor relevant to the target group. Therefore, with a targeted needs assessment curriculum developers prioritize the categories and information most pertinent to the problem to be addressed.

Theoretical Framework

The systematic curriculum development framework described by Kern, Thomas, and Hughes (2009) guided this project. The six-step framework begins with 1) identifying a problem, conducting a general needs assessment, and then 2) conducting a targeted needs assessment. Findings from the needs assessments guide 3) goal and objective setting, 4) development of educational strategies, and finally 5) the implementation and 6) evaluation of the training. The simulation instructor course developers (paper authors) determined the following categories and information described by Hughes (2009) to be most pertinent for a simulation instructor needs assessment: past training and experience, existing proficiencies, expectations of roles, perceived weaknesses and needs, learner motivation, and barriers to optimal performance.

General and Targeted Needs Assessment

The course developers initiated a general needs assessment for simulation instructors through discussions with key individuals (departmental leaders, simulation center staff, and NPD specialists) and informal observations of simulated-based learning experiences. Findings from the discussions and observations were compared to an ideal approach of instructor training with formal coursework and targeted training with a mentor. Gaps in our current approach were considerable. Peers and simulation center staff informally guided NPD specialists when using simulation; no formal instructor training was provided. A wide variation in instructor practices was also noted.

The general needs assessment also included a review of literature and Internet resources to determine the essential tasks and skills of nursing simulation instructors. The course developers reviewed online manuals and resources for instructors on professional organization websites and simulation center websites, books, journal articles, and research instruments designed to evaluate learners' perceptions of simulated-based learning experiences. A list of tasks and skills was developed as a result of the review and then evaluated for redundancy and relevance to the role of the NPD specialists within the department.

For the targeted needs assessment, a survey was developed to capture relevant information from the NPD specialists regarding past simulation experience and learning needs. The survey included demographic items to capture the target nurses' years of experience in their current roles and past simulation experiences, and Likert-like items regarding the participants' confidence in instructing different types of simulations and conducting

simulation instructor tasks and skills. For the Likert-like items, respondents ranked their level of confidence in performing 28 simulation instructor activities from 1 (not at all) to 4 (to a great extent). Content of items included the design, implementation, and evaluation of simulation experiences for the formative (continuing education) and summative (competency) assessment of professional nurses. Lastly, five items were included regarding interests and barriers in conducting simulations.

Sample/Procedures

Twenty clinical nurse educators and clinical nurse specialists from the Center for Nursing Professional Practice and Research were the target population for this project. Departmental staff who did not provide clinical training were excluded from participation. Although a part of normal educational procedures, Institutional Review Board approval was obtained prior to conducting the needs assessment survey in order to disseminate findings outside of the organization. Items were entered into an online survey system (Vovici Survey Workbench) and a link to the survey was submitted to eligible staff via email. The email informed participants of the intent of the survey (for program development) and were assured confidentiality in their responses, only the course developers would view individual responses to the surveys.

Analysis

Descriptive statistics including frequencies, means, and standard deviations were used for participant characteristics and to analyze the nurses' confidence rating for each skill/task. Frequencies of similar responses (themes) in open-ended items were tallied.

Survey Results

Previous experience—Fifteen (75%) of the nurses responded to the survey. While the majority of respondents ($n = 9$) had 5 or more years of experience in their current role, 3 respondents were in their role for less than 1 year. All respondents reported prior experiences as simulation participants; some reported multiple experiences. Most experiences were obtained through continuing education as a professional nurse ($n = 12$), versus as a nursing student ($n = 4$). The most commonly reported simulation experiences included team training ($n = 8$), procedural/task training ($n = 9$), and resuscitation training ($n = 12$). Four participants reported leading a simulation project.

Perceived strengths and deficiencies—Respondents were most confident in conducting the simulation instructor skills/tasks of fostering teamwork, collaborating with other instructors, encouraging discussion during debriefings, and developing course evaluations (Table 1). They were least confident in choosing simulation delivery methods and organizational resources to fit learning objectives - specifically using computerized full-body mannequins, standardized patients, and computer programs, and choosing settings to hold simulations. Participants requested hands-on practice using mannequins and equipment, debriefing with multiple facilitators, developing and implementing new scenarios, and adapting scenarios to different learners.

Motivation and Barriers—Most (n = 12) of the nurses identified ways to use simulation in their work. Fifteen specific ideas and applications were suggested for existing programs and clinical training. Eight respondents answered “yes” to the item “If training were provided, would you be interested in developing a project of your own?” Four answered “possibly” and identified time, resources, and personal comfort level as reasons why they were not sure. No respondents answered “No”. Three respondents did not respond to this item.

When asked about their chief concerns and barriers to implementing a simulation project, the nurses described issues of time, role development (new to role), competing work demands/obligations, need for additional training in simulation, coordination of facilities within the department and institution, nursing staff attendance at training activities, and need for support from colleagues.

Goals and Objectives

The course developers compiled a list of all possible course content identified during the needs assessments. Sources of content included departmental priorities for simulation, learning needs identified by the course developers through observation of simulations, simulation center priorities and projects, simulation and education literature, and the results from the targeted needs assessment (see Figure 1). It was important to consider sources beyond the learners’ perceived needs, as participants’ perceptions of their own performance and knowledge of best practice for simulation instructors may not be comprehensive. For example, their perceptions may not fully reflect current literature or the priorities of the department and medical center. Using the list of possible content, the course developers then determined simulation instructor course objectives, content, and educational strategies, taking into consideration the reported barriers to participation, the most immediate needs of the learners, department, and institution (e.g. actual projects, identified problems), and the resources available. Table 2 provides examples of how needs assessment findings were considered and subsequently influenced the final course content and delivery methods. Table 3 provides course learning objectives, a list of the content delivered, and activities conducted to meet those objectives. Goals for the program were to enhance future and existing simulation programs by efficiently training instructors, to lessen the burden of participants in terms of time away from other responsibilities and workload, and to provide realistic expectations of available resources.

Educational Strategies and Implementation

Course content was structured following the components of the National League for Nursing/Jeffries Simulation Framework (P. R. Jeffries, 2012), now the NLN Jeffries Simulation Theory (Jeffries, Rodgers, & Adamson, 2015). The delivery of course content was based on the attributes of effective continuing education for health professionals proposed in the Institute of Medicine’s report *Redesigning Continuing Education in the Health Professions* (2010). These attributes include incorporating needs assessments, interactivity, multiple methods of learning, adequate time to assimilate knowledge, and simulations of the clinical setting. Additionally, the course developers sought to address the

nurses' reported barriers (time/multiple projects and lack of familiarity with equipment/process) to facilitate participation. The resulting structure was a two-day course "Designing, Implementing, and Evaluating Simulations", a six hour class offered in a computer lab, followed by a four hour class "Delivering and Debriefing Simulations", offered at a simulation center site about two weeks later. Sessions were offered on multiple dates to accommodate the maximum number of learners. The course developers facilitated these classes as they both had formal training in simulation, years of experience leading simulated-based education experiences for nurses and other healthcare professionals, and provided mentorship to other simulation instructors within the organization.

Prior to the first class, participants were informed that the course would provide time and mentorship for them to develop and practice implementing a simulation scenario. To minimize additional work, they were encouraged to choose a current project that could benefit from the use of simulation. Individuals without an applicable project were encouraged to develop a scenario for a departmental project that used simulation: the nurse residency program for new graduate nurses. Because of this structure, both the participants and the department immediately benefited from the time and resources invested in instructor training.

The first day of class consisted of short presentations interspersed with group activities with time for the participants to apply the content to their own scenarios (see Table 3). The course facilitators provided mentorship as needed. At the end of the first day, participants had developed a brief simulation scenario with learning objectives, background information, a list of needed supplies, a debriefing plan, and a beginning plan for evaluation. They were also introduced to simulation center staff, the settings where simulations were held in the organization, and the materials and equipment available.

The second day of class was held at the simulation center with a control room, full body computerized patient simulators, and the ability to conduct video debriefing. Class size was limited to four participants each to provide adequate time to implement and debrief all participant scenarios. The course began with a discussion on the role of the simulation instructor in setting a safe environment for learning and facilitating discussion. An instrument for evaluating instructor debriefing was introduced (Simon, Raemer, & Rudolph, 2010). Videos of mock debriefings were viewed and the participants evaluated the performance of the instructors in the video, discussing strategies for effective debriefing.

For the second half of the class, participants set up, facilitated, and video debriefed their scenarios with the other class participants acting as the learners. After each simulation and debriefing, the group "debriefed the debriefing". Using the debriefing instrument to facilitate discussion, participants and instructors provided feedback to the scenario leader about the scenario and the instruction provided. Numerical scores were not calculated from the debriefing instrument to help decrease participant performance anxiety, as most participants had never previously led a simulation. The instructors hoped the course would promote future work with the Simulation Center, thus providing future opportunities for mentorship. This activity allowed participants to practice the discussed instructor skills, learn from one

another, and experience first-hand what it is like for learners to participate in the simulation training environment.

Course Evaluations and Subsequent Use of Simulation

Nineteen employees attended the first class day; 16 were clinical nurse educators or clinical nurse specialists, and the other 3 attendees were individuals from other departments who also conduct simulation training. Seven employees attended the second hands-on day of training. The lower attendance of the second day of class reflects scheduling difficulties for participants. A response to this issue was to bring an abbreviated form of the class to the clinical areas of attendees as they started new simulation initiatives. With this alteration, 3 more attendees received content from the second day.

Course evaluations were done using a standard form provided by the hospital's approving organization for continuing nursing education contact hours. For these evaluations participants rate to what extent the class met the proposed course objectives (from 1 "not at all" to 4 "to a great extent"). Participants were also able to provide comments. The evaluations were distributed at the end of each day and were collected without identifying information.

A total of 18 evaluations were received for the first class and 7 for the second class. Evaluations were overwhelmingly positive. The 13 learning objectives for the two classes were rated by most attendees as 4 "met to a great extent 4/4". No class objectives were rated lower than a 3 "met to a moderate extent" by a participant. Mean scores for all learning objectives ranged between 3.61 and 4.0. The two objectives rated lowest for the course were regarding the development of a debriefing plan ($M = 3.61$, $SD 0.49$) and a plan to prepare for their own scenarios ($M = 3.72$, $SD 0.45$). Evaluation comments included that the course was helpful and informative ($n = 18$), new insights were gained such as the amount of preparation needed for a good simulation or how challenging it was to run a scenario ($n = 2$), and successful components of the instructor course design such as providing real-life examples, breaking into groups, time to work on own scenario, two-day design, feedback provided, and running through the scenarios ($n = 11$). One suggestion for improvement was to incorporate a step-by-step example throughout the course. One learner did report feeling overwhelmed, "It was great. A little overwhelming. Gonna need a lot of assist when setting up first class alone!"

Following training, 10 attendees implemented the scenarios they developed; the scenarios were used for the nurse residency program, training of rapid response team nurses, unit-based inter-professional training for clinical emergencies, and annual competency evaluations. Subsequently, 16 of the attendees have been involved in the delivery of simulations; seven have increased their use of simulation, and six have collaborated with another instructor course participant to deliver training. The majority of participants who implemented their scenarios and increased their use of simulation attended both days of training.

Discussion

By the nature of their work, most nursing professional development specialists have past experience teaching and assessing the performance of professional nurses. However, these past experiences may or may not have included the use of simulation or formal training in simulation instruction. Other learning needs assessments conducted solely with this population have not addressed skills specific to facilitation of simulations (Johnson & Puglia, 2012; Mailloux, 1998; McKinley, 2009). NPD specialists responding to this needs assessment were least confident in choosing simulations to align with learning objectives. This finding differs from needs assessments conducted with samples that were primarily nursing faculty, in which subjects reported being least proficient in programing and writing simulation scenarios (Anderson et al., 2012) and most highly endorsed training regarding inter-professional communication and debriefing (Taibi & Kardong-Edgren, 2014).

In conducting a targeted needs assessment for a simulation instructor course, the past experiences, perceived learning needs, and motivations/barriers for attendance of the target audience were identified. This proactive approach benefited the medical center as it helped to eliminate superfluous content, maximize attendance, and align resources with current projects and priorities. The approach benefited the attendees as it addressed their personal learning needs and concerns regarding attendance.

It was not surprising that the nurses' mean confidence scores for every item on the targeted needs assessment was less than 3 (confident to a moderate extent), as only 22% of respondents reported past experience leading a simulation activity. This finding required the course developers to focus on fundamentals of simulation pedagogy and to eliminate more complex content such as conducting inter-professional training. The developers recognized that there was a need for ongoing advancement and mentorship of instructors beyond these two classes to address additional or more complex topics. Results that were not anticipated included low confidence in identifying simulation resources within the department and institution. These findings led to the development of reference materials for simulation equipment and training settings, and an introduction to all simulation center staff during the course.

Though not ideal, the abbreviated second day of training met an immediate need of the participants to assist with clinical simulations before another course could be provided. These schedule challenges reflect the flexibility required to effectively deliver education in a hospital setting, where educators are responding to the demands of an ever-changing clinical setting. The lower-rated course objectives were related to content provided near the end of the first class day, which had less time allotted for individual development. The participants may have benefited from a longer class day that allowed more time to practice and apply these components of the simulation design and planning.

A limitation to this project includes the lack of generalizability of findings and a limited evaluation of course outcomes. The authors developed the needs assessment to inform program development for the organization's nurse educators and clinical nurse specialists. Our resulting instrument and findings may not apply to other populations or organizations.

However, others may benefit from following similar procedures to prioritize course content for future simulation instructor training in their own organizations. Additionally, participants' perceived achievement of learning objectives was used to evaluate the program; formal evaluation of the participants' actual performance was not conducted, as the intent of this program was to provide formative feedback. Future evaluation of attendee performance while conducting actual simulation-based training should be conducted.

Implications for Future Practice

As hospitals integrate simulation-based learning experiences into training, clinical experts will be needed to act as course instructors. It is important that these individuals receive training regarding best practices; however, more targeted training is required to ensure the quality of instruction without overburdening busy professionals with an exhaustive course. Although this manuscript focuses on simulation, the steps herein could be replicated for other perceived teaching skill deficits. Future research should focus on the development and validation of an instructor needs assessment that demonstrates usefulness in multiple clinical settings with individuals of various disciplines. Additionally, the best methods to deliver content and the extent of training required for learners to achieve competence in facilitating simulations needs to be determined.

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References

- Anderson M, Bond M, Holmes TL, Cason CL. Acquisition of simulation skills: Survey of users. *Clinical Simulation in Nursing*. 2012; 8(2):e59–e65. DOI: 10.1016/j.ecns.2010.07.002
- Boese T, Cato M, Gonzalez L, Jones A, Kennedy K, Reese C, ... Borum JC. Standards of Best Practice: Simulation Standard V: Facilitator. *Clinical Simulation in Nursing*. 2013; 9(6S):S22–S25. DOI: 10.1016/j.ecns.2013.04.010
- Franklin AE, Boese T, Gloe D, Lioce L, Decker S, ... Sando CR. Standards of Best Practice: Simulation Standard IV: Facilitation. *Clinical Simulation in Nursing*. *Clinical Simulation in Nursing*. 2013; 9(6S):S19–S21. DOI: 10.1016/j.ecns.2013.04.011
- Hughes, MT. Targeted needs assessment. In: Kern, DE.; Thomas, PA.; Hughes, MT., editors. *Curriculum Development for Medical Education: A Six-Step Approach*. 2. Baltimore, MD: Johns Hopkins University Press; 2009.
- Institute of Medicine. 2010. *Redesigning Continuing Education in the Health Professions* Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK219811/>
- Jeffries PR. A framework for Designing, Implementing, and Evaluating Simulations Used as Teaching Strategies in Nursing. *Nursing Education Perspectives*. 2005; 26(2):96–103. [PubMed: 15921126]
- Jeffries, PR., editor. *Simulation in nursing education: From conceptualization to evaluation*. 2. New York, NY: National League for Nursing; 2012.
- Jeffries PR, Battin J, Franklin M, Savage R, Yowler H, ... Sims C, et al. Creating a professional development plan for a simulation consortium. *Clinical Simulation in Nursing*. 2013; 9(6):e183–e189. DOI: 10.1016/j.ecns.2012.02.003
- Jeffries PR, Rodgers B, Adamson K. NLN Jeffries Simulation Theory: Brief Narrative Description. *Nursing Education Perspectives*. 2015; 36(5):292–293. [PubMed: 26521496]

- Johnson RH, Puglia C. Designing a needs assessment survey for clinical nurse educators. *Journal for Nurses in Staff Development*. 2012; 28(5):225–228. DOI: 10.1097/NND.0b013e31826a0c73 [PubMed: 22992636]
- Kern, DE.; Thomas, PA.; Hughes, MT., editors. *Curriculum Development for Medical Education: A Six-Step Approach*. 2. Baltimore, MD: Johns Hopkins University Press; 2009.
- Mailloux JP. Learning needs assessments: definitions, techniques, and self-perceived abilities of the hospital-based nurse educator. *Journal of Continuing Education in Nursing*. 1998; 29(1):40–45. [PubMed: 9505632]
- McGaghie WC, Issenberg SB, Petrusa ER, Scalese RJ. A critical review of simulation-based medical education research: 2003–2009. *Medical Education*. 2010; 44(1):50–63. DOI: 10.1111/j.1365-2923.2009.03547.x [PubMed: 20078756]
- McKinley MG. Go to the head of the class: clinical educator role transition. *AACN Advanced Critical Care*. 2009; 20(1):91–101. DOI: 10.1097/NCI.0b013e31819454ba [PubMed: 19174641]
- Simon, R.; Raemer, DB.; Rudolph, JW. *Debriefing Assessment for Simulation in Healthcare (DASH)*. 2010. Retrieved from https://harvardmedsim.org/_media/DASH.handbook
- Taibi DM, Kardong-Edgren S. Health care educator training in simulation: A survey and web site development. *Clinical Simulation in Nursing*. 2014; 10(1):e47–e52. DOI: 10.1016/j.ecns.2013.05.013

Figure 1. Process of Determining Simulation Instructor Course Content

Sources of course content are depicted at the top of the image. Together, the sources contribute to a comprehensive list of possible course content. Objectives, actual course content, and methods of delivery are then determined by taking into consideration and prioritizing 1) barriers that can be addressed 2) the most immediate needs of the organization, department, and individuals, and 3) the resources available. © 2013 LaFond and Blood, reprinted with permission.

Table 1

Confidence Scores Performing Simulation Instructor Skills and Tasks

Simulation Instructor Skill or Task	Confidence Ranking (%)				Total (n)	Mean	SD
	1	2	3	4			
	Not at all	To a Slight Extent	To a Moderate Extent	To a Great Extent			
Designing Simulation for Training Purposes							
Task training	14.3	35.7	42.9	7.1	14	2.429	0.852
Nursing scenarios	13.3	26.7	53.3	6.7	15	2.533	0.834
Inter-professional scenarios	21.4	42.9	35.7	0.0	14	2.143	0.770
Designing Simulation for Assessment Purposes							
Nursing orientation	28.6	28.6	35.7	7.1	14	2.214	0.975
Annual competencies	26.7	20.0	33.3	20.0	15	2.467	1.125
Other competency	21.4	35.7	35.7	7.1	14	2.286	0.914
Facilitating a Simulation							
For training	20.0	33.3	40.0	6.7	15	2.333	0.900
For assessment	26.7	26.7	40.0	6.7	15	2.267	0.961
Facilitation Specifics							
Introducing the environment	13.3	33.3	33.3	20.0	15	2.600	0.986
Fostering teamwork	6.7	20.0	60.0	13.3	15	2.800	0.775
Assigning roles	6.7	33.3	46.7	13.3	15	2.667	0.816
Collaborating with other facilitators	14.3	21.4	42.9	21.4	14	2.714	0.994
Providing cues	13.3	40.0	40.0	6.7	15	2.400	0.828
Encouraging discussion	13.3	26.7	40.0	20.0	15	2.667	0.976
Providing feedback	20.0	26.7	46.7	6.7	15	2.400	0.910
Moderating group problems	26.7	33.3	33.3	6.7	15	2.200	0.941
Adapting for different levels of need	26.7	40.0	26.7	6.7	15	2.133	0.915
Choosing Simulation to Fit Learning Objectives							
Resources within own department	21.4	42.9	35.7	0.0	14	2.143	0.770
Resources within institution	14.3	42.9	42.9	0.0	14	2.286	0.726
Complex computerized mannequins	40.0	33.3	26.7	0.0	15	1.867	0.834
Standardized patients	53.3	20.0	20.0	6.7	15	1.800	1.014
Computer programs	42.9	35.7	21.4	0.0	14	1.786	0.802

Simulation Instructor Skill or Task	Confidence Ranking (%)				Total (n)	Mean	SD
	1 <i>Not at all</i>	2 <i>To a Slight Extent</i>	3 <i>To a Moderate Extent</i>	4 <i>To a Great Extent</i>			
Simulation locations	21.4	57.1	21.4	0.0	14	2.000	0.679
Patient care equipment	14.3	14.3	64.3	7.1	14	2.643	0.842
Evaluating Simulations							
Creating assessment tools	20.0	60.0	13.3	6.7	15	2.067	0.799
Creating course evaluations	6.7	26.7	46.7	20.0	15	2.800	0.862
Assessing program effectiveness & impact	14.3	35.7	50.0	0.0	14	2.357	0.745
Measuring impact on patient outcomes	28.6	28.6	42.9	0.0	14	2.143	0.864

Table 2

Examples of Incorporating Targeted Needs Assessment Results into the Instructor Course

Targeted Needs Assessment Results	Impact on Course Content	Rationale
Chief concerns implementing a simulation project: <ul style="list-style-type: none"> Time Competing work demands Experience in role Need for support of peers Need for additional simulation training Coordination of facilities Staff attendance/participation 	<ul style="list-style-type: none"> Time: Participants were given time during the course to work on live projects. Competing work demands: Encouraged small-scale project to enhance current work, rather than new program. Experience in role/educator support: Provided summary of educational best practices, 1:1 coaching for project development, work in teams when applicable. Simulation training/coordination of facilities: See cell "leading a simulation project" Staff attendance: By targeting simulation to a course already offered, staff attendance would not be a barrier. 	<p>Understanding and addressing perceived barriers was essential to designing the course to improve attendance, quality of current projects, and encourage initiation of future simulation projects.</p> <p>Smaller projects were more feasible to complete in the allotted time.</p> <p>Working in teams decreased workload and allowed mentorship of newer staff by more experienced staff.</p> <p>Integrating best educational practices provided a foundation for newer staff. Coaching of individuals for their projects allowed accommodation of different levels of expertise.</p>
Leading a Simulation Project <ul style="list-style-type: none"> 100% with exposure to simulation 22% with experience leading a simulation project 46.7% confident in conducting simulations for training and assessment purposes Requested hands-on practice: <ul style="list-style-type: none"> Developing and implementing scenarios Using mannequins and equipment Adapting scenarios to different learners Debriefing with multiple facilitators 	<p>Course centered on simulation development and implementation process –with hands-on opportunities.</p> <p>Day 1 (6-hours): held in computer lab to facilitate scenario development. In addition to educational best practices, included practical aspects of leading a simulation program. Provided time to work on own project with guidance of instructors.</p> <p>Day 2 (4-hours): held in simulation center to allow run-through of scenarios and practice facilitation and debriefing. Class limited in size, offered multiple dates.</p>	<p>Course designed to meet recommendations for continuing education for healthcare professionals (Institute of Medicine, 2010): interactivity, time to assimilate knowledge, simulations of setting</p> <p>Due to inexperienced staff reporting confidence in conducting simulations, concerns were present that individuals surveyed may not have a full appreciation of the complexities of a well-instructed simulation learning experience. Wanted to be sure they had the opportunity to engage in these activities to gain the appreciation.</p> <p>Limiting course participants in Day 2 allowed more time for practicing facilitation and receiving feedback</p>
Confidence Designing Simulation Training:	<ul style="list-style-type: none"> All topics discussed during course; though emphasis primarily on nurse training 	<ul style="list-style-type: none"> Though less staff were confident in inter-professional training, the main role and demand of projects for the department was nurse training.

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Targeted Needs Assessment Results		Impact on Course Content	Rationale	
•	35.7% confident, inter-professional	•	Emphasis on objective building and scenario design	• Objective building and scenario design are the basis for any simulation and were therefore emphasized.
•	50.0% confident, task trainers	•	Individuals chose type of simulation to design – 1:1 support provided as needed	• Needs of the participants were too varied for one course to comprehensively cover all content, 1:1 coaching supported greater variance.
•	60.0% confident, nursing-specific	•	Covered aspects of assessment, such as different types of assessment metrics (checklists, rating scales, etc.) methods of assessment for the individual versus the group, and utilizing published and peer-reviewed resources and tools.	• Could not adequately cover breadth and depth of essentials of design and implementation (hands-on requests) with plan to mentor staff on evaluation of projects as they arise.
•	Assessment: 42.8% confident, nursing orientation			
•	53.3% confident, annual competency			
•	42.1% confident, other competency			

Table 3

Course Objectives, Content, and Associated Activities

Day 1 Designing, Implementing, and Evaluating Simulations in Nursing Education				
Objective	Content	Time	Activities	
1. Identify 3 types of simulation used in nursing education	<ul style="list-style-type: none"> Choosing the best form of simulation Definitions of simulation Variations of simulation in fidelity, context, materials/methods, and learners 	20 min	Game in teams: name that type of simulation	
2. Identify the essential components of an effective simulation learning experience	Roles and behaviors <ul style="list-style-type: none"> Role of the instructor Role of the learner Educational best practices 	20 min	Reflective questions	
3. Identify the best type of simulation for different learning objectives	Learning objectives and simulation <ul style="list-style-type: none"> How simulation can contribute to different domains of learning Considerations when deciding on simulation: educational objectives/purpose, desired skills, fidelity/realism, resources available 	20 min	Group Activity choosing simulation types based on provided learning objectives	
4. Critique simulation scenario designs for essential design components	Simulation Design <ul style="list-style-type: none"> Objectives, fidelity, problem solving, student support, and debriefing (Jeffries, 2012) Introduction to a scenario critique form 	60 min	Small group activity reviewing four scenarios, identifying strengths and weaknesses and making suggestions for improvement	
5. Design a high-fidelity, full-context simulation training scenario for clinical nurses	Designing a scenario <ul style="list-style-type: none"> Introduction to an electronic template to guide scenario writing 	90 min	Individuals begin writing objectives and scenarios with support, briefly present their scenarios, and class offers suggestions.	
6. Design and present a debriefing plan for a simulation scenario	Debriefing <ul style="list-style-type: none"> Main components/structure of debriefing Decision-making regarding debriefing Common discussion questions 	45 min	Individual activity to outline a debriefing plan	
7. Determine a simulation scenario preparation plan	Preparation <ul style="list-style-type: none"> Considerations: knowledge, equipment, working with simulation team, working with multiple instructors 	45 min	Discussion and planning for scenario delivery on Day 2	

Day 1 Designing, Implementing, and Evaluating Simulations in Nursing Education				
Objective	Content	Time	Activities	
	<ul style="list-style-type: none"> Enhancing fidelity Organizing your approach with students, debriefing, and multiple scenarios 			
8. Determine an evaluation plan for a simulation scenario	Evaluation plan <ul style="list-style-type: none"> Considerations: goals and objectives, feasibility, validity and reliability Types of evaluation methods, strengths and weaknesses of each Examples of evaluation methods 	45 min	Group discussion how to evaluate your proposed scenarios	
9. Identify 3 resources available through Simulation Center	Introduction to Simulation Center staff <ul style="list-style-type: none"> Equipment available 	15 min		
Day 2 Delivering and Debriefing Simulations in Nursing Education				
Objective	Content	Time	Teaching/Learning Strategies	
1. Review the six elements of desired instructor behaviors during simulation implementation and debriefing	Instructor behaviors <ul style="list-style-type: none"> Tour and introduction to Simulation Center Video modeling desired instructor behaviors: establishing and maintaining the learning environment, debriefing and engaging discussion, exploring performance gaps and achieving good performance Introduction to the Debriefing Assessment for Simulation in Healthcare tool (Simon, Ramer, & Rudolph, 2010) Using the tool to improve your performance 	75 min	Group activity viewing videos and critiquing performance of instructors	
2. Implement a simulation scenario with other class participants	Delivering Scenarios <ul style="list-style-type: none"> Preparing the environment Establishing roles Student introduction to the environment Running the scenario and providing direction to other facilitators throughout Use of equipment Identifying and correcting scenario problems 	160 min	Participants act as instructor for their scenarios with other class participants acting as learners	

Day 1 Designing, Implementing, and Evaluating Simulations in Nursing Education				
Objective	Content	Time	Activities	
3. Lead a debriefing session after facilitating a simulation learning experience	Debriefing <ul style="list-style-type: none"> • Viewing of video-taped simulated learning experience • Leading the discussion after a simulation • Avoiding pitfalls • Providing feedback to other instructors 	20 min	Group Activity leading group debriefing after a scenario is implemented	
4. Summarize key components of implementing and debriefing a simulation learning experience	Putting It All Together	60 min	Group Activity following each simulation scenario, participants identify weaknesses in simulation scenarios provided and share ideas for improvement	