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Featured Article

# Simulation Design: Addressing Care of a Transgender Patient

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## KEYWORDS

simulation;  
mental health;  
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**Abstract:** This article describes the creation of a simulation of a transgender individual experiencing anxiety using International Nursing Association for Clinical Simulation and Learning Standards of Best Practice: Simulation<sup>SM</sup> (2016). The aims of the simulation were to (a) identify signs and symptoms of client anxiety, (b) provide safe management of a client experiencing anxiety, and (c) establish culturally sensitive, therapeutic communication skills with a transgender client. Evaluation of the simulation design indicated it prepared participants to identify and address the psychosocial needs of a transgender individual. Whereas participants did not indicate the need to revise the simulation, as the evidence of transgender individual's health care needs and disparities continues to grow, so should the simulation to reflect and incorporate the current evidence.

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It is well acknowledged that nurses care for a diverse population of people, and nurses need to be adequately prepared to provide health care that addresses this diversity (Pérez-Stable, 2016). In the United States, the lesbian, gay, bisexual, transgender, queer, and questioning (LGBTQQ) population are becoming more visible and socially acknowledged. Yet, an understanding of their unique health care needs is still lacking (Institute of Medicine, 2011). The mental health care needs of LGBTQQ individuals are important to address.

Transgender individuals have unique health needs, some of which are based on risk factors associated with substance abuse, anxiety, depression, and suicidality (Gay and Lesbian Medical Association, 2017). Although discussion of these issues in detail is beyond the scope of this article, it is essential that nurses be equipped to address them. Exposure to transgender persons is increasing within American society. As transgendered persons begin to feel empowered to be open about their gender identity, recognizing and understanding their health needs is becoming increasingly critical. Although there is increasing literature on the health care needs of the

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LGBTQQ community, the literature assessing LGBTQQ topic inclusion in nursing education suggests a critical failure of nurse educators to ensure these concepts are infused within the nursing curricula (Kellett & Fitton, 2017). This supports the need for focused-based activities designed to increase cultural competence of student nurses in treating these clients.

### Key Points

- A valid simulation scenario can be used to address care of a transgender patient.
- Transgender patient care can be explored via simulation to address needs of this population.
- Standards of Best Practice in Simulation should guide the creation of scenario development.

This article describes the design of a simulation of a transgender individual, incorporating International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice: Simulation<sup>SM</sup> Simulation design (INACSL Committee, 2016). The National League for Nursing (NLN) Jeffries Simulation Theory served as the theoretical basis to design a simulation to address health care needs among the trans-

gender community in an undergraduate nursing curriculum. The simulation participant population of interest was undergraduate nursing participants at two different university settings.

## Context and Background

Contextual meaning for the simulation is based on basic fundamental practice of therapeutic communication. Interpersonal Relation Theory, created by Peplau (1997), proposes that the nurse–client relationship (NCR) is the foundation for therapeutic communication, the nursing process, and the center of all nursing activity. The NCR is defined as an interpersonal situation where both client and nurse come to know one another well enough to face the problem at hand in a cooperative manner (Peplau, 1997). The NCR is developed to help the client better understand the presenting problem and to develop effective problem-solving skills. Peplau's application of Sullivan's theory of anxiety to nursing practice led to identification of the different effects on perception and learning based on the client's level of anxiety (mild, moderate, severe, and panic) and promoted interventions to lower anxiety to improve the client's ability to function (Halter, 2014). This is appropriate to care of transgender persons as data suggest nurses report significantly greater distress and anxiety when having to provide care for LGBTQQ persons (Orgel, 2017). Thus, Peplau's concept of anxiety guided the components of the simulation of managing client anxiety and improving NCR.

## Theoretical Framework

The NLN Jeffries Simulation Theory is the theoretical underpinning for creation of scenarios in the practice setting (Jeffries, 2016). The theory looks specifically at the components of: context, background, design, simulation experience, facilitator, educational strategies, participant, and outcomes. The combination of the specific aspects of the theory creates a systematically sound simulation when all are taken into consideration.

INACSL Standards of Best Practice: Simulation<sup>SM</sup> Simulation design (INACSL Committee, 2016) was the basis for the development of a complete and congruent transgender simulation to ensure effectiveness of the learning experience and to optimize learning outcomes. All steps in the planning of this simulation-based experience adhered to these 11 criteria for simulation design. Design aspects included a needs assessment, measurable objectives, simulation format, the clinical case, fidelity of the simulation, facilitative approach, briefing plan, debriefing plan, evaluation methods, participant preparation, and simulation pilot. This article addresses how each of these 11 criteria (INACSL Committee, 2016) were met when designing this transgender care simulation.

## INACSL Standards of Best Practice: Simulation<sup>SM</sup> Simulation Design

### Criterion 1—Needs Assessment

A gap in curriculum was informally identified by the curriculum committees of the study settings and through a comprehensive review of the literature that showed poor preparation of nurses in caring for transgender clients (Carabez, Eliason, & Martinson, 2016; Kellett & Fitton, 2017; Lim, Johnson, & Eliason, 2015; McDowell & Bower, 2016; Mayfeather & Bruce, 2014). Topics related to the mental health needs of transgender persons, supported by the literature on health disparities in this population (GLMA, 2017; Kattari, Walls, Speer, & Kattari, 2017; Kellett & Fitton, 2017; Reisner et al., 2014), and support for the transgender client, were discussed in didactic courses; however, participants expressed a desire to role play and practice caring for this specific group. An informal review of the psychiatric mental health curriculum was conducted with all mental health professors in both universities. It was identified that participants were instructed on therapeutic communication, anxiety disorders, and de-escalation techniques, however, were not afforded the ability to practice these skills with the transgendered population. This was seen as a vital opportunity for increasing student nurse competence, particularly because GLMA (2017) asserts that concepts related to mental health is included in the provider–transgender interaction.

### Criterion 2—Measurable Objectives

The benchmarks of assessment for this simulation scenario were identification of therapeutic communication skills, recognition of anxiety escalation, and utilization of appropriate interventions to manage anxiety. Focus on these skills resulted from review of the literature indicating transgender persons have significantly higher rates of anxiety disorder compared with the general population (Kattari et al., 2017). Objectives were stated for prelicensure students. The SMART (Specific, Measurable, Achievable, Relevant and Time-bound) objectives of the simulation were to (a) identify signs and symptoms of anxiety, (b) safely manage a client experiencing escalating anxiety, and (c) establish and maintain therapeutic communication in a culturally sensitive manner with a transgender client. All objectives were measurable with a checklist created by content experts. The objectives on the checklist were achievable and specific to time of implementation. The participants had adequate time to demonstrate the required tasks.

### Criterion 3—Format of Simulation-Based Education

The purpose of this simulation was a formative assessment. The clinical case was grounded in a focus in the psychiatric mental health nursing needs of a simulated transgender client, yet, contextually placed within a medical/surgical case scenario. This simulation adhered to the framework components in the NLN Jeffries Simulation Theory (Jeffries, 2016). The modality chosen for this simulation-based education (SBE) was a mid-technology, high-fidelity simulation scenario. The structure included prebriefing, the simulated clinical experience, and debriefing.

Designers of this study met with content experts in mental health, and LGBTQQ issues to ensure adherence to current evidence-based practice. These persons included faculty members in nursing that were experienced in conducting research with LGBTQQ populations and whom had solid track records of scholarly publication on LGBTQQ health-related topics. This is especially important with the changing field of appropriate pharmacology for transgender clients. Content experts and transgender persons, at various stages of their transitioning, informally validated the simulation. The transgender scenario was validated by two independent Certified Healthcare Simulation Educators (CHSE or CHSE-A) for simulation design and rigor. Verification of medication and appropriate dosages was completed by a registered nurse who also had a doctorate degree in pharmacy (PharmD). The content validity was conducted by two independent mental health faculty from both universities. Content experts were doctorally prepared and actively practicing mental health nurses. An LGBTQQ researcher also validated the simulation for content validity.

Following verification of the content, the simulations were carried out in cooperative learning groups of four to six nursing participants. All were oriented to the role of the

nurse and observer. The roles were defined and questions clarified pertaining to the roles prior to the commencement of the simulation. There were two active nurses in the scenario while the other participants were vicariously learning as observers (Bethards, 2014). During the simulation, the facilitator operated the simulator from a remote location. All discussion and questions took place in the pre-brief or debrief period.

### Criterion 4—Clinical Case

#### *Situation/Backstory*

The client “Taylor Hermes,” a 23-year-old male, presented to the emergency department complaining of severe migraines and feelings of anxiety Figure. He discussed that during his work hours, he could not concentrate and function at his previous level. His complaints were related to his coworkers isolating him during lunch breaks. The coworkers were grumbling regarding privacy issues during the work day and the use of the male bathroom by a female coworker. “Taylor” expressed concern regarding acceptance by his colleagues who continued to refer to him as a female. He had been cared for previously within the hospital system as a female; however, he was reluctant to discuss previous admissions. He was in the process of transitioning pharmacologically and surgically. At admission, his breasts were strapped with a tensor elastic bandage. His blood pressure had been elevated, and he remained anxious with constant pacing and a continued complaint of headache. He was medicated with acetaminophen 650 mg by mouth on admission.

#### *Clinical Progression/Cues*

Participants, on request, were provided lab results during the scenario. Cuing was provided as needed, for example, the client stated “I do not know why they can’t accept me. I’ve thought about this a long time. I’m still the Taylor they are friends with.” The purpose of offering cueing comments was to allow the client’s behavior to become more irritable, his



**Figure** “Taylor Hermes” is a simulated high fidelity transgender patient in the emergency room scenario.

mood angrier, thoughts tangential, and speech nonsensical to almost irrational. “They do not get it, I do not care. I’ve got to get out of here. You guys are not doing anything for me. The world is sick and getting worse I’ll handle it myself—get me my clothes. I’m just going to leave—you do not get it either why bother. Nobody accepts us.”

#### *Time Frames*

Time allocation for each scenario was 60 minutes. Prebriefing for the specific scenario was 10 minutes; the scenario ran 15 minutes, and the debriefing period was 30 minutes.

#### *Script*

The script was consistent between facilitators and pilot tested for flow and appropriate responses prior to implementation with participants. Standard answers were provided for key questions regarding suicide and anxiety because these conditions were identified as greater in transgender persons (GLMA, 2017; Kattari et al., 2017). The script for the verbal bedside report was written and required to be used by each facilitator.

#### *Critical Actions*

Actions on entering the room were consistent with client safety and double identifiers. Critical actions included therapeutic communication, specifically related to de-escalation and presencing with the client. The critical actions were embedded into the evaluation checklist.

### **Criterion 5—Fidelity**

Fidelity is defined as the degree simulation mimics reality and how believable the scenario is to a real clinical situation (Meakim et al., 2013). Fidelity is important to foster suspension of disbelief, thereby allowing the participant to fully immerse him or herself in the clinical simulation physically, psychologically, and conceptually just as he or she would with an actual client interaction. For validation of the simulation, fidelity provides a set of procedures that were implemented in order to draw conclusions from the formative assessment. The various types of fidelity that were considered in the development of this scenario included physical, psychological, and conceptual (Jeffries, 2016). Content reliability was ensured via pictures as a resource for set-up and props. A discussion related to moulage, fidelity, and realism was accomplished with experts in LGBTQQ research.

#### *Physical Fidelity*

Physical fidelity pertains to equipment and physical environment (Paige & Morin, 2013). Faculty members with experience working with LGBTQQ clients verified the physical fidelity. Psychological fidelity is the extent to which the participant engages in nursing tasks and experiences a situation they would practice in (Curtis et al., 2012). Curtis et al. (2012) describe methods of improving psychological fidelity that included scripting the client responses, thus, adding complexity to the simulation. High- to mid-fidelity simulation was chosen to meet the simulation objectives. The

female mid-fidelity manikin chosen for the simulation had the following features important to the fidelity of this simulation: remote voice input via microphone, pulse, blood pressure, and auscultation of heart and lung sounds. The simulated transgender client was a female transitioning to male who was in the beginning phase of transition. The client’s identification band indicated male gender; this was reflected in the medical records as well. The environment was a private in-client room.

Moulage and props included a four-inch elastic wrap bandage, which was placed over the adult female manikin’s chest skin without breast foam inserts to give illusion of breasts being bound; although the manikin did have female genitalia. The manikin was dressed in a client gown and wore a male felt fedora hat and masculine eyeglasses. The manikin was sitting up in a simulated hospital bed, wearing earbuds listening to his phone. A men’s health magazine was also on the bedside table.

#### *Psychological Fidelity*

Psychological fidelity was met by the facilitator using a low-pitch female voice, which participants did not recognize, speaking remotely via microphone through the manikin during communication. This allowed the facilitator to remain outside of the participant’s view allowing for full immersion in the scenario. The facilitators within both university settings followed a script, in which the speech was rapid, disjointed, and difficult to follow during the nurse-client conversation.

#### *Conceptual Fidelity*

Conceptual fidelity addresses the development of clinical reasoning skills (Paige & Morin, 2013). This type of fidelity included consistent vital signs and speech patterns reflecting different levels of anxiety. When participants purposely utilized therapeutic communication, the simulated patient anxiety was alleviated, as indicated by normal vital signs, coherent speech, euthymia, and subjective data. When participant’s interventions lacked therapeutic communication techniques, anxiety was exacerbated, the simulator’s speech would become more rapid and disjointed, and vital signs elevated.

### **Criterion 6—Facilitator Approach**

The trained facilitator was responsible for orienting the participant to the simulation and simulator by clearly explaining the objectives (Boese et al., 2013). Facilitators ensured “psychosocial safety” for the participant and made sure that there would not be negative consequences to the participant making a mistake during simulation. Participants are often more willing to engage in learning and self-reflection if they feel they are in a safe learning environment (Dieckmann, Gaba, & Rall, 2007). Facilitators in this study were experienced and received ongoing training regarding various aspects of facilitation and debriefing.

The facilitator was responsible for adjusting the educational strategies in response to the participants’ progression



through the simulation (Jeffries, 2016). Facilitators were provided a guide for the structured debrief as many scenarios require briefing for the facilitator by the LGBTQQ content expert. The guide served as a tool to access frequently asked questions in a simulation related to the content after a structured debrief (Cheng et al., 2014; Dreifuerst, 2015; Ruldolph, Raemer, & Simon, 2014). In relation to the transgender community, listed resources for support were also available. In addition, main teaching points were included in the guide to ensure the learning loop was closed prior to the end of structured debrief.

### Criterion 7—Prebriefing

General prebriefing for the on campus simulated clinical experience occurred over an hour at the beginning of the day. This included a review of the schedule, simulation center orientation, confidentiality contract, and psychological safety agreements. The prebrief was provided for participants through an off-going nurse's report that was read for consistency between sites. Participants received provider orders and were oriented to the medication cart containing the simulated medications listed on the orders.

The background information for the simulation should be sequenced throughout the curriculum, building a knowledge base the participant can draw upon (Jeffries, 2016). This knowledge base was accomplished by assigning evidence-based articles for nursing participants to read, delivering didactic lectures, and offering other presentations related to the information on transgender clients prior to simulation activities, thus, layering the content. Participants entered the simulation experience knowing they were going to be caring for a client that was a medical client with potential mental health issues. Prebriefing also included a case history in report prior to entering the client room.

### Criterion 8—Debriefing

All facilitators were trained in debriefing for meaningful learning (DML) (Dreifuerst, 2015). DML is a validated structure for debriefing participants. This method encourages critical reasoning to challenge previous assumptions. Participants were encouraged to delve into their thought processes. A structured debrief allowed participants to process information and apply it to varying situations. Components of "DML" engage, evaluate, explore, explain, and extend that promote critical thinking by using methods of "Socratic Questioning" (Dreifuerst, 2015, p.270) were used.

### Criterion 9—Evaluation

Participants were aware that the simulation was a formative assessment. They were cognizant of the critical elements that were being evaluated, such as assuring client safety, by using double identifiers and checking the identification bands. Facilitators utilized a standard evaluation form created by one site's undergraduate curriculum committee to identify participant's progress through the simulation. Evaluation

domains included safety of the environment (including risk to client or provider), physical assessment (including assessing anxiety and mental status), psychomotor skills (including interventions to minimize anxiety), medication administration, and therapeutic communication. Following the simulation, participants completed an evaluation of the simulation and facilitator on a five-point Likert scale (Díaz, Maruca, Gonzalez, Stockmann, & Hoyt, 2017).

### Criterion 10—Participation Preparation

Designing a simulation requires careful consideration regarding preparation prior to the SBE (Jeffries, 2016). All participants had previous experiences in simulation including orientation to the simulation suite and discussion related to reflective thinking practices covered and utilized in a debrief. The participants signed a confidentiality agreement prior to entering the simulation suite, and code of conduct within the simulation area was discussed. Participants were actively engaged in a mental health course prior to taking care of the simulated patient. The course covered mental health issues associated with care of the transgender client. The participants also had medical surgical clinical experiences that formed the foundation for the simulation.

### Criterion 11—Pilot Testing

The transgender simulation was first pilot tested with participants in an east coast university. The participants were familiar with the simulation content and provided feedback to enhance the realism of the scenario. Subsequently, the simulation was implemented in a university on the east coast and in a southern state. Improvements to the moulage such as how the breasts were bound were implemented. Improvements to props were the addition of the magazine and earbuds to increase realism per the pilot test participants. The simulation met the educator objectives that were previously validated by LGBTQQ experts.

## Participants and Setting

Researchers recruited prelicensure, baccalaureate nursing participants from two different state university systems, one in Florida and one in Connecticut, to conduct the simulation. Sites were based on convenience, a prior working relationship with the transgender population, and current mental health content in the curriculum. The simulation occurred during an on-campus simulated clinical experience. Participants were in their second year of a baccalaureate nursing program and enrolled in mental health nursing. The transgender scenario was one of four scenarios encountered during the SBE.

In an attempt to understand the participants, demographics were collected, as this may affect the simulated learning experience (Jeffries, 2016). Lim and Hsu (2016) included religion on the original demographic instrument in an attempt to capture bias based on religious affiliation.

There was no noted religious bias based on the completed demographics. Results indicated participants were predominantly Christian (72%), Caucasian (68%), and females (70%).

The total number of participants in the simulation was 170. Internal review board approval at both sites was obtained. Total eligible participants were 170, of which 80 individuals completed the questionnaires. Feedback was obtained from both participating sites. Participation in the simulation was mandatory; however, completion of the evaluation forms was not mandatory. The results of the demographics are consistent with the majority of the class based on college demographics. The lack of completion of the evaluation forms may be attributed to them being distributed at the end of the simulation. Students were not required to reconvene as a group once the simulation was complete. The anecdotal feedback from all participants during the didactic portion of the course was positive. There was no negative feedback verbally or anonymously associated with this simulation.

## Outcomes

The participants stated anecdotally the desire to have additional simulations based on mental health needs after the SBE. Specifically, participants indicated a further desire to work through simulations focused on improving their competency in treating GLTBQQ persons, with an emphasis on those with mental health concerns. The basis for their appeals for further experiences was grounded in the idea they do not get to practice communicating and caring for clients that have complex diagnoses or have unique communication considerations, including sexual minorities. Participants believed that the simulation was helpful and effective (Díaz et al., 2017). Specific feedback included a greater sense of ease in working with transgender clients, and participants acknowledged the need to tailor nursing care of transgender persons using a culturally sensitive approach. They also felt there was enough information during the prebrief and during the simulation to meet the simulation objectives. Participants stated they were provided feedback in a timely manner allowing them to prioritize interventions and set goals in order to build on their knowledge (Díaz et al., 2017).

## Discussion

This article described the design of a transgender simulation and pilot testing at two universities using Standards of Best Practice: Simulation<sup>SM</sup>. The results were positive with participants strongly agreeing the current transgender simulation fulfilled their learning expectations and needs (Díaz et al., 2017). This simulation met critical participant learning needs by practicing assessment of mental status, identifying and intervening in the management of anxious, agitated

clients, and engaging in therapeutic communication with a client in transition from female to male. Specific evidence-based strategies employed by the participants to reduce anxiety in the simulated transgender client included application of concepts related to psychoeducation, modifying problematic thinking styles, enhancing social support, and preventing suicidality (Austin & Craig, 2015). Although further detail on these specific techniques is beyond the scope of this writing, readers can read more about reducing anxiety in transgender persons using these approaches in the work of Austin and Craig (2015). Blackwell (2015) also describes approaches used for screening and reducing anxiety in gay populations in emergency settings that are also applicable to transgender persons.

Debriefing was supported by using standards in the design and creation of simulation scenarios (Decker et al., 2013). The debrief elicited participant reactions and understanding of the content. Participants also reported how quickly levels of client anxiety escalated with the simulated patient. Thus reinforcing content learned during the didactic portion of their course. They also expressed feelings of empathy and concern for “Taylor” during the debrief. Caring and empathy have been elicited in previous simulation studies (Díaz, Maruca, Kuhnly, Jeffries, & Grabon, 2015). Using trained facilitators promoted optimal learning. Participants were able to explore their thought process. They felt the facilitator encouraged their learning and expanded their understanding.

Participant outcomes were measured with a checklist. The outcome measures were directly linked to the simulation objectives. Participants were rated on dichotomous checklist. The checklist identification was either completed or not completed. The three items that were directly linked to the objectives of the simulation were as follows: did they communicate to the patient in a therapeutic manner, were they able to recognize anxiety escalation, and did they utilize interventions discussed in their didactic course to manage anxiety. The checklist utilized standard patient safety checks such as washing hands prior to entering the room and utilizing a double identifier. Jeffries (2016) states the importance of determining outcomes of the simulation on the client and system. This simulation served as a basis to gather these data in the future. Based on the results, the current simulation design adequately provided the psychosocial aspects of a transgender individual. The transgender simulation will continue to incorporate emerging evidence of health care needs and disparities for the LGBTQQ populace and transgender individuals in particular.

## Conclusion

Mental health issues are a priority for transgender individuals, a particularly marginalized community (Austin & Craig, 2015; GLMA, 2017; Kattari et al., 2017; Kellett & Fitton, 2017; Reisner et al., 2014). Devaluation and limited understanding of their life experiences

place them at increased risk for depression, anxiety, substance use, and self-harm behaviors (Austin & Craig, 2015; Belluardo-Crosby & Lillis, 2012; Bockting, Miner, Swinburne Romine, Hamilton, & Coleman, 2013; GLMA, 2017; Hotton, Garofalo, Kuhns, & Johnson, 2013; Kattari et al., 2017; Kellett & Fitton, 2017). The changing health care needs of society at large require the nurse to be astute to underlying issues that often go undetected. Practicing therapeutic communication can create empathetic and compassionate nurses (Díaz et al., 2015). Collaboration and development in the design and appropriate placement of simulation scenarios in the mental health curriculum is critical to meet the needs of disparate populations.

Current simulation research is focused on the biological well-being for the LGBTQQ community, minimizing the psychological and sociocultural dimensions of health. The focus on psychosocial behavior is imperative as the rise of health disparities and complex mental illness effects LGBTQQ client populations. These mental health issues often go untreated until a medical emergency arises. A more holistic approach to should be reinforced in educational preparation of nurses and other health care professionals; and the simulated clinical environment is an excellent platform to accomplish this goal.

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