Improving Anesthesia Providers' Knowledge and Experiences in Transgender Preoperative Care with Gender-Affirming Webinar Training

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Author Note

This paper is based on data from the DNP Project completed as partial fulfilment of the Doctor. of Nursing Practice degree with the guidance and supervision of the following:

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Abstract

When encountering transgender patients in the perioperative environment, many nurse anesthetists feel unprepared or uncomfortable with providing competent care due to a lack of training or experience. Missed opportunities to deliver trusting, patient-centered care can lead to poor patient outcomes and satisfaction. The consensus of evidence on LGBTQIA care stresses a need for culturally competent providers and inclusivity to improve the quality of care for transgender patients. By integrating evidence-based practice (EBP) recommendations, a gap analysis, and professional teaching strategies into a transformational learning framework, a specialized webinar course was designed for certified registered nurse anesthetists (CRNAs) and student registered nurse anesthetists (SRNAs). The purpose of this Doctor of Nursing Practice (DNP) project was to improve nurse anesthesia providers' knowledge, attitudes, and perioperative encounters with transgender patients. Although the DNP project did not meet all targeted goals, clinical significance was exhibited with improved LGBTQIA patient encounters and increased post-training scores in clinical preparedness, knowledge, attitudes, and overall competency self-ratings. Based on these promising results and minor quality improvement adjustments, this webinar training can be used as an effective educational tool to develop gender-affirming competency among CRNAs and SRNAs.

Keywords: transgender, gender-affirming care, online education, anesthesia providers

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Chapter 1: Introduction

According to the Centers for Disease Control and Prevention (CDC), there are approximately 1.4 million (0.06%) transgender people in the American adult population, with the largest group ages 18 to 24 years, and individuals identifying as transgender as young as three years old (Flores et al., 2020). With the current trajectory of increasing visibility and social acceptance, anesthesia providers will encounter more transgender patients in their practice. This surge of increased healthcare utilization by transgender people was a result of reformed health policies. The Affordable Care Act (2010) and the U.S. Department of Health & Human Services (HHS) (2016) prohibited discrimination of a person's gender in federally funded facilities; thereby increasing health coverage and access for transgender people (Lambda Legal, 2016). Although this contributed to the rise of transgender people seeking medical care, many still avoid healthcare due to providers' incompetency and mistreatment. Castillo (2020) found that certified registered nurse anesthetists (CRNAs) who refused or provided subpar care for this population likely harbored implicit bias or possessed limited knowledge, skills, and experience in transgender care. CRNAs often struggle with appropriate communication, cultural sensitivity, and understanding of the transgender population's unique health needs. This educational gap is a result of the systemic transphobia embedded in nursing education and practice (Castillo, 2021; Stroumsa et al., 2019).

Background & Significance

The term transgender represents a person who identifies as nonbinary (neither male nor female) or the opposite of their assigned sex at birth (APA, 2022). Transgender people often

struggle with gender dysphoria, which the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM) describes as "psychological distress that results from an incongruence between one's sex assigned at birth and one's gender identity" (APA, 2022). To cope with gender dysphoria, individuals practice gender-affirmation expression, which may include pronouns or name change, breast or genital concealment, voice modification, hormone therapy, and/or transitional surgeries (APA, 2022). However, these forms of self-expression and gender identification defy society's binary construct of "men" and "women," a concept known as cisnormativity (McDowell et al., 2020). This ideology led to social stigmas and ostracism towards transgender people in healthcare, education, and the workforce.

In healthcare, transgender people are more likely to be denied medical services or harassed by providers (James et al., 2016), which can further contribute to "minority stress" (Whalin & Makic, 2022). This is frequently exhibited through severe physical and psychological ailments, including substance abuse, depression, anxiety, and suicidal ideation. According to the recent 2015 National Center for Transgender Equality (NCTE) survey, 55% of transgender patients were denied transition surgery, 33% were denied hormone therapy, and 13% were denied gender-specific care (James et al., 2016). Another 33% had at least one negative encounter with a health care provider (HCP), 23% did not see a doctor for fear of being marginalized, and 39% experienced psychological distress (James et al., 2016).

Gradually, transgender people hid from the public, contributing to the knowledge gap and cultural incompetence in transgender medical services and education (Lambda Legal, 2016). The 2015 NCTE survey also reported that 35% of HCPs had limited or no knowledge of transition-related care and 24% of HCPs had to be taught by their transgender patient about gender-affirming care (James et al., 2016). Thus, several global and professional organizations

collaborated to issue standardized guidelines on LGBTQIA care. These reputable resources include the World Professional Association for Transgender Health (WPATH), Fenway Institute's National LGBTQIA Health Education Center, and The Joint Commission.

Problem Statement

Despite increased LGBTQIA efforts in healthcare, nurse anesthetists still face various barriers with adopting gender-affirming practices. Structural barriers, such as a non-inclusive electronic medical record of the patients' chosen name and gender identity, can create tension and confusion during patient interaction (Vupputuri et al., 2021). A lack of expertise, training, and organization support forces providers to rely on external resources for self-learning (Vupputuri et al., 2021). Patient barriers also pose difficulty in creating a therapeutic patient-provider alliance. For example, limited access to care and post-traumatic stress from previous medical encounters can cause patients to be leery or disengaged with providers (Tollinche et al., 2020). Lastly, providers' lack of education and implicit bias can hinder their ability to communicate effectively with transgender patients (Vupputuri et al., 2021; Stroumsa et al., 2019). Incompetence in gender-affirming care can lead to suboptimal care for transgender patients. This can result in decreased patient satisfaction and increased health costs related to low adherence to medical advice and adverse outcomes (Tollinche et al., 2020).

The evidence in literature proposed that gender-affirming education and training is a practical strategy to improve providers' knowledge and attitudes in transgender care. Various medical specialties have demonstrated positive outcomes through online training, specifically increased understanding, and readiness in transgender care (Lindsay et al., 2019; Seay et al., 2019). Other benefits of this intervention include cost-efficacy, time and geographic flexibility, and tailored learning. With the current concern of COVID-19 pandemic's impact on United

States' public health, this solution offers a safe, quick, broad-spectrum method to educate anesthesia providers.

PICO Question

A Population, Intervention, Comparison, and Outcome (PICO) question was developed to guide this DNP project: Can a gender-affirming webinar training improve CRNAs' and SRNAs' knowledge, cultural sensitivity, and perioperative encounters with transgender patients?

System and Population Impact

With the rapid growth of transgender patients in the perioperative setting and the push for gender-inclusive care in healthcare, CRNAs and SRNAs must be cognizant of various barriers and transgender-specific anesthetic implications to deliver quality, safe, and patient-centered care. This requires proficiency in effective communication by using open, nonjudgmental, and respectful language. But Hatfield's survey (2017) reported that many CRNAs felt disconnected and uncomfortable with asking tough questions, hindering their ability to gather relevant patient information. Missing data or incomplete anesthetic plans pose unnecessary health risks to transgender patients. Stressors from the surgical environment (e.g., patient turnover and time constraints) also produce additional pressure and challenges for providers to obtain accurate preanesthetic evaluations. Gender-affirming training can help increase CRNAs' and SRNAs' comfort and confidence during transgender patient encounters and improve workflow efficiency.

Needs Assessment

An indirect needs assessment was conducted through research and anecdotal evidence, including online publications, LGBTQIA health organizations and experts, and CRNA researchers involved in transgender work, to understand the knowledge and cultural gap among CRNAs and SRNAs. Compiled evidence from the WPATH and Fenway Institute highlighted the

general educational needs of HCPs, and the American Association of Nurse Anesthesiologist's (AANA)'s Diversity and Inclusion Committee (DIC) discerned the specific learning needs of CRNAs. This included implicit bias awareness, proper terminology, communication strategies, and knowledge about transition surgeries and hormone therapy (Castillo, 2021). Castillo (2021) also stressed the importance of the preoperative period because establishing good communication and mutual trust during the initial patient encounter is fundamental for building a therapeutic partnership between the patient and provider. Experienced CRNA educators and local LGBTQIA+ community organizations in Lehigh County (PA) area, including the Bradbury-Sullivan LGBT Community Center and the Eastern Pennsylvania Trans Equity Project, were also consulted for the best teaching and audience engagement techniques.

Then, an informal needs assessment on CRNA colleagues in Pennsylvania and New Jersey confirmed similar issues and barriers surrounding gender-affirming care in their practice. For example, providers recounted personal experiences of peers misgendering patients or making inappropriate remarks. Several CRNAs also admitted to being confused or unfamiliar with common anesthetic complications related to hormone and retroviral therapies as well as surgeries. Finally, network connections with CRNA advocates provided insight and guidance on transgender research and activism. They supported the focus of the DNP project, which is to provide ongoing gender-affirming education and training for anesthesia providers and to promote an inclusive perioperative environment for transgender patients.

Purpose, Goals, and Objectives

The purpose of this DNP project was to enhance perioperative care for transgender patients through evidence-based practice (EBP) education on gender-affirming care. The goal was to improve anesthesia providers' knowledge, cultural sensitivity, and perioperative

encounters with transgender patients using a single-session multimodal webinar training. The objectives were (1) to increase CRNAs' and SRNAs' post-training knowledge and attitude scores on the modified DOCSS-LGBT survey on transgender gender-affirming care by 30% and (2) to improve perioperative interactions with LGBTQIA patients by 30% after one month.

Chapter 2: Review of the Evidence/Literature

Literature Search Strategy

A literature search was performed using eight databases, including Google Scholar, Cumulative Index to Nursing and Allied Health Literature (CINAHL), EBSCOhost, Wiley, PubMed, PlosOne, Liebert, and Science Direct. Medical Subject Heading (MeSH) keywords were included as followed: *transgender, online education, webinar, health care provider, anesthesia, gender-affirming, LGBTQIA, perioperative,* and *cultural competency*. The Boolean phrase “AND” and “OR” was used to separate the search terms. An inclusion criterion included "free-full linked text," "peer-reviewed," and a specific date of the year “2016 to 2022”, with the exception being landmark publications. Another critical focus was finding articles on healthcare professional groups with similar characteristics (e.g., learning styles) and experiences (e.g., daily tasks, patient types) as anesthesia providers, such as advanced practice nurse providers, staff nurses, physicians, and healthcare graduate students. Exclusion criteria were not applied because studies on transgender care in perioperative settings or gender-affirming training for anesthesia providers were extremely limited. This search method yielded 497 scholarly publications. After titles and abstract review, and duplicate screening, only 12 relevant, high-quality-rated studies were selected as supporting evidence for the PICO question.

Evidence Analysis

A literature appraisal was conducted using the John Hopkins Evidence-Based Practice Level and Quality Guide (Dang & Dearholt, 2018). Types of studies varied from systematic reviews, meta-analysis, correlational, quasi-experimental, to retrospective studies. Most of the supporting articles are considered Level I to IV because there was a large incongruence in control design and methodology. Moreover, these publications received a quality rating of high

(Grade A) or good (Grade B) based on adequate sample size, fair control over the study design and implementation process, reasonable conclusions and recommendations, and incorporation of professional guidelines, validated tools, theory framework, and expanision on existing research (Dang & Dearholt, 2018).

Overview of Findings

This evidence analysis identified key themes and characteristics regarding the current state of the transgender population's health needs, healthcare students and providers' perspective and learning needs, educational gaps in gender-affirming training, effects of transphobia and implicit bias, preoperative considerations for transgender care, and effective teaching modalities for practicing healthcare learners.

Transgender Patients' Healthcare Barriers

To deliver safe and quality care, nurse anesthetists must be familiar with the transgender population's specific social and health determinants. According to systematic reviews, the leading health challenges for transgender patients are "lack of provider knowledge and or sensitivity, and financial and insurance barriers" (Drabish & Theeke, 2022; Teti et al., 2021). Historically, transgender patients avoided essential medical care due to inappropriate behavior from providers, including frequent harassment, misgendering, hostile responses, microaggression, humiliation, and refusal of privacy or services (Teti et al., 2021). This imposed psychological harm, specifically self-blame, low self-esteem, and internalized transphobia (Drabish & Theeke, 2022). Consequently, transgender patients had higher incidences of anxiety, depression, substance abuse, and suicidal ideation, with rates being even higher among transgender people of color, compared to the general population (James et al., 2016). Limited healthcare coverage also deepened transgender patients' negative perception of healthcare. For

instance, many transgender patients struggled with high out-of-pocket cost due to limited funds for trans-specific care or general health services (Teti et al., 2021). When encountering transgender patients in the perioperative setting, anesthesia providers should use good judgment and caution during patient interviews and physical assessments. Culturally sensitive language is necessary to optimize care and promote a better image of healthcare (Whalin & Makic, 2022).

Need for Gender-Affirming Education & Training

Statistical reports showed that transgender patients with access to inclusive care had lower risks of mental illnesses and better compliance rates with preventative care (Stryker et al., 2020). Thus, LGBTQIA health sexperts and advocates are pushing for providers to obtain more gender-affirming training. Many accreditation and federal reimbursement entities, such as The Joint Commission, Medicare, and Medicaid, even mandated that providers deliver equitable and nondiscriminatory care for all patients (Lambda Legal, 2016).

Various studies demonstrated that gender-affirming education can effectively increase providers' knowledge of basic transgender needs and clinical implications (Berenson et al., 2019; Englund et al., 2019; Levy et al., 2019). However, some studies had conflicting results on providers' attitudes (e.g., confidence, comfort). Some attributing barriers may be providers' previous experience or knowledge of LGBTQIA care (Walia et al., 2019; Morris et al., 2019) or unconscious transphobia (Stroumsa et al., 2019). Sole intent on improving knowledge is not enough to build cultural awareness and sensitivity because implicit bias can "adversely influences clinician verbal and nonverbal communication, which is linked with patients’ negative perceptions of care" (McDowell et al., 2020, p.656).

Stryker et al. (2019) recommended incorporating implicit bias reduction strategies with any gender-affirming training for the long-term impact in improving providers' attitudes and

practice change. One proven approach is storytelling, such as practicing direct interaction with transgender people or observing transgender people's experiences in healthcare (McDowell et a., 2020; Levy et al., 2021). This allows providers recognize and attenuate their own personal stigmas, while developing respect and compassion for the population. Some effective teaching styles included lectures (Gavzy et al., 2019), group discussion (Traister, 2020; Walia et al., 2019), simulation (Muckler et al., 2019; Englund et al., 2019), and online self-learning (Nowaskie, 2021; Seay et al., 2019). The use of combined modalities is recommended because it is more effective in engaging learners and targeting different learning styles compared to a single modality (Oikarainena et al., 2019; Gavzy et al., 2019; Berenson et al., 2019). Gender-affirming education is best implemented through a strategic approach, which include considerations of the audience's needs, preferences, and organizational support (Pratt-Chapman et al., 2022). Lastly, studies emphasized that early and ongoing gender-affirming education is necessary to improve preparedness and adherence to current best practices (Muckler et al., 2019; Traister, 2020). Gender-affirming training can help address the educational gaps in nursing curriculums (Vries et al., 2020).

Preoperative Anesthetic Consideration for Transgender Care

Gender-affirmative care aligns with the AANA's standard of practice and nursing ethical duty (AANA, 2019, p.1). Providers must support patients' physical and psychological wellbeing while recognizing their moral and legal rights without judgement or discrimination. These standards (AANA, 2019, p.1) states that the anesthesia provider must:

> "Respect the patient's autonomy, dignity, and privacy, and support the patient's needs and safety (Standard 1). " …and… "Perform and document or verify documentation of a preanesthetic evaluation of the patient's general health, allergies, medication history,

> preexisting conditions, anesthesia history, and any relevant diagnostic tests. Perform and document or verify documentation of an anesthesia-focused physical assessment to form the anesthesia plan of care (Standard 2)."

To meet these expectations, providers must be timely and proficient in conducting an accurate and relevant patient history intake and assessment during the preoperative interview. Data collection of the patient's gender identity, medical history, and medications is essential in formulating a tailored anesthetic plan and minimizing complications.

Surgical risks and complications, pain management, postoperative recovery, and adverse effects of anesthetic medications differ across genders (Filipescu & Stefan, 2020). For example, transgender females who concurrently use estrogen hormone therapy and tobacco are at a greater risk of developing venous thromboembolism (VTE) due to coagulation disturbances (Tollinche et al., 2020; Filipescu & Stefan, 2020). Regarding pain management, research discovered that providers often give less pain medication to female patients due to gender stereotypes, which is the assumption that female pain is related to psychosomatic factors (Filipescu & Stefan, 2020). Also, body composition and muscle mass of different genders plays a role in the pharmacokinetics and pharmacodynamics of some anesthetic medications, such as muscle relaxants, narcotics, and benzodiazepines. Prudent attention to gender differences is crucial for drug dosing because it can affect a patient’s length of stay and postoperative outcome.

Some transgender patients in transition may require more vigilance. Transgender patients with a history of facial reconstructive surgeries, such as a trachea shave (chondrolaryngoplasty), require a thorough airway assessment to mitigate structural injuries, such as damage to the vocal cords or trachea (Tollinche et al., 2020). Transgender males with a female reproductive organ from birth warrant a pregnancy test, and those undergoing hormonal therapies may need

additional laboratory testing. Providers should also be mindful of the greater incidence of obesity, cardiovascular diseases, diabetes, HIV, and psychological disorders among the transgender population (Tollinche et al., 2020). The development of cultural humility and a solid knowledge base of transgender patients' unique anesthetic considerations is the foundation for fostering mutual trust and collaboration. When providers create a space of comfort and safety, patients are more willing to disclose sensitive information, which can have a huge impact on their anesthetic care (Houssayni & Nilsen, 2019; Whalin & Makic, 2022).

Benefits of Virtual Learning for Providers

Virtual learning is a popular education delivery method among nursing providers (Rouleau et al., 2019) and is proven to increase healthcare learners' knowledge and confidence in LGBTQIA care (Seay et al., 2019; Nowaskie, 2021). In one pilot study at three academic cancer centers, Seay et al. (2019) found significant improvement in the oncologists' LGBTQIA-related knowledge, attitudes, and clinical practice after using web-based training for their specialty compared to no virtual training. Oncologists reported that the web-based training was high quality (82%) and well-received (97%). Virtual learning is a low-cost, sustainable, convenient learning tool for providers with limited resources, commuting constraints, or public health crises. In another study, Nowaskie's (2021) centralized web-based LGBTQIA platform successfully reached over 2000 providers across 50 states and 50 specialties after 14 months. Online learning provides flexibility for busy providers with a demanding schedule. However, some drawbacks to online learning are distractions and self-isolation (Oikarainena et al., 2019; Nowaskie, 2021). Systematic reviews recommend employing (1) transformative learning, (2) collaborative teamwork and expertise, (3) low technology methods (e.g., PowerPoints or PDF documents), (4) multimedia, (5) didactic and experiential online lessons, and (6) audience stimulation with

discussions and interactivity to capture and maintain the audience's interest (Longhini et al., 2021; Pratt-Chapman et al., 2022).

Limitations

Due to the complex and controversial nature of this vulnerable population, rigorous research design (including randomized controlled trials) may not always be feasible or ethical. Therefore, there were minimal studies on LGBTQIA training for perioperative providers and no specific e-learning on transgender care for nurse anesthesia. Many of these studies also lack measurement of long-term outcomes, so it is inconclusive whether these interventions can produce practice change. Overall, the most common threats to validity were the high risk of selection bias, measurement bias, small sample sizes, absence of control groups, and research designs lacking validated outcome measures and appropriate statistical analyses.

Evidence-based Summary

Key findings of the literature review imply that:

1. Multi-modal online learning is an effective and favorable educational strategy among healthcare providers.
2. Gender-affirming training can improve healthcare students' and professionals' attitudes, knowledge, and confidence toward LGBTQIA patients.
3. Future gender-affirming training should focus on transgender patients' specific health needs, anesthesia providers' professional needs, and tools to address implicit bias.

Chapter 3: Organizational Framework of Theory

Conceptual Definitions of Theory or Framework

Jack Mezirow's Transformational Learning Theory (TLT) was chosen as the guiding framework for this project because it describes how adult learners cultivate their knowledge and habitual processes with new ideas and information. Mezirow theorized that a person's frame of reference is shaped by their "habit of mind" which is typically an unwavering set of values and beliefs, and "point of view" that is one's evolving interpretation of life experiences (Mezirow, 1997, p.5). Growing up, individuals will instinctively adopt societal norms and beliefs as part of their frame of reference to assimilate into popular social groups for sense of belonging and safety.

The problem is that some dominant groups exhibit ethnocentrism, which is the predisposition that individuals outside one's own group are inferior (Mezirow, 1997). The spread of negative assumptions and stereotypes can lead to discrimination and prejudice towards marginalized groups. One prime example is transphobia, an irrational fear, aversion, or stigmatization towards transgender people (Stroumsa et al., 2019). Literature revealed that this type of implicit bias adversely influences clinician verbal and nonverbal communication in healthcare, resulting in poor patient outcomes (Stroumsa et al., 2019, p.656). Healthcare professionals have an ethical duty to provide equal and quality care for all patients. Mezirow's theory explains that transformative learning can help people develop cultural awareness and humility by addressing their point of view, which is more receptive to feedback and autonomous thinking (Mezirow, 1997, p.7-10).

Relationship of Theory/ Framework to the Scholarly project

Systemic transphobia is ingrained in all aspects of society, including healthcare and

nursing education (McDowell et al., 2020; Stroumsa et al., 2019). This is the reason why healthcare barriers exist for transgender people, and why there is a knowledge gap among healthcare professionals (Sukhera et al., 2018). Without correction, transgender patients will continue to receive subpar care. Although research demonstrated that increased hours in education can improve knowledge competency on transgender care, it is not enough to change providers' behavior and compassion towards the transgender population. Cultural competency training must have a deliberate approach in addressing unconscious transphobia among clinicians because implicit bias is difficult to recognize and even more difficult to unlearn (McDowell et al., 2020). Strategic training guides learners through critical self-reflection of their implicit bias and how it influences their behaviors and attitudes toward others (Sukhera & Watling, 2020). Under the TIT, people must undergo the four phases of learning to attenuate implicate bias and develop cultural awareness (See Appendix A). Specifically, the adult learner (1) undergoes a disorienting experience, (2) performs a critical reflection, (3) acquires new skills and information, and (4) applies or role models new behaviors. The proposed webinar challenges SRNAs and CRNAs to explore their predisposed feelings, assumptions, and perspective towards the transgender population and adopt a more rational and principled thought process (Pratt-Chapman et al., 2022; Sukhera et al., 2020).

Chapter 4: Project Design

Project Overview

As one of the few existing inclusivity training tools for CRNAs and SRNAs, this webinar was conducted as a one-day pilot study. It helped identify effective teaching strategies and the current knowledge gap among anesthesia providers. The presentation took place on November 17, 2022, to help spread awareness of Transgender Remembrance week, a significant time in the transgender community. This specific date was scheduled according to the availability of the panelists. The one-hour webinar included a short introduction, a lecture on transgender care and anesthetic considerations, two case-scenario videos, interactive poll-taking, question-and-answer (Q&A) sessions, and panel discussions with various members, experts, and advocates of the LGBTQIA community. Online software, such as VideoShop, Zoom, Poll Everywhere, and JotForm, were used to create the registration form, self-assessment surveys, poll-taking forum, and online presentation.

Institutional Review Board (IRB) Approval

Early institutional review board (IRB) approval was necessary to implement the project in a timely fashion. In September 2022, the primary investigator submitted the proposal to the Cedar Crest College (CCC) IRB for an expedited review. The submission required an informed consent form, a description of the study, samples of the measuring instruments, written permission from offsite agencies, and a proposal of the implementation plan. After two weeks, the project was approved with no need for revisions (See Appendix B). However, two minor corrections were necessary to reflect the project's latest procedure and protocol. Based on the application selections, the layout and language of the surveys and informed consent were amended to correspond with the registration and data collection processes. The primary

investigator also expanded the geographical target of SRNAs and CRNAs to increase the number of participants since the numbers of registants were low during the first two weeks of recruitment. Due to the project being entirely online, no additional IRB approvals from other academic or clinical institutions were required.

Some benefits for participation included an opportunity to earn continuing education (CE) credits and gender-affirming training at no financial cost. The project carried minimal risks, no greater than those encountered in daily life or during physical or physiological examinations. Each participant received full disclosure on the student investigator 's role and affiliations, purpose and goals of the project, details on the webinar's program, and use of data collection during the registration process. Informed consent was also required for all participants. Participation was completely voluntary, and participants had the option to leave the project at any time. All collected information remained confidential and used only for the scholarly purposes. The data was stored on the primary investigator's password-protected computer and only DNP committee members are privileged to full access. After three years, all collected data will be erased. These policies were enforced to safeguard the safety and privacy of the participants. The primary investigator also obtained CITI certification in human research ethics and training to uphold these standards.

Implementation Plan

To optimize the best teaching approach for anesthesia providers, the primary investigator applied evidence-based recommendations and implementation strategies from numerous experts and leaders specialized in cultural competency training for LGBTQIA patients. Using the "Developing Standards for Cultural Competency Training for Health Care Providers to Care for Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, and Asexual Persons: Consensus

Recommendations from a National Panel" as the guiding framework, five phases were employed (Pratt-Chapman et al., 2022).

Phase 1: Getting to Know the Audience

The indirect gap analysis on anesthesia providers revealed specific knowledge gaps and motivators for learning. Anesthesia providers lacked interpersonal skills and knowledge of the appropriate language, health disparities, and populational needs (Castillo, 2021). More importantly, Hatfield (2017) reported that most CRNAs seldomly tailor care for transgender patients due to their discomfort or lack of care. This lack of motivation for patient-centered care is likely attributed to internal bias or unconscious transphobia (Morris et al., 2019; McDowell, 2021). Therefore, implicit bias training was necessary to build empathy for the transgender population and moral obligation as healthcare professionals. Other learning barriers were the lack of time and common location, so a virtual format was chosen to accommodate the participants' schedules and learning environment needs. Typically, the operating room schedule dictates anesthesia providers' availability, so an evening time was chosen to maximize attendance. Since the level of interest in this topic was unknown, the webinar was open to all CRNAs and SRNAs in the United States. SRNAs were included in the project because the literature stresses the need for early intervention in LGBTQIA education and training to improve new graduates' preparedness in providing gender-affirming care (Muckler et al., 2019; de Vries & Muller, 2020; Korpaisarn & Safer, 2018).

Phase 2: Developing a Curriculum

Based on previous teaching experience, the DNP committee recommended that the webinar be set to one hour at maximum to maintain learners' attention and interest. The DNP project also followed specific curriculum guidelines published by the Safe Zone Project and

Fenway Institute's National LGBTQIA. Both resources provided fundamental information about the populations' health needs, effective communication strategies, social etiquettes, definitions of common terminology, and negative scenarios commonly encountered in healthcare. These modalities support the core components of implicit bias training, which are promoting conscious awareness of biases and fostering behavioral changes (Sukhera et al., 2020). The Safe Zone Project also provided step-by-step instructions for creating a realistic timeline. Learning goals and objectives were established based on the gap analysis and the LGBTQIA organization's recommendations. Due to several factors, such as the short timeframe, varied knowledge and experience base among the audience, and the trial nature of the project, the training will only cover a basic overview of perioperative care and anesthesia considerations for transgender patients.

Phase 3: Implementing an effective delivery method and transformational learning theory.

After two years of social isolation during the COVID-19 pandemic, healthcare providers heavily relied on virtual learning for medical education and training. For this project, an extensive search and review of various e-based learning platforms was performed. Zoom was determined to be the most popular and user-friendly among healthcare learners. This platform allowed smooth transition through programmed segments (e.g., logging on, PowerPoint presentation, case-scenarios, online videos, Q&A sessions, and multiple speakers). This minimized distractions by evading the need for multiple internet browsers, applications, or electronic devices. Other benefits of Zoom were a discounted price for new users, the capacity to hold a large audience, and an all-in-one complete package (e.g., unlimited meetings, webinars, polling, record-keeping, and privacy options).

Zoom's capabilities of multimedia presentation and simultaneous multi-speakers are essential for transformative learning. Static and dynamic visuals (i.e., videos, graphs, charts, tables) were used as learning aids. Development of cultural humility and competency mandate that participants undergo the four phases: experience, critical reflection, dialogue, and behavioral change (Sukhera et al., 2020). In the first phase of TLT, participants experienced a disorienting and uncomfortable state by observing or experiencing bias towards transgender patients in triggering videos, statistical reports, and lived testimonies. For the opening, the PowerPoint lecture explained the science and types of implicit bias. Then, statistical reports demonstrated how implicit bias negatively influences clinicians' behavior and patient outcomes (Sukhera & Watling, 2018). Next, lived testimonies from transgender patients provided insights into the population's life experiences, needs, and struggles.

In the second phase of TLT, participants underwent self-reflection via question-and-answer sessions, poll-taking (via Poll Everywhere), and dialogues with opposing perspectives. Guest speakers, such as CRNAs with LGBTQIA expertise, provided a safe and non-threatening space for the audience to ask difficult questions and practice metacognitive strategies (i.e., mindfulness and self-monitoring techniques) (Sukhera & Watling, 2018). Experiential learning (i.e., triggering videos and case scenarios) will further elicit emotions and a sense of social responsibility. By recognizing internal biases, learners can begin correcting harmful attitudes and perceptions toward the transgender community.

For the third phase of TLT, participants received training on gender-affirming communication techniques and basic knowledge of transgender care related to anesthesia through a lecture and panel discussion. Then, case scenario films reinforced skill-building activities, enhancing learners' ability to acknowledge perceived bias, communicate discomfort,

and remedy trust during interactions. The first case scenario focused on proper history and physical (H&P) preoperative assessment. The second scenario focused on creating accountability and promoting a respectful and inclusive environment. Finally, the last phase of TLT enabled adoption and application of new knowledge and skills into practice.

Phase 4: Employ experienced instructors

Selection of suitable trainers and teaching strategies is essential for immersive learning (Pratt-Chapman et al., 2020). During the search process for DNP committee members and panel speakers, each candidate had to meet specific requirements, including prior experience in nursing education or simulation, academic leadership, and/or transgender work. The primary investigator of the webinar also sought additional training through Fenway Institute's online resources for educators and LGBTQIA organizations to enhance training skills. Lastly, the DNP committee regularly communicated and convened for rehearsals and consultations.

Phase 5: Evaluation of the training

Immediately after the presentation, participants received a 23-item survey to provide feedback on the quality of the presentation and the impact of the training on their attitudes and knowledge toward transgender care. One month after the presentation, the participant received another 2-item survey to evaluate the impact of the training on their practice. Results from the post-survey helped identify motivating factors for practice change and areas for improvement in the training.

Data Collection Tools

A flyer (See Appendix C) was developed to gain interest in the webinar. It included a description of the webinar and two methods to sign up, including a QR code and weblink. After searching and reviewing many registration and survey builder websites, JotForm was chosen for

its low-cost, user-friendliness, visual aesthetics, QR code capability, anonymity feature, and record-keeping capability. JotForm surveys were used for the pre- and post- test evaluation because it allowed for anonymous submission and assurance of the participants' privacy protection.

For this DNP project, the Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS) was chosen as the validated instrument for its relevancy, brevity, and comprehensiveness. It is comprised of three subscales that measure a provider's clinical preparedness, attitudinal awareness, and basic knowledge of the LGBTQIA community. The LGBT-DOCSS survey underwent a meticulous examination in three studies. It demonstrated high internal consistency and validity with Cronbach's coefficient alpha scores (α) of 0.86 overall, 0.88 for the clinical preparedness subscale, 0.80 for the attitudinal awareness subscale, and 0.83 for the basic knowledge subscale, and a 2-week test-retest reliability of 0.87 (Biddell, 2017). The LGBT-DOCSS survey uses a Likert seven-item rating scale, where *7 equals strongly agree*, and *1 equal strongly disagree*. Although the LGBT-DOCSS contains 18 questions, seven questions were removed to gear focus on the transgender population, reduce redundancy, and increase the response rate. After email communication with the author, Markus Biddell allowed the use and modifications of the LGBT-DOCSS survey to meet the needs of this DNP project (See Appendix D).

Before distribution, the DNP committee previewed the surveys to ensure ease of applicability and clarity. Participants were asked to complete three surveys, including one pre-survey and two post-surveys (See Appendix E). Each survey contained a combination of multiple choices, Likert scales, and/or open-ended questions. The pre-survey has 15 questions total, including 11-items modified LGBT-DOCSS and four-item demographic questions. The post-

survey has 23 questions total, including 11-items modified LGBT-DOCSS and a 12-item quality and learner assessment required by the AANA CE program. The final one-month post-survey contained two questions to evaluate any translation into practice.

Resources Needed and Budget Justification

The total cost of the project was 315 US dollars and was paid out-of-pocket. Many avenues were explored to lower cost, but the final selections were found to be the most cost-efficient. The required costs included a 1-year subscription with Zoom webinar for 130 US dollars, an AANA CE application for 150 US dollars, and 25 US dollars for a gift-card raffle prize. Qualified participants had to complete all three surveys to enter the raffle. Another added expense was a conference speaker for 10 US dollars for audio enhancement. A pre-owned webcam was also used to improve visual effects during the conference. JotForm, a free online application, was chosen for data collection, including the surveys and registration form. Poll Everywhere, another free online application, supplemented learning through poll-taking and group discussion. Fortunately, CCC provided the remaining resources and equipment at no cost. Preliminary discussions about resource needs and reservations were established prior to video recording. The CCC simulation lab was used to replicate a holding area and operating room in the case scenarios. A free video editing software called Video Shop and iPhone were used for filming. With previous experience in short films, the CCC simulation director, Adam Hough, BA, voluntarily assisted in producing the case-scenarios and recruited simulation staff for character roles.

Chapter 5: Implementation Procedures and Processes

Webinar Preparation & Materials Assembly

The initial step for implementation was compiling a list of the required components for the project. This list included a flyer, registration website, point of contacts/liaisons, educational materials, AANA CE approval, and a virtual platform for the presentation and meetings. Other technical equipment included a computer, web camera, and conference speaker.

The time-sensitive tasks were prioritized first. The AANA CE application was submitted 45 days before implementation to ensure ample time for processing and potential for adjustments. Next, the registration website and flyers were developed. Each selected online resource required an account creation and acclimation period for new users. After getting familiarized to each platform, the registration webpage was launched during the first week of October 2022. The JotForm registration form was designed to provide each participant a unique randomized code, consent form, description of the study, and program schedule. To limit distraction and maximize discretion during the event, the Zoom setting was changed to restrict the audience's microphone and camera use. When most of the materials were obtained or underway, the flyers were disseminated to the point-of-contacts (i.e., CRNAs, SRNAs) in student, peer, and professional networks at established clinical sites. Flyers were also posted on social media, including SRNA/CRNA professional network pages, such as Facebook and AANA student blogging page.

The educational materials included a PowerPoint presentation, clinical handout, host's script, webinar's scheduled program, case-scenarios videos, list of interview questions for the panelists, and a closing video. First, the PowerPoint overviewed common themes and issues surrounding the transgender population, including social and health disparities, healthcare

mistreatment and discrimination, implicit bias recognition, common terminology, proper pronouns and language use, social etiquettes, transitioning and hormone therapy, and anesthesia considerations. Three polling questions were transferred to Poll Everywhere and attached onto the PowerPoint to gather the audience's attention and increase interactivity. A doubled-sided and foldable clinical handout was also created to highlight key information from the presentation. It was distributed with the pre- and post- survey via email. Next, two case scenarios were developed to demonstrate instructions on becoming a better gender-affirming provider and how to navigate common issues encountered in the perioperative setting. After the script was devised and reviewed, the videos were filmed at the CCC's simulation center. Two staging rooms and three actors were arranged by the simulation coordinator prior to the filming date. A YouTube video called, "How can cis people be allies (Cut, 2021)" was chosen as the closing video. The webinar was timed for 60 to 65 minutes in total, 20 minutes was allotted for the PowerPoint lecture, 8 minutes for the case-scenarios, 2 minutes for the question-and-answer (Q&A) session, 30 minutes for the panel discussion, and 2-3 minutes for the closing video and remarks. Finally, a list of interview questions was written based on common knowledge gaps and bias amongst anesthesia providers. All educational materials were checked for content, formatting, and accuracy by the DNP advising team. A week before the webinar, individual and team practice rehearsals were held to increase the presenter's comfort, troubleshoot technical issues (i.e., application transition, audio, and camera quality), and identify areas of improvements.

Recruitment Efforts

Convenience sampling was used to recruit participants by word-of-mouth, social media for a minimum number of 10 and no maximum cutoff. The inclusion criteria were current CRNAs and SRNAs in the United States, and exclusion criteria was CCC-affiliated CRNAs and

SRNAs due to the university's policy. The flyer provided general information about the webinar and instructions on how to register. The link or QR code on the flyer gave direct access to the JotForm registration form, which required applicants to fill out their full name, AANA member number, contact information (i.e., email and/or phone number), and a consent statement to the DNP project's terms and conditions. Five days before implementation, a pre-survey was sent to the registrant's email. An automated reminder email was sent every other day until the day of the presentation, prompting participants to complete their surveys.

Stakeholders and Team Collaboration

The DNP advising team for this project consisted of the DNP chair and DNP mentor. The DNP chair served as the main support person for feedback and guidance. During the planning stage, one-on-one meetings were held two to three times a month to discuss evidence findings, validated tools, pertinent research theories or framework, a proposal plan, and project manuscript. The DNP mentor joined these progress meetings once a month to provide additional consultation on the DNP project process and triple-check the webinar's teaching materials.

During the webinar, the DNP chair served as the moderator and was tasked with addressing technical issues, bringing attention to the audiences' questions, and reading the pre-written questions for the panelists. For the panel discussion, experts shared their recommendations and insight on focused topics, specifically nursing education, LGBQTIA research and care in perioperative setting, and the patient perspective. To locate these panelists, the primary investigator attended professional conferences and reached out to LGBTQIA organizations for potential speakers. After meeting with the interested parties, three people agreed to be panelists for the webinar. Updates and information about the webinar were

communicated to the panelists by email. Before the webinar, a virtual panelist meeting was held for a brief meet-and-greet and Q&A session.

Data Collection and Analysis

All surveys were distributed by email and social media platform seven weeks prior to the webinar. Responses were collected and tracked in JotForm. The deadline for the pre-survey was set on the webinar's start date and time. The post survey deadline was set to 12 days after the webinar, and the 1-month post-survey was sent on December 17, 2022, and was opened for 5 days. After retrieval of the final set of data, the primary investigator screened all surveys. On Dec 23, 2022, all qualified data was transferred to an excel spreadsheet on a password-protected personal computer for further analysis and safekeeping. After launching, 29 people signed up for the project but 21 people completed the pre-survey and post-survey. Only completed pre- and post-responses were retained for descriptive and inferential statistics. Incomplete surveys were excluded and deleted along with the JotForm account. Charts and tables were used to illustrate the population demographics and statistical trends.

Sustainability Efforts

After the completion of the pre- and post- survey, participants were emailed a completion certificate and awarded 1 CE credit. Supplemental resources (e.g., handout and PowerPoint presentation) were provided to each participant for clinical reference and support. Confidential feedbacks were also collected on the post-survey. It served to improve the educational delivery method, such as the online format, course duration, teaching methods, topics, and presenter's skills.

Chapter 6: Evaluation and Outcomes

On November 17, 2022, the DNP project was implemented. On December 22nd, all surveys were collected, screened, and evaluated using descriptive and inferential data analysis.

Demographics

The population of the project were nurse anesthesia providers and student nurse anesthetists in the United States, not affiliated with CCC. Using convenience sampling, a total of 29 providers signed up for the webinar but only 21 (72%) became full participants. In the pre-survey, participants were asked to indicate their type of provider position, race/ethnicity, gender, age group, and years of experience as a CRNA if applicable. Among the 21 anesthesia providers, there were 13 (62%) SRNAs and 8 (38%) CRNAs. According to their gender, 19 (90%) participants identified as cisgender female, 2 (10%) participants identified as cisgender male. In terms of race/ethnicity, 17 (80%) participants were White or Non-Hispanic White, 2 (10%) participants were Asian, and 2 (10%) participants were Black or African American. Most of the participants were young adults, with 11 (52%) participants aged between 26 to 35 years, 5 (24%) participants aged 36 to 45 years, and 5 participants (24%) over 45 years old. Participants attended the webinar from various states, including New Jersey, Florida, Pennsylvania, Maryland, North Carolina, and Texas.

Evaluation

The purpose of this DNP project was to improve student and nurse anesthesia providers' knowledge, cultural sensitivity, and perioperative encounters with transgender patients after a one-day educational webinar. The measurable outcome goals were (1) increased knowledge and attitude scores on the modified LGBT- DOCSS scale by 30%, and (2) improved perioperative interactions with transgender patients by at least 30% one month after the intervention.

Outcomes

LGBT- DOCSS Scoring System

A modified version of Bidell's LGBT- DOCSS (2017) scale was used to evaluate the audience's overall competency, clinical preparedness, attitudes, and knowledge in gender-affirming care for transgender patients after a pre- and post-intervention. After compiling individual ratings, the overall population's ratings were averaged for each question (See Table 1). Then, the averaged ratings were converted into points* using the author's survey grading system (See Table 2). The DOCSS-LGBT rules states that questions 3, 4, 7, 12, 17, and 18 were scored based on a reversed Likert scale, and the remaining questions 1, 8, 10, 12, 15, and 16 were scored using their original rating. The final mean value was the conclusive score.

Table 1

The overall average raw score for the sample's pre- and post-survey (n = 21).

DOCSS-LGBT: Selected Questions	Pre-Survey	Post-Survey
1. I am aware of institutional barriers that may inhibit transgender people from using health care services.	5.00	6.10
3. I think being transgender is a mental disorder.	1.95	1.48
4. I would feel unprepared talking with a LGBT patient about issues related to their sexual orientation or gender identity.	3.76	2.52
7. Transgender individuals must be discreet about their gender identity around children.	2.05	1.71
8. I am aware of research indicating that transgender individuals experience disproportionate levels of health and mental health problems compared to cisgender individuals.	5.19	6.00
10. I have received adequate clinical training and supervision to work with transgender patients.	2.62	4.76
12. The lifestyle of a transgender individual is unnatural or immoral.	1.62	1.57
15. I feel competent to assess a person who is transgender in a therapeutic setting.	4.00	5.62
16. I have experience working with transgender clients/patients.	3.67	3.95
17. People who dress opposite to their biological sex have a perversion.	1.43	1.43
18. I would be morally uncomfortable working with a transgender patient.	1.43	1.48

Table 2

The overall average converted score for the sample's pre- and post-survey (n = 21).

Scores	**Pre-Survey**	**Post-Survey**
Q1	5.00 points	6.10 points
*Q3	1.95 = 6.05 points	1.48 = 6.52 points
*Q4	3.76 = 4.24 points	2.52 = 5.48 points
*Q7	2.05 = 5.95 points	1.71 = 6.29 points
Q8	5.19 points	6.00 points
Q10	2.62 points	4.76 points
*Q12	1.62 = 6.38 points	1.57 = 6.43 points
Q15	4.00 points	5.62 points
Q16	3.67 points	3.95 points
*Q17	1.43 = 6.57 points	1.43 = 6.57 points
*Q18	1.43 = 6.57 points	1.48 = 6.52 points

Strongly Disagree			Somewhat Agree/Disagree			Strongly Agree
1	2	3	**4**	5	6	**7**
7	6	5	**4**	3	2	**1**

Note: *Scoring System - Reverse the Likert scale for questions 3, 4, 7, 12, 17, & 18. For questions 1, 8, 10, 12, 15, & 16, leave the score as it.

Next, each categorical score was determined based on their selected questions. For instance, the overall competency score was determined using all 11 LGBT-DOCCSS questions. Subscale categories also had their own assigned questions. For example, the clinical preparedness score was based on questions 4, 10, 15, and 16; the attitude score was based on questions 3, 7, 12, 17, and 18; the knowledge score was based on question 1, and 8. Higher scores (*high =7* and *low = 1*) was indicative of higher level of clinical and cultural competency.

Quantitative Findings

Objective 1: Competency, Clinical Preparedness, Attitudes, and Knowledge

Although the project did not meet the 30% goal of increase in knowledge and attitude scores measured by the DOCSS-LGBT scale, there was improvement in all categorical scores (e.g., competency, clinical preparedness, attitudes, and knowledge) after the intervention. In fact, the overall competency score increased from 5.11 to 5.84 or 14% (See Table 3). The population's average clinical preparedness score increased from 3.63 to 4.95 or 36.4%, attitude score increased from 6.30 to 6.47 or 2.7%, and knowledge score increased from 5.1 to 6.05 or 18.6%. A statistical test was then performed to determine if these values had any statistical significance. Based on the pre- and post- intervention nature and characteristics, a paired t-test was used to assess for statistical significance among the categorical scores. Using a p-value of 0.05, findings revealed there were statistical significance with the sample population's overall competency ($p = 0.0069$) and clinical preparedness ($p = 0.0437$) scores.

Table 3

Statistical Difference and t-test: Categorical scores.

	Pre-Survey score	**Post-Survey score**	**Point Difference**	**Percentage Difference**	**P < 0.05**
Overall Competency All questions	5.11	5.83	+ 0.72	+ 14%	**0.0069**
Clinical Preparedness Q (4), 10, 15, 16	3.63	4.95	+ 1.32	+ 36.4%	**0.0437**
Attitudes Q (3), (7), (12), (17), (18)	6.30	6.47	+ 0.17	+ 2.7%	0.189
Knowledge Q 1, 8	5.10	6.05	+ 0.95	+ 18.6%	0.0959

Notes: A t-test was performed using Lambert (2019)'s Online T-Test Calculator version 1.0.

Categorical scores were also computed with differing age groups and provider types (See Table 5). When comparing 13 SRNAs to 8 CRNAs, the SRNA group exhibited higher scores in clinical preparedness, whereas the CRNA group obtained greater scores in overall competency, attitudes, and knowledge. When comparing age groups, the youngest age group (26 to 35 years) scored better in overall competency and the oldest age group (over 45 years) scored highest in clinical preparedness and attitudes. The middle age group (36 to 45) scored the lowest in all categories. However, these ratings are subjective to each individual, and scores can be influenced by personal characteristics (e.g., confidence level, experience, personality, and. bias).

Table 5

Pre-Survey Comparison of the Population Sample's Age Group and Provider Type Group

		Overall Competency	**Clinical Preparedness**	**Attitudes**	**Knowledge**
Type of Provider	SRNA (n = 13)	4.99	**3.79**	6.07	4.69
	CRNA (n = 8)	**5.19**	3.54	**6.45**	**5.35**
Age Groups	26 to 35 (n = 11)	**5.36**	3.57	6.67	**5.64**
	36 to 45 (n = 5)	4.33	3.5	4.96	4.4
	Over 45 (n = 5)	5.35	**3.9**	**6.8**	4.6

Objective 2: Improved Perioperative Experience

A one-month post survey was also conducted to address the project's second objective. This survey contained two questions to assess for practice change. The first question was stated:

"After participation in the gender-affirming webinar, did you encounter any transgender or LGBTQIA patients in your practice?", followed by "If yes, did the training help improve your perioperative care and interactions with transgender or LGBTQIA patients?".

Twenty responses were received, and 5 (25%) respondents encountered LGBTQIA patients in practice and 15 (75%) did not (See Table 6). Of the 5 respondents who encountered LGBTQIA patients in practice, all of them (100%) reported that the webinar improved their perioperative interactions. The results determined that anesthesia providers were able to employ this educational tool into clinical practice.

Table 6

Results of the One-Month Post Survey

Questions (n = 20)	YES	NO
After participation in the gender-affirming webinar, did you encounter any transgender or LGBTQIA patients in your practice?	25% (n = 5)	75% (n = 15)
If yes, did the training help improve your perioperative care and interactions with transgender or LGBTQIA patients?	**100% (n = 5)**	----

Qualitative Findings

Content Quality

Qualitative data were also collected to evaluate the benefits, barriers to evidence-based translation, and the quality of the webinar presentation. Based on data from the post-survey, some practical instructions and information of the webinar included patient explanation and guidance during medical assessment and history-taking, use of appropriate communication techniques, proper terminology and pronoun, enforcing workplace accountability, addressing gaps in medical infrastructure (e.g., EMR), preoperative assessment considerations and tools,

maintaining a gender-neutral approach, understanding transgender health disparities and population-specific medical needs, and health and legal advocacy. However, some reported barriers to education translation were “personal beliefs and bias,” “challenging organizational culture and systemic norms,” “feeling of inferiority,” and “lack of experience.”

Presentation Quality

On the post-survey, participants were asked if they would recommend the webinar to other colleagues and all 21 (100%) participants marked yes. All participants also strongly agreed or agreed that the webinar’s teaching methods, content, online format, and facilitator’s presentation style were effective. However, there were several suggestions for improvements. Some reported feedbacks were, “the speakers (panelists) went off topic,” “need more information on preoperative guidelines related to hormone therapy and labs.” incorporate a “mock preoperative assessment or interview,” more discussion on the “effects of legislation on anesthesia providers’ practice when caring for transgender individuals,” “more discussion time with panelists,” and “more details in subtopics.” Unfortunately, a one-hour allotment did not allow sufficient time for in-depth discussion and subtopics, which will be considered for future course planning.

Presenter and Technical Quality

During registration, there was no reported complaints. However, there were technical issues with participants being unable to access the survey link or forgetting their unique identifier code. These issues were quickly brought to the host’s attention and resolved within 1 to 2 hours of receiving. Setting changes in JotForm eliminated future error messages with the surveys. Also, all pre- and post- surveys were emailed to each participant with their individualized codes. This also helped participants who had forgotten their identifier code, and it improved survey response

rates. During the presentation, there was a brief issue with loss of internet connectivity at the site of implementation. However, a mobile internet backup was used to restore webinar's connection. Another limitation was the host's lack of experience with Zoom Webinar, which raised difficulties with switching between the presentation and discussion chat box in Zoom. This caused a slight time lag with addressing the audience's questions.

Discussion

With the growing acceptance and attention towards transgender patients in the medical community, anesthesia providers remain unconfident in their ability to provide safe and appropriate care for this population (Castillo, 2021; Hatfield, 2017). One attributing reason is the lack of well-developed education or training courses on gender-affirmation for specialized fields, such as nurse anesthetists (Castillo, 2021; Muckler et al., 2019). This one-hour webinar project offered CRNAs and SRNAs a unique opportunity to learn more about transgender health disparities, medical needs, and anesthetic considerations to provide patient-centered care for their transgender patients in the perioperative environment. The webinar was methodically designed and catered to the learning needs of student and nurse anesthetists. Using a multimodal method, the webinar used patient storytelling, video scenarios, didactic presentation, and panelist discussion to engage the audience in a safe and nonjudgement learning environment.

After launching on November 17, 2022, the webinar received positive outcomes and wide-reaching reviews from CRNAs and SRNAs in the United States. The data reported a growth in all measuring parameters, including overall cultural competency (14.3%), clinical preparedness (36.3%), attitudes (2.7%), and knowledge (18.6%) scores after the one-day session. Given that the percent changes were small, it important to consider that some participant factors may have skewed scores. For instance, some participants may be less attentive with virtual

learning or already be well-versed on the topic. Inferential statistical analysis also determined that the increased value in overall cultural competency and clinical preparedness carried statistical significance. This implies that there is 5% chance that the outcome was unlikely caused by a probability, and there is a 95% confidence that an actual relationship exists between the variables. Although the intent of the DNP project is not to prove statistical significance, it is more assuring when statistical results are congruent with project's positive effects.

The main goal of the DNP project was to produce an educational intervention with clinical significance. After uncovering the impact from the one-month survey, it was evident this webinar training had clinical significance. From a 1-month post -survey, five participants reported that this gender-affirming education helped improved their perioperative encounters with LGBTQIA patients after the attending the presentation. The webinar afforded nurse anesthesia providers the confidence, knowledge, and tools to deliver quality care for LGBTQIA patients. The webinar also received many positive reviews, and the data showed that 100% of the participants would recommend the webinar to their colleagues. Interestingly, some participants shown interest in additional sessions on other LGBTQIA subtopics, course development support, and educational resources.

Although this gender-affirming webinar demonstrated to be an effective tool to enhance cultural competency for CRNAs and SRNAs, there were some identified areas of improvement. Since the project had a small sample size, the use of early advertisement, increased number of champions, and strategic recruitment can improve the sample size for more generalizable results. Based on audience feedback, all of the participants enjoyed the panelist discussion portion, but many of them expressed that it was too short. An increased duration of time would allow more

opportunities for meaningful discussion with the panelists, questioning-and-answering, and in-depth coverage on preferred subtopics.

Chapter 7: Implications for Nursing Practice

Implications for Practice

The webinar presentation was well-received, which was evident by positive reviews and subsequent requests for additional courses on transgender health. Once the anesthesia providers mastered the basic knowledge of transgender care, it is recommended that they seek ongoing training and expand into other subtopics that affect nursing anesthesia practice. Some highly suggested areas include legal policies and professional liability, patient transitioning and clinical implications, strategies for patient advocacy and institutional changes, and an in-depth discussion on specific anesthetic considerations. This gender-affirming webinar for CRNAs and SRNAs can also serve as a training blueprint for other medical and nursing educational institutions. Future e-based tutorials should employ a systematic and active teaching approach to optimize learning conditions. First and foremost, creating a safe and open learning environment is key for meaningful group discussion. Interaction with transgender people and experts should be considered to provide an opportunity in exploring different viewpoints and discussing sensitive topics. Overall, the tutorial should be tailored for the unique practice, audience's learning gaps, professional standards, and hospital or practice policies.

Strengths of the Project

The webinar was meticulously developed based on theoretical science, professional recommendations, and existing evidence from other specialty studies (e.g., emergency department, nurse practitioners, primary care) (Seay et al., 2019; Stryker et al., 2019; Traister, 2020). TLT was chosen as the guiding framework because it is a pragmatic solution for attenuating provider's implicit bias and resistance (Sukhera et al., 2018). Transformative learning has been widely accepted in healthcare education and adopted in many other forms of cultural

competency training (Pratt-Chapman et al., 2022). Quality content and organized formatting was also prioritized for the webinar. Instructional strategies and factual information were compiled from recent robust evidence, best recommendations, and leading experts. These primary sources included the WPATH, National LGBTQIA+ health education center (Fenway), the Human Right Campaign (HRC), and nurse anesthesia scholars specialized in LGBTQIA care or research. The webinar also catered to various learning needs through multiple modalities, including didactic instruction, a key highlights handout, video scenarios, group discussion, and interactive activities (e.g., poll-taking, and Q&As). The online and user-friendly format also made the webinar cost-efficient, convenient, and accessible for any nurse anesthesia provider. This is particularly advantageous for professionals who cannot attend face-to-face instruction. And although the project's budget was limited, the instructor was able to deliver a quality and effective education on gender-affirming care with impressive results.

Limitations of the Project

The project had minor methodology faults and sampling errors. When the webinar's registration site initially launched, only CRNAs and SRNAs in Pennsylvania and New Jersey were invited. After three weeks, there was a low number of enrollments, so the eligibility criteria expanded to CRNAs and SRNAs from all states. Although this change helped increase enrollment numbers, the project still had a small sample size after seven weeks of recruitment. If the webinar was opened to all CRNAs and SRNAs originally, the sample size could have been larger. This convenience sampling was also subjected the data to selection bias, homogeneity, and social desirability bias. A randomized and large sample size is more preferable because it increases the probability of population generalizability. Another identified issue was time constraint, which restricted the audience's full participation. Some unaddressed questions were

answered outside the webinar via email, which is counterproductive in group learning. For future directions, the webinar's duration and panel discussion should be extended to allow adequate time for in-depth dialogue and meaningful engagement.

Linkage to DNP Essentials

The American Association of College of Nursing (AACN) established the *2006 Essential of Doctoral Education for Advanced Nursing Practices* as core competencies for the "advanced nurse's role in improving healthcare outcomes through organizational leadership, quality improvement processes, and translation of evidence into practice" (ACCN, 2019, p.4-5). These eight essentials have been integrated into the planning, implementation, analysis, and dissemination of doctoral prepared scholarly works of nursing.

Essential I – Scientific underpinnings are the groundwork for advancing nursing research and practice. Compared to the general population, the transgender patients experience a disproportional amount of discrimination and poor service in healthcare (Lambda Legal, 2016; Flores et al., 2020). For this project, a literature review found that cultural competency and gender-affirmative training can improve transgender patient experiences and outcomes. The webinar in this project functioned as a clinical resource for CRNAs and SRNAs with the overall goal to improve gender-affirming care for transgender patients in the perioperative setting. The information presented in the webinar was derived from scientific guidelines, existing quality evidence, and expert recommendations.

Essential II – Organizational leadership and systems level thinking enables a collaborative approach for complex healthcare issues with consideration of patient ethics, organizational processes, and scientific research. In this project, a DNP committee was established to identify key stakeholders, form a budget, provide feedback, and facilitate project

development and IRB approval. Next, a gap analysis determined that online and multimodal education intervention was a practical approach in meeting the audience's learning needs. LGBTQIA experts and researchers were also sought from professional networks and conferences to enrich the webinar's panel discussion portion. Group discussion raised awareness in cultural/diversity specific to the nurse anesthesia profession and perioperative environment. The webinar also highlighted strategies and tools for political and patient advocacy. This gender-affirmative training tool has the potential to elicit structural and system changes in improving patient experience for transgender patients.

Essential III – Clinical scholarship and analytical methods are the basis for evidence-based practices. For this DNP project, a PICO method was applied to develop and evaluate an education intervention for the anesthesia provider's role in reducing disparities for transgender patients. This project adds to nursing science and practice by presenting a cost-effective strategy in improve the anesthesia provider's knowledge and care in transgender health. Using translational evidence, this webinar was developed based on credible survey tools, recommendations of previous successful studies, and standardized clinical guidelines. Several committees and checkpoints were also used to refine the DNP project for accuracy and plausibility. Next, descriptive and inferential statistics was applied for data analysis. As a result, the webinar demonstrated improved knowledge and attitudes in gender-affirmative care and clinical significance in nurse anesthesia practice. After a positive learning experience, some attendees even consulted the project developer about initiating similar educational tools modeled after this gender-affirmative webinar.

Essential IV – Information systems technology and patient care technology can enhance and transform healthcare processes and outcomes. The use of online education and clinical tools

is becoming widely recognized as quick and reliable sources for clinical decision making. Compared to physical reference materials, virtual resources are far more efficient and practical in the increasingly fast-paced and evolving healthcare. For this project, the lead investigator incorporated several technological tools to develop and implement an interactive webinar. Using Zoom Webinar, JotForm, VideoShop, and Poll-Everywhere, the webinar delivered an effective education on gender-affirmative care with multiple teaching modalities, such as live group discussion, simulation exercises, and self-reflection surveys. Finally, findings from the project's data have been disseminated to other SRNAs and CRNAs in professional virtual conferences to expand nursing knowledge and translate evidence-based practices.

Essential V – Healthcare policies and advocacy can promote interprofessional collaboration and improve patient and population health outcomes. Despite compelling evidence on gender-affirmative care, a knowledge gap and resistance among anesthesia providers continues to drive the health disparities for transgender patients. However, pro-LGBTQIA policies can improve transgender patients' welfare by promoting access to healthcare and quality care. In this project, the webinar discussed several advocacy strategies and health policies to protect this vulnerable population and promote social justice. This includes annual cultural competency training, inclusive language in the electronic medical record, no-tolerance policy for gender discrimination.

Essential VI – Interprofessional collaboration is essential for improving patient and population health outcomes. To deliver an effective educational intervention, the DNP lead collaborated with many experts from various disciplines. The interprofessional consultation team helped to better comprehend the various perspectives and navigate this sensitive and controversial issue in an ethical way. Markus Bidell, a renown LGBTQIA researcher, shared his

survey tool and other scholarly publications as the groundwork for the webinar's instruction approach. Panelists also shared viewpoints from the trans-community, social advocacy, research, clinical setting, and close relative/friendship. A professor with a background in simulation excellence and scholarly leadership provided guidance with teaching, public speaking, and webinar format and delivery. Throughout the project progression, effective communication and dedication were employed to construct a timely plan and implementation.

Essential VII – Focus on clinical prevention and population health is significant for improving nation's health. This DNP project examined the state of perioperative care for transgender patients and devised a tool to help reduce disparities and promote equality and quality care. The lead student investigator for this project demonstrated leadership and scholarly excellence by educating anesthesia providers and promoting policy for equal and quality care. After the webinar education, there was an increased in knowledge and positive attitudes among student and nurse anesthetists on gender-affirmative, which can improve transgender patients' care and welfare.

Essential VIII – Advanced nursing practice providers must exercise sound clinical judgement, system thinking, and delivery of evidenced-based care guidelines to optimize healthcare delivery. After implementation of this project, the lead student investigator is more competent with population needs assessment, peer mentorship and interprofessional collaboration, and health promotion for vulnerable populations.

Chapter 8: Summary of Project

Conclusion

Medical hostility had caused transgender people to feel mistrust towards clinicians (Teti et al., 2021) and avoid needed medical services (Medina et al., 2021). This poses serious legal and financial risks for healthcare facilities (Lambda Legal, 2016). When examining the perioperative conditions for transgender patients, anesthesia providers were found to be a part of the transphobic microaggression (Muckler et al., 2019; Hatfield, 2017; Castillo, 2021). Research has shown that transphobic bias and maltreatment is often associated with the clinician's lack of knowledge or inadequate exposure to the transgender population (Stroumsa et al., 2019). Thus, several studies and experts introduced evidence-based guidelines to address these gaps. The WPATH produced the Standards of Care (Version 8) to optimize care for transgender patients and promote LGBTQIA cultural competency among providers (Coleman et al., 2022). The Health Resources and Services Administration (HRSA)'s Fenway Institute was also developed to support LGBTQIA research, education, training, and health policies.

Although there are many forms of cultural competency training tools for healthcare providers, there are very few intended for the nurse anesthesia profession. Thus, a single-session webinar was created based on an indirect need assessment, existing evidence, and guidance of LGBTQIA experts. Recognizing that the transgender ideology is complex and controversial in healthcare, the transformational learning theory was also integrated to foster a compassionate and open mindset (Sukhera & Watling, 2020; Pratt-Chapman et al., 2022). This approach was helpful with appealing to the participants' moral reasoning and ethical obligations. Other key elements, such as implicit bias training, multiple learning modalities, foundational knowledge in gender-affirming care, and simulation instruction, were also used to strengthen the effectiveness

of this educational intervention. An online format also increased people's willingness to participate by allowing learning flexibility and easy accessibility (Rouleau et al., 2019).

The purpose of the DNP project was to improve student and nurse anesthesia providers' knowledge, cultural sensitivity, and perioperative encounters with transgender patients. The project demonstrated clinical significance because five nurse anesthesia providers expressed that the webinar was helpful with their interactions with LGBTQIA patients. Using a pre- and post-evaluation, the project also reported increased scores in overall competency, knowledge, attitudes, and preparedness, but it did not meet the benchmark goal of 30 percent growth. These marginal changes may be attributed to the voluntary sample. When clinicians seek supplementary training, like education on LGBTQIA care, the common motivating factor is genuine interest (Stryker et al., 2019). Therefore, it can be presumed that participants may have some prior knowledge or exposure, and positive attitudinal views towards LGBTQIA patients.

Dissemination Plans

On March 9, 2022, the project was presented virtually at the Pennsylvania Association of Nurse Anesthetists' Annual Symposium. Nurse anesthesia leaders, educators, and students were invited from five academic institutions in Southeastern Pennsylvania. Presenting for this specific audience was instrumental for continuing efforts in gender-affirming care and education. On April 20, 2022, the project was also showcased at CCC for nursing faculty and students. This event presents an opportunity to build awareness on LGBTQIA issues in the perioperative arena and encourage interprofessional collaboration for patient advocacy. The project recognized that interprofessional team collaboration is necessary for promoting a welcoming, equal, and inclusive culture for all patients.

Future Ideas

The findings from this pilot project suggested that gender-affirming education is effective with improving CRNA's and SRNA's knowledge and experiences in transgender care. Since this webinar was an introductory course, clinicians and educators should also consider exploring other LGBTQIA subtopics that can affect nurse anesthesia practice. Based on the subjects' testimonies, there were requests for courses on in-depth anesthesia considerations, legal and professional duties, policy changes, and advocacy. However, the long-term benefits of this educational webinar are unknown, so it recommended that future projects include multiple or recurring sessions, randomized and large sample sizes, and an increased duration period for analysis.

It is vital that clinicians stay abreast of current evidence-based practices to improve care and outcomes for vulnerable populations. It is recommended that hospital stakeholders incorporate gender-affirming education into the staff's diversity and inclusion compliance training. A webinar format can be particularly advantageous for remote facilities with limited technical and LGBTQIA training support because it inexpensive and easily reproducible. LGBTQIA champions should also be established for periodical evidence review and quality improvement. Nurse anesthesia educators should also examine the state of current graduate-level LGBTQIA curriculum to improve graduate preparedness.

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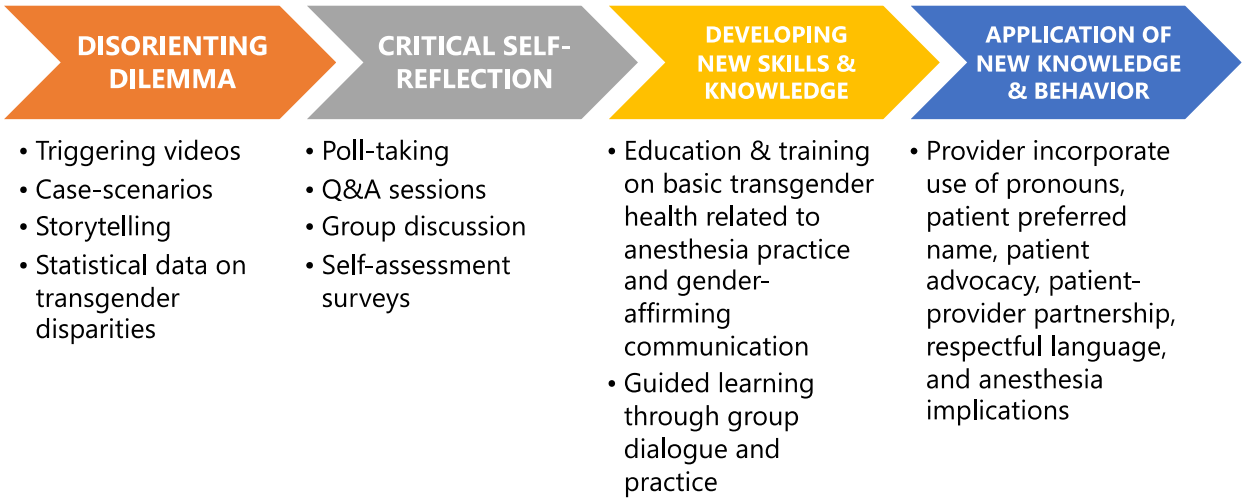
Appendix A

Application of the Transformative Learning Theory (TLT)



Appendix B

Institutional Review Board (IRB) Approval

APPROVED - IMPROVING ANESTHESIA PROVIDERS' KNOWLEDGE AND EXPERIENCES IN TRANSGENDER PERIOPERATIVE CARE WITH GENDER-AFFIR...

DN

DocuWare Notification <noreply@docuware.cloud> Friday, September 9, 2022 at 9:09 AM

To: Pear Mok; **Cc:** DocuWare Service Account

IMPROVING ANEST...
2.4 MB

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Your IRB Request has been Approved by the Project Advisor/Supervisor, the Committee Chair and the Extended Reviewer. This is the Final Approval.

Attached you'll find the IRB Request Form for this request, including any notes added by the reviewer.

If additional files were submitted the request form and additional files will be delivered together in a zipped file.

COMPLETE BY DATE: 9/9/2023

Notes:

IRB Request Number: 433

Title of Research: IMPROVING ANESTHESIA PROVIDERS' KNOWLEDGE AND EXPERIENCES IN TRANSGENDER PERIOPERATIVE CARE WITH GENDER-AFFIRMING WEBINAR TRAINING

Review Type: EXPEDITED REVIEW

Lead Researcher: Pear Murphy

Project Advisor/Supervisor: Jill Hanisak

Date Submitted: 9/1/2022

Appendix C

Recruitment Flyer

Appendix D

Written Permission for Survey Use

From: Markus P Bidell <mbidell@hunter.cuny.edu>
Sent: Tuesday, July 12, 2022 10:49:46 AM
To: Pear Mok <PMok@cedarcrest.edu>
Subject: Re: Permission to use Survery

Any modifications to help your research program are fine.

Markus P. Bidell, Ph.D., LMHC
he, him, his/they, them, theirs – what's this?
NYS-LMHC & School Counselor (Permanent Certificate)
Associate Professor
Counseling & Psychology
Hunter College & CUNY Graduate Center

From: Pear Mok <PMok@cedarcrest.edu>
Date: Monday, July 11, 2022 at 7:55 PM
To: Markus Bidell <mbidell@hunter.cuny.edu>
Subject: Re: Permission to use Survery

Hi Dr.Bidell,

Thank you for giving me permission to use the LGBT-DOCSS survey and for the articles you provided. I am emailing you again to clarify if I also had permission to modify the survey to fit the needs of my project. I will be only focusing on the transgender population, so I will be removing some of the LGBT questions.

Kind Regards,
Pear

Pear Murphy, BSN, RN, SRNA

From: Markus P Bidell <mbidell@hunter.cuny.edu>
Sent: Tuesday, June 21, 2022 10:35:45 AM
To: Pear Mok <PMok@cedarcrest.edu>
Subject: Re: Permission to use Survery

Pear-
Thanks for your interest in the LGBT-DOCSS. You have my permission to use the assessment scale within the scope of your institution's research IRB proposal and approval. Good luck with your research – I attached a few documents that might help with your work.
Best, Dr. M. P. Bidell

Markus P. Bidell, Ph.D., LMHC
he, him, his/they, them, theirs – what's this?
NYS-LMHC & School Counselor (Permanent Certificate)
Associate Professor
Counseling & Psychology
Hunter College & CUNY Graduate Center

From: Pear Mok <PMok@cedarcrest.edu>
Date: Friday, June 17, 2022 at 5:03 PM
To: Markus Bidell <mbidell@hunter.cuny.edu>
Subject: Permission to use Survery

Hello Dr. Markus P. Bidell

My name is Pear Murphy, and I am a doctorate nursing student at Cedar Crest College, PA. I am emailing you because I am seeking permission to use and/or possibly modify the *The Lesbian, Gay, Bisexual, and Transgender Development of Clinical Skills Scale (LGBT-DOCSS)* for a required graduate project. In this project, I will be using an educational webinar to improve attitudes, beliefs, and knowledge in transgender care among students and nurse anesthetists. The survey will be mentioned in my proposal paper, manuscript, presentation/dissemination, and published work. If you have further questions, please feel free to contact me.

Pear Murphy, BSN, RN, SRNA
Cedar Crest College
(p) 267.972.4602
(e) pmok@cedarcrest.edu
My Pronouns: she, her, hers

Appendix E

Pre- and Post-Survey

PRE-SURVEY

PART 1: DEMOGRAPHICS

1. What is your gender?
    a. Cis-Male
    b. Cis -Female
    c. Trans-man
    d. Trans-woman
    e. Nonbinary/Genderqueer
    f. Prefer not to answer

2. What is your race?
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian/Pacific Islander
    e. White
    f. Mixed/Other
    g. Prefer not to answer.

3. What is your age range?
    a. Younger than 25
    b. 26-35
    c. 36-45
    d. Older than 45
    e. Prefer not to answer

4. Are you a SRNA or CRNA?
    a. SRNA
    b. CRNA
    If you selected CRNA, pick your years of experience.
        a. 0-5 years
        b. 6-10 years
        c. >10 years

PART 2: THE TRANSGENDER DEVELOPMENT OF CLINICAL SKILLS SCALE (DOCSS-LGBT)

Strongly Disagree			Somewhat Agree/Disagree			Strongly Agree
1	2	3	**4**	5	6	**7**

Select a numerical rating using this Likert Scale for each question.

5. I am aware of institutional barriers that may inhibit transgender people from using health care services.
6. I think being transgender is a mental disorder.
7. I would feel unprepared talking with a LGBT client/patient about issues related to their sexual orientation or gender identity.
8. Transgender individuals must be discreet about their gender identity around children.
9. I am aware of research indicating that transgender individuals experience disproportionate levels of health and mental health problems compared to cisgender individuals.
10. I have received adequate clinical training and supervision to work with transgender patients.
11. The lifestyle of a transgender individual is unnatural or immoral.
12. I feel competent to assess a person who is transgender in a therapeutic setting.
13. I have experience working with transgender clients/patients.
14. People who dress opposite to their biological sex have a perversion.
15. I would be morally uncomfortable working with a transgender patient.

POST SURVEY

PART 1: THE TRANSGENDER DEVELOPMENT OF CLINICAL SKILLS SCALE (DOCSS-LGBT)

Strongly Disagree			Somewhat Agree/Disagree			Strongly Agree
1	2	3	**4**	5	6	**7**

Select a numerical rating from using Likert Scale for each question.

1. I am aware of institutional barriers that may inhibit transgender people from using health care services.
2. I think being transgender is a mental disorder.
3. I would feel unprepared talking with a LGBT client/patient about issues related to their sexual orientation or gender identity.
4. Transgender individuals must be discreet about their gender identity around children.
5. I am aware of research indicating that transgender individuals experience disproportionate levels of health and mental health problems compared to cisgender individuals.
6. I have received adequate clinical training and supervision to work with transgender patients.
7. The lifestyle of a transgender individual is unnatural or immoral.
8. I feel competent to assess a person who is transgender in a therapeutic setting.
9. I have experience working with transgender clients/patients.
10. People who dress opposite to their biological sex have a perversion.
11. I would be morally uncomfortable working with a transgender patient.

PART 2: LEARNER ASSESSMENT

Following this presentation, I am able to:

16. Incorporate gender-affirming language and etiquette into my practice.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

17. Describe strategies to attenuate providers' implicit bias towards transgender patients.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

18. Discuss anesthetic considerations for the transgender population.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

PART 3: PROGRAM EVALUATION

19. The facilitator was effective in presenting the material.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

20. . The online format facilitates learning.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

21. Teaching methods were effective.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

22. This content was related to the webinar's goal and learning objectives.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

23. My personal learning objectives were met.
    a. Strongly Agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly Disagree

24. State one item you learned that will help improve your nurse anesthesia practice.

25. State any barriers to implement this change.

26. Would you recommend this webinar to colleagues/others?
    a. Yes
    b. No

27. Please write any suggestions for improvement or topics you would like to see in the future. (optional)

ONE-MONTH POST- SURVEY

1. After participation in the gender-affirming webinar, did you encounter any transgender or LGBTQIA patients in your practice?
    a. Yes
    b. No
    c. Not Applicable

2. If yes, did the training help improve your perioperative care and interactions with transgender or LGBTQIA patients?
    a. Yes
    b. No