

2023

Perinatal Nursing Education Related to Opioid Use Disorder

Britney Taniguchi
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Walden University

College of Nursing

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Britney Taniguchi

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the review committee have been made.

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Walden University

2023

Abstract

Perinatal Nursing Education Related to Opioid Use Disorder

by

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MS, Chamberlain College of Nursing, 2018

BS, University of Hawai'i at Manoa, 2016

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

August 2023

Abstract

Opioid use disorder (OUD) contributes to severe perinatal and neonatal morbidity and mortality in the United States, leading to alarming complications for pregnant women, mothers, and newborns. Complications the mother experiences with OUD include increased mortality, overdose, infections, endocarditis, narcotic bowel syndrome, and accident-related injury. Complications the newborn can suffer include neonatal abstinence syndrome, respiratory depression, microcephaly, and sudden infant death syndrome. Framed within the analysis, design, development, implementation, and evaluation model of instructional design, this project aimed to plan, implement, and evaluate a staff education program on opioid use disorder. The staff education program was presented to 13 perinatal nurses. A participant's change in knowledge from the pretest to the posttest was analyzed using descriptive statistics. The group mean of the pretest was 67%, the mean of the posttest was 89%, for the mean change in knowledge was 23%. Evaluation of the educational program was completed by the participants using a dichotomous scale with met=1 and not met = 2. Analyzed using descriptive statistics, the mean was 1, showing that the participants felt the program met all the objectives. The participants recommended that the program be presented to nurses outside of the perinatal unit because of the need to increase knowledge about OUD in caring for all patients afflicted with the disorder. They also recommended having a longer period of time for the presentation. The impact of an increase in nurses' knowledge of OUD, neonatal abstinence syndrome, and nurses' bias/attitudes may enhance the health of pregnant women, mothers, and newborns, improving patient outcomes and the human condition.

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Dedication

This DNP project is dedicated to my grandfather, Lewis Andrade, who always believed I was capable of greatness and nurtured that in me. To my grandmother Sheila who believes that learning is lifelong and encourages me to reach for the stars. To my parents, Stephanie and Manuel, for their continued encouragement, sacrifice, and support during my academic journey. This project is also dedicated to my husband Paul and my beloved children, Kahalaomapuana and Kolton, for their inspiration and drive for me to accomplish my academic dream and their unwavering support and belief in me.

I would also like to dedicate this project to all nurses and patients. Nurses continue to be the backbone of the American healthcare system. Your knowledge, impeccable skills, and commitment form the foundation of patient care. May we strive for change and better healthcare outcomes among patients and their lives.

Acknowledgments

I wish to express my heartfelt appreciation for my project chair, Dr. Joan Moon, for her incredible leadership, mentorship, and brilliance throughout this project. From start to finish, she spent tireless hours encouraging and ensuring the completion of this project. She never gave up on me and never allowed me even to fathom the idea of quitting. I would also like to thank my second committee member Dr. Tracy Wright and university research reviewer, Dr. Jonas Nguh. The expert library staff also played a pivotal role in my success, spending hours supporting and advising me during the research of this project. I also want to thank all my professors throughout my academic journey who helped shape, encourage, and support me throughout this project and journey.

Next, my husband, Paul, spent countless and tireless days re-reading and editing this project while effortlessly encouraging me to persevere. Paul and my children were instrumental in my fulfilling my doctoral academic goal. Thank you to ke Akua (God) and anyone I may have forgotten who was instrumental in this project and my life.

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Section 1: Nature of the Project

Introduction

Opioids are a class of drugs that comprises illicit drugs (heroin) and prescription pain relievers (oxycodone, codeine, morphine, fentanyl, and others). According to Jarlenski et al. (2020), substance use, particularly opioids, contributes to severe maternal morbidity in the United States. The *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition* defines opioid use disorder (OUD) as a problematic pattern of opioid use leading to problems or distress (American Psychiatric Association, 2021). OUD through pregnancy leads to alarming complications for the mother and newborn. Complications the mother experiences with OUD include increased mortality, overdose, infections, endocarditis, narcotic bowel syndrome, and increased rates of accident-related injuries. Complications the newborn can experience include respiratory depression, microcephaly, and sudden infant death syndrome (Ahmad et al., 2019). OUD is characterized in patients as: taking larger amounts or taking drugs over a more extended period than intended, persistent desire or unsuccessful efforts to cut down or control opioid use, spending a great deal of time obtaining or using the opioid, craving or having a strong desire or urge to use opioids, problems fulfilling obligations at work, school or home, continued use despite having recurring social or interpersonal problems, giving up or reduction activities because of opioid use, usage in physically hazardous situations, continued use despite ongoing physical or psychological problems likely caused or worsened by opioids, tolerance, and taking opioids to relieve or avoid withdrawal symptoms (American Psychiatric Association, 2021).

Opioid misuse can lead to dependence in as little as 4-8 weeks, leading to withdrawal symptoms such as generalized pain, chills, cramps, diarrhea, dilated pupils, restlessness, anxiety, nausea, vomiting, insomnia, and intense cravings. In the past decade, there has been a steady increase in the use of opioids, leading to a rise in pregnant women developing OUD. According to the Centers for Disease Control and Prevention (2020), an estimated 33% of women of reproductive age filled an opioid prescription between 2008 and 2012.

Research identifies a marked increase in opioid use among perinatal women and mirrors a larger epidemic. According to Blair et al. (2021), rates of perinatal OUD have quadrupled and OUD among perinatal women increased 400% from 1999 to 2014 in the United States. Opioid-related death during pregnancy increased by over 200% from 2007 to 2016. Neonatal abstinence syndrome (NAS) rates have been reported, particularly in rural areas of the country (Aryana et al., 2020). In 2017 alone, more women perished of opioid overdose than motor vehicle accidents, further recognizing the demand to address this problem (Rizk et al., 2019).

Birth complicated by maternal OUD in the perinatal period in the United States increased more than fourfold between 1999 and 2014, resulting in a parallel increase in NAS (Rizk et al., 2019). The frequency of infant and maternal hospitalizations linked to opioid use grew from 5.1 to 8.7 per 1,000 hospitalizations and 13.4 to 17.9 per 1,000 patients between 2006 and 2012 (Substance Abuse and Mental Health Services Administration, 2015). From 2010 to 2017, data describe an increase in national rates of maternal OUD and NAS from 4% to 7.3%. Every 19 minutes, a newborn is diagnosed in

the United States with NAS, with an estimated 80 born per day (Hirai et al., 2021). NAS is a withdrawal syndrome among newborns whose mothers have used opiates, opioid agonists, or other substances during pregnancy. According to Hirai et al. (2021), NAS rates have significantly increased for 42 of the 51 states, including Hawai'i, from 1 per 1,000 births in 2000 to 5.80 in 2012. Neonates with NAS have substantially longer lengths of hospital stays, approximately 12 days longer, and higher hospital costs of more than \$14,600.

National, state, and regional organizations are aware of the impact the opioid epidemic has had on pregnant women, with new guidelines and resources being published (Rizk et al., 2019). Perinatal nurses play a pivotal role in providing care to women and infants, significantly impacting their treatment and experience. Of all the healthcare team members, nurses have the most frequent interactions with patients, accounting for up to 84% of nursing time, and provide the most pharmacological and non-pharmacological interventions for those with OUD seeking healthcare (Jackman et al., 2020). A nurse's knowledge of OUD and NAS and attitude, bias, and enriched knowledge and skills regarding patient diseases directly affect the quality of patient care (Jackman et al., 2020). The need for staff nurse education about OUD can be beneficial in maintaining effective nurse-patient relationships and improving the care of the perinatal mother and baby (Jackman et al., 2020). The potential impact of an increase in the nurses' knowledge of OUD could facilitate social change by establishing evidence-based practice within a caring environment. Additionally, increasing nurses' knowledge of

OD can improve patient outcomes, the human condition, and the social condition affecting patients, families, and communities.

Problem Statement

The problem identified for this Doctor of Nursing Practice (DNP) staff education project (SEP) is the need for a perinatal staff education program on opioid use disorder (SEPOUD) for the women and infants' health unit in the hospital for which this project took place. After speaking with several professionals at the hospital, including the director for clinic operations, the director for patient quality services, the supervisor for the Mother-Baby Unit, and the supervisor for the education department, I was informed that there is currently no education program (or guidelines within the facility in which I will implement this SEP) for antepartum and perinatal nurses regarding knowledge of OUD. The gap in practice for this DNP SEP project is the lack of knowledge by perinatal nurses in the Mother-Baby Unit, related to OUD and the effects this lack can have on the patient care of the pregnant woman, mother, and newborns. Therefore, this project aims to plan, implement, and evaluate a staff education program on OUD for the perinatal nurses in the hospital setting. Nurses are in a unique position to create positive social change. Increased knowledge centered around OUD decreases the negative attitudes of healthcare workers (Bell & McCurry, 2020). In addition, knowledge about OUD and nurses' bias is beneficial as opioid use and misuse continue to be a severe national crisis that affects public, social, and economic welfare (Bell & McCurry, 2020).

Purpose Statement

The gap in practice for this DNP SEP project is the lack of knowledge by perinatal nurses on the women and infants' health unit related to OUD and the effects the lack of knowledge can have on patient care of pregnant women, mothers, and newborns, which was addressed by the evidence and guided by the practice-focused questions:

- What evidence from the literature supports the need for a staff education program on OUD in the women and infant's health unit in the hospital where the SEPOUD will take place?
- After the presentation of the SEPOUD to perinatal nurses on the women and infant's health unit, will there be a change in knowledge from pretest to posttest?
- Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

Therefore, the purpose of this DNP project was to plan, implement, and evaluate a perinatal SEP on OUD (SEPOUD) for the women and infant's health unit of the hospital where the SEP will take place. Evidence indicates that nurses who understand the OUD disease process can provide more effective care with improved attitudes and clinical confidence in managing the OUD patients they encounter (Substance Abuse and Mental Health Services Administration, 2015). Providing nurses an opportunity to expand their nursing knowledge to facilitate the well-being of the pregnant woman, mother, and newborn also improves the patients' social condition.

Nature of the Doctoral Project

Evidence to Support the Project

Evidence for this DNP project was acquired through a review of the peer-reviewed literature using the following databases: MEDLINE, ProQuest, Embase, PubMed, Google Scholar, Cumulative Index to Nursing & Allied Health Literature (CINAHL), American College of Obstetricians and Gynecologists (ACOG), American College of Nurse-Midwives, The American Journal of Maternal Child Nursing, Advances in Neonatal Care, Obstetrics and Neonatal Nurses, American Academy of Pediatrics, position statements from the organization, and American Psychological Association.

Keywords and phrases include Opioid Use Disorder, neonatal opioid withdrawal syndrome, staff education, antenatal, maternal, pregnant, pregnancy, nurse, stigma, bias, and neonatal abstinence syndrome. Governmental organizations used include the Centers for Disease Control and Prevention (CDC), Substance Abuse and Mental Health Services Administration, and the Department of Health database.

Evidence to be Produced by the Project

The evidence from the literature was placed in the Literature Review Matrix and graded using the Fineout-Overhold and Melnyk's Rating System for the Hierarchy of Evidence for Intervention Studies tool with permissions (see Appendix B).

Approach

The analysis, design, development, implementation, and evaluation (ADDIE) model of instructional design was used for the project (see Appendix A). The ADDIE model consists of five phases to help nurses and healthcare practitioners translate

research findings into clinical practice to improve patient outcomes (Patel et al., 2018). In the first step of the ADDIE model, there is an analysis of knowledge gaps and identifying the project's purpose. The design phase turns analysis and theory into action (design), identifying methodology and strategies for program delivery. Program content is created (research and design) during the development phase, and in the implementation phase, the program is employed at the healthcare facility. Finally, the evaluation phase analyzes the program, identifies the program's success, and allows changes and improvements. The use of the ADDIE model will help this project reach all the goals set forth.

Planning

In the first phase of the ADDIE model, there is an analysis of knowledge gaps and identifying the project's purpose. The design phase turns analysis and theory into action (design), identifying methodology and strategies for program delivery. Program content (research and design) is created during the development phase. My committee chair and I discussed many topics of interest for this project. I further discussed these topics with managers, supervisors, administrators, and workers at the hospital. We decided that a staff education on maternal OUD would be excellent for the hospital. The organizational leadership has expressed support for the project. The literature was searched to support the project and graded and placed on the Literature Review Matrix (see Appendix B). I developed the curriculum from the evidence and the pretest/posttest from the curriculum. Three content experts (CEs) was selected to provide a formative evaluation of the curriculum related to the course objectives and evidence-based literature and validate the pretest/posttest items based on course objectives and curriculum.

Implementation

During the implementation stage of the ADDIE model, the program was introduced to the targeted audience, and the learning process began. Once the formative evaluation of the curriculum and content validation of the pretest and posttest is approved by the CEs, the program was implemented. The organization supports the recruitment of staff for education. The education implementation was provided at the hospital facility, in one of the conference rooms. First, the pretest was administered, then the education was presented, and finally the posttest was administered. The pretest identified the participants' current knowledge prior to the educational activity program. A posttest was then administered to reassess if the participants' knowledge increased. Impact evaluations of the program evaluation by participants and change in knowledge from pretest to posttest of participants occurred in this step.

Evaluation

The first set of evaluations was formative and took place during the planning step, including the curriculum evaluation by CEs and the content validation of the pretest and posttest items. During the implementation step, evaluations consisted of the pretest/posttest change in knowledge after implementing the educational activity and the evaluation of the education program by participants. Finally, a summary evaluation of the project, process, and my leadership was obtained from the CEs upon the project's conclusion.

Significance

Nursing is a continually progressive discipline to serve the interests of society centered around healthcare and advocates for social change. OUD produces a burden on society and impacts the social functioning of individuals and families. This project aligns with Walden's mission to promote social change by educating perinatal nurses about OUD and the perinatal patient and the effects on the newborn, thus optimizing the care nurses provide, which can significantly impact the wellbeing of the patient, infant, and family, advance the betterment of society, and aid in improving the human condition. Promoting maternal health and newborn health meets the needs of the individual, local and global community. Additionally, improving the knowledge of OUD, NAS, and bias among nurses can positively impact the organization, as improving knowledge of OUD can mitigate negative health implications for mothers and newborns.

Stakeholders are critical when implementing this project and engage depending on their skills and attributes. The hospital stakeholders were the mother and baby unit manager and women and infants' health nurses. These stakeholders were pivotal in their role in the perinatal and the healthcare organization. Using these stakeholders will allow for the potential to expand education to other healthcare workers in the facility and other facilities under the parent organization, impacting the state of Hawai'i. By addressing other hospital departments with knowledge regarding OUD and nurses' bias, the correlation between substance misuse and the healthcare system can be enhanced (Jukiewicz et al., 2017).

This SEPOUD can expand to different nursing practice areas and across the state of Hawai'i, implemented first in the different hospitals under the organization's umbrella and then in other hospitals. This project can also transfer into the clinic setting as nurses within the clinic and hospital settings care for patients, men and women, with OUD. The organization can add this program to continuing education modules presented to all healthcare professionals. This project can also transfer into the government sector by being presented to public health nurses, which can directly impact the community.

The SEP positive contributions to the healthcare field are many. Pregnant women's needs are often undetected and untreated, and they may not seek appropriate prenatal and addiction care. Nurses who can provide compassion and competence to perinatal women with OUD can positively affect the care they receive and decrease the negative attitudes of these women (Alexander, 2017; Bell & McCurry, 2020). Increasing nurses' knowledge regarding OUD, NAS, and nurses' bias among perinatal patients can improve patient outcomes and decrease economic costs (Alexander, 2017; Bell & McCurry, 2020).

Summary

This SEP is proposed to address the problem of the need to provide education for nurses in caring for the OUD patient and their infants, which has been shown to be lacking in the work setting, through an educational program addressing the evidence-based literature supporting the need for such education and the opportunity to show a change in knowledge by a pretest/posttest situation. This project aligns with the DNP Essential VII, *Clinical Prevention and Population Health for Improving the Nation's*

Health, and the DNP Essential VI, *Interprofessional Collaboration for Improving Patient and Population Health Outcomes*, defined by the American Association of College of Nursing (AACN, 2006). DNP Essential VII encourages DNP nurses to engage in evidence-based clinical prevention and population health, which achieves the goal of improving the population's health status in the United States (AACN, 2006). This project aligns with the Healthy People 2030 goals and initiatives, identifying that OUD has become problematic in recent years. The goal of Healthy People 2030 is to reduce the proportion of persons with OUD and the proportion of pregnant women who use illicit opioid pain relievers during pregnancy (Office of Disease Prevention and Health Promotion, 2021). Lastly, the SEP aligns with the Walden University DNP Manual for Staff Education, which guides DNP students to advance their understanding and proficiencies using evidence-based practices.

The lack of knowledge by the women and infants' health nurses related to OUD, NAS, and nurses bias was the driving force behind my desire to plan and evaluate a perinatal staff education curriculum and pretest/posttest on OUD to improve nurses' knowledge, attitude, and care.

In Section 2, there is a discussion about the ADDIE model used to guide this project. In addition, the relevance of this project to nursing practice will be discussed, including peer-reviewed journals, position statements, and use of opioids in the antepartum period, NAS, nurses' attitudes toward patients with OUD, nurses lack of knowledge of OUD, the local background and context of OUD and the effects of OUD on

the community, county, and state will be presented. I will conclude by stating my role as a DNP student, including my inspiration for conducting this project on OUD.

Section 2: Background and Context

Introduction

The problem identified in this DNP SEP was the lack of knowledge by perinatal and antepartum nurses related to OUD, the effects on patient care of the pregnant woman, mother, newborn, and nurses' bias. The problem identified was evidenced by discussions with several hospital staff members. The DNP project questions were as follows:

- What evidence from the literature supports the need for a staff education program on OUD in the women and infants' health unit in the hospital where the SEPOUD will take place?
- After the presentation of the SEPOUD to perinatal nurses on the women and infants' health unit, will there be a change in knowledge from pretest to posttest?
- Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

The ADDIE model provided the phases to develop this education project and is further discussed. The relevance of this project to nursing practice related to nurses' lack of knowledge, attitudes towards OUD patients, bias and stigma, and education of nurses on OUD are reviewed. This section also discusses local background and context, my role in this project, and the CEs' role.

The purpose of the SEPOUD was to develop, plan, and evaluate a staff education program addressing the gap in nurses' knowledge to increase said knowledge and present the evidence-based literature through a pretest/posttest analysis. This project aims to

enhance the care of pregnant women, mothers, and newborns and decrease the negative attitudes of healthcare workers.

Concepts, Models, and Theories

The ADDIE model concept has been around since the early 1950s but was further developed by Florida State University. At first, the ADDIE model was used by the United States armed forces, but slowly other disciplines adopted it. Initially, the model consisted of 19 steps and was later grouped into the five stages familiar today. The idea behind this model is that each phase is completed before moving on to the next. However, each phase can be revised as the steps continue, making the ADDIE model a more fluid and interactive model (Patel et al., 2018).

For this SEPOUD project, the ADDIE model was applied, providing an organized approach to analyzing needs, designing and developing a curriculum, and implementing and evaluating a program (Patel et al., 2018). The ADDIE model can be helpful, as the model considers learning theories, learners' needs, environment, and approaches necessary to train practitioners in evidence-based practice. The ADDIE model aids in designing a curriculum or training geared toward generating detailed learning outcomes and behavioral changes (Patel et al., 2018).

Nurses' competencies are essential to conducting quality nursing care. The ADDIE model is an instructional design model that facilitates nurses' learning process in achieving competencies and can be used to create a curriculum in the healthcare field (Cheung, 2016). This model aims to aid educators in developing curricula for diverse

fields. The ADDIE model can develop competency training methods with the analysis, design, development, implementation, and evaluation process.

Phases of the ADDIE Model

Analysis

The first phase of the ADDIE model looks to discover knowledge levels, skills, and critical thinking. The learner's need is ascertained along with the objectives and ideas on what needs to be taught to accomplish goals. The target audience is determined, constraints are assessed, the goal for the project is identified, and the project's scope is determined (Cheung, 2016; Patel et al., 2018).

Design

The second stage of the ADDIE model determines how materials will be learned. Learning goals are identified, the project's content is analyzed, and how the project will be conducted. Learning goals and the project's content are ascertained from needs identified in the analysis phase. An overview and description of how the instructional design will be delivered to meet the objectives are also identified (Cheung, 2016; Patel et al., 2018;). Planning of the learning modules and guidelines concerning policies, roles, and skills are considered.

Development

The third phase of the ADDIE model is the development phase. During the development phase, the learning materials and environment are created, collaboration with the CEs for content review and validation occurs, and each component of the

instruction is planned, meeting elements in the design phase (Cheung, 2016; Patel et al., 2018).

Implementation

During the implementation phase of the ADDIE model, instructions and learning materials are delivered (using the methods identified in the design and development phases) to the participants, in this case, perinatal nurses at the participating hospital (Cheung, 2016; Patel et al., 2018).

Evaluation

The final phase of the ADDIE model is the evaluation phase. During this stage, the effectiveness and efficiency of the project are measured. Many disciplines have adopted the ADDIE model, including healthcare (nursing). The ADDIE model is one of the most used learning models and provides a valuable and clear standard to foster curriculum, change participants' behaviors, and increase knowledge among participants (Cheung, 2016). The ADDIE model in creating this SEPOUD allows for building a practical educational project to increase knowledge among perinatal nurses.

Relevance to Nursing Practice

Use of Opioids in the Antepartum Period

Over the last 20 years, a steady rise in OUD has occurred among young people. OUD in the perinatal population is more common among those who are young, White, single, low-income, high school educated or less, unemployed, and residing in rural northeastern or southern United States (Wortham & Bianchi, 2022). According to self-reported data collected in 2019 with 21,488 respondents, nearly 7% of women reported

using opioids for pain relief during pregnancy, and 1 in 5 pregnant women reported misuse of opioids obtained from a non-healthcare practitioner and using them for a reason other than to relieve pain. An estimated 21% of pregnant women filled an opioid prescription during pregnancy, 27.1% indicated wanting or needing to cut down or stop use, and 68% received counseling from a healthcare practitioner on opioid use during pregnancy and the detrimental effects on newborns. In comparison, 32% reported no counseling on the impact on mothers and infants (CDC, 2020).

Nurses' Knowledge and Attitudes Toward the Patient With OUD

Lack of knowledge is one reason nurses and other healthcare professionals treat patients with OUD with a negative attitude. When treated negatively, patients are more reluctant to continue treatment programs, either for themselves or their babies, and are reluctant to seek future treatments (Alexander, 2017).

Stigma and negative attitudes impact mothers' willingness to access health-related services. An integral part of family-centered care is respectful and trusting relationships between parents, nurses, and infants. Stigma/bias can affect nurses' willingness to interact with parents. Negative and judgmental attitudes are prominent within healthcare settings. Lack of knowledge, empathy, and understanding is recognized as contributing factors to nurses' attitudes toward patients (Shannon et al., 2021).

Nurses' attitudes toward addiction directly affect the recovery success and health outcomes of pregnant women suffering from OUD. Negative attitudes impact how nurses interact with mothers who have OUD, causing them to be less engaged in inpatient care, more task-oriented, and less empathetic towards mothers (Recto et al., 2020). The

literature reported that healthcare practitioners exhibiting negative attitudes report a lack of desire to work with patients reporting substance use.

In a qualitative study by Horner et al. (2019), a one-on-one interview was conducted to evaluate the attitudes, perceptions, and training needs of nurses in the inpatient setting when caring for patients who have OUD. Data from the one-on-one interviews with 22 nurses at an academic medical center in Boston, MA, identified six themes: stigma, pain, burnout, communication, safety, security, and opportunities for change. Nurses recognize the need for expanded role support and structured policies centered around OUD. Findings from this study highlight the need for further development of programs targeting organizational culture and nurse quality for patients who present with OUD. The study concluded that nurses are motivated to improve their scope and quality of care for patients with OUD; however, they need more proficiencies and support (Horner et al., 2019).

Attitudes are essential within healthcare and allow practitioners and patients to understand how people perceive issues and processes in care. Strategies to address nurses' role in improving care for patients with OUD are multifactorial. This study highlighted the need to develop education programs for nurses supported by organizational change (Horner et al., 2019). Nurses often lack knowledge associated with OUD and have negative attitudes toward patients with substance disorders. Nurses' negative attitudes towards patients, such as stigmatization, biases, labeling, and stereotyping, lead to premature discharge and neglect, affect the quality of patient care delivered, and create dissatisfaction among patients and nurses. Within healthcare,

understanding attitudes are critical to providing collaborative, patient-centered care. Nurses' attitudes toward the OUD patient are not straightforward. Factors such as stigmatizing attitudes and actions among nurses toward patients with OUD are linked to worse patient outcomes, delay in medical care, less engaging clinical care, nondisclosure of risky behaviors, rushed visits, and decreased drug treatment compliance (Horner et al., 2019). Stigmatization, labeling, and stereotyping of patients lead to premature discharge, neglect, and feelings of frustration, anger, and depression. Nurses' negative attitudes toward the afflicted patient can cause delayed care, advocacy failure, rushed delivery of interventions and care, criticism, and disapproval among patients (Horner et al., 2019). Nurses' knowledge, attitude, and practice can directly affect patient outcomes. During a typical day at a hospital, nurses spend most of their time with patients, significantly impacting their experience. According to Horner et al. (2019), nurses encounter growing quantities of patients with OUD. Nurses spend the most time with these patients. However, attitude and stigma can impede the therapeutic connections between nurses and patients. Nurses not confident in their proficiencies to support OUD patients' treatment are less likely to engage with patients actively.

OUD is considered a highly stigmatized condition. Stigma is a well-documented global barrier to health-seeking behaviors and engagement in healthcare. According to Blair et al. (2021), stigma is a primary consideration for why pregnant persons avoid disclosure of substance use issues and avoid prenatal care. Stigma results in labeling individuals or groups as different enabling discriminatory behaviors against them. The perception that OUD is a social or criminal problem rather than biological contributed to

the refusal of healthcare for many pregnant and parenting women and is intensified during the perinatal period (Recto et al., 2020). Pregnant and parenting women with OUD frequently encounter stigma in the form of punitive and exclusionary healthcare practices. They also describe feelings of exclusion of care for their infants, subjective scoring of NAS symptoms, and verbal/non-verbal judgment from healthcare providers (Recto et al., 2020).

Shannon et al. (2021) identified that caring for NAS infants has many stigmas and can become taboo. In their qualitative study, they looked to identify the nurse's involvement in caring for infants with NAS (with a focus on pharmacological and nonpharmacological interventions). The study identified five themes that emerged among nurses, including the complex care needs of this patient population, prioritizing physiological care, compassion fatigue, lack of continuity of care, and stigma. The findings from this study identified that further research is necessary to implement and evaluate the effectiveness of models of care in improving patient outcomes and nurses' experiences of providing care to infants with NAS.

The condition of NAS is perceived as a negative topic, arousing nurses' feelings of alarm towards the mother having a history of drug addiction. There is a bias among nurses to feel empathy and compassion towards infants and parents in the nursery that does not have NAS and feel sympathy towards these patients (and parents) when they witness the withdrawal symptoms of infants with NAS, along with the behaviors of the parents connected with a history of substance use. Nurses have described stress when

working with this population and find it difficult to set aside personal biases and provide adequate care (Recto et al., 2020).

The stigma and bias associated with NAS infants and OUD mothers are embedded into the culture of care, leading parents to be blamed and deemed undesirable by nurses (Shannon et al., 2021). One participant in the study shared, “Somehow there is a culture, we have got a NAS baby, must come from a mummy not controlling herself very well, and there is a culture of negative feeling towards the family behind this NAS baby.” In another qualitative study by Recto et al. (2020), the researchers wanted to identify the role of stigma in the care of families impacted by NAS. In the study, mothers of infants with NAS face different challenges, including stigma. Women of babies with NAS often feel ostracized, excluded, and shamed. Nurses providing care to these women and infants report feelings of ethical and moral distress and compassion fatigue. Judgment towards mothers from nurses upon care causes negative emotions experienced by nurses. The study identified that further examination is necessary to continue to assess and explore the efficacy of strategies for counteracting harmful stigma in this patient population. Nurses’ stigma or bias towards mothers dealing with OUD and caring for their babies with NAS discourages providing family-centered care. Women with OUD express worry and stress over child welfare involvement due to nurses’ responses which is counterproductive to their recovery and a potential trigger for substance use relapse (Recto et al., 2020).

Neonatal Abstinence Syndrome

The prevalence of neonatal opioid withdrawal syndrome (NOWS), previously known as NAS, has increased consistently to the upsurge in opioid dependence (Wortham & Bianchi, 2022). NAS may be present secondary to the use of licit and illicit substances, including morphine, methadone, heroin, buprenorphine, prescription opioids, antidepressants, anxiolytics, and other substances (Shannon et al., 2021). According to Alexander (2017), one baby is born diagnosed with NAS every hour in the United States, and an estimated 4% of NICU beds are occupied by babies diagnosed with NAS.

Infants affected by opioid use experience symptoms often related to the opioid they were exposed to. There are 11 main symptoms associated with OUD: generalized pain, muscle pain, nausea, diarrhea, sweating, rhinorrhea, tearing, dilated pupils, tremors, goosebumps, restlessness, and anxiety (The American College of Obstetricians and Gynecologists, 2017). These symptoms include tremors, seizures, overactive reflexes, increased fussiness, excessive crying, high-pitched crying, poor feeding/sucking, tachypnea, fever, blotchy skin, sweating, difficulty sleeping, diarrhea, vomiting, sneezing, and stuffy nose. Babies with NAS are also at an increased risk of developing: Jaundice, low birth weight, seizures, sudden infant death syndrome, developmental delays, motor problems, behavioral problems, learning problems, speech issues, language issues, sleep issues, ear infections, vision problems (March of Dimes, 2019).

Infants presenting with NAS are unique; thus, complex care is critical. Infants diagnosed with require complex care. Shannon et al., (2021) conducted a qualitative study to identify nurses' involvement in caring for infants with NAS. Five themes

associated with nurses' care with NAS include complex patient care needs, prioritizing physiological maintenance of the infant with NAS, compassion fatigue, lack of continuity of care, and stigma). The study concluded that further research is necessary to implement and evaluate the effectiveness of models of care in improving patient outcomes and nurses' experiences of providing care to infants with NAS.

According to Shannon et al., (2021), the more senior the nurse, the better the care is for the infant. Additional complex care for infants with NAS includes:

- Extra time to manage symptoms effectively
- Additional time to support families appropriately
- Increased nursing time
- And adequate standards of care (which many systems do not facilitate)

Additionally, specialized knowledge required to care for infants with NAS is considered a barrier as the allocation of senior nurses or midwives to care for infants is measured as best practice, identifying the need to increase knowledge of NAS among nurses to allow for proper care of infants presenting with NAS and their families who present with OUD complexities (Shannon et al., 2021).

Eat, Sleep, Console

Nonpharmacological interventions are preferable among patients with NAS. The principal first-line care therapy for NAS incorporates nonpharmacological treatment, and the eat, sleep, console is one of the new approaches. The eat, sleep console approach is a simplified family integrative approach to monitoring and treating newborns with NAS. Performed by the mother (or caregivers), the NAS approach can be highly successful in

reducing the severity of the syndrome. The eat, sleep, control approach sees the nurse teach mothers and support persons how to manage symptoms of NAS by comforting the baby and reducing the need for medical interventions (Miller et al., 2021).

Evaluating infants in three capacities, the ability to eat, sleep, and be consoled by the caregiver within ten minutes of crying is emphasized by ESC. Effective outcomes include reduced medication, shorter length of hospital stay, and decreased cost. According to Wortham & Bianchi (2022), implementation of the ESC intervention reduces hospital length of stays from 10.3 to 4.9 days, 48% reduction in hospital cost per day, 34% improvement in breastfeeding, and pharmacotherapy decreased from 92% to 19%.

Nurses' Role in Eat, Sleep, Console

Nurses provide instruction and participatory assistance in the eat, sleep, console approach and take on a maternal and family educator role along with a coach and support person. Instruction should be given in a nonjudgmental and empowering manner. The nurse conducts eat, sleep, and console assessments every three hours, usually after feeding. The mother is also actively engaging in the assessment process. Her input is paramount to interpreting the newborn's well-being and affords the most significant potential benefit to the baby (Wortham & Bianchi, 2022).

When transitioning nurses to the ESC approach, consistency is critical to ensure nurses are prepared to move from subjective-based assessments to family-integrative and focused assessments. Nurses must establish assessments, reassessments, huddle requirements, and appropriate documentation (Wortham & Bianchi, 2022).

Evidence from up-to-date and current quality projects supports positive implications for organizations and dyads where the caregiver applies ESC. Positive implications include a reduced length of stay among newborns, reduced duration of pharmacotherapy, and reduced medical costs. Another benefit of the ESC approach is that breastfeeding rates improve, affording positive benefits for the mother and infant and continuously improving newborn regulation and bonding. Maternal and newborn attachments are empowered (Wortham & Bianchi, 2022).

Education of Nurses on Opioid Use Disorder

Evidence suggests that educating nurses can change their attitudes, expand their clinical knowledge and increase positive patient outcomes. Literature suggests that nurses need to have education regarding the mother-infant couplet, OUD, and the care of infants with NAS (Tobin, 2018). Literature also argues that nurses need to be educated to improve care, improve the management of patients, reduce stigma, reduce stereotyping, and increase knowledge of addiction (Tobin, 2018). In a literature review study by Tobin, (2018), the study aimed to bridge the knowledge gap in nursing education related to caring for infants with NAS and the mother's support. Following the presentation of NAS, a post-test demonstrated increased knowledge of NAS. This study identifies an educational need for nurses to improve their knowledge and skills when caring for infants with NAS.

Along with a lack of knowledge, nurses report a lack of education and facility guidelines within and for clinical practice (Romisher et al., 2018). Studies identify the importance for hospitals to improve staff support, implement protocols, and ensure

consistency in practice (Loyal et al., 2019). In addition, establishing a therapeutic relationship between nurses and mothers is imperative. According to Alexander (2017), women have expressed awareness that nurses do not show comprehension of addiction and recovery during the perinatal and postpartum phases. Mothers of babies with NAS often feel guilty about the withdrawal symptoms their babies are experiencing (Alexander, 2017).

Countertransference is a term used to describe the unconscious redirection of a practitioner's feelings, attitudes, and desires about a close personal relationship with the patient and occurs commonly among healthcare practitioners working with patients with a substance disorder. When nurses are not given appropriate tools within a healthcare organization, including educational tools to manage adverse reactions to patients with a substance disorder, adequate care may not be delivered.

Nurses' attitudes are essential to nursing because nurses are in the most frequent contact with patients with SUD seeking health care. Studies maintain that nurses are unprepared to care for patients with OUD due to a lack of education. Nurses have self-reported inadequate knowledge in screening, identification, and care of patients with OUD. Insufficient education of patients with OUD can cause unnecessary suffering and poor patient outcomes. For nurses to be influential in the care of OUD patients, they must be educated, competent, and knowledgeable in providing care and understanding their professional role (Bell & McCurry, 2020). According to Horner et al., (2019), nurses have expressed interest in learning about OUD and ways they can improve care for this

population. Nurses have offered insight into learning more about OUD and include CEU credits or educational, structured training/programs, making this project valid.

Local Background and Context

The intended setting for this doctoral project is the hospital where antepartum services are provided and the hospital's obstetrical unit where labor/delivery, postpartum, and newborn care are provided on one of the islands of Hawai'i. The mother-baby department has 32 labor and delivery nurses, four obstetricians, one front desk receptionist, and one nurse aide. The four obstetric hospital physicians are also in the clinic. According to the nurse manager, opioid tests are not routinely administered to pregnant patients. However, if there is suspicion about maternal drug use, the physicians order a drug screen to be done at clinical labs on the island. While the daily patient caseload varies due to out-of-clinic surgeries scheduled on a rotating basis, each physician sees up to 26 patients each full day. There are currently no education programs in place for OUD, thus illuminating a gap in practice that presently exists, which this project addressed. The organization has given verbal approval and has cleared me to present this project.

My Role

Professional Context and Relationship to the Project

Opioid addiction and the overdose issue has been a growing problem in Hawai'i for the last decade. Over the last few years, the news in Hawai'i has reported increasing opioid overdoses and a crackdown within law enforcement among people selling opioids. In a news report by Hawaii News Now (2021), the island where the SEP will take place

had five overdose deaths in a single month. Since September 2021, opioid overdose-related calls have more than quadrupled. In September 2021, 18 opioid overdose calls were responded to, a massive jump from the month previously, which was four. In another news article by Hawai'i Public Radio (2021), during a two-month-long crackdown on opioid sales on the island, over 800 people were arrested.

As a Family Nurse Practitioner, my desire and pull have always been pediatrics. As a FNP, I try to keep up to date with the current issues within the community. In recent years, like many places on the mainland, opioids have continued to be a significant issue within the community.

Relationship to the Topic, Participants, Evidence, or Institution

The main hospital on the island is where this DNP project is taking place. My relationship with this institution is unique, as I have grown up there since my mother (who continues to work there) and my father both worked there. I have a deep connection to this hospital, the people who work there, and the community making this project especially special. The topic of this project is extremely important and close to my heart as I have had many family members that have and continue to deal with substance abuse issues. The opioid epidemic reaches all locations, including Hawai'i, and affects all socioeconomic populations; and ethnicities, though Pacific Native Hawaiians are disproportionately affected here in Hawai'i. I conducted evidence-based literature searches and reviews to gather this project's current and relevant data and information.

Motivation for the Project

My motivation for this project stems from my heritage. As a Native Hawaiian woman, I am acutely aware of how the Native Pacific Islander population is disproportionately affected by diseases, and the opioid epidemic. On a more personal note, substance abuse has always been something some of my family members have struggled with, including during the perinatal period.

As a master's and doctoral-prepared nurse, I must enhance and improve nurses' knowledge and healthcare topics. Through this project, I have the opportunity to address nurses' lack of knowledge about opioid addiction, nurses' stigma, and bias centered around the OUD perinatal patient and care for a baby with NAS symptoms. Addressing nurses' lack of knowledge about OUD can improve nurse-patient relationships, thereby increasing positive patient outcomes for mothers and infants. Knowledgeable nurses can also ensure a positive experience for mothers allowing them to seek healthcare and maintain their plan of care, bridge a gap in practice, and continue to create social change. I am also motivated to bring evidence-based information regarding OUD to improve nursing practice and the quality of care and life among OUD patients.

Potential Biases

This DNP project was conducted without any potential bias. I was not offered any compensation that may have influenced this project's successful completion and implementation, and I did not have any affiliations.

Role of the Content Experts

The CEs evaluated the curriculum relative to the literature review matrix and the objectives. The CEs also validated the pretest/posttest items relative to the objectives and curriculum. After completing this project, the CEs also completed summary evaluations of the program, process, and my leadership. The CEs additionally offered suggestions for further improvement.

Summary

In Section 2, the practice-focused questions and purpose of this SEP were re-stated and addressed through the application of evidence-based sources to bridge the gap in practice for this DNP SEP project is the lack of knowledge by perinatal nurses on the women and infants' health unit related to OUD and the effects the lack of knowledge can have on patient care of pregnant women, mothers, and newborns. The ADDIE model for evidence-based practice was discussed as the guiding model for this project. The ADDIE model outlined the project in addressing the problem through planning, implementing, and evaluating the SEPOUD. The relevance of this project to nursing was also discussed with evidence-based literature discussing topics significant to this project. My role within this project, biases, and the role of CEs were addressed.

In Section 3, the collection and analysis of evidence for this project will be discussed. The section will begin with an introduction, followed by a discussion on the practice-focused questions, sources of evidence, participants, procedures, CEs packet, content validity index tool, evaluation of staff education program by participants,

pretest/posttest change, summary evaluation and analysis and synthesis of the evidence collected.

Section 3: Collection and Analysis of Evidence

Introduction

The problem identified in this DNP project is the need for staff education on OUD, NAS, and nurse bias for perinatal nurses in the women and infants' health unit in the hospital for which this project took place. There are no education programs or guidelines currently in place within the hospital setting in the main hospital on the island. Nurses' lack of knowledge on OUD affects patient care delivered to the pregnant woman, mother, and newborn. Additionally, this lack of knowledge may impact the nurses' care and attitude toward patients with OUD, thus affecting the care delivered to both mother and child. Increased knowledge about OUD can decrease the negative attitudes of healthcare workers toward patients with OUD, thus affecting the care delivered to both mother and newborn.

This project will address the gap in practice related to the lack of knowledge of perinatal nurses on the women and infants' health unit through the evidence and guidance by the practice-focused questions. This accomplishment will be achieved through planning, implementing, and evaluating a SEP of OUD. The guiding practice questions for this project are:

- What evidence from the literature supports the need for a staff education program on OUD in the women and infants' health unit in the hospital where the SEPOUD will take place?

- After the presentation of the SEPOUD to perinatal nurses on the women and infants' health unit, will there be a change in knowledge from pretest to posttest?
- Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

The Walden University DNP Manual for Staff Education provided the framework for this project, and the ADDIE Model of Instructional Design (see Appendix A) was the model used to frame the SEP. The ADDIE model provides an organized approach in analyzing the participants' learning needs, designing and developing a curriculum, and implementing and evaluating a program (Patel et al., 2018). The ADDIE model has been used in many disciplines and helps address behavioral changes among participants.

Section 3 of this project includes the practice-focused questions and evidence sources produced to support this project. The sources of evidence included the appendices (Literature Review Matrix, Curriculum Plan, Evaluation of the Curriculum, Pretest/Posttest, and Content Validity). Section 3 also includes an analysis and synthesis of the evidence collected.

Practice-Focused Questions

The U.S. Department of Health and Human Services has classified OUD as a national epidemic, affecting every part of the world. Hawai'i is no different, as opioid abuse continues to be a developing crisis in Hawai'i (Hawaii Pacific Health, 2018). In 2017 alone, 1 in 5 deaths among young adults were opioid-related, and opioid-related deaths exceeded the number of deaths from motor vehicle fatalities. The opioid trend in

Hawai'i is expected to increase as Hawai'i is classified as a High-Intensity Drug Trafficking Area due to the isolated location and high tourist traffic. While data are limited, the Centers for Diseases Control and Prevention (2019) identified that in 2019 there were 242 drug overdose deaths in Hawai'i (15.9 per 100,000 people). In October 2021, the Drug Enforcement Agency on the island where the project will take place arrested more than 800 people on sales of illegal drugs and seized nearly 2 million pills laced with synthetic opioids. Opioid addiction and overdose have continued to grow on the island, with six opioid deaths in 2021, a considerable difference from the two deaths noted in 2020 (Hawaii Public Radio, 2021).

The gap in practice for this DNP SEP project is the lack of knowledge by perinatal nurses in the women and infants' health unit related to OUD and the effects this lack of knowledge can have on patient care of pregnant women, mothers, and newborns. This project aims to "bridge the gap" and increase perinatal nurses' knowledge of OUD, NAS, and bias. Providing nurses an opportunity to increase their knowledge about OUD, NAS, and nurses' biases can improve the well-being of the pregnant woman, mother, and newborn, thus improving patient outcomes and the social condition, in addition to improving the well-being of the pregnant woman, mother, and newborn. This project can positively impact healthcare organizations and mitigate adverse health implications. The guiding practice questions for this project are:

- What evidence from the literature supports the need for a staff education program on OUD in the women and infants' health unit in the hospital where the SEPOUD will take place?

- After the presentation of the SEPOUD to perinatal nurses on the women and infants' health unit, will there be a change in knowledge from pretest to posttest?
- Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

This SEPOUD project was designed to provide education about OUD to perinatal nurses at the obstetrical hospital. This project aims to improve knowledge of the disease, knowledge of NAS, negative attitudes and bias toward the OUD patient, and quality of care delivered to newborns and mothers.

Sources of Evidence

The evidence gathered to support this DNP project included peer-reviewed literature, and the collection and analysis of the sources of evidence provide an appropriate way to address the practice-focused questions. Sources of evidence include databases and publications from MEDLINE, ProQuest, Embase, PubMed, Google Scholar, CINAHL, ACOG, American College of Nurse-Midwives, Obstetrics and Neonatal Nurses, American Academy of Pediatrics, and position statements from the organization. Governmental organizations used as sources of evidence include the Centers for Disease Control and Prevention, Substance Abuse and Mental Health Services Administration, and the Department of Health database. Sources of evidence also came from local news articles and coverage, including Civil Beat and KHON2 New Now. A Literature Review Matrix was developed for each peer-reviewed article (see Appendix B).

The key Boolean terms and phrases used for the literature search addressing this SEPOUD include *or, and, OUD, NAS, nurses bias, nurses' stigma, perinatal, and nurses' attitudes*. The phrases used to acquire literature support for this project included phrases such as *nurses' knowledge related to substance abuse, SUD AND pregnant women AND baby health, SUD AND pregnant women, nurses' knowledge AND neonatal abstinence syndrome OR neonatal withdrawal syndrome OR NAS*. Researching for specific data and sources included *incidence of neonatal abstinence syndrome AND neonatal abstinence syndrome*. To determine nurses' knowledge of OUD/NAS and how nurses learn, phrases included *improve knowledge AND OUD AND perinatal nurses, nurses' knowledge AND attitude AND substance use disorder, nurses' knowledge AND NAS, increasing nurses' knowledge AND OUD, opioid use disorder in pregnancy, nurses' knowledge r/t substance abuse, nurses' knowledge AND OUD, effective nursing education, continuing education on OUD, opioid use disorder in critical care, improving care for NAS, OUD education, consensus bundle on opioid use, role of perinatal nurse on opioid use*. Researching for nurses' attitudes, bias, and stigma, key phrases and terms included *compassionate care AND OUD, compassionate care AND NAS, nurses' attitudes toward SUD patients, caring for pregnant women AND OUD/NAS*. To determine the most effective model for this SEPOUD, terms and phrases used included *models of care for NAS, ADDIE model AND nurses' attitudes, practice change models, and ADDIE model*. To ensure data acquired for this project is within appropriate time frames, articles from 2015 to 2022 were further specified during searches.

Sources of evidence to address the practice focus questions generated by the project came from the literature review matrix in which the Fineout-Overhold and Melnyk's Rating System for the Hierarchy of Evidence for Intervention Studies tool was used with permission (see Appendix B), the Curriculum Plan (see Appendix C), and the Pretest/Posttest (see Appendix E). Evidence generated from this project was shown in the Curriculum Plan Evaluation by CEs (see Appendix D), Pretest/Posttest Content Validation by CEs (see Appendix F), and Pretest/Posttest Change in Knowledge by Participants (see Appendix G). Additional evidence came from the Staff Education Program (see Appendix H) and the Evaluation of the Staff Education Program by Participants (see Appendix I).

Participants

The SEP comprises two participant groups: the CEs and the SEPOUD participants. Upon approval of the proposal, an email was submitted to each CE to request participation. The CEs were selected for their expertise, ability to address practice-focused questions, and knowledge of the literature. The first CE has a Doctor of Nursing Practice, is a Board-Certified Family Nurse Practitioner, and is an associate professor at a university in the state. The second CE has a DNP degree, is a Board-Certified Adult Nurse Practitioner and Women's Health Nurse Practitioner and is a professor at a university in the state. The third is a Hawai'i Board-Certified OB-GYN. The second group of participants comprised 16 mother/baby nurses from the hospital's women and infants' health unit.

Procedures

My Walden University project chair developed the SEPOUD templates used to organize the work to ensure a uniform standard for the DNP project. Reliability and validity have yet to be performed for these templates as they are not measurement tools. The Fineout-Overhold and Melnyk's Rating System for the Hierarchy of Evidence for Intervention Studies tool with permissions (see Appendix B) were developed by experts to appraise the literature review components and are not subject to validity and reliability testing.

Content Experts Packet

Each CE received a CE packet anonymously. Each packet had an alphabet assigned to all the material to ensure confidentiality. A Content Expert Letter introducing myself and the project was included in the packet (see Appendix J). The letter included instructions for completing the information in the packet and the best way to contact me. The packet also included the Literature Review Matrix (see Appendix B), the Curriculum Plan (see Appendix C), the Curriculum Plan Evaluation by CEs (see Appendix D), the Pretest/Posttest (see Appendix E), and the Pretest/Posttest Content Validation by Content Experts (see Appendix F).

Staff Education Program

A PowerPoint presentation was developed based on the evaluation of the curriculum and content validation of the pretest/posttest (see Appendix H).

Pretest/Posttest Change in Knowledge by Participants

The Pretest/Posttest questions (see Appendix E) were developed based on the curriculum objectives and curriculum to assess the participants' knowledge before and after completing the SEPOUD. Participants in the education program completed a pretest identifying their current understanding of OUD, NAS, and nurses' bias at the beginning of the presentation. The perinatal nurses then completed the posttest assessment at the end of the program. Packets were created for each participant including a randomly assigned number, pretest, PowerPoint presentation, posttest, and program evaluation. It was explained that the participants are to put their randomly assigned number at the top of their pretest and posttest to allow easy compilation of results and evaluation of the change in knowledge. These packets were handed out before administering the pretest while I was out of the room. The nurse manager collected the pretest, posttest, and evaluations anonymously and placed them in a folder.

Evaluation of the Staff Education Program by Participants

The Evaluation of this Staff Education Program by Participants (see Appendix I) is centered on the course's objectives relative to the curriculum. Once the presentation of this project was completed, the participants evaluated the program. To ensure anonymity, I made sure to leave the room. The participants placed the evaluations in a blank envelope. A volunteer who is one of the participants delivered the envelope to me once they were all completed. I then analyzed and shared the results in Section 4.

Evaluation of the Staff Education Project, Process, and My Leadership by Content

Experts

Once the SEP was completed, the CEs were asked to evaluate the project, process, and my leadership by answering open-ended questions (see Appendix K). I assigned each CE with a letter to the evaluation to ensure anonymity. Results were thematic and discussed further in Section 4.

Protection

To ensure the protection of the participants and SEP products, I obtained approval from the hospital I partnered with for this project. Due to this project being a SEP, no patient contact occurred; thus, the ethical considerations are limited to the anonymity of CEs and nurses participating in the educational session. DNP project approval was acquired from Walden University's internal review board to ensure no identifiers of any participants, location, or facility. I complied with the project site organization policies. Additionally, all paperwork was coded, and Form A was completed after the proposal was approved. Paperwork for this project was retained in a secured file and will be kept for 5 years then shredded and disposed of appropriately.

Analysis and Synthesis

Information found in the analysis and synthesis will include a Curriculum Plan Evaluation by Content Experts Summary (see Appendix L), Pretest/Posttest Content Expert Validity Index Scale Analysis (see Appendix N), Summary of the Evaluation of the Staff Education Program by Participants (see Appendix M), and Summary Evaluation Results of the Staff Education Project by Content Experts (see Appendix O).

Curriculum Plan Evaluation by Content Experts Summary

The CEs completed the curriculum evaluation relative to the literature review evidence (see Appendix L). They used a dichotomous scale of met = 1 or not met = 2, with additional comments identifying any problems, understanding of the content, or if the content does not speak to the objectives. Findings were reported in Section 4 using descriptive statistics.

Pretest/Posttest Content Experts Validity Index Scale Analysis

The Pretest/Posttest Content Experts Validity Index Scale Analysis (see Appendix N) was completed using a 4-point Likert scale according to their relevance to the curriculum content (1=*Not Relevant*, 2=*Somewhat Relevant*, 3=*Relevant*, 4=*Very Relevant*). The item content validity index was calculated using the number of experts rating “relevant” or “very relevant” for each item, with a score of 1. In contrast, a score of “somewhat relevant” or “not relevant” received a score of zero, which was totaled and then divided by the total number of experts. The Scale CVI was calculated by adding all I-CVI item results and dividing by the total number of items. This value then identified the S-CVI. Each item has an individual I-CVI. Outcomes were reported using descriptive statistics, conveyed, and synthesized to finalize the program.

Summary Evaluation of the Staff Education Program by Participants

The Summary of the Evaluation of the Staff Education Program by Participants (see Appendix M) was analyzed to support recommendations for further improvements to the SEPOUD. A dichotomous scale was used for the participant’s evaluation of the objectives relative to the presented curriculum (see Appendix M). Each objective was

rated with either *met = 1* or *not met = 2*. Findings were completed by descriptive statistics and reported in Section 4.

Pretest/Posttest Change in Knowledge by Participants

The pretest/posttest findings completed by the participants were analyzed to identify participants' change of knowledge about OUD, NAS, and nurses' bias. This change in knowledge was analyzed using descriptive statistics for the 13 participating perinatal nurses. Also included are the percentage change in score, pretest score percentage, and posttest score percentage (see Appendix G).

Summary Evaluation of the Staff Education Project by Content Experts

The CEs evaluated the SEP, process, and my leadership (see Appendix K). The summary evaluation results of the SEP by CEs identified responses to findings related to my role as leader of this project (see Appendix O). Open-ended questions were used, and the CEs offered recommendations once the project was completed.

Summary

In Section 3, the collection and analysis of the evidence of this project reviewed the practice-focused questions which guided the literature review. Further examined in Section 3 includes the evidence generated by the project. Section 3 also described how evidence generated by this project is to be collected, analyzed, and synthesized. A detailed description of methods used to collect evidence from the literature was discussed and evaluated. Procedures were outlined to assure the evidence's integrity. An approach to managing missing information and protections for contributors and entities was

discussed. In Section 4, the findings and implications of the analysis, recommendations from the findings, and the strength and limitations of this SEPOUD will be discussed.

Section 4: Findings and Recommendations

Introduction

The problem identified for this DNP project is the need for staff education on OUD for the perinatal nurses on the women and infants' health unit. The practice-focused questions were:

- What evidence from the literature supports the need for a staff education program on OUD in the women and infants' health unit in the hospital where the SEPOUD will take place?
- After the presentation of the SEPOUD to perinatal nurses on the women and infants' health unit, will there be a change in knowledge from pretest to posttest?
- Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

The purpose of this DNP project was to plan, implement, and evaluate a staff education program for OUD (SEPOUD), addressing the nurse knowledge gap to increase said knowledge and present the evidence-based literature through a pretest/posttest analysis. Evidence generated by the project was obtained from the Curriculum Plan (see Appendix C) and the Pretest/Posttest (see Appendix E). The Curriculum Plan Evaluation by CEs (see Appendix D), Pretest/Posttest Content Expert Validation by Content Experts (see Appendix F), and Pretest/Posttest Change in Knowledge by Participants (see Appendix G).

In Section 4, the findings and implications of the analysis and synthesis of the project are presented, including the Curriculum Plan Evaluation by CEs Summary (see Appendix L), the Pretest/Posttest by CEs Validity Scale Analysis (see Appendix N), Summary Evaluation of the Staff Education Program by Participants (see Appendix M), Pretest/Posttest Change in Knowledge by Participants (see Appendix G), recommendations, the contribution of the CEs, the strengths and limitations of the project, and the summary.

Findings and Implications

The evidence from the literature supported the need for this staff education program coupled with the lack of OUD education to perinatal nurses at the hospital where the project was implemented. Providing education on OUD to perinatal nurses can result in expansion of clinical knowledge, improvement in nurses' negative attitudes and bias, improvement in the nurse-patient relationship, improvement in patient outcomes for the mother/baby dyad along with stigmatizing attitudes.

Curriculum Plan Evaluation by Content Experts Summary

Three CEs, based on their experience and expertise, evaluated the SEPOUD. The CEs used for this project completed an evaluation of each of the learning objectives encompassed in the curriculum plan, which was supported by the literature (see Appendix L). A dichotomous scale was used to indicate whether an objective was met =1 or not met =2. Analysis of the Curriculum Plan Evaluation by CEs indicated that Content Expert A felt that objective one was *not met*, generating a mean of 0.66. Learning objective one was rewritten to be better aligned with the curriculum, pretest/posttest, and

literature. However, all other learning objectives were *met* generating a mean score of 1. Content Expert A had constructive feedback suggesting moving specific topics into the objectives list, rewriting objectives for better clarity, changing specific questions due to similarity, and suggesting changing the order of topics for better organization. Content Expert B felt the video was beneficial and questioned whether references should be included in the PP. Content Expert C had no comments or suggestions.

Pretest/Posttest by Content Experts Validity Scale Analysis

Pretest/posttest items were validated by the CEs using a 4-point Likert scale according to their relevance to the curriculum content (1=*Not Relevant*, 2=*Somewhat Relevant*, 3=*Relevant*, 4=*Very Relevant*). One of the three CEs evaluated three items with a score of 1 (not relevant) or 2 (somewhat relevant), reflecting a score of 0. Two CEs evaluated one item with a score of 1 (not relevant) or 2 (somewhat relevant), which reflected a 0. Eleven items received a score of 3 (relevant) or 4 (very relevant), which reflected as a 1. Three items resulted in an I-CVI of 0.67, 11 items resulted in an I-CVI of 1, and one item resulted in an I-CVI of 0.33. The S-CVI revealed a score of 0.89, demonstrating an acceptable validity score and identifying that each pretest/posttest item was valid to the curriculum and the program objectives (Polit & Beck, 2006).

Summary Evaluation of the Staff Education Program by Participants

The analysis of the summary evaluation of the staff education program by participants was based on a dichotomous scale with “Met =1” and “Not Met =2” (see Appendix M). Sixteen nurses participated in the SEPOUD (13 perinatal nurses and three nurse managers); however, 13 nurses (81% of the nurses present) volunteered to

participate in the pretest/posttest and the evaluation of the SEPOUD. All 13 participants collectively answered “met” to each of the four learning objectives generating a mean score of 1. Comments provided by the participants included that the program was “outstanding, relevant, had great content, was well organized, increased knowledge of OUD, and had excellent information that should be taught to other RNs outside of the perinatal staff” (such as MedSurg). Perinatal nurses present during the SEPOUD presentation acknowledged that they gained new awareness and understanding from the SEPOUD and that the SEPOUD should be used as an ongoing presentation to new and current nurses.

Pretest/Posttest Change in Knowledge by Participants

Before conducting the SEPOUD program, thirteen perinatal nurses anonymously completed the pretest. Once they completed their pretest, the pretest was placed in an envelope, and the SEPOUD was conducted. Once the PowerPoint presentation was completed, a posttest was immediately given anonymously. The change in knowledge by participants from the pretest to the posttest was then evaluated using descriptive statistics. The pretest and posttest consisted of 15 test questions: 11 multiple choice and four true or false. Results from the pretest determined that the mean group score was 10, with an individual range of 8 to 12. The group posttest mean score was 13.38 ranging from 11 to 15. The mean change in knowledge from the pretest to the posttest was 3.4. The pretest scores ranged from 53% to 80%, averaging 67%. Posttest scores ranged from 73% to 100%, with an average score of 89%. All participants scored higher on the posttest than

on the pretest, as evidenced by the increased change in knowledge from 67% to 89%, signifying a positive change in knowledge (see Appendix G).

Additional examination of the test questions identified that question number 10 was challenging for 9/13 nurses during the pretest and 7/13 nurses during the posttest.

The question was a multiple-choice question and read:

What are the possible complications for the mother who has been diagnosed with Opioid Use Disorder? Select all that apply (Ahmad et al., 2019)

- a. Increased mortality
- b. Overdose
- c. Infections
- d. Ectopic Pregnancy
- e. Endocarditis
- f. Narcotic Bowel Syndrome
- g. Term birth

The data established that participant nurses could identify four out of the five of the select all answers correctly. In addition, Test Question 7 was complex for 12/13 nurses to answer during the pretest. Test Question 2 read:

Horner et al. (2019) identified that nurses' negative attitudes and actions towards the afflicted OUD patient are linked to all the following patient outcomes EXCEPT

- a. Delay in medical care
- b. Increased engagement in clinical care
- c. Rushed visits

d. Abandonment, inattention

The correct answer was D; however, 12/13 nurses did not get the correct answer during the pretest. After the posttest was given, several nurses had questions regarding these two questions, so reeducation was given to ensure the information was received and appropriately disseminated regarding nurses' negative attitudes and actions towards the afflicted OUD patient and how that is linked to patient outcomes. Some nurses discussed that they felt the question was difficult to understand and to not use "except" questions in the future.

Summary Evaluation of the Staff Education Project by Content Experts

The CEs agreed on the effectiveness of the project. All three experts felt that the project successfully improved the understanding of OUD and identified biases of nurses towards clients who have OUD. They felt the project did educate and raise awareness in the nursing staff. One CE felt the curriculum was organized and holistic and that the objectives, implementation, and evaluations were pertinent, comprehensive, and cohesive.

The CEs felt honored to be involved in this project and were pleased that I was using my skills to create change and improve patient care outcomes. One CE felt they were qualified to be a CE for this project due to their educational background and 30+ years of clinical experience as an OB-GYN. All three felt that they provided constructive guidance and that the topic was timely and socially responsible in addressing the opioid crisis in the maternal/neonatal population. The CEs provided appropriate written feedback, including suggestions on how the content could be delivered more clearly and

cohesively. In addition, they provided efficient feedback on the subject matter, tests, and presentation. Two CEs felt content with the amount of participation they were involved in for this project; however, one felt she would have liked to help develop the tools for this project. All three CEs felt I provided well-written instructions in my content letter regarding their roles as CEs for this project. Directions were clear, and they felt that I was diligent in sending email reminders and was open to feedback and advice to improve the project and achieve the project's goals. While the CEs all had positive feedback and experiences with this project, each CE offered suggestions for improvement. Content Expert A felt grateful for the opportunity to serve as a CE reviewer and participate in such a meaningful endeavor. Although she was primarily involved in the appraisal of evidence and project planning, she was eager to learn more about the application and analysis of the outcomes. Content Expert B was interested in having the opportunity to attend the presentation in person or virtually. Content Expert C felt that a calendar of proposed due dates should be included in the reviewer packet to keep the reviewer on track and ensures the questions and answers aligned. She felt this SEPOUD was well thought out and would benefit utilization and research in educating nurses and making them aware of their biases with OUD clients.

Recommendations

As a result of this SEP, a recommendation to implement education to the perinatal staff at the project site to complete an evidence-based course on OUD, NAS, and nurse bias upon hire was made. This recommendation was made because all participants in the presentation had a significant increase in knowledge regarding OUD, NAS, and nurses'

bias after being present for the SEPOUD, showcasing the efficacy of this program on perinatal nurses' knowledge. To maintain this staff education program of OUD, the organization should integrate this education program into their new employee orientation, competency and skill training, and training for all nurses across all departments.

Contribution of the Content Experts

All three CEs performed critical roles in assessing the curriculum. The CEs assessed the learning objectives and validated the pretest/posttest. They offered constructive feedback and suggestions for improvement. The CEs also evaluated the project, process, and my leadership after the SEP.

Strengths and Limitations of the Project

Strengths

One of the significant strengths of the project was the current relevance of OUD to the nursing staff. Both perinatal nurses and nurse managers felt the relevance of this project was pertinent to the current perinatal opioid crisis. Addressing the current perinatal opioid crisis is currently a quality measure within the hospital to teach perinatal nurses about OUD and opioids, thus strengthening the purpose of this DNP practice project. Another major strength of this project is the results in a change of knowledge which identified that the SEPOUD is instrumental in enhancing OUD knowledge among perinatal nurses. Lastly, this project was evidence-based, thus adding strength to the project.

Limitations

One limitation identified for this project was the inability to present to the medical clinic, as no nurses from the clinic participated in the presentation.

Summary

In Section 4, I presented the findings of the SEPOUD, implications, recommendations, and contributions of the content experts, with strengths and limitations of the project. The evaluated evidence resulted in outcomes that answered the question associated with the change in knowledge with implications for ongoing education of OUD in the hospital setting to women and infants health nurses. Section 5 will consist of the dissemination of the project, provide an analysis of myself as a scholar, practitioner, and project manager, and shed some insights from this SEPOUD.

Section 5: Dissemination Plan

This Doctor of Nursing SEPOUD has the potential to reach perinatal nurses in both the hospital and clinic setting, allowing for a broader reach within the nursing profession. The dissemination of this project will improve perinatal nurses in the hospital setting in their knowledge about OUD, NAS, and nurses' bias. Increasing the understanding and expertise centered around OUD can improve patient outcomes and the human condition, decrease economic costs, and increase the well-being of pregnant women, mothers, newborns, and social conditions among these patients. Raising awareness and knowledge-centered around nurses' bias can improve care, improve management of patients, reduce stigma and stereotyping, and increase knowledge of addiction. The dissemination of this project will bridge the gap in OUD knowledge among perinatal nurses in the women and infants' health unit while aiming to improve the nurse-patient relationships, thereby increasing positive outcomes for mothers and infants. This project has the potential to reach other hospitals within the state that is under the umbrella facility.

Analysis of Self

Practitioner

Maintaining and increasing clinical healthcare knowledge is critical to my role as an FNP; providing compassionate, empathetic, and competent care to perinatal women with OUD profoundly impacts the care they (and infants) receive. As a Native Hawaiian nurse practitioner, I feel honored and privileged to have the opportunity to participate in this program and develop this DNP project. This SEPOUD has improved my knowledge

of the disease process of addiction, OUD, NAS, and nurses' bias, and allows me to better educate patients on OUD, and NAS, along with educating nurses on OUD, NAS, nurses' bias, and the awareness of the experiences these patients are going through.

Scholar

Obtaining a terminal degree has been a goal of mine since I can remember. This doctoral journey has been filled with profound experiences. As a scholar in the nursing field, I can incorporate theoretical and evidence-based knowledge into clinical practice. I am confident in my ability to identify nursing problems or gaps in practice (discover), explore the literature, create a plan, implement an intervention, and evaluate any changes. This SEPOUD has allowed me to increase my knowledge and awareness of evidence-based research and disseminate this research into practice. As a nurse scholar, I am more prepared to generate new knowledge and connect this knowledge to clinical practice. I am confident in applying my knowledge through effective communication, publications, presentations, and policy changes. Lastly, I am satisfied that I will use my scholarly knowledge to teach future nursing professionals and current nurses.

Project Manager

As the project manager for this SEPOUD, I selected and guided the CEs and nurses. I conducted a literature search, created the curriculum based on the literature, created the pretest, posttest, evaluations, and disseminated the literature, which aided in supporting this project. I identified healthcare members in the community with valuable knowledge in appraising the project's content and collaborated with nurse managers. I

collected change in knowledge data. I learned that I am effective at communicating but can be a little “needy” in wanting responses promptly.

Challenges, Solutions, and Insights Gained

Throughout this journey, many challenges occurred, but solutions and insights were gained. One of my challenges was time management. Throughout this journey, as a mother, I would feed my toddler one scoop of food and then type one sentence of my project. Balancing all aspects of my life with this project caused me to take longer to complete this project. One of the most effective solutions I found in completing this project was communication. Communicating with my chair, family, and husband ensured I could finish this doctoral project. One of my most significant academic challenges was my literature matrix. I collected all my evidence and then completed my literature matrix, which I found stressful and inefficient. Instead of ensuring I kept the literature matrix up to date as efficiently as possible.

Despite all the adversities, and even though this doctoral project took longer than the goal I had planned for myself, I am proud of what I have overcome. I will be an Indigenous woman with a doctorate and the first in my family to obtain this degree. I will have fulfilled the goal I had set for myself from a young age, and the feeling is indescribable. I am excited to continue impacting the nursing profession, impacting my community, and incorporating what I have learned into advancing healthcare in my community.

Summary

Opioid use disorder is a chronic brain disease. Data suggest opioid use among pregnant women continues to rise, affecting mothers and newborns. Nurses spend much of their time with patients and have a significant role in managing perinatal patients with OUD, thus directly impacting both the mother and nurse experience. Nurses' attitudes and stigma can significantly affect patients' current and future engagement, impeding or hindering the therapeutic connection and affecting healthcare outcomes, treatment, discharge, and recovery. Educating nurses can expand clinical knowledge, improve attitudes, improve nurse's patient relationships, improve positive patient outcomes, and improve the human/social condition.

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Appendix A: Analysis, Design, Development, Implementation, and Evaluation (ADDIE)

Model of Instructional Design



Centers for Disease Control and Prevention (CDC). (2019). Public health education training development: ADDIE Model

Appendix B: Literature Review Matrix

Melnik, Bernadette Mazurek, and Ellen Fineout-Overholt's tool, Used with Permission

Reference	Theoretical/ Conceptual Framework	Research Question(s)/ Hypotheses	Research Methodology	Analysis & Results	Conclusions	Grading the Evidence
Ahmad, N., Robert, A., Jampa, A., Ashraf, S., & Patel, S. (2019). Antepartum drug dependence and pregnancy- or birth-related complications: A cross-sectional study of 19 Million inpatients. <i>Cureus Journal of Medical Science</i> , 11(11), e6117. https://doi-org.ezp.waldenulibrary.org/10.7759/cureus.6117	Not Defined	Evaluate demographic characteristics, hospital length of stay, hospital expenses, and comorbidities during the antepartum period of mothers with antepartum drug dependence	Descriptive Study	Between the years of 2010-2011, hospitalizations related to antepartum drug dependence (including opioid abuse) decreases, followed by an increase of 50% in the years to follow. Opioid abuse was the most prevalent	Antepartum drug dependence is associated with worsening of illness in pregnant or birth-related complications leading to increased healthcare economic burden	V

<p>Alexander, K. (2017). A call for compassionate care. <i>Journal of Addictions Nursing</i>, 28(4), 220–223. https://doi.org/10.1097/JAN.000000000198000000000198</p>	<p>Not Defined</p>	<p>Explore and describe context of maternal nonprescription opiate use and the care mothers in opiate maintenance treatment should receive based on nursing ethical standards</p>		<p>Recognizing personal bias along with creating a relationship with patients are important steps in providing compassionate care for mothers in opiate maintenance treatment</p>	<p>Providing compassionate, nonjudgmental care for mothers in opiate maintenance treatment is critical when caring for patients in this population</p>	
<p>Aryana, M., Smid, M., Cheng, M., Fortenberry, K., Kenney, A., Muniyappa, B., Pendergrass, D., Gordon, A., & Cochran, G. (2020). Addressing opioid use disorder among rural pregnant and postpartum women: a study protocol. <i>Addiction</i></p>	<p>RE-AIM framework</p>	<p>Define a study protocol designed at developing and assessing a perinatal OUD curriculum, enhancing evidence based perinatal OUD treatment in a rural setting, and evaluating the implementation of such</p>	<p>Implementation study</p>	<p>A comprehensive approach in implementing perinatal OUD treatment education offers opportunities facing the problem of perinatal OUD</p>	<p>Due to the ongoing opioid crisis in the U.S, this study aimed to bridge the gap in research around evidence-based treatment for perinatal OUD. This implementation study has the potential to improve health</p>	

<p><i>Science & Clinical Practice</i>, 15(1), 1–14. https://doi.org/10.1186/s13722-020-00206-6</p>		<p>collaboration care for perinatal OUD.</p>			<p>outcomes among perinatal women with OUD and their infants and qualitative findings from this study can aid in developing future programs and research</p>	
<p>Bell, F., & McCurry, M. (2020). Opioid use disorder education for acute care nurses: An integrative review. <i>Journal of Clinical Nursing</i>, 29(17–18), 3122–3135. https://doi.org.ezp.waldenulibrary.org/10.1111/jocn.15372</p>	<p>Literature Review</p>	<p>Investigate opioid use disorder education programs centered around nurses in the medical-surgical settings</p>	<p>Systematic Integrative Review</p>	<p>There are many different types of education programs geared towards increasing knowledge of OUD. These include workshops, case studies, online modules, simulations,</p>	<p>Additional research is needed to determine appropriate and best teaching strategies to increase knowledge related to OUD and OUD patient care</p>	<p>V</p>

				and in-service training		
Blair, L., Ashford, K., Gentry, L., Bell, S., & Fallin-Bennett, A. (2021). Care experiences of persons with perinatal opioid use: A qualitative study. <i>Journal of Perinatal & Neonatal Nursing</i> , 35(4), 320–329	Interview	Characterize experiences of perinatal care from the perspective of childbearing persons with OUD	Descriptive Study	Childbearing persons with OUD often experience both positive and negative perinatal care experiences	The experiences shared offers a fuller understanding of perceptions and lived experiences of care can guide and inform practice changes and educational trainings. Future research is needed to continue to develop comprehensive care models and offer changes in clinical practice, policy, and research	VI
Cheung, L. (2016). Using the ADDIE model of instructional	Not Defined	Show educators how to use an instructional design model	Qualitative Study	The ADDIE model is simple to use and can be	The paper illustrates how the ADDIE model is useful	VI

design to teach chest radiograph interpretation. <i>Journal of Biomedical Education</i> , 2016, 1-6		known as the ADDIE (Analysis, Design, Development, Implementation, Evaluation) to create a curriculum in medical education		applied to curriculum that teaches knowledge, skills, or attitudes	in designing a curriculum	
Hirai, H., Ko, Y., Owens, L., Stocks, C., & Patrick, S. W. (2021). Neonatal abstinence syndrome and maternal opioid-related diagnoses in the US, 2010-2017. <i>JAMA</i> , 325(2), 146–155	Descriptive Study	What are national-level and state-level rates in NAS and maternal opioid-related diagnoses in the US between 2010-2017	Cross-sectional Analysis Research	Identify if NAS rates have increased from 2010 to 2017 in the United States	Rates have significantly increased nationally and for most states with substantial state-level variation	V
Horner, G., Daddona, J., Burke, D., Cullinane, J., Skeer, M., & Wurcel, A. (2019). “You’re kind of at	Grounded theory	The purpose of this study was to evaluate the attitudes, perceptions, and training needs of nurses in the	Qualitative Study	Data from interviews with 22 nurses identified six different themes,	The results from this study highlight the need for further development of programs targeting both	VI

<p>war with yourself as a nurse”: Perspectives of inpatient nurses on treating people who present with a comorbid opioid use disorder. <i>PLoS ONE</i>, 14(10), 1–16. https://doi.org/10.1371/journal.pone.0224335</p>		<p>inpatient setting when caring for patients who have OUD</p>		<p>stigma, pain, burnout, communication, safety and security, and opportunities for change. Nurses identified the ability to identify struggles patients with OUD confront during hospitalization. Nurses identify the need for expanded role support and structured policies centered</p>	<p>organizational culture and nurse quality for patients who present with OUD</p>	
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				around OUD		
Jackman, K., Scala, E., Nwogwugwu, C., Huggins, D., & Antoine, D. (2020). Nursing attitudes toward patients with substance use disorders: A quantitative analysis of the impact of an educational workshop. <i>Journal of Addictions Nursing, 31</i> (3), 213. https://doi.org/10.1097/JAN.0000000000000351	Not Defined	What are the effects of an 8-hour educational workshop on nurses' attitudes toward patients with SUD?	Descriptive Study	Following the workshop, positive attitudes were significantly increased at posttest and sustained at 30-day follow-up. Other subscales such as motivation and self-esteem did not change at posttest	The findings from this study identifies workshop effectiveness improves nurse attitudes toward patients with substance disorders (including OUD)	VI
Jarlenski, M., Krans, E., Chen, Q., Rothenberger, D., Cartus, A., Zivin, K., & Bodnar, M. (2020).	Not Defined	What is the independent association between substance use disorders during	Retrospective Study	Pregnant women with an opioid use disorder have an increased	Substance Use Disorder during pregnancy, particularly opioids, may contribute to	III

<p>Substances use disorders and risk of severe maternal morbidity in the United States. <i>Drug and Alcohol Dependence</i>, 216, 108236.</p>		<p>pregnancy and risk of severe maternal morbidity</p>		<p>risk of severe maternal morbidity compared with women without an OUD (this also includes stimulant use disorder and cannabis use disorders)</p>	<p>severe maternal morbidity in the United States</p>	
<p>Jukiewicz, D., Alhofaian, A., Thompson, Z., & Gary, F. (2017). Reviewing opioid use, monitoring, and legislature: Nursing. <i>International Journal of Nursing Sciences</i>, 4(4), 430-436. doi:10.1016/j.ijnss.2017.09.001</p>	<p>Literature Review</p>	<p>Examine at the state and federal level, opioid policies, regulations and guidelines to identify knowledge gaps and nursing implications</p>	<p>Literature Review</p>	<p>There are several resources available to aid in reducing the opioid epidemic including improved prescribing and monitoring policies, and improved</p>	<p>Implementing education, standardizing prescribing practices, and implementing monitoring can all aid in addressing the current opioid crisis</p>	<p>V</p>

				knowledge gaps		
Loyal, J., Nguyen, V., Picagli, D., Petrucelli, A., O'Mara, E., Grossman, M., & Colson, E. (2019). Postpartum nurses' experience caring for infants with neonatal abstinence syndrome. <i>Hospital Pediatrics</i> , 9(8), 601-607	Descriptive Study	Examine and understand the lived experience of nurses on maternity and well-newborn units caring for infants with neonatal abstinence syndrome (NAS)	Qualitative Study	Seventeen postpartum nurses participated in 5 focus groups. Major themes emerged and included managing expectations of parents of newborns with NAS, current NAS protocol, inconsistencies in care and communication, perceived increase in nursing workload on the	With increasing numbers of infants with NAS and longer stays on the well-newborn unit, hospitals must prepare to better support staff and implement protocols that offer consistency in practice	VI

				postpartum unit, and nurse's emotional response to the care of infants with NAS		
Miller, P., Willier, T., & Cleveland, L. (2021). Baby STRENGTH: Eat, sleep, console for infants with neonatal abstinence syndrome. <i>Advances in Neonatal Care (Lippincott Williams & Wilkins)</i> , 21(2), 99–106. https://doi.org/10.1097/ANC.0000000000000840	Literature Review	Identify whether the use of Eat, sleep, console model to treat infants with opioid withdrawal results in decreased length of stay and number of infants receiving morphine when compared with traditional medication management	Retrospective Review	The implementation of the eat, sleep, console model shows a decrease in length of stay, morphine administration, as well as an increase in breastfeeding rates	As opioid use and misuse continue to rise, healthcare systems are beginning to reevaluate treatment of infants with NAS. The use of the ESC can be useful when implemented at organizations. Future studies are necessary	V
Patel, S., Margolies, P., Covell, N., Lipscomb, C., &	Pedagogical	Identify the usefulness of the ADDIE model in improving	Quantitative and Qualitative Study Methods	The ADDIE model is successful in	The ADDIE model of instructional design offers a	V

<p>Dixon, L. (2018). Using instructional design, analyze, design, develop, implement, and evaluate, to develop e-learning modules to disseminate supported employment for community behavioral health treatment programs in New York State. <i>Frontiers in Public Health</i>, 6. https://doi.org/10.3389/fpubh.2018.00113</p>		<p>practitioner knowledge through learning modules</p>		<p>improving practitioner knowledge. In addition to this, e-learning modules were rated high and efficient in presenting new information and learning objectives</p>	<p>flexible and systematic approach in developing learning modules in training in evidence-based practice</p>	
<p>Recto, P., McGlothen-Bell, K., McGrath, J., Brownell, E., & Cleveland, L. (2020). The role of</p>	<p>Literature Review</p>	<p>What is the role of stigma in the care of families impacted by Neonatal</p>	<p>Systematic Review of Qualitative or Descriptive Studies</p>	<p>Mothers of infants with NAS face different challenges, one of</p>	<p>Further examination is necessary to continue to assess and explore the</p>	<p>V</p>

<p>stigma in the nursing care of families impacted by neonatal abstinence syndrome. <i>Advances in Neonatal Care</i>, 20(5), 354–363. https://doi.org/10.1097/ANC.0000000000000778</p>		<p>Abstinence Syndrome?</p>		<p>which is stigma. These women often felt ostracized, excluded and shamed. Nurses providing care to these women and infants often report feelings of ethical and moral distress, and compassion fatigue</p>	<p>efficacy of strategies for counteracting harmful stigma in this patient population</p>	
<p>Rizk, A., Simonsen, S., Roberts, L., Taylor-Swanson, L., Lemoine, J., Smid, M. (2019). Maternity care for pregnant women with opioid use disorder: A</p>	<p>Screening, Brief Intervention, and Referral to Treatment (SBIRT) framework</p>	<p>How should pregnant women during the antepartum, intrapartum, and postpartum periods be cared for through the lens of the opioid epidemic?</p>	<p>Descriptive and Literature Review Study</p>	<p>Collaborative, multidisciplinary care for women with OUD is necessary to promote optimal outcomes</p>	<p>The current opioid epidemic highlights the necessity for all maternity healthcare practitioners to take an active role in</p>	<p>V</p>

review. <i>Journal of Midwifery & Women's Health</i> , 64(5), 532-544.				among women and infants	prevention and treatment	
Romisher, R., Hill, D., & Cong, X. (2018). Neonatal abstinence syndrome: Exploring nurses' attitudes, knowledge, and practice. <i>Advances in Neonatal Care</i> , 18(2), E3–E11. https://doi.org/10.1097/ANC.0000000000000462	Literature Review	Explore attitudes, practice trends, and gaps in knowledge among nurses caring for infants with NAS	Qualitative	Out of the 54 participant responses, nurses' concerns include environmental issues, relationship with mother, and inconsistency in care	Additional research and education programs are needed for nurses providing care to infants with NAS	VI
Shannon, J., Blythe, S., & Peters, K. (2021). The complexities associated with caring for hospitalised infants with neonatal	Not Defined	What is nurse's involvement in caring for infants with NAS (with a focus on pharmacological and non-pharmacological interventions)?	Qualitative	Five themes emerged among nurses and include complex care needs of this patient	Further research is necessary to implement and evaluate the effectiveness of models of care in improving patient outcomes and	VI

<p>abstinence syndrome: The perspectives of nurses and midwives. <i>Children</i>, 8(152), 152. https://doi.org/10.3390/children8020152</p>				<p>population, prioritizing physiological care, compassion fatigue, lack of continuity of care, and stigma.</p>	<p>nurses' experiences of providing care to infants with NAS</p>	
<p>Tobin, K. (2018). Changing neonatal nurses' perceptions of caring for infants experiencing neonatal abstinence syndrome and their mothers: An evidenced-based practice opportunity. <i>Advances in Neonatal Care</i>, 18(2), 128–135. https://doi.org/10.1097/ANC.0000000000000476</p>	<p>Literature Review</p>	<p>The purpose of this study was to provide education to NICU nurses (evidence-based practice) to bridge the knowledge gap of nursing education related to caring of infants with NAS and support of the mother.</p>	<p>Literature Review</p>	<p>The posttest demonstrated a statistically significant increase ($p < .001$) in knowledge of NAS following the presentation of this evidence-based project</p>	<p>Nursing literature identifies there is an educational need for nurses to improve their knowledge and skills when caring for infants with NAS and interacting with mothers with SUD. It is imperative to continue to grow the body of evidence which supports</p>	<p>VI</p>

					best practices in providing education for nurses on these topics	
Wortham, S., & Bianchi, A. (2022). Strategies to successfully implement an eat, sleep, console protocol. <i>MCN. The American Journal of Maternal Child Nursing</i> . https://doi.org/10.1097/NMC.0000000000000833	Not Defined	Summarize and analytically review developing research on the eat, sleep, and console method of managing NAS and develop a recommendation for implementing an ESC model	Literature Review using PubMed, Cochrane, and Google Scholar	Studies identified successful development and implementation of the ESC model at facilities. The implementation of the ESC model decreases length of stays, exposure to pharmacological agents, and overall cost of treatment	While research and studies identify the use of ESC model is successful in managing babies with NAs, further research is necessary	VI

Fineout-Overholt, E., Melnyk, B., Stillwell, S., & Williamson, K. (2010). Evidence-based practice step by step. Critical appraisal of the evidence: part I: An introduction to gathering, evaluating, and recording the evidence...fifth in a series. *AJN American Journal of Nursing*, *110*(7), 47–52. <https://doi.org/10.1097/01.NAJ.0000383935.22721.9c>

Appendix C: Curriculum Plan

Title of Project: Perinatal Nursing Education Related to Opioid Use Disorder

Student: Britney Taniguchi, MSN, FNP-BC

Problem: The problem identified for this Doctor of Nursing Practice (DNP) SEP is the need for a perinatal staff education program on opioid use disorder (SEPOUD) for the women and infants' health unit in the hospital for which this project took place

Purpose: The purpose of this DNP project is to develop, plan, and evaluate a staff education program addressing the gap in nurses' knowledge to increase said knowledge and present the evidence-based literature through a pretest/posttest analysis

Practice Focused Question(s): PFQ1: What evidence from the literature supports the need for a staff education program on OUD in the women and infants' health unit in the hospital where the SEPOUD will take place? PFQ2: After the presentation of the SEPOUD to perinatal nurses on the women and infants' health unit will there be a change in knowledge from pretest to posttest? PFQ3: Will the participants evaluate the SEPOUD as having met the objectives of the program related to the curriculum presented?

Objective Number and Statement At the conclusion of this DNP educational project the participant will be able to:	Detailed Content Outline	Evidence (from Literature Review Matrix) – Article #	Method of Presenting	Method of Evaluation P/P Item
1. Define OUD, describe the different types (forms) of OUD, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy	<p>a. What is Opioid Use Disorder:</p> <ul style="list-style-type: none"> - As defined by the Diagnostics and Statistical Manual of Mental Disorders, 5th Edition, OUD is a “problematic pattern of opioid use leading to problems or distress” - Opioid Use Disorder is characterized by loss of control of drug taking, continued drug use in the presence of adverse consequences, and repeated relapses to drug taking even after long periods of abstinence <p>a. What are opioids?</p> <ul style="list-style-type: none"> - Opioids are natural or synthetic chemicals that reduce the feelings of pain by interacting with opioid receptors on nerve cells in the body and brain 	Article #1; Article #9; ACOG, 2017; American Psychiatric Association, 2021; CDC, 2021;	PowerPoint	Question #1

	<p>b. Types (forms) of opioids</p> <ul style="list-style-type: none"> - Prescription pain relivers most commonly including oxycodone, hydrocodone (Vicodin), morphine, codeine, and methadone - Synthetic and illicit drugs such as fentanyl and heroin <p>c. The Brain and Opioids</p> <ul style="list-style-type: none"> - https://www.youtube.com/watch?v=PhnPS1hKf_8 - Opioids change the brain, which are wired to seek reward - Opioids trigger a surge of dopamine (feel good hormone) increasing sense of pleasure and this desire to feel pleasure becomes a driving force to take opioids again <p>d. Risk factors</p> <ul style="list-style-type: none"> - Past or current substance abuse, untreated psychiatric disorders, age (younger age), social/family environment that encourages <p>e. Treatment for OUD</p>			
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	<ul style="list-style-type: none"> - Management of maternal OUD can be overwhelming for both patient and practitioner, particularly during the early postpartum period - First-line treatment for maternal OUD involves the use of opioid agonist pharmacotherapy (methadone or buprenorphine) - Along with pharmacotherapy, cognitive behavioral therapy and counseling are best practice recommendation 			
<p>2. Discuss perinatal NAS/ OUD, the impacts on the newborn and mother, and the Eat, Sleep, Console intervention and its benefits to the perinatal and neonatal patient</p>	<p>Neonatal Abstinence syndrome (NAS)</p> <p>a. What is Neonatal Abstinence Syndrome:</p> <ul style="list-style-type: none"> - NAS is a withdrawal syndrome among newborns whose mothers have used opiates, opioid agonists, or other substances during pregnancy - Caused by in utero exposure to opioids during the first 28 days of life (CDC) - Increased consistently to the upsurge in opioid dependence 	<p>Article #2; Article #6; Article #17; Article #19; ACOG, 2017; March of Dimes, 2019</p>	<p>PowerPoint</p>	<p>Question #3</p>

	<ul style="list-style-type: none"> - NAS may be present secondary to the use of illicit and illicit substances, including morphine, methadone, heroin, buprenorphine, prescription opioids - Rates have significantly increased for 42 of the 51 states, including Hawai'i - From 2010 to 2017, data described an increase in national rates of maternal OUD and NAS from 4% to 7.3% - Every 19 minutes, a newborn is diagnosed in the United States with NAS, with an estimated 80 born per day - 4% of NICU beds in the United States are occupied by babies diagnosed with NAS <p>b. The symptoms/risks of NAS associated with OUD</p> <ul style="list-style-type: none"> - Infants exposed to opioids during gestation are more likely to be born at a lower birth rate 			<p>Question #2 Question #9</p> <p>Question #14</p>
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	<p>e. Negative consequences of NAS</p> <ul style="list-style-type: none"> - Infants with NAS are more likely to be admitted to the NICU - Substantially longer lengths of hospital stays (12 days longer compared to full term infant's hospital stays of 2-3 days) - Higher hospital costs depending on the need for pharmacological treatment - Babies with NAS are at an increased risk of developing Jaundice, low birth weight, seizures, sudden infant death syndrome, developmental/motor/ behavioral delays, learning problems, speech/language/sleep issues, ear infections, and vision problems <p>Eat, Sleep, Console approach (ESC)</p> <ul style="list-style-type: none"> - Nonpharmacological intervention among patients with NAS - Simplified family integrative approach to monitoring and treating newborns with NAS 			Question #15
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	<ul style="list-style-type: none"> - Performed by mother (or caregiver) - Evaluate the infant in three capacities, the ability to eat, sleep and be consoled within ten minutes of crying <p>Nurses Role in ESC and benefits to patients with OUD and NAS</p> <ul style="list-style-type: none"> - Nurse takes on a more educator role and teaches mothers or caregivers (support persons) to manage symptoms of NAS by comforting the baby, reducing the need for medical interventions - Assessments are more family integrative and not subject based - Instructions given in a nonjudgmental and empowering manner - Nurse conducts eat, sleep, and console assessment every three hours, after feedings <p>Benefits of educating perinatal nurses about ESC (Health, life and economic benefits)</p> <ul style="list-style-type: none"> - Highly successful in reducing severity of NAS symptoms - Reduced need for pharmacological treatment (92% to 19%) 			
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	<ul style="list-style-type: none"> - Decreased length of hospital stays from 10.3 to 4.9 days - Decrease cost of 48% per day 34% improvement in breastfeeding rates. Improves regulation and bonding between mother and newborn which in turn empowers attachment 			
<p>3. Discuss nurse's knowledge of OUD, attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother</p>	<p>a. What are the effects of nurse's attitudes on the mother/newborn dyad?</p> <ul style="list-style-type: none"> - Nurses' attitudes toward the OUD patient are not straightforward or linear. Lack of knowledge, empathy, and understanding is recognized as contributing factors to nurses' attitudes towards patients - Factors such as stigmatizing attitudes and actions among nurses toward patients with OUD are linked to worse patient outcomes, delay in medical care, less engaging clinical care, nondisclosure of risky behaviors, rushed visits, and decreased drug treatment compliance 	<p>Article #2; Article #4; Article #7; Article #11; Article #17; Article #19</p>	<p>PowerPoint</p>	<p>Question #12 Question #8 Question #6</p>

	<ul style="list-style-type: none">- Nurses' attitudes, knowledge, and practice can directly affect patient outcomes- During a typical day at a hospital nurses spend most of their time with patients, significantly impacting their experience- Nurses encounter growing quantities of patients with opioid use disorder. Nurses spend the most time with these patients, but attitude and stigma can impede the therapeutic connections between nurses and patients.- Stigmatization, labeling, and stereotyping of patients lead to premature discharge, neglect, and feelings of frustration, anger, and depression. Nurses' negative attitudes towards the afflicted patient can cause delayed care, advocacy failure, rushed delivery of interventions and care, criticism, and disapproval among patients			Question #7
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	<p>b. Benefits of increasing perinatal nurses' knowledge of OUD, NAS, and bias</p> <ul style="list-style-type: none">- Evidence suggests that educating nurses can change their attitudes, expand their clinical knowledge and increase positive patient outcomes- Change/improve negative attitudes and bias- Improve nurse-patient relationships, thereby increasing positive patient outcomes for mothers and infants- Providing nurses an opportunity to increase their knowledge about OUD, NAS, and nurses' biases can improve the well-being of the pregnant woman, mother, and newborn, thus improving patient outcomes and promote positive social change- Improve patient outcomes, the human condition, and the social condition affecting patients, families, and communities			
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	<ul style="list-style-type: none"> - Facilitate compassion and commitment when providing care to OUD patients and NAS infants - Decrease economic costs (another incentive that could drive institutions to dedicate resources to educating nurses), and have positive patient outcomes 			
4. Define and identify the complications of Opioid Use Disorder, and the signs and symptoms of OUD in both mother and newborn	<p>a. What are the complications of OUD for the mother and newborn?</p> <ul style="list-style-type: none"> - Mother: increased mortality, overdose, infections, endocarditis, narcotic bowel syndrome, and increased rates of accident-related injuries. - Newborn: respiratory depression, microcephaly, and sudden infant death syndrome <p>b. What are the signs and symptoms of OUD in the newborn and mother?</p>	Article #1; Article #9; ACOG, 2017; American Psychiatric Association, 2021; CDC, 2021	PowerPoint	Question #10 Question #4 Question #11

	<ul style="list-style-type: none">- Mothers: generalized pain, muscle pain, nausea, diarrhea, sweating, rhinorrhea, tearing, dilated pupils, tremors, goosebumps, restlessness, and anxiety- Newborn: related to the opioids they were exposed to but include tremors, seizures, overactive reflexes, increased fussiness, excessive crying, high pitched cry, poor feeding/sucking, tachypnea, fever, blotchy skin, sweating, difficulty sleeping, diarrhea, vomiting, sneezing, and stuffy nose			
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Appendix D: Curriculum Plan Evaluation by Content Experts

Title of Project: Perinatal Nursing Education Related to Opioid Use Disorder

Student: Britney Taniguchi

Respondent: (A, B, C)

Products for Review: Curriculum Plan, Complete Curriculum Content, Literature Review Matrix

Instructions: Please review each objective related to the curriculum plan, content and matrix. The answer will be a “Met” = 1 or “Not Met” = 2 with comments if there is a problem, understanding the content or if the content does not speak to the objective, At the conclusion of this educational experience, the participant will be able to:

Objective Number	Objective Statement	Met (1)	Not Met (2)	Comment
1	Define OUD, describe the different types (forms) of opioids, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy			
2	Discuss perinatal OUD and the impacts on the newborn and mother			
3	Discuss nurse’s knowledge of and attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother			
4	Define and identify the complications of Opioid Use Disorder, signs and symptoms of OUD in both mother and newborn			

Appendix E: Pretest/Posttest

Perinatal Nursing Education Related to Opioid Use Disorder #_____
Britney Taniguchi, MSN, BC-FNP
DNP Student, Walden University

Thank you for participating in this DNP project. This test on Opioid Use Disorder is anonymous. BE SURE to have the same number on your pretest and posttest. Please circle the letter for your choice. You have 10 minutes to take this test. Thank you for your time.

Section 1: Multiple Choice

1. Which are forms of an opioid? Select all that apply
 - a. Heroin *
 - b. Oxycodone *
 - c. Codeine *
 - d. Morphine *
 - e. Narcan
 - f. Fentanyl *
 - g. Naproxen
2. According to Hirai et al. (2021), approximately how many babies are born per day diagnosed with Neonatal Abstinence Syndrome?
 - a. 30/day
 - b. 60/day
 - c. 80/day *
 - d. 125/day
3. According to Shannon, Blythe, and Peters (2021), Neonatal Abstinence Syndrome may be present secondary to the use of which illicit substance?
 - a. Acetaminophen
 - b. Morphine *
 - c. Ondansetron
 - d. Ibuprofen

4. What are some complications of OUD for the newborn according to Ahmad et al. (2019)?
 - a. Respiratory depression, microcephaly, and sudden infant death syndrome*
 - b. Sudden infant death syndrome, coughing, petechiae
 - c. Sudden infant death, sneezing, runny nose
 - d. Sudden infant death, macrocephaly, diabetes
5. ESC emphasizes evaluating infants in what three capacities?
 - a. Eat, Snooze, comfort
 - b. Eat, Sleep, Cheer
 - c. Eat, sleep, console *
 - d. Eat, slumber, cheer
6. Horner et al. (2019) identified that nurses' negative attitudes and actions towards the afflicted OUD patient are linked to all the following patient outcomes **EXCEPT**
 - a. Delay in medical care
 - b. Increased engagement in clinical care *
 - c. Rushed visits
 - d. Decreased drug treatment compliance
7. Horner et al. (2019), identified that stigmatization, labeling, and stereotyping of perinatal women with OUD can lead to all the following **EXCEPT**
 - a. Premature discharge
 - b. Neglect, depression
 - c. Feelings of frustration and anger
 - d. Abandonment, inattention *
8. What are three contributing factors to nurses' attitudes towards patients according to Shannon, Blythe, and Peters (2021)?
 - a. Sympathy, self-awareness, workload
 - b. Lack of knowledge, empathy, and understanding *
 - c. Empathy, nursing experience, altruism

- d. Altruism, educational level, staffing
9. According to Hirai et al. (2021), a newborn is diagnosed with NAS in the United States every ____ minutes
- a. 39
 - b. 45
 - c. 60
 - d. 19 *
10. What are the possible complications for the mother who has been diagnosed with Opioid Use Disorder? Select all that apply (Ahmad et al., 2019)
- a. Increased mortality *
 - b. Overdose *
 - c. Infections *
 - d. Ectopic pregnancy
 - e. Endocarditis *
 - f. Narcotic bowel syndrome *
 - g. Term birth
11. What are the signs and symptoms of OUD in the newborn?
- a. Excessive crying, overreactive reflexes, poor feeding *
 - b. Fever, cough, fatigue
 - c. Nosebleeds, headaches, irregular heart rhythm
 - d. Constipation, cough, runny nose

Section 2: True or False

12. Nurses' attitudes toward the OUD patient are straightforward or linear
- a. TRUE
 - b. FALSE *

13. In the Eat, Sleep, Console model, the nurse takes on a subjective-based assessment approach instead of a family integrative/focused approach

- a. TRUE
- b. FALSE *

14. Signs and symptoms of Neonatal Abstinence Syndrome includes low birth weight, seizures, high pitched crying and inability to be consoled

- a. TRUE *
- b. FALSE

15. According to Wortham and Bianchi (2021), the Eat, Sleep, Console intervention for NAS treatment is successful in reducing the severity of NAS symptoms.

- a. TRUE *
- b. FALSE

Appendix F: Pretest/Posttest Content Validation by Content Experts

Title of Project: Perinatal Nursing Education Related to Opioid Use Disorder

Student: Britney Taniguchi

Respondent: (A, B, C)

Accompanying Packet: Curriculum Plan, Pretest/Posttest with answers, Pretest/Posttest Expert Content Validation Form

INSTRUCTIONS: Please check each item to see if the question is representative of the course objective and the correct answer is reflected in the course content.

Test Item # 1 2 3 4

1 Not Relevant __ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

2 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

3 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

4 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

5. Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

6 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

7 Not Relevant__ Somewhat Relevant__ Relevant ___ Very Relevant__

Comments:

8 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

9 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

10 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

11 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

12 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

13 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

14 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Comments:

15 Not Relevant__ Somewhat Relevant__ Relevant___ Very Relevant__

Appendix G: Pretest/Posttest Change in Knowledge by Participants

Number of Student	Pretest Score Numerical	Posttest Score Numerical	Change in Knowledge	% Change in Score	Pretest Score Percentage	Posttest Score Percentage
1	8	11	+3	20%	53%	73%
2	12	15	+3	20%	80%	100%
3	10	15	+5	33%	67%	100%
4	11	13	+2	13%	73%	87%
5	8	15	+7	47%	53%	100%
6	11	13	+2	13%	73%	87%
7	9	13	+4	27%	60%	87%
8	10	12	+2	13%	67%	80%
9	12	14	+2	13%	80%	93%
10	10	15	+5	33%	67%	100%
11	10	11	+1	7%	67%	73%
12	10	14	+4	27%	67%	93%
13	9	13	+4	27%	60%	87%
Mean	10 Range 8 to 12	13.38 Range 11 to 15	3.4	23%	67%	89%

Appendix H: Staff Education Program

*Perinatal Nursing
Education Related to
Opioid Use Disorder*

Britney Taniguchi MSN, BC-
FNP, Walden DNP student

WALDEN
UNIVERSITY
EDUCATION FOR GOOD®

Welcome

- Britney Kekepania
Taniguchi, MSN, BC-FNP
- I would like to thank
 - Administration
 - Mentor Dawn Taroc-Silva
 - Coordinators of this project
 - All Perinatal Nurses
 - Other participants



Aloha everyone and welcome to my staff education

Pretest

- Participation in this pretest is voluntary
- No names or identity
- You will receive a number that is unique and anonymous to you
- Try to answer all questions to the best of your ability
- You will have 10 minutes
- Place in designated envelope



Before we begin, you will find a pre-test handout above which is a yellow number. This test is voluntary. Please do not write your name just write the number you received anonymously at the top of the page. Try to answer all the questions to the best of your ability. You will have 10 minutes to complete this test. When finished, please place your completed pretest questionnaire in this designated envelope. I will now step out to ensure anonymity. Thank you.

Learning Objectives

1. Define OUD, describe the different types (forms) of opioids, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy
2. Discuss perinatal NAS/OUD, the impacts on the newborn and mother, and the Eat, Sleep, Console intervention and its benefits to the perinatal and neonatal patient
3. Discuss nurse's knowledge of OUD, attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother
4. Define and identify the complications of Opioid Use Disorder, and the signs and symptoms of OUD in both mother and newborn



At the end of this presentation, participants will be able to.... (read the objectives)

What are Opioids

Natural or synthetic chemicals that reduce feelings of pain on nerve cells

Types of Opioids

- Prescription pain relievers
 - Oxycodone, Hydrocodone (Vicodin), Morphine, Codeine, & Methadone
- Synthetic and illicit drugs
 - Fentanyl, Heroin

Route includes oral (swallowing), inhalation, injection



Opioids are natural or synthetic chemicals that reduce the feelings of pain by interacting with opioid receptors on nerve cells in the body and brain

There are several types of opioids which include prescription pain relievers and illicit drugs. Prescription pain relievers most commonly include oxycodone, hydrocodone (Vicodin), morphine, codeine, Buprenorphine, Tramadol, and methadone

Synthetic and illicit drugs most commonly include fentanyl and heroin

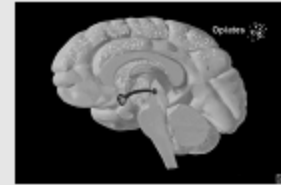
Use of opioids include swallowing capsules or tablets, inhaling crushed tablet powders through the nose and/or injecting into a vein with a needle (which places patients at increased risk of infection)

ANSWERS QUESTION #1

The Brain and Opioids

https://www.youtube.com/watch?v=PhnPS1hKf_8

- I would now like to play a short video for you
- Dr. Natalie Kirilichin, Emergency Medicine Physician does a beautiful job discussing the brain, opioids and opioids effects on the brain



Introduction

What is opioid use disorder (OUD)?

- Chronic brain disease with high potential for relapse
- Defined: A problematic pattern of opioid use leading to problems or distress
- Characterized by loss of control of drug taking

Risk factors for OUD

- Past/current abuse, untreated psychiatric disorders, age, social/family



Opioid Use Disorder is a chronic brain disease with high potential for relapse. Defined by the Diagnostics Manual of Mental Disorders, 5th Edition as a “problematic pattern of opioid use leading to problems or distress” Opioid Use Disorder is characterized by loss of control of drug taking, continued drug use in the presence of adverse consequences, and repeated relapses to drug taking even after long periods of abstinence.


Opioid misuse can lead to dependence in as little as 4-8 weeks, leading to withdrawal symptoms such as generalized pain, chills, cramps, diarrhea, dilated pupils, restlessness, anxiety, nausea, vomiting, insomnia, and intense cravings.

Risk factors associated with OUD include:

Past or current substance abuse, untreated psychiatric disorders, age (younger age), social/family environment

Signs and Symptoms of OUD in Newborn and Mother

- Maternal Symptoms
 - Generalized pain, muscle pain, nausea, diarrhea, sweating, tearing, dilated pupils, tremors, goosebumps, restlessness, and anxiety
- Newborn Symptoms
 - Tremors, overactive reflexes, increased fussiness, excessive crying, high pitched cry, poor feeding/sucking, mottled skin, difficulty sleeping



There are eleven main symptoms associated with OUD in mothers and include: generalized pain, muscle pain, nausea, diarrhea, sweating, rhinorrhea, tearing, dilated pupils, tremors, goosebumps, restlessness, and anxiety (The American College of Obstetricians and Gynecologists).

Infants affected by opioid use experience symptoms often related to the opioid they were exposed to. Signs and symptoms include tremors, seizures, overactive reflexes, increased fussiness, excessive crying, high pitched cry, poor feeding/sucking, tachypnea, fever, blotchy (mottled) skin, sweating, difficulty sleeping, diarrhea and vomiting.

ANSWERS QUESTION #11

Complications of OUD for Mother and Newborn

- Mother complications
 - Increased mortality, overdose, infections, endocarditis, narcotic bowel syndrome, and increased rates of accident-related injuries
- Newborn complications
 - Respiratory depression, microcephaly, and sudden infant death syndrome




Opioid Use Disorder through pregnancy leads to alarming complications for both mothers and newborns.

Complications the mother experiences with OUD include increased mortality, overdose, infections, endocarditis, narcotic bowel syndrome, and increased rates of accident-related injuries.

Complications the newborn can experience include respiratory depression, microcephaly, and sudden infant death syndrome (Ahmad et al., 2019).

ANSWERS QUESTION #4 AND #10



Treatment for OUD in Pregnancy

- Management of maternal OUD can be overwhelming
- First-line treatment for pregnant women involves opioid agonist pharmacotherapy
 - Methadone
 - Buprenorphine
 - Suboxone (combo of buprenorphine and naloxone)
- Cognitive behavioral therapy and counseling should be used in conjunction

Management of maternal OUD can be overwhelming for both patient and practitioner, particularly during the early postpartum period. Substance Abuse and Mental Health Services and American College of OBGYN recommend First-line treatment for pregnant women involve the use of opioid agonist pharmacotherapy (methadone or buprenorphine which continue to be the safest medicines to manage OUD during pregnancy). Opioid agonists essentially aim at eliminating withdrawal symptoms and relieve drug cravings by acting on opioid receptors in the brain. The use of cognitive behavioral therapy and counseling should be used in conjunction with pharmacological interventions. All are considered best practice recommendation.

Impact on Mother/Newborn

- Steady rise of opioid use among pregnant women
- Common among young women, white, single, low income
- CDC self reported data
- Impact on mother
 - Social functioning, depression, placental abruption, maternal death
- Impact on infant/newborn
 - Poor fetal growth, preterm birth, respiratory problems, low birth weight, feeding issues, still birth, fetal distress, withdrawal, longer hospital stay

Studies show a steady rise in opioid use disorder occurring among pregnant women increasing 400% from 1999 to 2014 in the United States. Opioid-related death during pregnancy also increased by over 200% from 2007 to 2016.

Opioid use disorder in the perinatal population is more common among young, white, single, low income, high school education or less, unemployed, and those residing in rural northeastern or southern United States (Wortham & Bianchi, 2022).

According to self-reported data collected in 2019 with 21,488 respondents, 1 in 5 pregnant women reported misuse of opioids obtained from a non-healthcare practitioner and using them for a reason other than to relieve pain. 21% of pregnant women filled an opioid prescription during pregnancy, 27.1% indicated wanting or needing to cut down or stop use (CDC, 2020).

Opioid impact mothers social functioning, and places them at increased risk of depression, placental abruption and maternal death

In infants/newborns, they are at increased risk of experiencing poor fetal growth, preterm birth, respiratory problems, low birth weight, feeding issues, and longer hospital stays

Neonatal Abstinence Syndrome (NAS)

- **Caused** by in utero exposure to opioids
- Postpartum symptoms of drug withdrawal due exposure
- Withdrawals can occur within first 24-96 hours after birth
- Rates have significantly increased in 42 states, including Hawai'i
- Estimated every 19 minutes, a newborn is diagnosed with NAS
 - About 80 born per day



The prevalence of neonatal abstinence syndrome (NAS) has increased consistently to the upsurge in opioid dependence (Wortham & Bianchi, 2022).

Neonatal Abstinence Syndrome are postpartum symptoms of drug withdrawal in an infant due to maternal drug use (opiates, opioid agonists) during pregnancy. Symptoms often appear in the newborn upon discontinuation of drugs to which they were exposed to in utero. Withdrawal symptoms often occur within the first 24-96 hours after birth

NAS is caused by in utero exposure to opioids

Research suggests NAS rates have significantly increased for 42 of the 51 states, including Hawai'i

According to research done by Hirai et al, (2021), every 19 minutes, a newborn is diagnosed in the U.S with NAS, with an estimated 80 born per day

ANSWERS QUESTION #3, #2, and #9

Symptoms/ Risks of NAS Associated with OUD

- Low birth weight
- 60-80% will experience NAS
- NAS symptoms in infants are similar to symptoms adults experience
 - Decreased sleep, tremors, seizures, sweating, fever, n/v, SIDS, inability to be consoled, high pitched crying
- Secondary complications include tachypnea, meconium aspiration, respiratory distress, jaundice, and sepsis

Infants exposed to opioids during gestation are more likely to be born at a low birth weight

Approximately 60-80% of fetuses exposed to opioids during gestation will experience NAS

NAS symptoms in infants includes decreased sleep, tremors, seizures, increased muscle tone, sweating, fever, vomiting, diarrhea, high-pitched crying, inability to be consoled, SIDS

Secondary complications associated with NAS include tachypnea, meconium aspiration, respiratory distress, jaundice, and sepsis

QUESTION NUMBER 14

Negative Consequences of NAS

- Increased risk of admittance to NICU
- Longer length of hospital stays (12 days longer)
- Higher hospital costs
- Increased risk of developing developmental/motor/behavioral delays, learning problems, vision problems, ear issues



Infants with NAS are more likely to be admitted to the NICU
Substantially longer lengths of hospital stays (12 days longer compared to full term infant's hospital stays of 2-3 days)
Higher hospital costs depending on the need for pharmacological treatment
Babies with NAS are at an increased risk of developing developmental/motor/ behavioral delays, learning problems, speech/language/sleep issues, ear infections, and vision problems

Treatment NAS



- Eat, Sleep, Console
 - Nonpharmacological intervention among patients with NAS
 - Family integrative approach
 - Performed by mother (or caregiver)
 - Evaluates infant in three capacities
 - Ability to eat, sleep, and be consoled within **10** minutes of crying

Nonpharmacological interventions are preferable among patients with NAS. The principal first-line care therapy for NAS incorporates nonpharmacological treatment. One new approach now being used is the eat sleep, console intervention. The eat, sleep console approach is a simplified family integrative approach to monitoring and treating newborns with NAS. Performed by the mother (or caregivers), it can be highly successful in reducing the severity of the syndrome. This approach sees the nurse teach mothers and support persons how to manage symptoms of NAS by comforting the baby, reducing the need for medical interventions (Miller, Willier, & Cleveland, 2021).

ESC emphasizes evaluating infants in three capacities, the ability to eat, sleep, and be consoled within ten minutes of crying.

ANSWERS QUESTION #5

Nurses' Role in ESC/ Benefits to Patients

- Effective outcomes include
 - Shorter length of hospital stays, decrease in hospital costs, reduction in severity of NAS symptoms
- ○ Implementation of ESC reduces hospital stays from 10.3 to 4.9 days, reduces hospital costs, improves breastfeeding, and decreases the need for pharmacological interventions
- Nurses take on an educator role
 - Instructions are given in nonjudgmental/empowering manner
- Assessments are not subject based (family integrative)
- Conducted every *three* hours, after feedings

Evidence from up-to-date and current quality projects supports positive implications for organizations and dyads where ESC is applied. Positive implications include a reduced length of stay among newborns (from 10.3 days to 4.9 days), reduction in severity of NAS symptoms, reduced duration of pharmacotherapy, and reduced medical costs (48% reduction in hospital cost per day). Breastfeeding rates improve, affording positive benefits for the dyad and continuously improving newborn regulation and bonding. (Wortham & Bianchi, 2022).

Nurses' role in the ESC interventions is more of an educator role teaching mothers or caregivers (support persons) to manage symptoms of NAS by comforting the baby, thus reducing the need for medical interventions, transitioning away from subjective based assessment to a more family integrative and focused assessment. Instruction should be given in a nonjudgmental and empowering manner. The nurse in this approach takes on a maternal and family educator role along with a coach and support person. The nurse primarily conducts eat, sleep, and console assessments every three hours, usually after feedings. The mother should be actively engaging in the assessment process as her input is paramount to interpreting the newborn's well-being and affords the most significant potential benefit to the baby (Wortham & Bianchi, 2022).

ANSWERS QUESTION #13 and question number 15

Effects of Nurses' Attitudes on the OUD Mother/Newborn Dyad

- OUD stigma is highly stigmatized
 - Barrier to health-seeking behaviors and engagement in healthcare
 - Negatively impact healthcare outcomes
 - Reluctant to continue treatment programs, seek future treatments, & access health-related services
 - Leads to premature discharge & neglect
- Understanding attitudes are critical to providing collaborative, patient-centered care



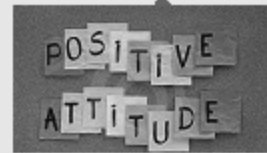
Opioid use disorder is considered a highly stigmatized condition. Stigma is a well-documented global barrier to health-seeking behaviors and engagement in healthcare. Stigma results in labeling individuals or groups as *different* enabling discriminatory behaviors against them. Stigma and bias negatively impact healthcare outcomes for pregnant women and infants (Recto et al., 2020).

When pregnant women are treated negatively by nurses or other healthcare practitioners, these patients are more reluctant to continue treatment programs, either for themselves (or babies), and are reluctant to seek future treatments (Alexander, 2017).

Nurses' negative attitudes towards patients, such as stigmatizing, biases, labeling, and stereotyping, lead to premature discharge, and neglect, affect the quality of patient care delivered, and create dissatisfaction among patients and nurses. Within healthcare, understanding attitudes are critical to providing collaborative, patient-centered care.

Effects of Nurses' Attitudes on the Mother/Newborn Dyad

- Affects recovery success
- Nurses are less engaged in patient care, more task oriented, less
—— empathetic towards mothers
- Report lack of desire to work with patients reporting substance use
- Nurses *not* confident in their proficiencies to support OUD
patients are less likely to engage with patients actively
- Attitudes are essential within healthcare



Nurses' attitudes toward addiction directly affect the recovery success and health outcomes of pregnant women suffering from OUD. Negative attitudes impact how nurses interact with mothers who have OUD, causing them to be less engaged in-patient care, more task-oriented, and less empathetic towards mothers (Recto et al., 2020). The literature reported that healthcare practitioners exhibiting negative attitudes often report a lack of desire to work with patients reporting substance use.

Nurses' attitudes, knowledge, and practice can directly affect patient outcomes. Nurses who are not confident in their proficiencies to support OUD patients' treatment are less likely to engage with patients actively. Attitudes are essential within healthcare and allow practitioners and patients to understand how people perceive issues and processes in care.

Effects of Nurses' Attitudes on the Mother/ New born Dyad

- Nurses spend most of their time with patients, impacting their experience
- ○ Attitudes and stigma can impede the therapeutic connection between nurses and patients
- Stigmatizations, labeling, & stereotyping lead to
 - Premature discharge, neglect, & feelings of frustration & anger
- Negative attitudes can cause delayed care, advocacy failure, rushed delivery of interventions and care, and disapproval among patients



During a typical day at a hospital nurses spend most of their time with patients, significantly impacting their experience

Nurses encounter growing quantities of patients with opioid use disorder. Nurses spend the most time with these patients, but attitude and stigma can impede the therapeutic connections between nurses and patients.

Stigmatization, labeling, and stereotyping of patients lead to premature discharge, neglect, and feelings of frustration, anger, and depression. Nurses' negative attitudes towards the afflicted patient can cause delayed care, advocacy failure, rushed delivery of interventions and care, criticism, and disapproval among patients

Effects of Nurses' Attitudes on the Mother/Newborn Dyad

- Not straightforward or linear
- Lack of knowledge, empathy, and understanding are contributing factors to nurses' attitudes towards patients
- Stigma (exclusion, rejection, devaluation)
- Linked to worse patient outcomes, delay in medical care, less engaging clinical care, nondisclosure of risky behaviors, rushed visits, and decreased treatment compliance
- Negative attitudes can cause advocacy failure, rushed delivery of interventions and care, criticism, and disapproval among patients



Nurses' attitudes toward the OUD patient are not straightforward or linear. Lack of knowledge, empathy, and understanding is recognized as contributing factors to nurses' attitudes towards patients

Factors such as stigmatizing attitudes and actions among nurses toward patients with OUD are linked to worse patient outcomes, delay in medical care, less engaging clinical care, nondisclosure of risky behaviors, rushed visits, and decreased drug treatment compliance

Nurses' negative attitudes can cause advocacy failure, rushed delivery of interventions and care, criticism, and disapproval among patients

Benefits of Increasing Nurses' Knowledge of OUD

- Evidence suggests educating nurses can expand clinical knowledge
- Improve negative attitudes and bias
- Improve nurse-patient relationship
- Improve positive patient outcomes, human condition, social condition
- Decrease economic costs



Evidence suggests educating nurses can expand clinical knowledge

Increasing knowledge of OUD can Improve nurse-patient relationships, thereby increasing positive patient outcomes for mothers and infants

Providing nurses an opportunity to increase their knowledge about OUD, NAS, and nurses' biases can improve the well-being of the pregnant woman, mother, and newborn, thus improving patient outcomes and promote positive social change

Improve patient outcomes, the human condition, and the social condition affecting patients, families, and communities

Facilitate compassion and commitment when providing care to OUD patients and NAS infants

Decrease economic costs, and have positive patient outcomes

Summary

- Opioid Use Disorder is a chronic brain disease with high potential for relapse
- Data suggests opioid use among pregnant women continues to rise
- OUD affects both mother and newborns/infants
- Opioids in utero causes Neonatal Abstinence Syndrome
- Nurses spend most of their time with patients, thus impacting experience
- Nurses' attitudes and stigma can affect:
 - Patient engagement, therapeutic connection healthcare outcomes, continuation of treatment, premature discharge, delay in medical care, neglect, recovery success
- Educating nurses can expand clinical knowledge, improve attitudes and bias, improve nurse patient relationship, positive patient outcomes, human/social condition and decrease economic costs



Closing Remarks

- Thank you to everyone who participated
- Thank you to Dawn Taroc-Silva
- Thank you to my content experts
- Thank you to administration
- Conclude presentation



This concludes my presentation. I just want to say thank you again to everyone here today who participated in this presentation. I appreciate you all investing in my education.

Administration of Posttest Questions

- Participation in this posttest is voluntary
- No names or identity
- Please write the number you received during the pretest on the posttest
- Try to answer all questions to the best of your ability
- You will have 10 minutes
- Place in designated envelope



You will find a posttest handout in the packet you received. Again, this test is voluntary. Please do not write your name just write the number you received anonymously at the top of the page. Try to answer all the questions to the best of your ability. You will have 10 minutes to complete this test. When finished, please place your completed pretest questionnaire in this designated envelope. I will now step out to ensure anonymity. Thank you.

Appendix I: Evaluation of the Staff Education Program by Participants

Objective Statement	Were the objectives met? Please circle Met = 1 or No Met = 2	
1. Define OUD, describe the different types (forms) of opioids, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy	Met Not Met	
2. Discuss perinatal NAS/OUD, the impacts on the newborn and mother, and the Eat, Sleep, Console intervention and its benefits to the perinatal and neonatal patient	Met Not Met	
3. Discuss nurse's knowledge of OUD, attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother	Met Not Met	
4. Define and identify the complications of Opioid Use Disorder, and the signs and symptoms of OUD in both mother and newborn	Met Not Met	
Additional Comments		

Appendix J: Content Expert Letter

Date

Dear Content Expert,

Mahalo for agreeing to participate as a content expert for my Walden University Doctor of Nursing Practice project entitled *Perinatal Nursing Education Related to Opioid Use Disorder*. In the enclosed packet, you will find documents for your review along with this letter. At the top of each document are instructions for completing the form. A numeric number has been assigned to each content expert to ensure anonymity. No names will be on any of the forms. The documents have been delivered to you by another person to ensure anonymity. Once you have completed the packet, please put the material in the enclosed envelope and someone will collect the packets. That individual will place the materials in a new envelope with no identification and deliver them to me. Please feel free to contact me at any time by phone or email, which are listed below. If necessary, my faculty member Dr. Joan Moon can be reached by email at joan.moon@mail.waldenu.edu or phone at 419-308-3714.

Contents of Packet:

- i. Letter of introduction
- ii. Literature Review Matrix
- iii. Curriculum Plan
- iv. Evaluation of the Curriculum Plan by Content Experts
- v. Pretest/Posttest
- vi. Pretest/Posttest Context Validity by Content Experts

Mahalo,

Britney Taniguchi-Koenig APRN, FNP-BC, DNP-Student

Appendix K: Evaluation of the Staff Education Project, Process, and My Leadership by
Content Experts

Title of Project: Perinatal Nursing Education Related to Opioid Use Disorder

Student: Britney Taniguchi

Thank you for completing the Summary Evaluation on my project. Please complete and send anonymously via interoffice mail to:

I. Content Expert Approach

- a. Please describe the effectiveness (or not) of this project in terms of communication, and desired outcomes etc.
- b. How do you feel about your involvement as a content expert member for this project?
- c. What aspects of the content expert process would you like to see improved?

II. There were outcome products involved in this project including an educational curriculum and pre/ posttest.

- a. Describe your involvement in participating in the development/approval of the products.
- b. Share how you might have liked to have participated in another way in developing/approving the products.

III. The role of the student was to be the leader of the project.

- a. As a leader how did the student direct you to meet the project goals?
- b. How did the leader support you in meeting the project goals?

IV. Please offer suggestions for improvement.

Appendix L: Curriculum Plan Evaluation by Content Experts Summary

Met = 1 Not Met = 2

Objective Number and Statement	Evaluator A	Evaluator B	Evaluator C	Average Score
1. Define OUD, describe the different types (forms) of opioids, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy	2	1	1	0.66
2. Discuss perinatal NAS/OUD, the impacts on the newborn and mother, and the Eat, Sleep, Console intervention and its benefits to the perinatal and neonatal patient	1	1	1	1
3. Discuss nurse's knowledge of OUD, attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother	1	1	1	1
4. Define and identify the complications of Opioid Use Disorder, and the signs and symptoms of OUD in both mother and newborn	1	1	1	1

Moon/August 2019

Appendix M: Summary of the Evaluation of the Staff Education Program by Participants

“Met = 1” “Not Met” = 2

Objective Statement	Response	Number
Define OUD, describe the different types (forms) of opioids, Opioid Use Disorder, risk factors, changes in brain structure, and treatment for OUD in pregnancy	Met	13
	Not Met	0
Discuss perinatal NAS/OUD, the impacts on the newborn and mother, and the Eat, Sleep, Console intervention and its benefits to the perinatal and neonatal patient	Met	13
	Not Met	0
Discuss nurse’s knowledge of OUD, attitudes and bias towards OUD patients and NAS negative attitudes and bias and their impacts on nursing care delivered to the newborn and mother	Met	13
	Not Met	0
Define and identify the complications of Opioid Use Disorder, and the signs and symptoms of OUD in both mother and newborn	Met	13
	Not Met	0
Mean		1
<p>Comments: Great job! Good info! Good job, we need to teach our follow RNs to be less judgmental. Gender inclusive language- not all birthing people are women! Very informative, well organized, avoid use of video presentation w/in slideshow. Great content! Need more time to present. Felt like some of the slides had the same info. Reword the “except” questions, otherwise this is a great and relevant presentation. Congratulations on your nursing journey.</p>		

Appendix N: Pretest/Posttest Content Expert Validity Index Scale Analysis

Rating on X-Items Scale by Three Experts on a 4-point Likert Scale

Items	Expert A	Expert B	Expert C	Total Item Rating
1	0	1	1	0.67
2	0	1	1	0.67
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	0	1	1	0.67
8	1	1	1	1
9	1	1	1	1
10	1	1	1	1
11	1	1	1	1
12	1	1	1	1
13	1	1	1	1
14	0	1	0	0.33
15	1	1	1	1
S-CVI				0.89

1. Review each CE individual item score from Appendix F. Any item that gets a 1 or 2, gets a 0 on this form. Any score that is a 3 or 4 gets a 1 on this form.
2. Add all three of the CEs scores horizontally and divide by the number of CEs to achieve the I-CVI and put in the Total Item Rating column for that item.
3. Add the Total Item Ratings vertically and divide by the number of test items.
4. The S-CVI should have a score between 0 and 1.
5. Note: Acceptable validity score should be between .78 and 1. Otherwise any items that are poorly rated need to be revisited.

S-CVI/UA, scale-level content validity index, universal agreement calculation method
Adopted from Polit, D. F., & Beck, C. T. (2006). The content validity index

Appendix O: Summary Evaluation of the Staff Education Project by Content Experts

Title of Project: Perinatal Nursing Education Related to Opioid Use Disorder

Student: Britney Taniguchi

I. Content Expert Approach

Please describe the effectiveness (or not) of this project in terms of communication, and desired outcomes etc.

Evaluator A	Evaluator B	Evaluator C
The curriculum plan created by Britney ensured that the project is organized and holistic in how the teaching material will be presented to the audience. Learning objectives, implementation and evaluation plan were pertinent, comprehensive, and cohesive. Britney made the necessary revision to this project based on feedback before implementation	The goal of this project was to educate and raise awareness in the nursing staff as to the extent of opioid use and medical repercussions as it pertains to the mother and the neonate. I believe this presentation explored these issues clearly and succinctly	I believe this project to be effective in improving the understanding of OUD and identifying potential biases of nurses towards clients who have OUD

How do you feel about your involvement as a content expert member for this project?

Evaluator A	Evaluator B	Evaluator C
I am honored to be part of this project and pleased that Britney is utilizing her talent and skills to create change and improve patient care delivery outcomes	As a Board Certified Obstetrician/Gynecologist I feel qualified to be involved as a content expert for this project. The topic is not only timely but it is socially responsible to address the opioid crisis in the maternal/neonate population. In addition, it addresses unconscious bias, an issue of which we are becoming more critically aware	I believe I was able to give constructive guidance to the surveyor regarding this project. The review packet was not too long and did not take up a significant amount of time to complete

II. There were outcomes products in this project including an educational curriculum and pre/posttest.

Describe your involvement in participating in the development/approval of the products.

Evaluator A	Evaluator B	Evaluator C
After being identified as content expert for the project, I was asked to review a project plan which outline the objectives, implementation and evaluation plan. I provided written feedback which included suggestions to how the content could be delivered more clearly and cohesively	As a content expert, I provided feedback on subject matter, exams, and the presentation. Because I was interested in this topic I reviewed the references Britney included in her Presentation	Packet was reviewed, analyzed, and evaluated. Objectives were met and the curriculum was well developed. I provided review of the test questions and provided feedback

d. Share how you might have liked to have participated in another way in developing/approving the products.

Evaluator A	Evaluator B	Evaluator C
I believe that the candidate had done a great job developing her project and my role as content expert evaluating her work was for me, a sufficient amount of involvement. I am looking forward to reviewing the outcomes of her project in her final document	I was comfortable with the amount of participation I was involved in	I would have liked to help Britney develop their tool

III. The role of the student was to be the leader of the project.

As a leader how did the student direct you to meet project goals?

Evaluator A	Evaluator B	Evaluator C
The student exhibited a participative type of leadership in that she sought input and was open to the feedback and advise meant to help her project and achieve its goals	Britney provided me with written instructions regarding my role as a content expert	The surveyor was clear in their direction of what I was to do. Although having a calendar of dates up front would have been helpful. The surveyor was diligent in sending email

		reminders but I was extremely busy with work and it would slip my mind
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How did the student support you in meeting the project goals?

Evaluator A	Evaluator B	Evaluator C
She formulated a project plan that clearly laid out her goals, implementation and evaluation plan which she then shared with me to review. She gave me ample time to examine her literature matrix and she used the evidence to develop her project. I feel that these actions adequately supported my role as content expert reviewer	Britney provided me with a packet that included documents for her presentation, exams and references. She gave realistic deadlines for completion of paperwork	The surveyor provided a packet with clear instructions as well as a timeline for completion. Provided contact information

IV. Please offer suggestions for improvement.

Evaluator A	Evaluator B	Evaluator C
First, I am grateful for this opportunity to serve as content expert reviewer and take part in such a meaningful endeavor. Although I am mostly involved in the appraisal of evidence and project plan, I am eager to learn more about the application, analysis of the outcomes. Looking forward to working with you again	It would have been interesting to have the opportunity to attend the presentation in person or virtually	My only suggestions are to include a calendar of proposed due dates in the reviewer packet to keep the reviewer on track and to ensure the questions and answers align. I made a few comments on the survey itself as to strength of answers and distractors. I thought this project was well thought and with minor changes would be beneficial for utilization and research in educating nurses and making them aware of their biases with OUD clients