# Prevention to Protection: Strategies for Naloxone Distribution and Overdose Education in a Community Shelter

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NUR7530 DNP Project and Practicum IV

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July 14, 2024

**Acknowledgments**

Words cannot express my gratitude to my professors, Dr. Melanie Michael, Dr. Imke Casey, and Dr. Jeanne Jenkins, for the invaluable guidance, patience, wisdom, and feedback that they have given me over the past two years. I will forever be a 'deeper learner' and appreciate the Paradigm change they have assisted in molding in me. I also could not have traveled this journey without my project mentor, Dr. Elizabeth Palazzi Xirinachs, who generously provided knowledge, support, prayers, and encouragement throughout this process. Additionally, I would like to thank Polk for Recovery for agreeing to partner with me on this project so that we may successfully decrease opioid overdose fatalities and distribute naloxone to many communities.

I am also grateful to my awesome classmates and cohorts for their assistance, support, counseling sessions and for remaining in the trenches with me as we forged our way to deeper depths and higher heights these past two years. I truly salute you and pray that all of you contribute as much to your communities as you have been in my life.

I thank my family. Their unwavering belief in me and encouragement kept my spirits and motivation alive. They were my strength when I became weak and my faith when I became doubtful. Their prayers gave me life.

Finally, I would like to thank God for allowing me to expand my horizons, increase my knowledge, and for choosing me to help and bring the change that someone else may need.

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**Abstract**

Community shelters serve a vulnerable population at heightened risk of opioid overdose. Providing shelter staff and residents with naloxone, an overdose reversal medication, and comprehensive overdose education is crucial for saving lives. This project outlines strategies for implementing a robust naloxone distribution and overdose education program within a community shelter. The project discusses the benefits of naloxone distribution and education in community shelters, offering best practices and protocols for such programs. It explores practical strategies for program implementation, including staff training, resident education methods, and harm reduction messaging. Considerations of overcoming potential challenges and ensuring program sustainability are also addressed. The pre-education and post-education surveys indicate that opioid overdose and naloxone education significantly increased overall knowledge and individual survey scores. A well-designed naloxone distribution and education program can empower shelter staff and residents to respond effectively to opioid overdoses. This intervention has the potential to significantly reduce overdose fatalities within the shelter community. By adopting a "prevention to protection" approach, community shelters can become safer spaces, equipped to prevent opioid overdose tragedies, and empower residents to take charge of their well-being.

*Keywords*: opioid overdose, naloxone education, community shelter, homelessness

# Prevention to Protection: Strategies for Naloxone Distribution and Overdose Education in a Community Shelter

Opioid overdose has reached epidemic proportions in the United States, with devastating consequences for individuals, families, and communities. Current evidence indicates a significant public health issue, as opioid-related overdoses and deaths continued to rise, now surpassing motor vehicle accidents as the leading cause of entry-related deaths (Bagley et al., 2019). Homeless adults are at a significant risk for opioid overdose. Drug overdose is a leading cause of death among homeless adults and accounts for one-third of the deaths among homeless adults less than 45 years of age (Dahlem et al., 2016).

According to Scher et al. 2018, historically, the classification of pain as a fifth vital sign has led to increased opioid prescriptions and subsequent misuse. While this shift initially aimed to improve pain management, it has contributed to the current crisis, prompting organizations like the American Medical Association to call for an end to this approach.

Although naloxone, a life-saving medication for reversing opioid overdoses, is available, barriers in distribution and education hinder its effectiveness. This Doctor of Nursing Practice (DNP) project proposes an opioid overdose naloxone distribution education program as a crucial measure to decrease opioid overdose mortality. The Opioid Education and Naloxone Distribution (OEND) program aims to (1) educate the community, including family, friends, healthcare personnel, and those at risk of overdose, on recognizing overdose signs and symptoms, (2) improve accessibility and understanding of naloxone use among laypeople and first responders, and (3) assess the program's success in enhancing timely and appropriate overdose responses. This DNP project specifically targets educating the staff of a community shelter about opioid overdose and its widespread impact, presenting naloxone education and distribution as part of the

solution to mitigate the harmful effects of opioid misuse and overdose, ultimately aiming to reduce opioid-related deaths.

**Background and Significance**

The current opioid epidemic in the United States began 20 years ago and has become the leading cause of accidental deaths (Centers for Disease Control and Prevention [CDC], 2023b). Over the past 20 years, an increasing use of opioids has been reported in the United States, coinciding with an increase in opioid addiction, opioid-related morbidity, and mortality. Canada is facing the same issue, with the world's second-highest rate of opioid prescribing fueling the rise in opioid-related deaths (Robert et al., 2022). Overdose continues to drag mortality among people with opioid use disorders worldwide. There are approximately 1.3 million people with opioid use disorder in Europe, with Ireland having one of the highest rates of all European countries (Barry et al., 2017).

An opioid is a drug that is derived from the poppy plant (opium) and is used in pain relief. Opioids can be obtained by prescription and illegally. Prescribed by a provider, this class of drugs relieves pain due to post-surgical procedures and severe pain due to trauma. “Opioid” is the proper term, but opioid drugs may also be called opiates, painkillers, or narcotics. All opioids work similarly: They activate an area of nerve cells in the brain and body called opioid receptors that block pain signals between the brain and the body. Examples of opioids include morphine, heroin, codeine, oxycodone, hydrocodone, and fentanyl. Opioids, even obtained from a physician, may lead to increased tolerance and dependence (Johns Hopkins University Medical Health System, 2023). In 1996, when pain was adopted as the fifth vital sign, along with patient satisfaction surveys, more attention was placed on patient pain complaints, and treatment was taken seriously (Humble, 2014). Research suggests prolonged operative opioid use, a common

complication following surgery, is associated with opioid misuse, which, in turn, is the most significant risk factor for heroin misuse (Lanzillotta et al., 2018). According to the CDC, over 645,000 people died from opioid overdose, whether prescription or illicitly, between 1999 and 2021. The number of people that died in 2022 due to overdose was six times that in 1999. Also, the CDC stated that the overdose epidemic occurred in three stages. The first wave began with increased prescribing of opioids in the 1990s. The second wave began in 2010, with rapid increases in overdose deaths involving heroin. The third wave began in 2013, with significant increases in overdose deaths involving synthetic opioids, particularly those involving illicitly manufactured fentanyl, which can be found in combination with heroin, counterfeit pills, and cocaine (Centers for Disease Control and Prevention [CDC], 2023b).

Out of the hundreds of thousands of people suffering from the opioid epidemic, specific populations are impacted more than others. The thirty-five to forty-four-year age group is experiencing the most opioid overdose deaths - 20,137 – a 20% increase from 2020 and a 73% increase since 2019. Currently, 71% of preventable opioid deaths occur among those ages twenty-five to fifty-four, and deaths among individuals fifty-five and older are increasing. Still, few opioid deaths occur among children under 15 (National et al. [NSC], 2023). Opioid-involved overdose deaths rose from 21,089 in 2010 to 47,600 in 2017 and remained steady through 2019. From 2018 to 2019, the United States saw a 2.7 percent increase in the overall homeless population (Nicholls & Urada, 2021, para. 2). About one-third of people experiencing homelessness experience alcohol and drug-related problems. It has been shown that substance use can be both a cause and a result of homelessness. Substance use is in the top five causes of homelessness and, in some cities, is the third leading cause (Nicholls & Urada, 2021). In Polk County, Florida, the age-adjusted rate for drug overdose for 2021 was 228 – 32%

compared to the state of Florida at 7719, at 36.7% nationally (Florida Department of Health [FDOH], n.d.).

Due to the urgent and rising rate of opioid deaths, research has focused on finding solutions for those suffering from opioid overdose. One effective solution is the availability of medications that can reverse the effects of opioid overdose. Naloxone is an opioid antagonist for opioid overdose. Therefore, programs are needed to increase the availability of naloxone in the community for those at risk. Studies have shown that individuals who survived an overdose are at an exceptionally high risk of experiencing repeat non-fatal and fatal overdoses (Bagley et al., 2019). Massive efforts have been made to increase the availability of naloxone. In 2018, the US Surgeon General advised individuals to carry naloxone. Today, the surgeon general is still encouraging people in the community to carry naloxone in the event of encountering someone suffering from an opioid overdose. Naloxone education is imperative to the process. Communities with overdose prevention programs (OPP) have lower rates of overdose deaths than those without these programs (Reed et al., 2019). Overdose fatalities are preventable with the timely administration of naloxone. Nevertheless, access to naloxone remains insufficient. Overdose education and naloxone distribution have been shown to increase the reversal of potentially fatal overdoses. A study showed opioid overdose death rates to be 27 to 46% lower in communities where OEND was implemented (National Institutes of Health [NIH], 2021). Thus, OEND programs are crucial for preventing opioid fatalities. These programs train people likely to witness an overdose and deliver critical information about overdose prevention, recognition, and response. Naloxone is now available over the counter (Substance Abuse and Mental Health Services Administration [SAMHSA], 2023). Although it may be expensive, depending on where it is purchased, it is still available to the public. Naloxone may be given by intranasal spray or

intramuscular, subcutaneous, or intravenous injection. Intranasal is the most common formulary for public use.

**Problem Statement**

Opioid overdose represents a critical health crisis, especially among the homeless population. Lack of education and access to life-saving interventions like naloxone exacerbate this issue. Opioid overdoses are a major public health crisis, contributing to significant morbidity and mortality rates. Advanced practice registered nurses (APRNs), often on the front lines of healthcare, frequently encounter patients affected by opioid use and overdose. The widespread nature of the opioid epidemic means APRNs must be equipped to manage and treat these cases effectively. APRNs are permitted to prescribe medicines within their scope of practice, and this often puts them in a crucial position to prescribe opioids responsibly and manage pain treatment plans. Lack of education and access to life-saving interventions like naloxone exacerbate this issue. APRNs play a crucial role in educating patients about the risks of opioid use, signs of overdose, and safe medication practices. They can implement and lead prevention strategies, such as prescribing naloxone and providing training on its use, screening for opioid misuse, and offering alternative pain management options. Advanced practice registered nurses can be essential in reducing the incidence of fatal opioid overdose in this vulnerable community. They may accomplish this by conducting regular screenings for substance use disorders during routine healthcare visits, using validated assessment tools to identify individuals at risk of opioid overdose, and intervening accordingly. APRNs can influence healthcare policy and advocate for changes that address the opioid crisis, such as improved access to addiction treatment services, tighter controls on opioid prescriptions, and expanded use of harm reduction strategies. APRNs may also collaborate with interdisciplinary teams to ensure comprehensive care, including

counseling and support services, design and implement educational programs to raise awareness about the risks of opioid use, signs of overdose, harm reduction strategies, and provide community-based training on naloxone administration. Naloxone is an opioid antagonist that reverses overdoses by quickly displacing opioid antagonists from the receptors and is the treatment of choice for opioid overdose (Lott & Rhodes, 2016). The challenges for APRNs in opioid overdose education and naloxone distribution arise from the intricate nature of the crisis, diverse patient populations, lack of standardization, legal complexities, societal attitudes, the need for collaboration, resource limitations, and the ongoing demand for professional development, and guidelines for prescription writing of class 2 drugs. Addressing these challenges requires a multifaceted and collaborative effort at individual and systemic levels.

**Project Purpose**

This Doctor of Nursing Practice project was dedicated to developing a tailored opioid education and naloxone distribution program at the Talbot House Community Shelter in Lakeland, FL. It aimed to mitigate the opioid overdose epidemic by enhancing naloxone accessibility and providing comprehensive overdose education. In collaboration with all stakeholders, the project manager thoroughly assessed the current naloxone distribution and overdose education at Talbot House. Based on this, the team designed an evidence-based OEND program addressing specific community needs. These included overdose recognition, proper naloxone administration, and dispelling addiction-related stigmas. A critical component was the development of culturally sensitive training materials for staff, who will, in turn, educate the community. This dual approach not only empowered staff but also fostered community resilience in combating opioid overdoses. In collaboration with Polk For Recovery, the team designed staff training sessions and developed a process plan to distribute naloxone kits. The goal was to

prepare the staff for program implementation within three months, ensuring a sustained and effective response to opioid overdoses. The project proposal earned the satisfaction of all stakeholders. This project included robust follow-up and evaluation strategies to assess impact, focusing on expanding and sustaining the program beyond its initial timeline. This OEND project aligns with broader public health strategies by contributing to harm reduction and overdose prevention. It aimed to reduce overdose fatalities, alleviate emergency services burden, and enhance community health in the face of opioid misuse.

**Clinical Question**

The question to be addressed in this project was: What are the best protocols and guidelines regarding naloxone education in community-based settings to decrease opioid overdose mortality? This project was significant to me because someone close to me struggled with opioid misuse and overdose. While researching and learning about the opioid epidemic was enlightening, experiencing it personally was profoundly distressing. Watching a loved one suffer from opioid misuse is incredibly challenging and emotionally exhausting. Opioid misuse is a complex issue that affects not only the individual but also their relationships and the entire family dynamic, straining communication, trust, finances, and overall well-being. These are some of the same challenges the OEND program aims to address.

Opioid overdose has reached epidemic proportions in the United States, with devastating consequences for individuals, families, and communities. Current evidence indicates that opioid-related overdoses and deaths have continued to rise, now surpassing motor vehicle accidents as the leading cause of injury-related death. This issue has become a significant epidemic, and there is an urgent need to reduce the number of people with opioid use disorders and the mortality rate of opioid overdoses before it becomes irreversible. Opioid-involved overdose deaths increased

from 49,860 in 2019 to 81,806 in 2022 (National Institutes of Health [NIH], 2024; Appendix A). Deaths from prescription opioid overdoses rose from 3,442 in 1999 to 17,029 in 2017, then declined to 14,139 by 2019. However, there was a slight increase in 2020, with 16,416 reported deaths, and a further decline to 14,716 in 2022 (NIH, 2024). According to Patrick (2024), synthetic opioid fentanyl is now the leading cause of death in the homeless community, with at least 421 homeless individuals dying in 2023—a 36% increase from 2022 and a 115% increase from 2018.

Guidelines and protocols are essential for outlining the critical components of education programs, ensuring that participants receive comprehensive and relevant information about opioids, overdose risks, and appropriate responses. This enhances the effectiveness of the educational aspect of OEND programs. Protocols help establish uniform procedures for distributing naloxone, including guidance on who should receive naloxone kits, how they should be distributed, and any associated documentation or follow-up procedures. Adhering to guidelines ensures the program complies with relevant laws and regulations, including those related to naloxone distribution and use. Guidelines should also be adaptable to different settings and populations and tailored to meet the specific needs and characteristics of the target audience. Proper documentation within the program's guidelines and protocols is crucial for accountability, program evaluation, and reporting to stakeholders, funders, and regulatory bodies. Safety considerations are prioritized for individuals receiving training and those administering naloxone, with instructions on managing and storing naloxone and guidelines for responding to emergencies during training sessions.

**Review of Literature**

The DNP project was conceptualized as an evidence-based quality improvement project. A focused literature review resulted in the development of project methods and innovations. The Roux Library database was used to research literature about protocols and procedures for opioid overdose and naloxone education. The project literature review was based on examining current evidence to determine the infrastructure and processes that have been used to establish OEND community-based programs successfully and explore the impact of OEND community-based programs on the organization's community-based outcomes.

Studies considered for inclusion were appraised using the Johns Hopkins Nursing Evidence-Based Practice guidelines and tools. For the final review, studies were appraised according to the level of evidence and quality per the Johns Hopkins tools and guidelines. There were 238 records identified through database searching, 58 additional records identified through other sources and methods, and 17 records were removed after duplicates were found. In total, 279 records were screened for inclusion criteria and relevance, 229 were excluded, 50 full-text articles were assessed for inclusion and relevance and quality, 35 full-text articles were excluded for various reasons, and 15 studies were included in the final synthesis. These articles considered for inclusion were read and kept based on the information received and whether it answered the problem question. The articles with the necessary information to answer the clinical question were kept and included in the final synthesis (Appendix B). The overarching common themes that emerged were signs and symptoms of opioid overdose, naloxone education, and decreased mortality among people experiencing opioid overdose. Other important issues were fewer community members shying away from naloxone use, decreased fear that would hinder community members from acting quickly, properly administering naloxone, and waiting for

EMS to arrive. The appraisal process included evidence-based practice literature via research and non-research, literature reviews, and the Johns Hopkins Evidence-Based Practice tool. Several methods were utilized while researching the proposed project. One of the research methods was the Arksey and O'Malley framework. In the Arksey and O'Malley framework, there are six stages of validation. These include 1) specifying the research question, 2) identifying relevant literature, 3) selecting studies, 4) mapping out the data, 5) summarizing, synthesizing, and reporting the results, and 6) including expert consultation (Daudt et al., 2013). The Knowledge-To-Action Framework by Ian Graham was also utilized. This framework provides a structured approach to making change, including a six-stage action cycle that enables translating knowledge into practice (Field et al., 2014). The first stage is to identify the problem; the second stage adapts guidelines; the 3rd stage identifies barriers and facilitators to use the best practice guidelines in the clinical setting; 4th stage adapts and implements interventions; the 5th stage and 6th stage concerns monitoring and sustaining the use of knowledge in our central to implementation (Field et al., 2014). Nine studies evaluated the best practices and protocols for OEND community-based delivery.

The most frequently sighted outcomes were best practices to implement staff, health departments, policymakers, friends, and family guidance to reduce opioid overdose mortality. It also stated that to prevent opioid-related mortality, opioid overdose education and naloxone distribution programs need to be created. Guidelines for obtaining naloxone and naloxone distribution are pertinent to remain in good standing with federal and statewide laws regarding the distribution of naloxone. Fourteen of the studies that met inclusion criteria evaluated the impact and education that opioid overdose signs and symptoms had on the mortality rate of those experiencing opioid overdose. These studies agreed that if people are equipped with the

education and training provided by OEND programs, naloxone can be administered by bystanders, whether that bystander is a person who uses opioids, a friend, a family member, an acquaintance, or a first responder, and that their social networks can obtain training. It showed that overdose risk reduction is superior to usual care in reducing opioid overdose (Kerensky & Walley, 2017; Sellen et al., 2023). Eight studies evaluated how naloxone education in the community impacts the opioid overdose mortality rate. However, studies show that naloxone education should be affordable to people in the community, friends, and family. Training effectively increases self-efficacy surrounding overdose prevention and response (Lewis et al., 2016). The studies also showed that many governmental agencies, such as the National Association of County and City Health Officials, the United States Veterans Association, and the World Health Organization, are needed to provide increased access to opioid overdose prevention education as well as improved access to medical, mental health and social services for people who use or misuse opioids (Feuerstein-Simon et al., 2020; Wheeler et al., 2012; Oliva et al., 2017). The evidence of synthesis related to naloxone research evaluated the effectiveness of naloxone and take-home naloxone programs in reducing opioid overdose mortality and examined optimal dosing or routes of administration for overdose reversal via naloxone education. The research also identified gaps in the evidence needed to inform clinical and operational guidance regarding naloxone distribution and programs.

Five studies evaluated the barriers to naloxone education and use in the community. Naloxone use education has decreased mortality rates among opioid overdoses but has barriers to naloxone education and naloxone use. The studies listed obstacles such as fear, the stigma of opioid use, who can administer naloxone, costs, obtaining naloxone without a prescription, and

the fear of administering naloxone among substance abusers. The fear of being legally responsible in the event of an opiate overdose is one of the most significant barriers some people experience. The Good Samaritan law protects those who administer naloxone to someone experiencing an opioid overdose. Naloxone cannot harm nor affect anyone experiencing an overdose on something other than an opioid. The person must stay with an overdose victim until the first responders arrive. There is also the fear of getting detained if you witness someone experiencing an opioid overdose if you are an opioid user. The same Good Samaritan law applies to this responder (Nicholls & Urada, 2021; Wheeler et al., 2012). This is especially important to communicate to the person administering naloxone, as research has shown that fear and stigma cause people to leave before the Emergency Medical Services personnel arrive. Acceptability is still marred by the stigma surrounding people who use drugs, making them hesitant to attend community education forums on naloxone use (Grant & Smart, 2022). Evidence indicates that policies and protocols must be followed to educate people about naloxone to ensure everyone understands the presented information and knows how to administer naloxone properly. The studies also showed that if naloxone is given at no cost via educational groups, community shelters, or take-home naloxone distribution programs, the community is more apt to participate in naloxone education and training (Wenger et al., 2022 (Mokomane & Makoae, 2015).

## Methods

The approach to this DNP project was guided by an evidence-based and quality improvement method. Quality improvement is crucial for enhancing the effectiveness, efficiency, and impact of an OEND program. A project charter was developed and submitted, outlining the project's key goals and benefits (Appendix C). Opioid overdose research was

conducted, information regarding opioid overdose was noted, and the information was documented and included in the education portion of the project. Research showed that increasing community-based OEND delivery is essential to reducing opioid overdose deaths. I researched these points: best practices and protocols for OEND community-based delivery, opioid overdose signs and symptoms education, naloxone education, and barriers to naloxone use and distribution. Current evidence was examined, and it showed that the opioid overdose epidemic remains a significant public health issue and continues to rise exponentially in the United States. It also showed that opioid-related overdoses and overdose deaths continue to present a significant public health crisis worldwide. My research showed that increasing community-based opioid overdose education and naloxone distribution delivery is essential to reducing opioid overdose deaths. Research also showed that the present situation with opioid overdose is not sustainable. The evidence indicates that interventions can improve health outcomes and decrease the mortality rate of opioid overdose while ensuring that medical providers and staff at community health centers in high-risk communities are knowledgeable about opioid use disorder and that recognizing and responding to opioid overdoses is crucial in helping prevent and decrease opioid-related deaths (Kottler & Reising, 2021, para. 1). This literature review answered the question of the best practices for community-based overdose education in naloxone distribution programs in community shelters. Guidelines and protocols for opioid overdose and naloxone education programs were developed for the Talbot House Community Shelter staff. Polk for Recovery partnered with The Talbot House on this project and is responsible for managing and distributing the naloxone.

Educational materials on opioid overdose prevention and naloxone distribution were created and submitted. Guidelines and protocols were also presented and accepted by all

stakeholders. This was done using PowerPoint demonstration methods and pre-education and post-education surveys. All pre-education and post-education surveys asked the same questions of all the participants. They were calculated by adding the sum of all pre-education surveys and dividing it by the number of participants, giving us the pre-education survey score. The post-education survey was calculated in the same manner. It used data to identify areas for improvement and adjust the program elements. The project supports continuous learning and adaptation, ultimately enhancing the program's ability to save lives and reduce the impact of opioid overdoses. The primary objective was to educate the staff of The Talbot House on opioids, the signs and symptoms of opioid overdose, and naloxone administration. We did this by educating the staff of Talbot House Ministries and some community members on the signs and symptoms of opioid overdose and naloxone and its use. In this case, we decreased the barrier of ignorance involved in opioid overdose, knowledge, treatment, and naloxone use and administration. The specific, measurable objectives were to increase the number of naloxone kits distributed within the next year and train the Talbot House staff to educate the community members on overdose response over the next six to twelve months. This project was implemented from January 2024 to July 2024.three waves

**Implementation and Plan**

I delivered the newly created best guidelines and protocols for The Prevention to Protection Strategy for an Opioid Overdose Education Naloxone Distribution Program in a Community Shelter to my mentor, the staff, and the stakeholders. The guidelines and protocols were placed in a binder, along with all the educational materials for the program. They are in English and Spanish. I educated the staff and stakeholders at The Talbot House Community

Shelter using pre-education and post-education knowledge surveys. I also presented the opioid overdose education via PowerPoint, which included a question-and-answer segment.

**Conceptual and Theoretical Framework**

A conceptual and theoretical framework is an intellectual foundation that guides and informs a project. It provides a structure for understanding the issue at hand, shapes research questions, and tells the design and interpretation of the study. A conceptual and theoretical framework serves as a road map, guiding each research project phase. It ensures that the study is grounded in established knowledge, coherent in its design, and contributes meaningfully to the academic and practical understanding of the subject matter. The framework used in this DNP project is the Johns Hopkins Evidence-based Model (Dang et al., 2021). (see Appendix D) and the Precede-Proceed Framework (RHIhub, 2018). (see Appendix E)

The Johns Hopkins evidence-based practice model for nurses and health care professionals is a problem-solving approach to clinical decision-making. It is accompanied by tools to guide individuals or groups through the evidence-based practice process. Using this model, I identified the problem of opioid overdose. The clinical question: What are the best guidelines and protocols for an opioid overdose education and naloxone distribution program for a community-based shelter? The best evidence was searched using the Roux Library of Florida Southern College. I conducted a literature review to find evidence on effective strategies for implementing OEND programs, training methods, naloxone distribution models, and their impact on overdose outcomes. The research literature was critically appraised using the Johns Hopkins evidence-based practice guidelines and tools. It assisted in evaluating the quality and relevance of identified studies to ensure that the evidence is reliable and applicable to the goals of the OEND program. Effective training methods and distribution strategies were presented to

The Talbot House Community staff to apply the evidence-based findings to design and implement the OEND program. I combined the evidence with the expertise of health care professionals involved in the OEND program and considered the preferences and needs of the target population. The staff of the Talbot House shelter will implement it. The evaluation includes continuously assessing the program's outcomes, such as the number of overdose reversals, participant satisfaction, and any other relevant metrics.

Through the precede proceed model, the first stage is the precede stage. It begins with the social assessment. Social assessment was done by researching the opioid overdose epidemic globally and locally. The second stage is the epidemiologic stage. Epidemiological evaluation was done by noting any statistics that were found for opioid overdose. We found that the epidemic happened in three waves. The first wave began with increased prescribing of opioids in the 1990s, with overdose deaths involving prescription opioids (natural and semi-synthetic opioids and methadone) rising since at least 1993. Come up the second wave began in 2010, with rapid increases and overdose deaths involving heroin. The third wave began in 2013, with significant increases in overdose deaths involving synthetic opioids, particularly those involving illicitly manufactured fentanyl. The market for illicitly manufactured fentanyl continues to change, and it can be found in combination with heroin, counterfeit pills, and cocaine. (Appendix F). The third stage is the educational stage. Research was done to discover the knowledge strengths and deficits regarding opioid overdose and naloxone use. Following the education stage are epidemiological studies. It is at this stage that the best guidelines and protocols are established.

## DNP Project Design

This project is a quality improvement initiative. It used pre- and post-educational surveys to demonstrate how opioid overdose and naloxone education can increase people's knowledge of opioid overdose, naloxone basics, how to administer naloxone, and when to administer naloxone. This quality improvement project was designed to improve outcomes and decrease fatalities from opioid overdose. It also assessed the program's impact and effectiveness, ensuring that the training provided, and the naloxone distributed were being used correctly and efficiently.

## Participants

The Talbot House staff (6) and community members (3) participated. The executive mentor and the stakeholders were present but did not complete the surveys. One staff member had some knowledge of opioids; the rest of the participants had heard of opioids but did not know about opioids or naloxone.

## Setting

The project was presented at The Talbot House Community Shelter. Located at 814 N Kentucky Ave Lakeland FL. Talbot House sees 3,200 patient encounters annually—the population is uninsured and homeless. Services rendered are primary care, dental care, and prevention services. The board has 18 members, including a president, vice president, secretary, treasurer, and 14 members at large. The executive team consists of an executive director, a director of finance, a director of programs, a director of Health Services, a director of people and culture, and a director of facilities. Talbot House Partners with several community partners, including Bartow Ford, the Campbell's Foundation, Give Well Community Foundation, Publix employees federal credit union, Publix supermarket charities, the United Way, Career Source Polk, First Presbyterian Church of Lakeland FL, First United Methodist Church of Lakeland FL,

Marcs mobility, Saddle Creek logistics services, and Sessums Law Group. Talbot House has a residential program that houses approximately 200 to 250 residents nightly, not to mention the other 250 community persons who come in nightly to sleep, shower, and have a hot meal but choose not to reside in the tablet house program. Talbot House offers a solutions program with one-on-one counseling, group classes, industry-standard certifications, soft skills coaching, and transportation assistance. Talbot House also educates the program members on professional attire. They advocate with employers to help clients gain confidence, overcome stigma, and reach their professional goals. Talbot House has a free clinic that allows the clients access to preventative care and interventions, education, prescriptions, and referrals they need to improve their physical and mental well-being. The Talbot House offers housing assistance with off-site rapid rehousing assistance, funded by the U.S. Department of Housing and Urban Development. They are via referrals from the Homeless Coalition of Polk County (Talbot House Ministries, 2023).

**Intervention**

A PowerPoint presentation was used for educating participants on opioids, opioid overdose, signs and symptoms of opioid overdose, Florida and Polk County statistics, and naloxone education and administration. A YouTube video was also used as a visual aid on the correct steps for administering naloxone in a suspected overdose situation (canPHEM, 2019). (Appendix G)

**Tools**

The tools used were a PowerPoint presentation, YouTube video, and naloxone distribution to those present for the project presentation. A binder with the guidelines, policies, procedures, and protocol was presented to The Talbot House stakeholders.

**Data Collection and Analysis Projected Outcomes**

The data was collected by the participants taking a pre-education survey and then a post-education survey. The scores from the pre-education survey were calculated and averaged. The scores from the post-education survey were calculated and averaged. The pre-survey and post-educational surveys were averaged together via basic mathematical calculations to get the results. Ten people took the survey. One person had some knowledge of opioids, and the other nine did not. Seven people were staff members of The Talbot House. However, they did not have medical backgrounds. Three people were community members and had no knowledge of opioids, nor did they have medical backgrounds. During the pre-educational survey, one person scored 100%. This was scored by the person with opioid knowledge. One person scored 90%, three scored 70%, three scored 60%, and two scored 50%. The average pre-educational survey score is 68%. During the post-educational survey, six people scored 100 %, three 90%, and one scored 80%. The average post-educational survey score is 95%. After averaging the pre- and post-education survey, it was shown that there was a 27% knowledge-based improvement and a 39.71% score increase after educating the staff and community members on opioid overdose and naloxone administration. (Table 1) The project objectives are to increase community education on opioid overdose, the signs and symptoms of opioid overdose, and naloxone administration. It was shown that there was a 29% increase in their knowledge after educating the staff and community members. This indicates that if some people do not know about opioids, educating them can increase their knowledge, leading to a decrease in the fatality number of opioid overdoses.

**Ethical Considerations**

This DNP project received IRB approval (Appendix H). Additionally, a letter of support was obtained from The Talbot House leadership, which affirmed that the project's goals align with the needs of their indigent population. The Talbot House expressed that the project's completion will enhance their ability to teach, discuss, and disseminate Narcan products and education. They also anticipate valuable collaboration among various departments benefiting from this initiative. (Appendix I)

**Analysis of Projected Outcomes/ Detailed Analysis**

When looking at participant performance, the high Achievers were Participants 1 and 5, who started with high scores (90% and 100%, respectively) and maintained or improved their scores to 100% post-education. The moderate achievers were participants 2, 3, and 4, who started with moderate scores (70%), and all improved to 100%, demonstrating a full grasp of the educational content. Finally, the lower achievers were participants 6, 7, 8, 9, and 10, with lower pre-education scores (ranging from 50% to 60%).

The overall improvement shows a pre-education average score of 68%, increasing to a post-education average score of 95%, Representing an average score increase of 20-seven percentage points over a 39.71% improvement.

The key outcomes of this educational intervention include significant knowledge improvement across all participants, excellent knowledge retention as evidenced by high post-education scores, and the effectiveness of the educational intervention, particularly for those with initially low knowledge levels. The impact of the program is clear: it successfully improved participants' understanding of opioid overdose and naloxone administration. Even participants with initially low scores showed substantial improvement, indicating the program's ability to

address varying levels of prior knowledge. This synthesis highlights the effectiveness of the educational intervention in improving participants' knowledge about opioid overdose and naloxone administration, with notable improvements across all skill levels.

## Discussion

The educational program on opioid overdose and naloxone administration demonstrated remarkable effectiveness, as evidenced by significant improvements in knowledge scores among participants. The average score increases of twenty-seven percentage points, coupled with a 39.71% improvement in knowledge-based metrics, underscores the program's success in enhancing participants' understanding and preparedness for addressing opioid overdoses and administering naloxone. These findings are particularly encouraging, suggesting that similar educational interventions could substantially benefit other settings, potentially improving community preparedness and response to opioid-related emergencies.

The results of this study align with those of other research projects focused on opioid overdose education. For example, in a project involving 123 participants from two rural communities, individuals received education on the impacts of the opioid overdose epidemic across four main areas: stigma reduction, prevention and treatment awareness, naloxone education and use, and resource location awareness. Post-education surveys from this project indicated improved learning in all four areas. As highlighted in the article by Condie et al. (2022), “This model for rural community education supports previous research and serves as an effective strategy of public health practice to address the opioid overdose epidemic on a local level.” Despite these positive outcomes, the current project faced significant limitations. The sample size was notably small, with only ten participants. One participant had some prior knowledge of opioid overdose due to personal experience with someone close to her abusing

recreational drugs but had no prior knowledge of naloxone use and administration. The remaining nine participants had no prior knowledge at all. Another limitation was the project's duration, which spanned from January 2024 to June 2024, potentially limiting the depth of the educational impact.

To enhance the effectiveness of future opioid overdose education and naloxone distribution programs, several recommendations can be made. Increasing the number of participants from various shelters or communities would provide a more extensive survey area and a broader knowledge base. This would improve the generalizability of the results and ensure that naloxone distribution is more widespread and practical. By expanding the participant base, future programs can better gauge the overall community's readiness and tailor the education to address specific gaps in knowledge and preparedness.

In conclusion, while the educational program on opioid overdose and naloxone administration was highly effective in improving knowledge and preparedness among participants, future efforts should focus on addressing the limitations identified. Expanding participant numbers and extending the duration of the program could enhance its impact, ultimately leading to better community preparedness and response to opioid-related emergencies.

## Conclusion

In conclusion, the opioid overdose crisis in the United States has had devastating effects, particularly among vulnerable populations such as homeless adults. Despite the availability of naloxone, the life-saving opioid overdose reversal medication, its potential is often limited by barriers to effective distribution and education. This quality improvement project demonstrated that targeted educational interventions could significantly enhance knowledge and preparedness in addressing opioid overdoses. The substantial improvements in participants' understanding and

the notable increases in their knowledge scores underscore the program's effectiveness. The strategic processes can (1) help set clear goals and objectives, (2) enable efficient allocation of resources (naloxone distribution), (3) use a practical course of action involving stakeholders and ensuring their perspectives are being considered to lead to an inclusive solution, (4) provide long-term vision and transform the situation enabling sustainable growth and development rather than short term fixes.

The project's success suggests that similar educational initiatives could be beneficial if implemented more broadly. However, the study's limitations, including the small number of participants and the focus on a single community shelter, highlight the need for further research. Future efforts should aim to pilot similar programs in multiple shelters and communities, involving a more extensive and diverse participant base. By expanding the scope and reach of these educational interventions, we can better equip individuals and communities to combat the opioid overdose epidemic more effectively.

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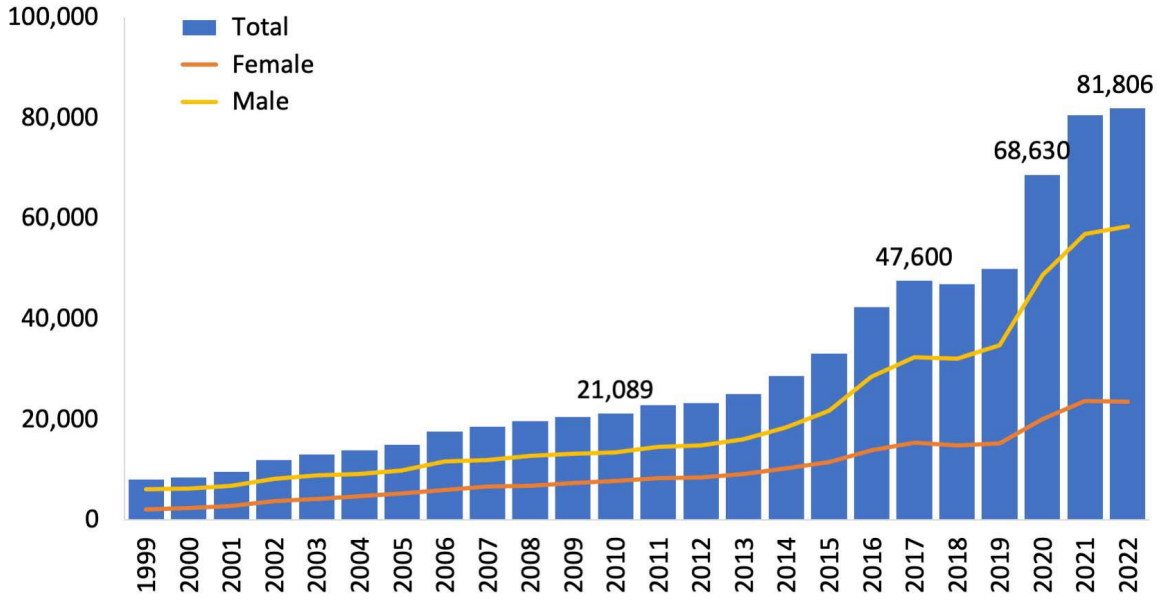
| Participant | Pre-ed Survey (% correct) | Post-ed Survey (% correct) |
|---|---|---|
| 1 | 90 | 100 |
| 2 | 70 | 100 |
| 3 | 70 | 100 |
| 4 | 70 | 100 |
| 5 | 100 | 100 |
| 6 | 60 | 100 |
| 7 | 60 | 90 |
| 8 | 60 | 90 |
| 9 | 50 | 90 |
| 10 | 50 | 80 |

**Table 1**

# Appendix A

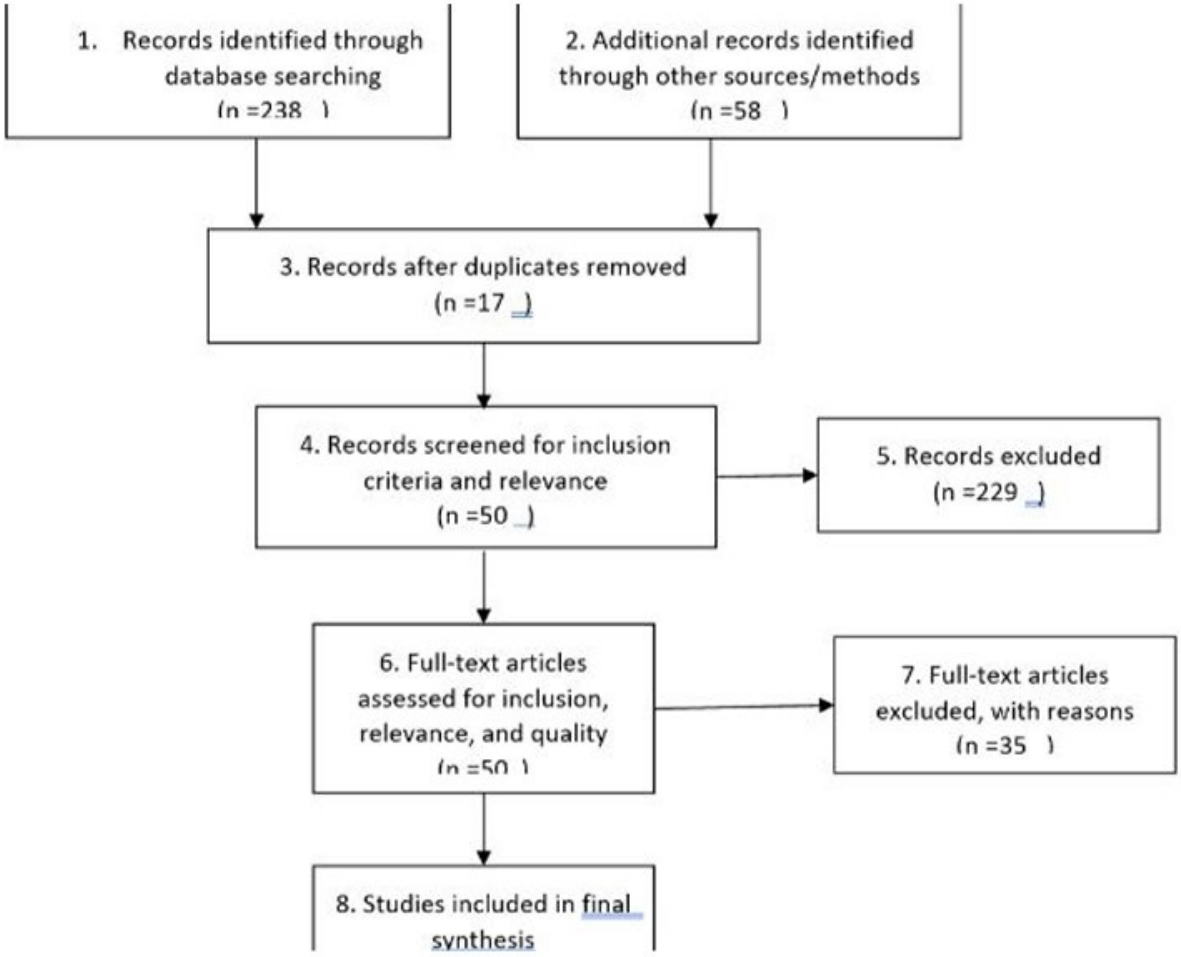
## Figure 3. National Overdose Deaths Involving Any Opioid*, Number Among All Ages, by Sex, 1999-2022




*Among deaths with drug overdose as the underlying cause, the "any opioid" subcategory was determined by the following ICD-10 multiple cause-of-death codes: natural and semi-synthetic opioids (T40.2), methadone (T40.3), other synthetic opioids (other than methadone) (T40.4), or heroin (T40.1). Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2022 on CDC WONDER Online Database, released 4/2024.

# Appendix B

## Literature Synthesis



# Appendix C

**Project Charter for Opioid Overdose Education and Naloxone Distribution Program at the Talbot House Community Shelter Lakeland, Florida**

**Objectives**

To develop guidelines and protocols for opioid overdose and naloxone educational programs for Talbot House Community Shelter staff.

**Background**

Examining current evidence shows that the opioid overdose epidemic remains a significant public health issue and continues to rise exponentially in the US. Opioid-related overdoses and overdose deaths continue to present an urgent public health crisis worldwide. My research shows that increasing community-based opioid overdose education and naloxone distribution (OEND) delivery is essential to reducing opioid overdose deaths.

**Scope**

Develop best practices for a community-based overdose education naloxone distribution program that may be implemented to train the staff on overdose prevention and naloxone administration.

**Deliverables**

Guidelines and protocols for a community-based naloxone distribution program. Educational materials on opioid overdose prevention and naloxone distribution.

**Budget**

Not Applicable

**Timeline**

January 1, 2024, to April 30, 2024

**Stakeholders**

Executive Director – Maria Cruz

Director of Health Services-Dr. Elizabeth Palazzi-Xirinachs

Operations Director-Rafael Diaz

Operations Manager-Michael Tinney

Director of Operations-Deborah Cozetti

**Team Members/Collaborators**

Shift Managers

Case Managers

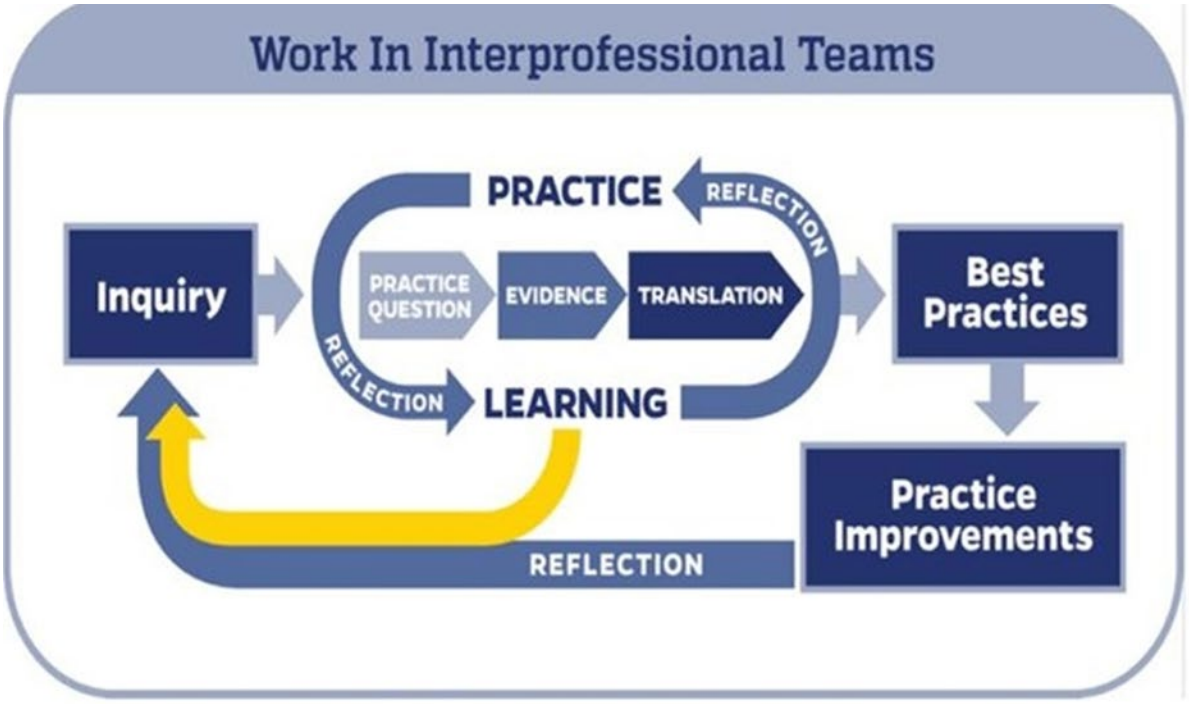
**Risks**

Lack of staff participation

Inadequate time

## Appendix D

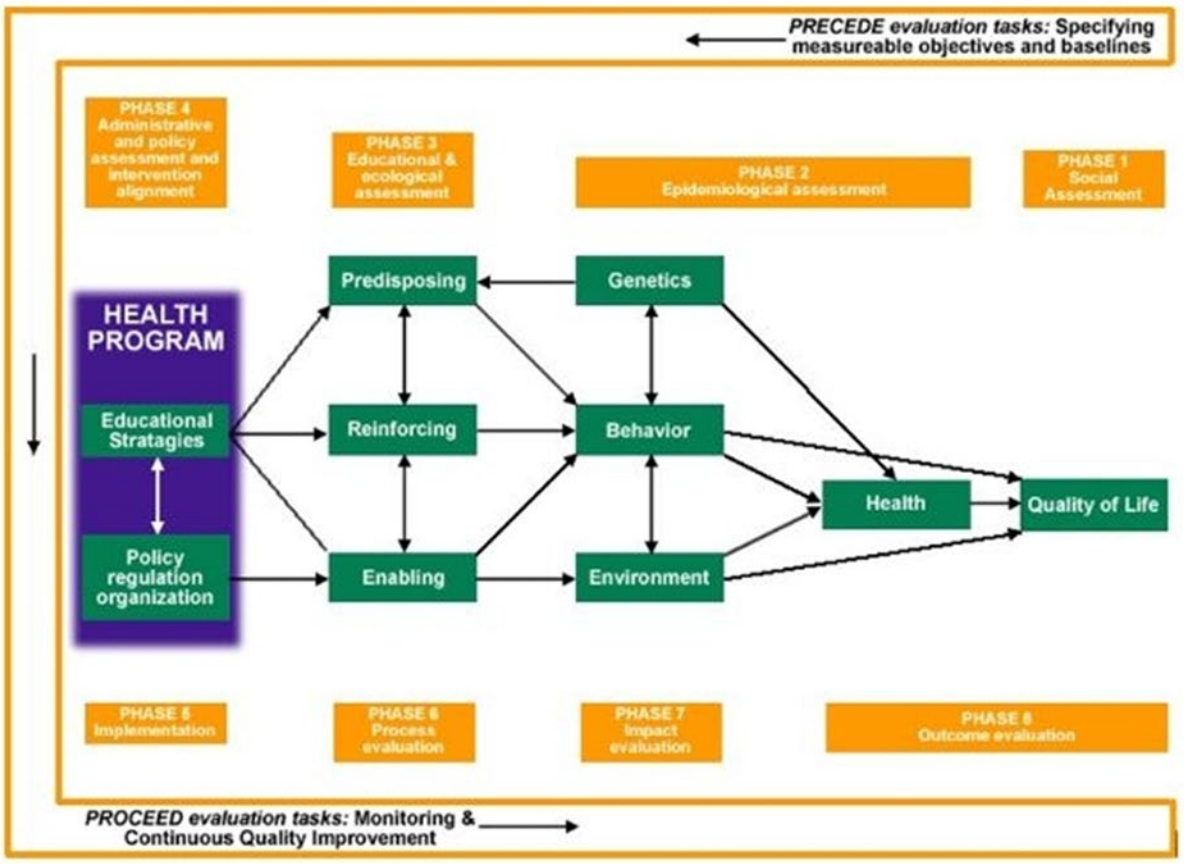
### Johns Hopkins Evidence-Based Practice Model




(Johns Hopkins University Medical Health System, 2023)

# Appendix E

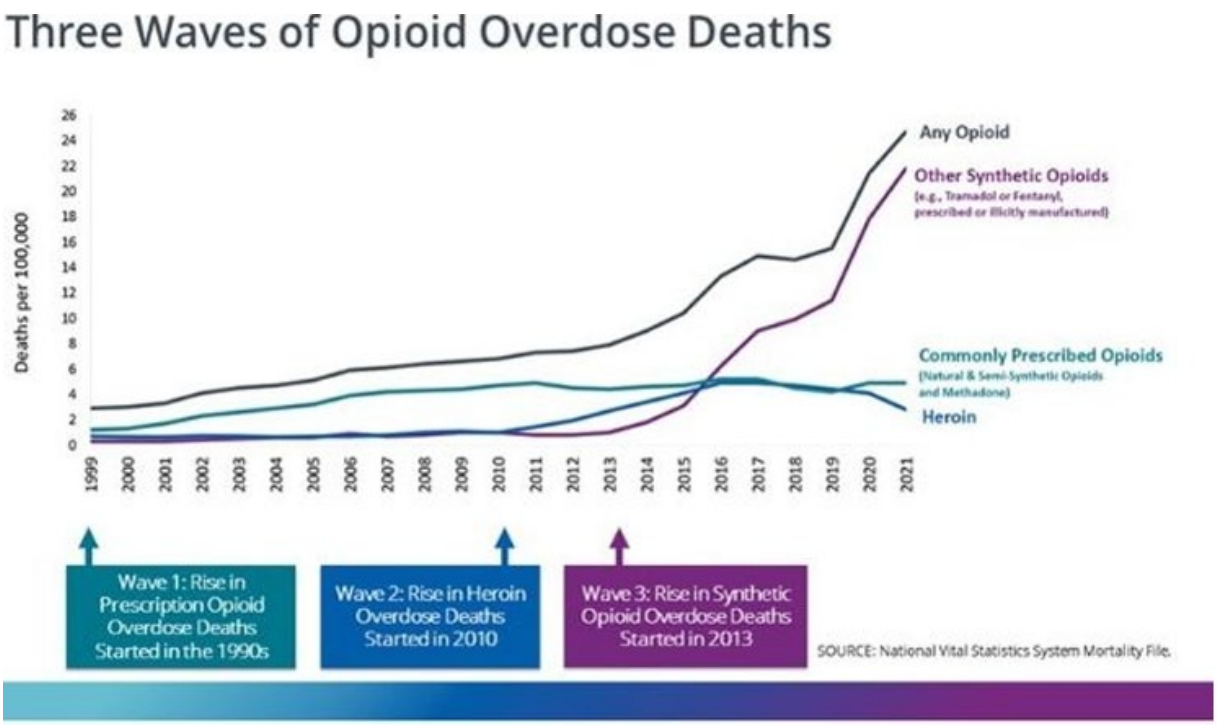
## Precede-Proceed Model




(Rural Health Information Hub [RHIhub], 2018)

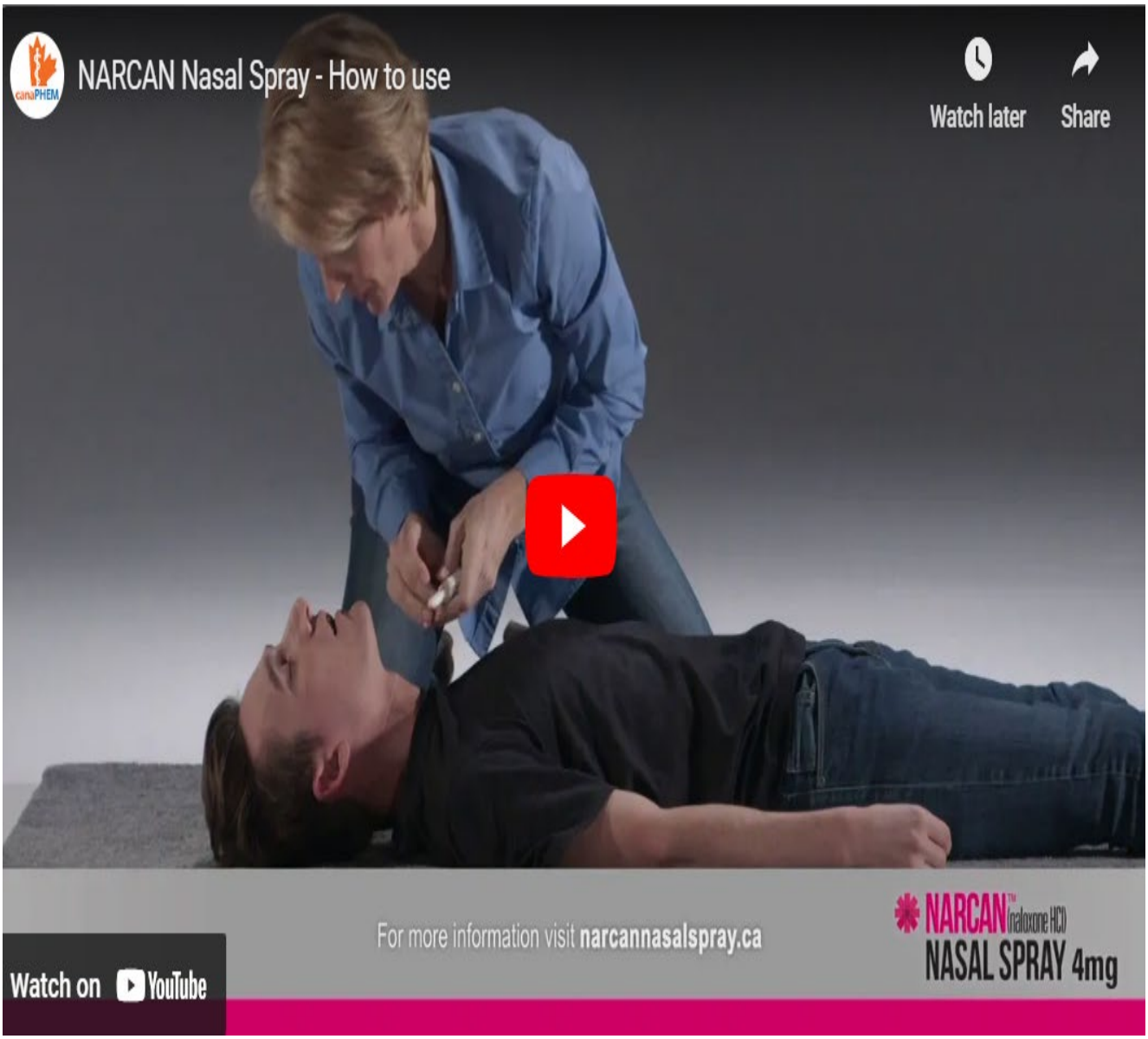
## Appendix F

### Three waves of opioid overdose epidemic




(Centers for Disease Control and Prevention [CDC], 2023a)

**Appendix G**


NARCAN Nasal Spray - How to use
Watch later
Share
For more information visit narcannasalspray.ca
NARCAN naloxone HCl
NASAL SPRAY 4mg
Watch on YouTube

## Appendix H

## IRB Approval Letter

FLORIDA SOUTHERN COLLEGE

November 7, 2023

Re: **IRB #:** 202310313

Dear Tamara Dukes,

We have reviewed and approved your IRB application submitted on 31 October 2023 via our Portal system.

You may collect data at your earliest convenience. You have been awarded exempt status and you will not need to file an annual update as long as your protocol does not change.

If your sample or methods change, then a request for modification should be submitted and approved prior to any changes to your study.

I hope your project goes well.

Sincerely,

Chastity Blankenship, Ph.D.
Chair, Human Subjects Institutional Review Board
Associate Professor of Social Science
Florida Southern College
cblankenship@flsouthern.edu

# Appendix I

TALBOT HOUSE MINISTRIES

814 N Kentucky Avenue
Lakeland, FL 33801
Tel: 863.687.8475

July 25, 2023

Ms. Tammy Dukes
Florida Southern College
Graduate Nursing School
111 Lake Hollingsworth Drive
Lakeland, Florida 33801-5698

Dear Ms. Dukes,

The purpose of this communication is to confirm our administrative support and approval of your proposed DNP Narcan Project at Talbot House – Good Samaritan Free Clinic. The intended goals of this project fit in beautifully with our indigent population. Once completed, this project will improve our ability to teach, discuss, and disseminate Narcan products and education. We look forward to your spearheading the needed collaboration among our various departments that will benefit from your expertise.

We are looking forward to participating in your success.

Many blessings,

Dr. Elizabeth Palazzi-Xirinachs,
DNP, APRN, MSN, ANP, BSN, RN-BC
Director of Health Services