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Rural Jail Administrators Perceptions of Take-Home Naloxone to Control Opioid Overdoses

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This is to certify that the doctoral dissertation by

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MPH, American Public University, 2009

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Opioid overdoses and overdose deaths have increased significantly throughout the United States. Naloxone distribution has become a harm reduction strategy that has proven effective in reducing opioid overdoses in urban areas through drug treatment centers and needle exchange programs. However, limited research is available on the efficacy and feasibility of these programs in rural locations and other nontraditional settings. Guided by harm reduction theory, the purpose of this qualitative phenomenological study was to address this gap by exploring the feasibility of implementing a take home naloxone program in rural jails. Semistructured interviews were conducted with 6 jail administrators in rural upstate New York to determine their knowledge, attitudes, perceptions, and perceived barriers of a take home naloxone program. Data analysis of the participant interviews concluded 6 themes. The first theme concluded that participants believe naloxone acts as a safety net for drug users. The second theme identified that jail personnel are knowledgeable of opioid overdose and naloxone administration. Theme three confirmed that jail personnel would likely not support a naloxone program. Theme four concluded that naloxone training within the jail would likely be appreciated by inmates. The fifth theme addressed that multiple training barriers exist. In conclusion theme six affirmed that harm reduction programs are not favored by jail administrators. The implications for positive social change include increased knowledge of barriers that surround nonmedical and nontraditional community dispensing models for Naloxone and improved community awareness of a growing public health concern and increases collaboration towards a public health and safety approach to substance use and abuse.

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Dedication

I dedicate this dissertation to all my family and friends. The dissertation journey requires hard work ethic, resilience, inspiration, and a sense of humor. There is not a chance I could have completed the journey without all of you. A special thank you to my husband for encouraging me and being beyond supportive. Most of all I dedicate this dissertation to my daughter. At the young age of six her patience, spirit, and confidence in me has carried me through. Thank you all for being a part of this significant accomplishment, now on to the next chapter!

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Chapter 1: Introduction to the Study

Background

The opioid epidemic emerging throughout the United States is critical to public health and is a standard discussion within political agendas. Opioid overdose deaths have quadrupled between 1999 and 2010 (Hawk, Fedrico, & D'Onofrio, 2015). Deaths from opioids nationally displayed a fourfold increase from 2003-2012 (Centers for Disease Control and Prevention [CDC], 2015b). In New York State, specifically, the number of poisoning deaths from all drugs doubled from 2003 to 2012 (CDC, 2015c). Deaths for both heroin and opioids in New York State have been similar to the national trends of overdose deaths (CDC, 2015c).

To combat this epidemic, prescribing patterns of opioids were reviewed to determine the relationship to overdose deaths. In a morbidity and mortality weekly report released in 2016 it was determined that opioid prescription overdoses are higher when prescribing patterns are high and heroin overdoses are higher when prescribing patterns are low (CDC, 2016). Efforts from multidisciplinary groups have gained momentum to reduce overdose deaths. These efforts include strategies focused on primary prevention efforts as well as rehabilitation and treatment enhancements. One integral policy change strategy has proven a controversial topic in discussions of overdose prevention. That strategy is focused on improving access to overdose reversal drugs to both professionals and laypeople to reduce overdose fatalities (Hawk et al., 2015). This access enhancement is based on the harm reduction approach, a controversial public health theory. The harm reduction theory is often criticized for enabling drug use. The arguments for harm reduction approaches address the acceptance of the reality of drug use and the ability to better reduce risks to the consequences from the drug use (Hawk et al., 2015).

One harm reduction strategy that has become a primary effort over the last year is to increase naloxone administration training to various groups to reduce overdose mortality (Hawk et al., 2015). Naloxone distribution has morphed into a community distribution model for those trained to administer and some physicians are prescribing naloxone to patients and caregivers (Hawk et al., 2015). Naloxone distribution programs have proven successful in many instances to reverse opioid overdose. Good Samaritan laws also provide protection for bystanders in helping someone experiencing an overdose (Hawk et al., 2015). However, opposition to the model has historically been upheld by laws and policies. Recent changes in opioid overdose prevention laws have created a movement for states throughout the United States to modify their laws and policies to adhere to the harm reduction theory.

Opioid use and abuse is a critical public health problem which has led to a nationwide concern and political push to reduce overdose mortality. Strategies involving primary, secondary, and tertiary prevention have culminated a multipronged approach to this emerging issue. Through reviewing the articles summarized it seems that a harm reduction approach would be logical to reduce opioid overdoses (Hawk et al., 2015). Bazzi, Zaller, Fu, and Rich (2010) determined there was no increase in drug usage with provision of the naloxone but a decrease in usage. Critics of the harm reduction method state that the reversal drug can act as a safety net for drug users (Bazzi et al., 2010).

Problem Statement

In 2013, overdose deaths were identified as the leading cause of injury-related deaths nationwide (CDC, 2015a). Opioid painkillers are among those most commonly related to misuse and abuse (Substance Abuse and Mental Health Services Administration [SAMSHA], 2015). In New York State rural residency is a significant factor for opioid prescribing patterns (Prunuske, Hill, Hager, Lemieux, Swanoski, Anderson, & Lutifiyya,

2014). Opioid abuse and overdose is a crucial public health concern as many states have begun restricting opioids and those dependent upon these medications often migrate to illicit drug use, mainly heroin for similar effects at a low cost (Drug Policy Alliance, 2015b).

To reduce poor health outcomes including overdose deaths public health professionals and policy makers are seeking various efforts to improve this nationwide epidemic. In 2013, SAMSHA published an opioid overdose toolkit. One of the five community strategies to reduce heroin drug overdoses is to ensure ready access to naloxone, a well-known overdose reversal drug (SAMHSA, 2013). This strategy reduces overdoses through assuring naloxone is available to drug users and family members when prescribed in New York State. Naloxone access researchers have provided evidence that this preventive method can reduce overdoses through trained and layperson utilization (Doe-Simkins, Quinn, Xuan, Sorensen-Alawad, Hackman, Ozonoff, & Walley, 2014).

There are many studies regarding this topic in large cities with data collected from drug users through needle exchange programs and rehab centers (Banta-Green, Kuszler, Coffin, & Schoeppe, 2011). There is a gap in the literature in regard to rural locations. There is also a gap in the literature focused on the perceptions of stakeholders in regard to utilizing this harm reduction strategy with high risk populations other than intravenous drug users. One of those high-risk groups are inmates recently released from incarceration. The transition from prison back into the community can be a risk factor for drug overdose due to the decreased tolerance for many drug users who have been incarcerated. As well as other risk factors including, poor social support, inadequate economic resources, and medical comorbidities (Binswanger, Nowels, Corsi, Glanz, Long, Booth, & Steiner, 2012).

Due to the rising rates of opioid morbidity and mortality added research is needed to prevent this increasing public health concern. Despite current efforts to reduce the negative

impacts of opioids in rural areas a community approach is needed to address social change from the local level up. Opioid abuse and overdose has negatively impacted residents with risk factors, including recently released inmates. A qualitative study focused on understanding the perceptions of whether a take home naloxone program can be implemented within a county jail may perhaps assist in controlling opioid overdose rates. This nonmedical dispensing model in a nontraditional community setting could increase the opportunity for other preventive programs within rural communities.

Purpose of the Study

The purpose of this qualitative phenomenological study was to understand and explore the perceptions of jail administrators regarding take home naloxone kit training and distribution in rural prisons and jails. The perceptions were used to understand the perceived effectiveness of a community-based dispensing model with this high-risk group in a rural setting. The qualitative data were collected through semistructured face-to-face or phone interviews.

Theoretical Framework

The theoretical basis appropriate for this study is the harm reduction model. This model provides a nonjudgmental risk reduction method emphasizing public health and human rights. The harm reduction theory focuses on prevention to reduce harms associated with specific behaviors (Drug Policy Alliance, 2015b). The harm reduction theory was derived from adults who could not abstain from substance abuse to decrease morbidity and mortality (Canadian Pediatric Society, 2008). This theory is most appropriate as it accepts that substance use will continue and is inevitable yet it works to reduce negative consequences associated with the behavior (Canadian Pediatric Society, 2008). The principals of the harm reduction theory are focused on accepting an individual’s decision to

engage in risky behavior, treating the individual with dignity, expecting individuals to take responsibility, ensure individuals have a voice, reduce harm rather than consequences, and ensure there are no pre-defined outcomes (National Care for the Homeless Council, 2010).

This preventive focus of thought can reduce overdose deaths and lead to public health policies that can provide improvements within the scope of this growing health concern (Canadian Pediatric Society, 2008). The Drug Policy Alliance (2015b) seeks innovative health strategies to reduce drug use and abuse and improve drug related illnesses and injuries through utilization of a harm reduction model.

In utilizing a qualitative design with the harm reduction theory more in depth knowledge, perceptions, and experience can be asserted (Creswell, 2013). This information can help identify deep rooted quality information that cannot be identified as thoroughly as it would be in a quantitative design. In this study I used a narrative inquiry qualitative approach informed by harm reduction theory. The harm reduction model harnesses the most appropriate theoretical basis for this study. Qualitative research assisted in the exploration of the perceptions of rural key local stakeholders in using naloxone as a preventive measure to reduce opioid overdose. This study could also create a theory based upon the perceptions of rural stakeholders. In that respect, a grounded theory approach would be utilized and theory would emerge based upon the data. Grounded theory in this respect would help explain the practice of providing naloxone as a harm reduction strategy (Creswell, 2013).

Creswell (2013) addressed alignment as a researcher's way to see the world through the results of their research. For this study, a pragmatic framework was utilized. This framework aligns with the theory in that pragmatism focuses on the reality of what works or is effective (Creswell, 2013). The harm reduction theory encompasses the same view in that it realizes acceptance of the drug use is integral to improving health outcomes in regard to

behaviors (Harm Reduction Coalition, n.d.). The alignment of the theory within the study is still to be determined. The theory can inform the research and assist in planning the design, research questions, and other methods of data collection and analysis in a conceptual manner (Miles, 2013). The alignment could also function as an existing theory and illuminate the research results and clarify what one sees within the research (Miles, 2013).

Harm reduction is often criticized for enabling drug use. However, the arguments for harm reduction approaches address the acceptance of the reality of drug use and the ability to better reduce risks from the consequences from the drug use (Hawk, et al., 2015). Bazzi et al. (2010) found that this approach in coordination did not act as a safety net to drug users which is believed to increase drug use.

Nature of the Study

The nature of this study is qualitative. A qualitative study is the most appropriate due to the inquiry on perspectives that is of exploratory nature (Creswell, 2009). This study used a descriptive phenomenological qualitative approach. The approach assisted in the exploration and analysis of perceptions associated with a phenomenon (Giorgi & Giorgi, 2003). The approach best fit the research focus to understand the perceptions of rural jail administrators in using naloxone as a preventive measure to reduce opioid overdoses. A similar approach was taken by researchers who explored stakeholder perceptions and operational barriers in implementing a take home naloxone program in an England prison (Sondhi, Ryan, & Day, 2016). This method was necessary to retain first hand perceptions of the jail administrators regarding the feasibility of implementing a take home naloxone program. A method of quantitative direction would not allow for the in-depth exploration that is available through this method. Interviews with the participants allows for open ended inquiry into the knowledge, attitudes, and perceptions of jail personnel.

Research Questions

1. What knowledge do jail personnel have in regard to opioid overdose and naloxone training?

2. What are the attitudes of rural jail personnel regarding a harm reduction strategy to reducing overdose deaths in the community?

3. What are the perceptions of rural jail personnel to implementing a take home naloxone distribution program for inmates being released?

4. What are the perceived barriers to implementing the take home naloxone program within the jail?

Operational Definitions

Opioid: Medication that reduces the pain stimulus. Examples include: hydrocodone, oxycodone, morphine, codeine, and other related drugs (National Institute on Drug Abuse, 2014).

Overdose: Overdoses occur when the drug slows a person's breathing enough to cause limited oxygen to the brain and other organs (Davis & Carr, 2015).

Stakeholder perception: Results of the interviews with jail personnel on the implementation of a take home naloxone program (Sondhi et al., 2016).

Harm reduction model/strategy: A model to provide naloxone kits to laypeople with or without a prescription to assist in the reversal of opioid overdoses. This model is a preventive public health strategy (Canadian Pediatric Society, 2008).

Assumptions

Various assumptions needed to be noted for this research. It is likely that jail personnel and administrators have knowledge and an understanding of the effects of drug

abuse, likelihood of overdoses, and the need for a preventive approach to reducing overdoses. This is assumed based upon the nature of their work and their experiences with inmates in the jail. It is also assumed that jail personnel are well educated on the policies and laws regarding naloxone distribution in New York State. The final assumption is that the participants will answer candidly and do not feel obligated to participate in the study participate for the sake of their employment.

Limitations

A limitation of this study is sample size, 6-8 participants were recruited. The study needed to be large enough to reach saturation yet also small enough to capture data with the limitation of participant pool and resources. This limitation was addressed by keeping the sample size flexible and thoroughly reviewing data after each interview to address whether enough information was presented to theorize the study outcomes. Participant base was a limitation due to willingness to participate and availability.

The qualitative nature of the study design and association to the participant's workplace presents bias among participants and the researcher. This limitation was mitigated with the allowance of participants to choose their interview environment as well as an in-depth review of the purpose of the study, desire for honest outcomes to inform positive changes to reduce overdose deaths in rural communities. As with any interview collection method there is always the limitation of or true self-reporting, for example one may not want to relay information because of employment or confidentiality concerns.

One final limitation is that in January 2016 a political push occurred to increase access to naloxone. This information was highly publicized in the media and may have increased awareness and knowledge of the policy and associated laws around naloxone distribution.

Scope and Delimitations

The aim of this study is to understand the perceptions, attitudes, and knowledge of jail personnel in rural locations in regard to naloxone dispensing in a jail setting. The rural locations focused were in upstate western New York region only. One notable delimitation in this study was that the participant sample was limited to jail personnel in rural county jails in Western New York. State prisons were excluded from the research as well as any cities within the rural locations. These limitations were deliberate due to the research focus on rural locations and jails. The inclusion of requesting participation from all jail personnel rather than just administrative personnel seeks to enhance the study and address possible similarities and differences in perceptions among varied operational and administrative staff.

Significance of Study

Findings from this study are significant to policy makers, public health workers and the public, as information from the research may drive future policy decisions and improve prevention focused programming. This study could be beneficial in displaying barriers to implementing harm reduction programs in rural communities. Although this research focused only on jails in rural communities as an implementation site for take home naloxone, the study contributes to the literature in addressing the topic from a rural location and a vulnerable at-risk population that hadn't been readily focused on in previous research. One of the main implications for social change this study is to provide health policy makers with informed evidence based research that harm reduction models will or will not work in rural communities and relay the barriers or solutions as to why and how. The perspectives of these stakeholders may assist in improving only one prong of the issue and health outcomes regarding opioid overdoses, however will contribute to research unavailable before. The literature review demonstrates minimal research focused on this specific risk population and rural locations. Much of similar research

available is focused on large cities and data collected from drug users (Banta-Green et al., 2011). This study may contribute in the development of new practices within rural communities that will in turn improve public health.

Summary

This study's findings will provide information on implementing a community based naloxone distribution program in rural jails. Although this is only one setting focused on a specific at-risk population it opens the conversation and other research efforts to focus on other implementation sites in rural locations.

Chapter 1 offered background information on the problem of opioid overdose, presented the theoretical focus of the harm reduction model, and introduced the community setting and population to be focused while relaying research questions to provide an overview of the study. Chapter 2 includes in depth information obtained through a literature review. The literature review revealed a gap in the literature that resulted in the basis of the population selected for this study. Chapter 3 includes details of the research design, detailed information on the setting and participants, and a description of data collection and analysis tools. Chapter 4 provides a review of the data collection and displays the data analysis. In Chapter 5 I interpret the research findings, limitations and recommendations, and implications for positive social change.

Chapter 2: Literature Review

The purpose of this research was to understand the perceptions of rural stakeholders towards a harm reduction model to reducing opioid overdoses. Harm reduction models can be an effective preventive measure if implemented in receptive communities. In understanding the perceptions of rural stakeholder's barriers can be reduced to better carry out a preventive approach. The harm reduction strategy focused on for this study is increasing naloxone availability and distribution. Many community settings including hospitals, substance abuse facilities, and pharmacies have implemented naloxone dispensing programs. The literature reviewed provided background on those efforts and will also bring to light a nontraditional distribution site. Jails and prisons have become a highlighted and discussed community dispensing site in recent years, specifically regarding increased risk of overdose of those released from incarceration. The research was conducted in upstate New York in rural locations with high rates of opioid overdoses. The literature review provides an in-depth analysis of the problem and an overview of current research related to the research purpose.

This chapter reviews current research related to opioid use and overdose, as well as strategies and programs to reduce overdoses. The research will focus on naloxone distribution as a preventive method to reducing overdose. Many research angles have been approached for this topic using quantitative and qualitative studies, multiple implementation sites, and varying participant pools. The research reviewed was segmented into seven major themes to help with the organization of the literature review: (a) description of the epidemic, (b) naloxone utilization concerns, (c) harm reduction framework efficacy, (d) rurality issues, (e) community based harm reduction approaches, (f) naloxone access laws, and (g) vulnerable population to overdoses.

Literature Search Strategy

The literature review contained specific inclusion criteria however was limited in exclusion criteria. The inclusion criteria included using only literature published from peer reviewed journals or credible sources published within the last six years, 2012-2016. Literature was included for all methodologies and did not omit participants or geographic area. Keywords used in the search included *opioid overdose, rurality and drug use, harm reduction,* and *overdose prevention.* Utilizing these keywords in the search allowed for the query to be focused on opioid overdose and naloxone as a preventive measure. The research reviewed was provided from multiple databases including MEDLINE, ProQuest, and PubMed. Google Scholar was also used for most the resources and those that weren't available full text were sought through the Walden library. The exclusion criteria were limited in the beginning of the literature review to determine a gap in the literature and focus for the research. Exclusions included no articles over six years old and only peer reviewed research or credible sources. The literature review begins with a discussion of the theoretical framework, the harm reduction model. Then provides insight to the variables of interest in this study.

Harm Reduction Model

The theoretical basis appropriate to this study is the harm reduction model. The model provides a nonjudgmental risk reduction method emphasizing public health and human rights. The harm reduction theory focuses on prevention and seeks to reduce harm associated with specific behaviors (Drug Policy Alliance, 2015b). The harm reduction theory derived from adults who had difficulty abstaining from substance abuse. To reduce morbidity and mortality in this group the harm reduction model emerged (Canadian Pediatric Society, 2008). The theory in regard to a substance abuse context accepts that substance use

will continue and is inevitable, yet it works to reduce negative consequences associated with the behavior (Canadian Pediatric Society, 2008). This preventive focus of thought can reduce overdose deaths and lead to public health policies that can provide improvements within the scope of the growing health concern of opioid use and overdose (Canadian Pediatric Society, 2008). The Drug Policy Alliance (2015b) seeks innovative health strategies to reduce drug use and abuse and improve drug related illnesses and injuries through utilization of a harm reduction model. The research presented addresses the feasibility and barriers in implementing a harm reduction approach in a rural county jail.

Harm Reduction Theory Efficacy

Naloxone intervention and program evaluations have taken place in several large United States cities including San Francisco, Baltimore, Chicago, and New York. The evaluations provided insight to increases on overdose knowledge among those trained in prevention and recognition techniques (Yokell, Green, Bowman, McKenzie & Rich, 2011). Two qualitative studies of drug user's attitudes in Rhode Island provided insight to willingness to provide the naloxone intervention to a peer in the event of an overdose. Yokell et al. (2011) utilized information from these past studies to develop and pilot an overdose prevention program in Rhode Island. The training program began in 2006 and recruited 120 participants for training. The participants received naloxone kits to reverse three opioid overdoses. Those trained were encouraged to return three months after training or after first naloxone kit usage to receive a $15 gift card. Data collection rates for this study were low due to a limited reporting system and lack of funding. The prevention program pilot demonstrated that naloxone distribution programs are feasible in Rhode Island and that participant follow up after training was very low.

Banjo, Tzemis, Al-Qutub, Amlani, Kesselring, and Buxton (2014) evaluated a take

home naloxone program in British Columbia. In Canada, these programs were new and only two had been initiated and evaluated within the country. A cross sectional study utilizing both quantitative and qualitative methods provide the program was easily implemented, empowered clients, and responsible for reversing overdoses. Quantitatively the study utilized records of the program to report on program outcomes such as kits dispensed and to whom. Qualitative focus groups and individual interviews assisted with understanding the programs outcomes and perceptions of those involved. Data were collected from 40 program clients and 12 service providers, police officers, and parents of people who used opioids.

A limitation of the study was noted through no assured reporting mechanism for those dispensed a naloxone kit. A more accountable reporting structure would have increased reporting of overdose reversals. In regard to the qualitative data there were concerns regarding fiscal and time constraints from prescribers, stakeholder misconceptions as well as lack of support, and still a disconnect in calling emergency services during an overdose event. Banjo et al. (2014) concluded additional research should be done in rural and remote settings and with those who are prescribed opioids regularly instead of the sole focus on illicit drug users. Information collected from stakeholders within the qualitative portion of this article point to the common misconceptions and various perspectives which could potentially impact program outcomes and policy decisions.

Community Based Harm Reduction Approaches

A variety of community based strategies focused on harm reduction approaches have been implemented as naloxone access policies have changed throughout the last few years. Community based naloxone distribution programs have been tested in hospital and emergency department settings, substance abuse treatment facilities, community centers,

jails and prisons. A review of examples of the noted community strategies revealed efficacy and feasibility for the program in the specific settings.

The burden of opioid overdose is a national problem and federal and state level strategies have been taken to reduce deaths and emergency room visits (Albert, Brason, Sanford, Dasgupta, Graham, & Lovette, 2011). A project was implemented in North Carolina labeled Project Lazarus. This project was developed through a community based secondary prevention model. This model sought to train health care providers to co-prescribe naloxone with opioids and provide risk education to patients and their families. This strategy was built on the harm reduction framework, as the project does not aim to reduce substance use but reduce overdose deaths. Project Lazarus implements the showing of an education video with a question and answer session. Participants receive naloxone kits free of charge with their pain management prescriptions. The project goals include maintaining patient safety while reducing costs and lost productivity. The study provides a rationale for a harm reduction strategy regarding opioid use and presents a program model using a multifaceted community response.

Pharmacists are in a prime position to provide opioid overdose education and preventive measures as they are ranked a trusted professional by consumers and are well positioned to provide brief counseling. Green, Dauria, Bratberg, Davis, and Walley (2015) presented a case study of pharmacy-based naloxone dispensing policies. The models and policies focus on collaborative pharmacy practice agreements and pharmacy standing orders. Pharmacies are displayed as unique dispensing sites due to their consumer product variation and provide an environment for various populations of socioeconomic status. Pharmacies in Europe and Australia have adopted these harm reduction and medical services into these traditional pharmacy settings. Scotland has made naloxone available without a prescription

and Australia is exploring this option as well. The author's previous qualitative work determined that for people who inject drugs in Rhode Island pharmacy models are desirable, feasible, and accessible. As access to naloxone laws change the need for pharmacy models are growing.

The feasibility of pharmacy based naloxone distribution intervention in Rhode Island was studied through qualitative interviews with injection drug users and pharmacy staff. Zaller, Yokell, Green, Gaggin, and Case (2013) reviewed data from a rapid policy assessment and response project to determining the barriers in implementing the model. Semistructured interviews were completed with 21 injection drug users and 21 pharmacy staff. The barriers identified through the interviews included misinformation for both drug users and pharmacy staff regarding naloxone, interpersonal relationships between the user and pharmacy staff including lack of support, mutual impressions, and perceived stigma, and finally the costs of the intervention.

The emergency department has also been a venue of discussion for overdose prevention interventions. Dwyer, Walley, Langlois, Mitchell, Nelson, Cromwell, and Bernstein (2015) conducted a study to establish the outcomes that could be attributed to an emergency department based overdose education and naloxone distribution programs. Between January 2011 and February 2012, 415 emergency department patients were provided overdose education or overdose education and naloxone rescues kits. In March 2012 participants were surveyed by phone to determine the educational efficacy. The survey results provided little statistical significance in differences between the overdose education only group and the overdose education and naloxone distribution group in regard to three measures: opioid use, overdose, and response to a witnessed overdose (Dwyer et al., 2015). The study data provides opportunities to capitalize on the retrospective preliminary data it

provides for emergency department feasibility for overdose education and naloxone distribution programs.

The training of law enforcement officers has become an effort to reduce opioid overdose deaths, especially in rural areas. A recent study by Wagner, Bovet, Haynes, Joshua, and Davidson (2016) a pilot training program of law enforcement officers was evaluated. The training program was a 30-minute curriculum developed by a Medical Director of San Diego County Emergency Medical Services and a research team from the University of California. Over the course of a week 83 San Diego law enforcement officials were trained, 81 completed the evaluation. The evaluation was completed using pre-and post-training data. Training participants were assessed before the training regarding their competency in responding, attitudes regarding overdose victims and situations, and concerns with administering naloxone. Most participants in this study (88.9%) had responded to an opioid overdose in the past. A mixed model approach was utilized for this evaluation research. The quantitative component focused on pre-and post-data. The data provided statistically significant increases in opioid overdose knowledge, competencies, and concerns with naloxone administration after the training. There was no change in the attitudes towards overdose victims. The qualitative data revealed that the law enforcement officers had positive experiences using the skills they learned or enhanced through the training. Overall the conclusions include increases in knowledge and confidence of law enforcement officers in responding to opioid overdose situations as well as positive effects for overdose victims.

Heroin overdose rates have driven the need for media campaigns and educational information to reduce the frequency of fatal overdoses. In Australia, a campaign was planned to target injecting drug users through a needle and syringe program. The campaign included overdose risk and prevention strategies through posters, wallet cards, and stickers (Horyniak,

Higgs, Lewisw, Winter, Dietze, & Aitken, 2010). The researchers conducted an evaluation after the campaign. One component of the evaluation included qualitative interviews with sixteen injecting drug users, and nine staff and key stakeholders of the needle and syringe program. The outcome evaluation revealed that less than one quarter of the campaign messages made an impact from baseline to evaluation. Horyniak et al. (2010) noted the campaigns weakness to be the delay of when the campaign was implemented and issue identification. This study concludes the need for preventive education and conscious raising. Timing of education is crucial to these issues and the utilization of theory in messaging to initiate behavior change is a crucial component to a strategies success.

Public support is also a key factor in community dispensing models for naloxone. Bachhuber, McGinty, Kennedy-Hendricks, Niederdeppe, and Barry (2015) researched specific messaging that increased support for naloxone distribution policies. A randomized survey experiment was conducted. A group of 1,598 participants read different messages on the topic and reported how effective each message was to increase their support for naloxone distribution policies. Logistic regression models were used to assess each messages efficacy with both the exposure and nonexposure group. The results included that information and sympathetic narrative messages exhume higher support for increased naloxone training for first responders, access to naloxone for friends and family of opioid users, and passing laws to protect those who assist overdose victims (Bachhuber et al., 2015). Participants that were provided sympathetic narrative and information instead of one message alone were more likely to support polices related to naloxone distribution.

To reduce opioid overdoses in Toronto Canada, Toronto Public health implemented a program focused on overdose prevention and response. The POINT program was piloted through a needle exchange program. Leece, Hopkins, Marshall, Orkin, Gassanov, and

Shahin (2013) first completed a feasibility study to understand experiences and attitudes of opioid users on the use of naloxone. Various stakeholders were also consulted in regards to content and training materials that should be included in the POINT program. The program included a one-on-one training session or a group session at the needle exchange program site or partner agencies. The 20-minute training was delivered by a nurse or counselor from the program. The curriculum included opioid overdose prevention techniques including: recognition of signs and symptoms, calling 911, chest compressions, naloxone administration, and post overdose care. The training also included basic knowledge on naloxone in regards to proper storage, administration, potential side effects, and proper disposing methods. The program trained 209 clients in eight months. After the training clients reported an increased sense of empowerment and ability to properly handle an overdose situation. The clients who participated received a naloxone kit and 17 reported having to use the kit during the first eight months of training, all reported successful outcomes. Leece et al. (2013) provided efficacy for the POINT program to provide successful outcomes in the Canadian setting. The authors discuss that the program development process may be beneficial in other settings including; methadone treatment programs, discharge planning in emergency departments, drug treatment programs, and prison settings.

A unique partner approach was taken by the Rhode Island Department of Health, a community recovery center, and an emergency department to reduce opioid overdoses. A program was created to utilize the emergency department as an arena to prevent opioid overdoses. Patients at risk who utilized the emergency department were assessed for opioid overdose risk and provide them a naloxone kit, brief overdose prevention education, addiction counseling and referral to treatment (Samuels, 2014). Recovery coaches trained by

the recovery community center provided follow up calls to the patients 24-48 hours after their visit. While the effectiveness wasn't reported in the journal article, barriers to program establishment were provided, that included funding, engagement of community and institutional stakeholders, provider and staff engagement and education, and protocol review and approval by the institution (Samuels, 2014).

The harm reduction theory utilized in the studies presented displays that community naloxone distribution programs are feasible in various settings. The literature also indicates that naloxone distribution to lay people with a training component is a successful preventive approach to reducing opioid overdoses. The harm reduction theory accepts that drug use will exist and seeks strategies to reduce the harm associated with the risk behavior. The harm reduction theory works well with this public health concern as it allows for a proactive approach to reducing mortality.

Opioid Overdoses

Opioid overdoses have become an emerging public health concern over the last decade. Overdoses are the leading cause of accidental death in the United States, overdose deaths surpassed motor vehicle crash deaths in 2009 (Warner, Chen, Makuc, Anderson, & Minino, 2011). In 2014, the rates continued to increase steadily to form an epidemic, with 18,983 overdose deaths related to prescription pain relievers and 10,574 related to heroin (American Society of Addiction Medicine, 2015). Drug poisoning deaths involving opioid analgesics were among those higher than any other drug. These rates mimic the increase in distribution and medical use of prescription pain relievers (Gu, Dilon, & Burt, 2009). In 2012, opioid prescriptions were prescribed to 259 million Americans (CDC, 2014). Those ages 25-54 years of age encompass the highest opioid overdose rate in the United States (CDC, 2014). Opioid abusers often migrate to heroin use as prescription opioids become

harder to obtain and more expensive than heroin (Cicero, Ellis, Surratt, & Kurtz, 2014). Heroin overdose deaths are most common among those aged 18-44 years of age (CDC, 2014). Age group death rates involving opioid analgesics are displayed in Figure 3.

Death rates for poisonings involving opioid analgesics, by age group (yrs) — New York State, 2003–2012

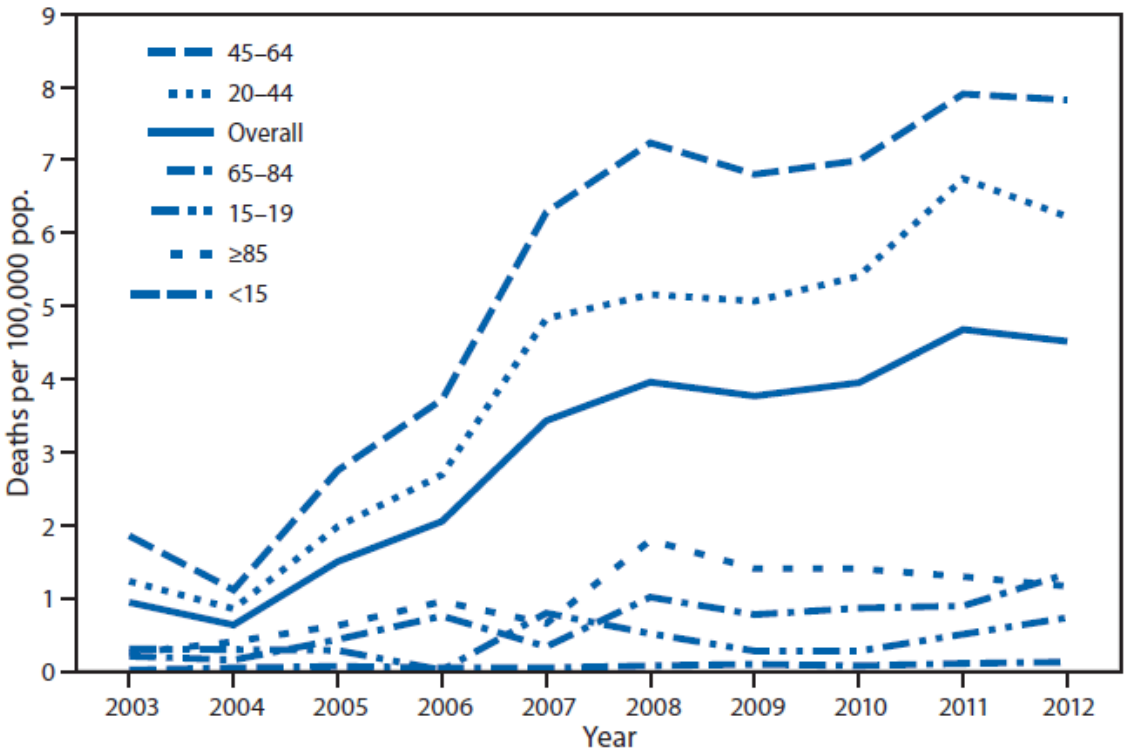


Figure 1. Death rates for poisonings involving opioid analgesics, by age group (yrs.) — New York state, 2003–2012.
Accessed at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6414a2.htm

In 2007, opioid abuse associated healthcare costs totaled an estimated 25 billion for the United States. New York State was in the top 10 states for total health care costs from opioid abuse at $1,256 million. The costs are mainly attributable to the health care costs associated with the negative effects of the drug, whereas a small portion is attributable to treatment, prevention, and research (Matrix Global Advisors, LLC, 2015). Increasing naloxone access programs provides a preventive approach to reducing overdoses and improving access to treatment.

Naloxone Utilization Concerns

Overdoses occur when the drug slows a person's breathing enough to cause limited oxygen to the brain and other organs (Davis & Carr, 2015). Overdose reversal drugs have been a highlighted strategy to reducing opioid mortality. Naloxone is a common overdose reversal medication used to save an overdose victim (CDC, 2015a). This medication was approved by the Federal Drug Administration (FDA) in 1971 as an injectable prescription drug (Davis & Carr, 2015). Naloxone has limited capacity for abuse however its availability policies and laws vary by state. Medical facilities have naloxone available in the event of an overdose treatment need. More recently an off label administered nasally is being utilized by police officers, emergency responders, and laypersons (Davis & Carr, 2015). Naloxone is available to opioid users in the United States through a small proportion of community based programs and most readily available through pharmacy based programs (Zaller et al., 2013). Programs focused on distributing naloxone have been implemented in various locals around the United States. Those distribution programs offer a training component in which the user or acquaintances are trained in naloxone administration. This type of program has not come without objections due to the nature of its nonmedical model distribution and administration. Bazzi et al. (2010) explained three common objections to this preventive approach. The first objection includes the argument that naloxone encourages increased drug use. The second, that naloxone enables drug users to reverse an overdose outside of a medical setting therefore delaying entry into drug treatment. The final objection the study reviews is based upon, lay people are not properly trained to deal with the serious medical nature of a drug overdose and should not be allowed to administer the drug without basic training.

Increased Drug Use

Increases in naloxone distribution have been critiqued with the argument that the drug provides opioid users and overdose victims a safety net and encourages increased or riskier drug use. Maxwell, Bigg, Stanczykiewicz, and Carlberg-Racich (2006) reported that participants of overdose training programs report less drug use after training program attendance. Naloxone use begins the withdrawal stage and often puts overdose victims into a position to receive medical treatment thus providing the opportunity for access to treatment.

Wagner et al. (2010) tested a framework for harm reduction and educational programming. An overdose prevention program targeted towards intravenous drug users in California was evaluated over a two-year period. The program was a one-hour training focused on opioid overdose signs and symptoms, how to respond to an emergency, and administration of naloxone. There were 93 intravenous drug users trained, 66 of those enrolled to participate in the evaluation study. Only 47 of those participants ended up completing both the baseline and three month follow up interview. The results of the evaluation determined that the training program increased knowledge and response behavior among those who attended the training. The study also revealed unforeseen reductions in drug use providing an argument for the opposition that naloxone education and distribution kits increase drug use and provide users a safety net.

Training of Laypeople

Train the trainer models for naloxone distribution programs have become increasingly popular. The research is limited regarding the efficacy of training many people to implement these types of training models. Madah-Amiri, Clausen, and Lobmaier (2016) reviewed a training model for the training of laypeople in Norway. The research focused on the implementation of a train the trainer program in multiple harm reduction health care

facilities. The training course was a two-hour training session encompassing all staff within the facilities. A sample of trainees were given a pre-and post-questionnaire to assess knowledge and attitudes regarding overdoses and naloxone distribution. There were 511 staff trained through 41 training sessions, 54 of those staff participated in the questionnaire study. The questionnaire results reported that knowledge and attitude scores improved significantly and staff felt the training was useful and comfortable distributing naloxone to their clients (Madah-Amiri et al., 2016). Overall the research provides insight that a train the trainer model is effective for large groups and improves knowledge and attitudes. The research noted that increased research is needed on the long-term effects of the training and the transfer of knowledge through the train the trainer model.

A high-risk population of intravenous drug users were identified among homeless people in Los Angeles, California. An educational program on opioid overdoses was offered through a community based organization. Specific components of the training program included assessment, calling for emergency services, performing CPR and administering opioid reversal medications. The training program was 1 hour in length. Over a period of two years, 93 intravenous drug users were trained through monthly trainings. Wagner et al. (2010) based the study outcomes on a baseline assessment prior to training and then a three-month follow up. Only 71% of the participants completed both a baseline interview and a three-month follow-up. Wagner et al. concluded an increase in overdose knowledge of overdose symptoms and naloxone use. From the participant sample 22 responded to an overdose within the three-month follow-up period. Those who witnessed an overdose reported the following response mechanisms: 85% stayed with the victim, 80% administered naloxone, 66% administered rescue breathing, and 60% called emergency series. Overall 53% of full evaluation program participants reported that their drug use decreased over the

last three months. The research concluded that the education initiated behavior change in regards to response procedures that the study participants took to assist the overdose victim. Based upon their findings rather than adverse findings of training the participants in naloxone administration unseen benefits appeared through the reporting of reduced drug use.

A retrospective cohort study conducted by Doe-Simkins et al. (2014) sought to understand the variances among those trained to use naloxone kits and an untrained person. The study focused on 4,926 substance abuse users enrolled in an education and distribution program for naloxone in Massachusetts. During the duration of the program 7.6% of the participants were present during an overdose and administered naloxone, of those 295 were trained and 78 untrained in overdose management. From the 599 rescue reports found there was no statistically significant difference in help seeking, rescue breathing, staying with the victim, or naloxone administration by those trained and those not trained. Chi square and *t* tests were used to compare the differences between the trained and layperson. In regards to those enrolled in the program there was no significant change in participant's heroin usage within the last 30 days. Few differences were found in behavior between trained and untrained overdose rescuers. Doe-Simkins et al. (2014) discussed the need for further studies to determine the optimal level of training for rescue kits to meet an over the counter standard.

Injection drug users are at high risk for opioid overdoses. An opioid overdose can occur within one to three hours, leaving ample time to administer life saving measures such as naloxone. As the death rates from opioid overdose rise community agencies are implementing programs focused on overdose prevention and naloxone distribution. Sherman, Gann, Scott, Carlbery, Bigg, and Heimer (2008) explored injection drug user's experiences with opioid overdose. The study included 31 qualitative interviews with clients

of the Chicago Recovery Alliance needle exchange program. Those who were interviewed witnessed an overdose within the last six months, have been injection drug users for a median of 10 years and have witnessed a median of six overdoses in their life. The interviews reviewed the participant's drug use history, personal and witnessed overdose experiences, and details of their own or a witnessed most recent overdose situation. The interviewees were provided $20 compensation for their participation in 30-45 minute interviews. The interview transcripts were coded and analyzed by themes. The data was themed using a multistep process of constant comparative method. Open coding was completed with five interviews to initiate a theme list. The data was entered in a data management program- Atlas-ti version 4.2. The article established that the participants respond appropriately to overdose situations stemming from an introduction to the idea of naloxone and its efficacy. The limitations of the study resulted from the small nongeneralizable sample of program specific participants.

Rurality Issues

Prunuske et al. (2014) asserted that rural location is an important concept to consider when reviewing opioid overdose rates, opioid abuse, and preventive programming. Prescribing patterns specifically were focused on by Prunuske et al. in rural locations. The study specifically focused on the variances of opioid prescribing patterns for nonmalignant pain in regards to rurality. The study highlighted that future research should be focused on ecological, political, and societal factors associated to opioid prescribing. Utilizing secondary data from the 2010 National Ambulatory Medical Care Survey (NAMCS) the authors hypothesized that rural residency was a significant and independent social determinant of health factor in prescribing patterns. The data was analyzed using bivariate and multivariate techniques and logistic regression analysis uncovered that rural resident

adults had higher odds than nonrural adults for opioid prescriptions. The study filled a gap in regards to the geographical trends in opioid prescribing, however does not relay any information about abuse or overdose. The study revealed that location is an important concept to consider when reviewing opioid overdose rates, opioid abuse, and preventive programming. Prunuske et al. pointed out that future research should be focused on ecological, political, and societal factors associated to opioid prescribing. Rural location can be a contributing factor in opioid use and abuse due to trends in prescribing.

Young, Havens, and Leukefeld (2012) compared nonmedical prescription opioid user's lifetime and recent drug use in rural and urban locations. The researchers recognized that there are characteristics of rural areas that may result in differences among drug users. The research was focused in the state of Kentucky; 101 participants were included from a rural Appalachian county and 111 from a metropolitan area. All the participants were prescription drug users and provided self-reported drug use through a survey. The outcome of the research determined that for this sample rural drug users had earlier ages of beginning drug use for oxycodone, hydrocodone, benzodiazepines, cocaine, and crack. Rural drug users also had higher odds of lifetime and recent drug use of methadone, oxycontin, and oxycodone. Cocaine and crack use over a lifetime were significantly higher in rural areas, however recent crack use was higher in urban participants (Young et al., 2012).

Naloxone administration by Emergency Medical Service Providers has also been proven a disparity in rural communities within the United States. Faul, Dailey, Sugerman, Sasser, Levy, and Paulozzi (2015) used a logistic regression model to assess the association of naloxone administration and certification level of Emergency Medical Technicians. Certification level of the technician can play a role in their level of training and in several states scope of practice does not allow Emergency Medical Technician with basic

certifications to administer naloxone. There were 42 states in the United States that chose to participate in the study. Ambulatory data from the National Emergency Medical Services Information System was utilized to determine what factors affect naloxone administration in drug overdose situations. Faul et al. (2015) concluded that naloxone administration was 23% higher in rural areas than urban areas and the opioid drug overdose rate was 45% higher in rural communities. Naloxone administration was the highest in suburban areas and urban areas settled at the lowest of odds. As suspected higher naloxone administration rates were seen among Emergency Medical Technicians with intermediate certifications rather than basic certifications. This research poses a barrier in that Emergency Medical Technicians with basic training are more common in rural areas and training of naloxone administration or increased certification levels are recommended to prevent drug overdose death (Faul et al., 2015).

Naloxone Access Laws

Naloxone access laws have evolved over the last few years, mainly from 2010 through 2015 as overdose rates became labeled as an epidemic. Prior to 2010 there was limited availability of naloxone throughout the United States. In 2011 the opioid overdose rates increased by nearly 600% over the past three decades and was recognized as the leading cause of injury death in the United States (Warner et al., 2011). Naloxone access laws vary throughout the United States and are categorized into three purviews. The first is laws to increase prescribing and distribution, the second is to increase access to naloxone in a pharmacy setting, and third to encourage overdose witnesses to call 911 in an overdose situation (Davis & Carr, 2015).

In 2015, a legal research protocol was utilized to identify and review naloxone access laws adopted as of September 2015. Davis and Carr (2015) concluded that 43 states and the

District of Columbia had laws which increased access to naloxone for laypeople. Standing orders for naloxone were permitted in 29 states which allows an identified person to provide prescription naloxone if they fall within specific dispensing guidelines. In 2015, 32 states enacted laws providing civil immunity to prescribers, dispensers, and laypersons. Davis and Carr provided insight that gaps still exist regarding the affordability of naloxone and insurance coverage of the cost. Although laws are now being passed in most states to increase access availability barriers remain including cost and prescription status (Davis & Carr, 2015). Naloxone's prescription only availability decreases its utilization rates for many of those who fall into the high-risk category of who needs the drug. Another barrier raised from the research is that regardless of the regulation changes health care providers, pharmacists, and laypersons are reluctant to prescribe and use the reversal drug due to fear of liability (Davis & Carr, 2015).

Davis and Carr completed a summary of legal interventions to reduce overdose mortality throughout the United States. New York State in June 2014 had the following naloxone laws: immunity for lay administrators, lay distribution and possession with a perception, and prescribing is authorized through third party and standing order methods (Davis & Carr, 2015). In 2016 the Governor signed legislation to reduce opioid overdoses and increase prevention and response efforts to opioid use. While funding and new laws focused on a comprehensive opioid prevention plan one component of this legislation specifically passed regarding naloxone mandated insurance companies to cover the cost of naloxone to expand life saving measures. This mandated insurance coverage applies to any person who is addicted to opioids or a family member on the same insurance plan. The policies recently put into place are still in the initial phases of implementation and efficacy of the policy inactions is limited at this time.

A Vulnerable Population

One vulnerable population at increased risk for overdose includes those recently released from incarceration. Released inmates are at high risk for overdose death due to poor social support, inadequate economic resources, and medical co-morbidities (Binswanger et al., 2012). The transition from prison back into the community can be a risk factor for drug overdose due to the decreased tolerance for many drug users who have been in incarcerated. A meta-analysis completed in four different counties, including the United States, indicated that recently released inmate are at the highest risk for drug overdose within the first two weeks of release (Merall, Kariminia, & Bird, 2010). A Canadian retrospective study examined overdose mortality in recently released persons who were incarcerated. Groot, Kouyoumdjian, Kiefer, Madadi, Gross, Prevost, Jhirad, Huyer, Snowdon, and Persaud (2016) reviewed coroner records in Ontario Canada for the years 2006 through 2013. In matching coroner and correctional records researchers identified a high number of individuals who died within one year of being released from incarceration. There were 702 deaths which occurred within one year of releases, 20 percent of those deaths occurred within one week of release and 77% of all deaths after release involved more than one opioid (Groot et al., 2016).

Post release mortality data was collected in Sweden though a review of a cohort of people imprisoned over a nine-year period. The study looked to understand an association between psychiatric disorders and deaths within those released from prison. Researchers identified 47,326 individuals to follow. Using a 5.1-year median follow up time a total of 2.874 deaths were recorded after prison release. In reviewing the records of these deaths, it was determined that 34% or all cause of deaths in men and 50% in women were related to substance abuse disorders (Chang, Lichtenstein, Larsson, & Fazel, 2015). Chang et al.

(2015) found prevention techniques and intervention in prisons could decrease the risk of mortality upon release.

A qualitative study of former prison inmate revealed that inmates returning to the environments they were in prior to incarceration triggers relapse and increases their risk factors for overdose. There were 29 former inmates recruited within two months of their release who participated in semistructured interviews exploring their perceptions and experiences of their release regarding drug use and overdose risk. The participants felt their overwhelming stressors could lead to intentional overdose and unintentional overdose was likely due to decreased tolerance. The released inmates also felt overwhelmed by the ease of access to drugs in their environments. Participants also reviewed protective factors including structured drug treatment programs, family, and community based resources. Binswanger et al. (2012) concluded that a staggered and structured approached to community transition would be beneficial to reducing drug use relapse and overdose risk. Researchers also concluded that education of teaching preventive interventions is beneficial upon release.

Barocas, Baker, Hull, Stokes, and Westergaard (2015) concluded that overdose prevention strategies including naloxone training may be beneficial to those incarcerated and reduce overdose deaths. The researchers identified through a survey assessment of incarceration history, drug use, and harm reduction strategy utilization that those with incarceration history may be at increased risk for overdose. The survey was completed with 543 participants who visited two multi-site syringe exchange programs in Midwestern United States. The survey results provided insight that those who were a victim off overdose, witnessed an overdose, or received training to administer naloxone were likely to also report history of being incarcerated (Barocas et al., 2015).

Stakeholder perceptions and operational barriers were assessed in regards to

implementing a naloxone take home program across 10 prisons in England. Sondhi et al. (2016) completed data collection on this topic using three strategies; qualitative interviews over a 12-18-month period with prison staff, prisoner perceptions with four focus groups, and document analysis of report minutes, management information, and performance reports. The data resulted in four themes characterized as challenges to implementing this program. The themes included negative and confused perceptions of the program among staff and inmates, difficulties with identifying and engaging eligible prisoners, the need to focus on individual prison progress to enhance effective distribution of the take home naloxone, and the need to engage senior staff (Sondhi, et al., 2016). The evidence from this study addresses that implementation of a harm reduction model requires attention to several the factors identified. The barriers identified can assist jails in planning to implement naloxone take home programs.

Zucker, Annucci, Stancliff, and Catania (2015) published a report in 2015 describing a new opioid prevention pilot program in New York State focused on preparing prisoners for the transition back into the community. The program included inmate training on overdose prevention and naloxone training as well as training of prison staff. The collaboration between public health, correctional facilities, and community based harm reduction programs was praised as a milestone collaboration in efforts to reduce opioid morbidity and mortality (Zucker et al., 2015). The program was piloted with a state prison in New York City. Since its inception in February 2015 over 700 inmates have been trained and about 200 received naloxone kits (Zucker et al., 2015). The goal is to target soon to be released inmates in all 54 state prions in the state. As this program is focused on New York State prisons it omits those county jails in New York State which often house inmates from rural locations.

Zucker et al. describe the need to include parole and corrections officers in the process and training to improve buy in and ensure saving lives is a top priority.

Summary

The literature reviewed in Chapter 2 allows for a brief review of recent research focused on opioid overdose strategies to reduce deaths. Harm reduction approaches advocate for the availability of preventive measures to reduce the risks of opioid use and death from overdose. As varied community settings begin to implement naloxone dispensing programs the research presented may become important in program planning. Utilizing a harm reduction model within the jail setting will contribute to prevention of overdose morbidity within this vulnerable population. Chapter 3 further delves into research methods to address the research questions.

Chapter 3: Research Method

Introduction

The purpose of this research is to understand the perceptions of rural stakeholders towards a harm reduction model to reducing opioid overdoses. In narrowing the research focus it was identified that a setting for the harm reduction model and strategy, and a vulnerable at-risk population would provide enhancements to a gap in the literature. The research focused on the perceptions of jail personnel in a rural location on implementing a take home naloxone program in jail. The study took place in upstate western New York. The content of Chapter 3 focuses on research design, data collection research questions, data analysis, study rigor, and ethical considerations.

Research Design and Rationale

This research is best addressed using a qualitative method as it requires a rigorous deep-rooted data collection and analysis technique. This design was chosen to ensure an in-depth discussion to best understand the attitudes, knowledge, and perceptions of participants. The qualitative approach used in this research encompassed individual interviews with jail personnel at administrative levels. Because this research did not seek to establish a relationship of cause and effect or prove a hypothesis a quantitative design would not be applicable.

The specific type of qualitative design that was used is phenomenology. Phenomenology is a method of inquiry founded on the concepts of descriptive psychology and conscious experiences (McWilliam, 2010). The type of phenomenological research used in this study is descriptive. Descriptive phenomenology allows for the perceptions related to a specific phenomenon to be analyzed (Giorgi & Giorgi, 2003). A descriptive phenomenological method can assist with predictions of how people may react to the

changes a phenomenon brings and addresses transferability of experiences among people with similar backgrounds (Giorgi & Giorgi, 2003). The references associated with phenomenology coincide with the research study in that a take home naloxone program is the phenomenon being discussed and the perceptions of jail administrators working in rural locations will be identified. The following research questions were explored:

1. What knowledge do jail personnel have in regards to opioid overdose and naloxone training?

2. What are the attitudes of rural jail personnel regarding a harm reduction strategy to reducing overdose deaths in the community?

3. What are the perceptions of rural jail personnel to implementing a take home naloxone distribution program for inmates being released?

4. What are the perceived barriers to implementing the take home naloxone program within the jail?

A phenomenology approach for this research was established the best fit based upon a review of three qualitative approaches. The other approaches reviewed were case study and grounded theory. Case study is an approach used to study how something is done or a specific phenomenon within a specific location (Baxter and Jack, 2008). Baxter and Jack (2008) suggested using case studies when concluding how and why questions. Case study research allows for an in-depth exploration into a specific unit of analysis. The research study presented wouldn't be well suited for this approach since data does not need to be explored within a specific context (Baxter & Jack, 2008). Grounded theory is an approach that uses research findings to develop a new theory (Lowe, Milligan, Watanadbe,

& Brearley, 2015). Grounded theory studies use an inductive manner to gather data and generate hypothesis that is proven or unfounded in data analysis (Salkind, 2010). Grounded theory often is used when there is limited research available on the identified topic. Researchers use this approach to develop a theory from the data (Salkind, 2010). Due to a theoretical base already informing the research in the study presented this qualitative approach would not align well with the purpose of the research.

Role of the Researcher

Due to the qualitative nature of this study the role of the researcher is to become the study instrument. The role I played as the researcher is external however to ensure validity, reliability, and objectivity within the interview format of data collection various strategies will be used to improve the study quality. I have twelve years of experience in the field of community health in regards to a variety of topics. I have limited professional experience with substance abuse although have had personal experiences with a family member addicted to opioids. I do reside in one of the counties in which a participant was recruited. I did not anticipate any of those participants connecting me to another professional or personal relation in the community although there was always a chance.

Due to the described circumstances, it was important to ensure an unbiased opinion when discussing opioid use and overdose prevention strategies. To address the concern of bias in this study I employed member checking in the review of my research questions to ensure the questions were free of bias. The expectations I anticipated for the data included a favorable response in attitudes regarding take home naloxone program, basic level knowledge of the program and reversal drug, and little barriers other than medical dispensing concerns among staff. An ethical concern accompanied this research in that the participants were recruited from within their worksite and the study was completed at the

worksite. This concern is valid in that participants could feel obligated to participate or have feelings of reduced confidentiality. To reduce those concerns the purpose of the research and the ethical issues were continuously highlighted during the recruitment and participatory stages of the research.

Methodology

Participant Selection Logic

Since the research focus on the perceptions of jail personnel on implementing a take home naloxone program within the jail setting, a specific population was desired for study participants. The participants were jail personnel from rural locations in upstate western New York, administrative staff, and employed with the agency for at least 3 years. The sampling strategy that was used is purposive, this type of sampling is more common than random sampling in qualitative research (Miles, 2014). This is rationalized as many qualitative researchers seek to observe specific populations, understand various relationships or learn lived experiences, these types of inquiry are best done seeking specific target groups or populations (Miles, 2014). The definition best fits the need of this dissertation to select participants based upon their place of employment.

The recruitment strategy included emailing a letter to jail administrators outlining the research study and ask for their participation as study participants (Appendix A). A mailing list was created using contact information available from public government websites. In the rural locations where I completed the research jail administrators were a management position underneath the Sheriff. Initially a direct mailing was done to multiple County Sheriffs and then to the jail administrators if their contract information was public. The recruitment letter was sent by email to track that the correspondence was received and ease

ability in sending back the consent form. The consent form was attached to the introductory email (Appendix B).

One-on-one interviews were the data collection format. The interviews were semistructured with open-ended questions (Appendix C). The participants were given the choice of completing the interview face to face or by phone (Appendix B). This choice was used to reduce outside disruption and address any concerns for confidentiality. Data collection sessions with each participant lasted no longer than 60 minutes. The data collection events were expected to be spaced out over a period of a couple months. To ensure an adequate sample size I proposed to recruit 6-8 participants. The goal was that this sample size will equate in the study reaching saturation due to the limited number of jail administrator participants. Since the research encompasses only upstate western New York jails there was a limited sample by design. Data saturation is reached when enough information is collected that the study can be replicated with attainment of new information and coding is no longer plausible (Fusch & Ness, 2015). This sample size allowed for varied responses, included enough people to fully analyze responses, and ensured meaningful time with each of the participants. If the participants provide a quality interview and informative responses to the study questions the sample size should have been effective enough to ensure positive study outcomes. Patton (2015) solidified this by explaining sample size needs to be focused on the research purpose and questions, what will be useful and ensure credibility, and what will be most effective given time and resources. Continuous data assessments were completed throughout data collection to ensure saturation was met. Assessment for the need of more participants continued throughout the data collection phase to ensure additional recruiting strategies didn't need to be employed.

The study participants were provided a closure statement after the interview to inform them of next steps within the research (Appendix C). It was discussed that their interview would be transcribed then coded to identify themes to address the research question. Confidentiality was also reiterated to all participants. The participants were informed that the study results would be presented to them when completed. This I felt would be important to let the participants know ahead of time and after the interview so they would feel vested in the study and are interested in following the study until completion.

Instrumentation

For this research, I selected interviewing as the data collection tool to be used. Interviewing is a popular data collection method in qualitative research. There are various interviewing situations a researcher can utilize. Interviews can be face-to-face, by phone, or through a virtual platform (Janesick, 2011). The interviews for this research included one on one interviews, and participant selection of an in person or telephone format. A semistructured interview guide (Appendix C) was used as a data collection tool to allow for open ended questions with room for open discussion. The interview method was chosen as a method of inquiry to ensure flexibility within the interviews as the questions would likely have to be adapted and follow up questions included which would come during the interview phase (Patton, 2015). A general weakness of interviews is that they can be time consuming and resources are needed to ensure accuracy and quality (Janesick, 2011). To address that proper interview protocols were followed to ensure quality in the data collection instrument, McNamara's format for preparing, implementing, and analyzing a qualitative interview will be followed (Turner, 2010).

Strategies were employed to organize and document the research as an effort to ensure proper interviewing protocol**.** One strategy used was a contact summary form (Miles,

Huberman, & Saldana, 2014). The forms were provided to each participant and included: identification information, research question responses, as well as data analysis information. Another strategy employed was to capture and document all information clearly and effectively. Recording interviews is one way of ensuring all data is captured, this can be done through tape or video recording. Those recordings can later be transcribed. To prevent data loss a researcher must back up the data using multiple sources to ensure data is protected. Data should be kept on a second computer, hard drive or cloud based system (Miles, Huberman, & Saldana, 2014).

The interview guide was created and encompasses questions related to the research gap and to address the interview questions (Appendix C). In identifying the perceptions of jail personnel on take home naloxone barriers to implementation of the program in a jail setting hope to be identified. I identified one closely related research article which led to identification of a gap in the research. This article focused on stakeholder perceptions and operational barriers for take home naloxone program implementation within prisons in England. Sondhi et al. (2016) assessed barriers and challenges within ten prisons in England implementing the program. The study utilized a grounded theory approach that included qualitative interviews and document analysis (Sondhi et al., 2016). Content validity for the interview guide was established through a peer review by other experts in the field including my dissertation committee members. This peer checking assisted in establishing trustworthiness of the instrument in a qualitative study through ensuring reduction in subjectivity, alignment in the questions, research premise, and theory, and allowed for quality improvement of the interview guide.

Data Analysis Plan

To analyze the data the modified Van Kamm method was used. This method uses a series of steps to represent the group through the emergence of related themes (Moustakas, 1994). The first step of this method of analysis is to review each participant's transcribed responses and list participant responses that are related to the phenomena. Moustakas (1994) labels this step as horizontalization. This step assists in the development of initial codes. Thereafter completion of horizontalization reduction and elimination bring forth specific statements which assist in emerging themes to create the overall perceptions of the participants. This occurs through analysis of individual textural descriptions and individual structural descriptions. Compilation of phenomenological reduction and imaginative variation develops a synthesis of perceptions of the phenomenon (Moustakas, 1994). An audit trail was also completed to address quality issues throughout the research process. An audit trail assists in ensuring subjectivity throughout the course of the research study (Simon, 2011). This method was selected for its appropriateness to the studies outcomes. Ensuring an open coding strategy will allow for flexibility and all potential themes can be considered and not constricted (Maxwell, 2013). The perspectives of the individuals are related to a controversial topic; open coding allowed for emergent themes that may not be addressed in a pre-coded structure. A pre-coding structure could have been created for this research although that structure could have decreased the descriptive data received.

The data was managed and organized using HyperRESERACH, a computer assisted software tool. This software incorporates a transcription tool component which increases efficiency. Due to the software programs intelligence, it can identify coding themes that I may not have concluded through a self-coding identification.

Issues of Trustworthiness

To address the rigor of this research multiple strategies were employed. Judgments for judging qualitative research are noted through four sets of criteria. That criteria includes credibility, transferability, dependability, and confirmability (Trochim, 2006). Credibility within the research was established through peer checking and reflexivity. Peer checking is a method utilized to review and discuss a researcher's findings and conclusions with a peer of similar expertise not connected to the research to assist in an unbiased review of the research. Peer checking assists in establishing quality scholarly work with limited flaws in design and methodology (Voight & Hoogenboom, 2012). Reflexivity is also a strategy applied to reflect on any bias that the researcher may have imposed in the data. A reflexive journal was kept and an entry completed after each interview to reflect on interview bias and impositions that may have occurred (Watt, 2007). An audit trail was also a strategy included to address any subjectivity throughout the research process.

Transferability addresses the extent to which research can be generalized or migrate into another context or setting (Trochim, 2006). The sampling strategy for this research was purposeful to ensure information rich participants were interviewed to address the research questions thoroughly. Although purposeful sampling limits generalization components of the research such as the interview questionnaire, the conclusions may be transferable to other studies with similarities.

Dependability in qualitative research addresses the data stability (Houghton, Casey, Shaw, and Murphy, 2013). To address dependability the research sections, include an audit trail to account for the steps taken throughout the research process. The audit trail allows for a depiction of the process to ensure a detailed report for outsiders to be able to replicate the details of the research if desired (Trochim, 2006).

Confirmability is addressed through an in depth focus on ensuring unbiased, subjective research. This is done through the utilization of reflexive journaling and the audit trail to address potential distortion (Trochim, 2006).

Ethical Procedures

The Walden University Internal Review Board approved the research study prior to data collection. The participants of the study provided a statement of consent through email (Appendix B). The participants were provided contact information for Walden's Institutional Review Board for ease of contact if there are concerns with the research. An ethical concern I identified is that by emailing the recruitment materials (Appendix A) there may be concerns with how recruitment or participation is related to employment. This concern was valid in that participants could feel obligated to participate or have feelings of reduced confidentiality. This concern was addressed through highlighting those issues during the recruitment and participatory stages of the research. Similar ethical concerns were attributed through data collection and again repeated confidence of confidentiality was relayed to participants. Data transcripts and recordings were stored in two locations and protected. The recordings and electronic transcripts were stored on a computer hard drive and zip drive with password protected security. Handwritten or typed notes used a personal identifier to address a participant that cannot be linked back to their electronic data. Confidential data was only reviewed by the researcher and Walden University. The data utilized for this research was stored in accordance with Walden University's Institutional Review Board Recommendation of five years. Thereafter the data will be destroyed through a comprehensive file deletion.

Summary

Chapter three provided the foundation for the research, aligned theoretical components, addressed in depth methodology, role of the researcher, research quality, and

ethical concerns. Chapter four provides a detailed presentation of the research findings and data analysis.

Chapter 4: Results

Introduction

The purpose of this qualitative phenomenological study was to understand and explore the perceptions of jail administrators regarding take home naloxone kit training and distribution in rural prisons/jails in upstate western New York. The research study addressed the following research questions (RQ):

1. What knowledge do jail personnel have in regard to opioid overdose and naloxone training?

2. What are the attitudes of rural jail personnel regarding a harm reduction strategy to reducing overdose deaths in the community?

3. What are the perceptions of rural jail personnel to implementing a take home naloxone distribution program for inmates being released?

4. What are the perceived barriers to implementing the take home naloxone program within the jail?

In this chapter the participant sample, setting, and demographics will be noted. The data collection methods and analysis processes will be identified and the data outcomes discussed. To conclude the chapter, evidence of trustworthiness is provided.

Setting

The research setting for this study was in person and phone interviews. I conducted six interviews and participants were given the choice of in person or phone interviews. One participant selected an in-person interview and the other five opted for phone interviews. The one in person interview was conducted in the participant's office at the local jail. The participants were well informed that their interviews would be recorded and that

confidentiality would be strictly upheld. One organizational influence that appeared in recruitment was the limited time each participant could commit to the interview. I had informed participants the interviews would last no longer than 60 minutes and some indicated they only had a specific amount of time to provide. No other personal or organizational conditions were noted that influenced the participants at the time of the study.

Demographics

The research study focused on a certain demographic due to the research purpose. The specific population desired for this study were jail personnel from rural locations in upstate western New York. The jail personnel needed to be administrative staff and employed with the agency for at least three years. Six jail administrators of upstate western New York jails participated in the research study. There were five male administrators and one female administrator. There was no other demographic data collected for this research as identifying other demographics may have reduced confidentiality due to the small sample size.

Data Collection

Participants were recruited by emailing a letter to jail administrators outlining the research study and ask for their participation as study participants (Appendix A). The mailing list was created using contact information available from public government websites. The mailing list created to recruit participants included 10 upstate western New York jails. The email was sent to the county sheriff and asked to be passed on to their Jail Administrator. In five out of the ten cases, the jail administrator's email was also listed on the public website. In those instances, I addressed the email to both the county sheriff and county jail administrator. The recruitment letter was sent by email and included a read receipt request to track that the correspondence was received (Appendix A). The consent

form was also attached to the introductory email (Appendix B). After multiple attempts with each participant, six jail administrators of upstate western New York jails responded that they would consent to participate in the research study.

Recruitment and data collection spanned over nine weeks. During each of the six interviews, participants were provided an overview of the research study and a review of everything within the consent documents. Confidentiality was also reiterated to all participants as well as a reminder that the interview would be recorded. The data was collected using one on one interviews, one interview was face to face and five were by phone. The interviews were completed utilizing a semistructured interview guide (Appendix C). Interviews were also recorded using a hand held digital recorder. Hand written notes were also taken during the interviews. The study participants were provided a closure statement after the interview to inform them of next steps within the research (Appendix C).

The recorded interviews and hand-written notes were transcribed and organized. The participants were identified with a number rather than their name or identifying criteria. The interviewers were labeled JA1 through JA6 in random order. Data was stored in a password protected file on my computer's hard drive and the data transcripts were saved in paper copy form in a locked filing cabinet.

There were no variations from the data collection plan presented in Chapter 3. The only unusual circumstance encountered was the number of attempts and length of time it took to gain participation and schedule interviews.

Data Analysis

The modified Van Kaam approach was used to analyze the data. This phenomenological analysis provided a series of seven steps to emerge themes (Moustakas,

1994). After the interviews were transcribed, the following steps were taken to analyze the participant information:

1. Listing and preliminary grouping,
2. Reduction and elimination,
3. Clustering and thematizing the invariant constituents,
4. Final identification of the invariant constituents and themes,
5. Create a textural description for each participant,
6. Create a structural description for each participant,
7. Construct a textural-structural description

The first step of this method of analysis was to review the participants verbal responses transcribed as well as the hand-written notes. All responses related to take home naloxone distribution programs were highlighted and noted as initial codes. This horontalization is the first step in the Modified Van Kaam process, as specific statements associated with the participant perceptions are preliminarily grouped (Moustakas, 1994). All perceptions for each participant were listed and grouped for initial themes to present. Thereafter reduction and elimination occurred as the second step of the process. This step requires that the statements contain a moment of the experience for understanding and the possibility that it is abstract and can be labeled (Moustakas, 1994). The third step of the process occurred through the grouping of the invariant constituents and organizing those into themes to create the participant perceptions, textural description (Moustakas, 1994).

The themes were identified and connected using HyperRESERACH or an organized coding and effective way to ensure coding themes that I may not have concluded through a self-coding identification. Individual textural descriptions and structural descriptions are

then constructed. The compilation of phenomenological reduction and imaginative variation develops a synthesis of perceptions of the phenomenon (Moustakas, 1994).

The themes that emerged included the following:

Theme 1

Five of the six participants indicated that their perceptions on naloxone include its ability to act as a safety net for drug users. Participants expressed that drug users see this preventive overdose drug as a drug that's available to save them. For example, JA1 stated, "I view it is kind of a safety net, I'm not sure that it's a preventative-type deal." JA2 further stated,

> The ones that we're wasting Narcan on-- my opinion, okay-- the hardcore addict who has absolutely no desire to really ever stop being a user. Likes the high, one thing or another. And Narcan for lots of them is just a method to keep them alive to get the next hit.

JA3 expressed,

> I think that it's my personal belief that use or issuing the Naloxone gives the thought process that they can use and abuse drugs and they're going to have that there to save them. And I agree that Naloxone's a great tool and it should be issued, and a life is a life. I'm all for saving lives but I think it's an enabler.

JA4 stated,

> I have pretty mixed feelings about it. Obviously, we've had, in our department, not in the jail itself, but in the Sherriff's department, many people saved. But on the other hand, many of the people they go to are people they might go to two or three times in one day. So, from the perspective of does it really have a significant potential to stop people from using? Not necessarily.

JA6 explained,

> Of course, you want to save lives. On the flipside of that, if you as a user know-- My buddy is right next to me and they have some of the naloxone, I can shoot whatever I want because they can bring be back to life.

Theme 2

The majority of jail personnel are knowledgeable of opioid overdose and naloxone administration. The results revealed about 67% of participants reported the majority (95% or more) of their jail staff are trained in naloxone. JA 1 stated for example,
"We've had some trainings here and all of my staff-- well I shouldn't say all. Probably 95% of my staff has been trained in the use of Narcan." JA 2 added, "Now everyone in the jail except one person who has been out on extended sick leave, all my officers, part time and full time, are all trained in the use of Narcan." Two participants expressed, "A majority of our staff is trained in Naloxone." (JA3) "We here have had Naloxone training for the majority of our staff." (JA6)

Theme 3

Jail personnel would likely not support the program. All the participants mentioned that employee perceptions would likely mimic their own perception, possibly feel like enablers, and noted a possible generational perception difference with this type of program. For example, JA1 stated,

> It's probably a 60/40. Sixty would be against. Forty would be for. And again, it's just like getting by anything else, public perception. Then again, it comes down to, we're just going to give these people, the people that are negative, we're just going to give these people a safety net to go get high.

JA2 expressed,

> There's always going to be some negative feelings regarding attempting to help probably-- that's not the right word. But again, enable someone with a drug habit. One of the biggest differences is between working on the road and working in jail-- on the road, you run into situations where you can actually help people…. And then jail, those circumstances are very very few and very far between .

JA3 explained,

> I would say the majority of them would have the same mindset as myself. I'm sure there would be a few folks that think differently but I believe the majority of them would think the same way. Naloxone gives the thought process that they can use and abuse drugs and they're going to have that there to save them.

JA4 stated,

> I think there's a lot of jail personnel that wouldn't necessarily buy into it and probably wouldn't encourage it. But if we had the program, the staff would go along with it but I think they would be-- you would get a lot of this attitude of "Okay, why are we even arresting these people if we're going to turn around and just give them this?.

JA5 elaborated,

> Staff would not be receptive due to the stigma. Unless you actually work in law enforcement, those mentalities of the officers-- I would say it would be divided. There are some that agree that we're trying to help these people and prevent deaths. And other staff members that'd be like, "Who cares? If they die it's"-- and I'm being honest-- If they die, they'd say, "it's tax-payer's money." I think there's a definite generation gap where that's concerned. The newer, younger officers coming in would be more receptive to doing that versus people that are getting ready to retire.

JA6 stated,

Mixed feelings. I mean, but that's a function of, I think, time on the job. I think my older, or more seasoned individuals don't necessarily have as progressive a view as the younger people that are coming in to work. And that's a function of training and exposure and--somebody who's been here for 35 years, we're a very, very different institution now than we were when they started here.

Theme 4

Training within the jail would likely be appreciated by inmates. The majority of the participants stated training without naloxone distribution within the jail would be beneficial and welcomed by inmates. For example, JA1 stated,

> I would say the general consensus is most of them enjoy some kind of level of training. Whether it's just to get out of their housing unit for a little while, or whether they really, sincerely want to better themselves. But overall, I think, they all would enjoy some sort of training like that.

JA2 elaborated,

> I think anybody can benefit from training, and I think anybody can benefit from education. So as far as educating people about the uses or myths around naloxone, I would be in favor of that. Inmates that I speak with enjoy any training they can get. There's a small percentage of them that have abused the privilege and will use it just as an excuse to get out of their housing area. But, for the most part, I believe that the training that we offer gives them good skills that they leave here with sometimes some certifications that they can use in the civilian world for employment or to set them on the right track for reduced recidivism.

JA4 added,

> We have all kinds of training. We do First Aid CPR for the inmates. And, in fact, I think that type of training might be part of that now. So we do First Aid and CPR. We have all kinds of programs here. You get a lot of people that will go to every program you offer, and then you have a few people that don't want to go to any. But the majority of inmates, yeah, they will participate in training.

JA5 stated,

> They're receptive to it while they're incarcerated. However, when they get out, I think what they've learned will take following up on. There's got to be a methodology of ensuring that they're following proper protocols and if they're going to be trained in Narcan. Because we are finding, in a law enforcement setting, we're finding abuses with Narcan.

Theme 5

Training barriers were reported by most of the participants however the barriers varied between all participants. The types of barriers indicated included time and location, funding, technology, language and mental health issues, and stigma of drug use. For example,

JA1 stated,

> Well, yeah, our biggest hurdle here - we're very small. We only have a 65-bed jail – it' time, time and location. We don't have a lot of room to hold multiple training sessions. We have one area that we can do our trainings in, which is where the time comes involved because we're so limited on the times that we can do things.

JA2 added, "Funding is always an issue, nobody wants to fund stuff in the county jail." JA3 stated, "In our facility, the only barrier that we've run up across recently is technology."

JA4 elaborated,

> Well, like I say, some people just really aren't very interested in it. I think the only other barriers that we would have are-- well, we have some people that are Spanish speaking, and maybe they kind of understand English for getting along day-to-day, but they might not understand this training. So, I think language could be. We have quite a few inmates that have mental health issues, so they might they might act like they understand it, but maybe they don't. So, I would say those are the key barriers that we have.

JA5 added, “There is a stigma of somebody that is addicted to heroin and treat it as a disease or illness versus a choice.”

Theme 6

Harm reduction programs are not favored by jail administrators. For example, JA1 stated,

> I could see where it would be beneficial. I think there's some hurdles that we would have to come over. But I do see-- whether how you implement it, targeting the folks that came in with drug problems, or if they indicate that there's users at home. We would have to do something along those lines. I think just a broad-- everybody gets a Narcan when they leave, I don't think that's a great idea.

JA2 stated,

> Upon release with proper counseling and education. Counseling would be, "Look, we're providing this to you not to enable your continued use, but to protect you against that accidental whatever. Maybe you're with somebody, and have to use it to help someone else. As long as they understood and were able to somehow sign off a

document that it was what it was for and it wasn't simply an enabling device. Yeah, I think. And it was free of charge.

JA3 further added,

I don't. And I'll elaborate a little bit. I think that it's my personal belief that use or issuing the Naloxone gives the thought process that they can use and abuse drugs and they're going to have that there to save them. And I agree that Naloxone's a great tool and it should be issued, and a life is a life. I'm all for saving lives but I think it's an enabler. And we've seen recently in our community what they call Naloxone parties or Narcan parties. Where someone will stay sober and everyone else abuses drugs to the point of overdose and they have several Narcan kits available to bring them all back. I think it's dangerous. I wouldn't be in favor of them.

JA4 stated,

Yeah. I think there's still that kind of sense of well, you're providing something for somebody that you don't know how they're going to use it when they get out. So, are they going to use this for their personal use? Are they going to pull this together and take it to a shooting party? So, we always think about that when we give people things when they're getting out. And also, we don't want them to get a false sense that it's okay to go out and use because you got this. So again, we're not convinced that people don't think of this as a way to save your life regardless of the circumstances. Are we expecting the taxpayers to pay for something that is related-- if drug use is illegal, then how do you justify giving somebody a drug that kind of goes along with the use of an illegal drug.

JA5 discussed,

> I would like the see are there any jails that are currently doing it and what cost benefits are to doing the program. If there's other facilities that are having a success rate with it, then I would be more apt to look at it. But if it's-- and then the cost as well. Who's paying for it? Is it going to be federally funded or is it going to be another expense to the counties? Because in a year you're going to have to give out the initial assessments and whether that can be done by a nonprofit organization to determine if someone is going to be eligible to receive it or not. But as far as blankets, just handing everybody a kit when they walk out, no absolutely not. I think that would be a waste of taxpayer money.

JA6 stated,

> Yeah, I think they would benefit. I think that's a really tough question, though, too, right? Because if we adopt the position that naloxone availability increases the likelihood of overdose or increases the likelihood that someone might try something because they believe that there's this instant, life-saving thing that's right there, introducing that training to that particular population might be suspect. So I don't know. And the flip side of that, releasing this population back into the community that's probably going to be exposed to drugs--and specifically opioids--and them having the knowledge of how to deploy naloxone might save somebody's life.

The data collected from the research questions did allow themes to be identified that addressed jail administrator perceptions of take home naloxone to control opioid overdoses.

Evidence of Trustworthiness

Several strategies were used to address the rigor of the research. Credibility within the research was established through peer checking and reflexivity. Peer checking occurred

through the committee review and discussion of the study's findings. A reflexive journal entry was made after each interview to reflect on interview bias.

Transferability addresses the extent to which research can be generalized or migrate into another context or setting (Trochim, 2006). The sampling strategy for this research was purposeful to ensure information rich participants were interviewed to address the research questions thoroughly. Although purposeful sampling limits generalization components of the research such as the interview questionnaire, the conclusions may be transferable to other studies with similarities.

An audit trail was completed to address the dependability the research sections. The audit trail lists the steps taken throughout the research process.

Confirmability is addressed through an in-depth focus on ensuring unbiased, subjective research. This was completed through entries into a reflexive journal after each participant interview as well as completion of the audit trail.

Results

The purpose of this research was to understand the perceptions of rural stakeholders towards a harm reduction model to reducing opioid overdoses. Data were collected using open ended questions by interviewing six rural jail administrators. Multiple themes were found that addressed the research questions. The themes identified included:

1. Naloxone acts as a safety net for drug users
2. Jail personnel are knowledgeable of opioid overdose and naloxone administration
3. Jail personnel would likely not support a naloxone program
4. Naloxone training within the jail would likely be appreciated by inmates
5. Training barriers exist
6. Harm reduction programs are not favored by jail administrators

The interview guide questions were chosen to provide information to address at least one of the four research questions of this study. The interview questions (IQ) will be discussed to address how the answers related to the research question (RQ).

Research Question 1

The first research question explored what knowledge jail personnel have regarding opioid overdose and naloxone training. Participant responses to address this question emerged from interview questions 1, 3, and 8. The responses to IQ1 revealed that the majority of jail personnel are knowledgeable to some degree on opioid overdose and naloxone. All the participants reported most or at least medical and/or administrative staff trained in overdose diagnosis and naloxone administration. JA1 stated, “Probably 95% of my staff has been trained.” JA2 responded “all full time and part time staff are trained.” Two participants replied, “a majority of the staff is trained.” (JA3; JA6)

IQ3 identified a common perception of the reversal drug reducing deaths however uncertainty of whether naloxone could reduce overdose deaths if provided to community members. This question also brought about mixed feelings on the drug being a safety net for drug users. The participants stated, “Oh, absolutely it will reduce deaths.” (JA1) “It will reduce deaths for those who end up getting something they didn’t realize…. Narcan for lots of them is just a method to keep them alive to get the next hit.” (JA2) “If you’re a user…shoot whatever I want because they can bring me back to life.” (JA6)

JA4 stated,

> I have pretty mixed feelings about it. Obviously, we've had at the Sherriff's department have many people saved. But on the other hand, many of the people they go to are people they might go to two or three times in one day.

JA 3 stated,

> Naloxone is a great tool for first responders to use in the event that someone overdoses on opiates. I don't think that it's intention or design was for anything more than that, as far as just distribute it to everyone, I wouldn't agree with that.

IQ3-1 and IQ3-2 identified multiple participants' hesitancy toward providing naloxone to the community at large and the need to employ training if naloxone is provided to community members. "I think there needs to be training involved." (JA1)

JA6 stated,

> I think that anyone should get it. But I also think that anyone who gets it should be trained but the thing is, I think our training was an hour, and that was really long. Because really, the actual training is, take the top off, shove it in their nose, it was really--it's very very simple. I think that if you get it you can have that two or three-minute training.

JA3 stated, "I think training is definitely a must, and as far as just distribute it to everyone, I wouldn't agree with that."

JA 4 expressed,

> I think it should go beyond training. I think there should be an understanding of why it's used and when it's appropriate and what other alternatives are available, and I think that anybody that's trained should also be trained in knowing how to refer people, how to advocate for them to get into treatment programs or other options.

IQ3-1 and IQ3-2 also brought out information on naloxone parties and other abuses in multiple participants communities. JA2 reported "You've got that group of people actually scheduling and planning Narcan parties, which is happening in our county, the next county over, all over the place." "We've seen recently in our community what they call Naloxone

parties or Narcan parties. Where someone will stay sober and everyone else abuses drugs to the point of overdose and they have several Narcan kits available to bring them all back." (JA3)

JA4 also noted this phenomenon,

> You're providing something for somebody that you don't know how they're going to use it when they get out. So, are they going to use this for their personal use? Are they going to pull this together and take it to a shooting party? How are they going to use something? So, we always think about that when we give people things when they're getting out.

JA 5 elaborated,

> Because we are finding, in a law enforcement setting, we're finding abuses with Narcan…the heroin addicts are replacing that with a liquid form of heroin. So, when they have contact with law enforcement it looks like a Narcan kit, it acts like a Narcan kit but it's actually a delivery system for the heroin.

Research Question 2

Research question 2 sought to understand the attitudes of rural jail personnel regarding a harm reduction strategy to reducing overdose deaths in the community. IQ4 solicited responses on whether inmates would benefit from a naloxone training program. The responses concluded that any training is beneficial however may not be effective for the inmates. Two of the participants responded that yes, they believe they would benefit (JA1 and JA5).

JA 2 stated,

> I think they would…I'm not sure it would be a good thing. I think that's what a lot of these kids would-- especially the younger kids would see it as, "Oh, they're going to

> give me stuff, so you know, I won't kill myself." And I think that might be what they would see it as, even with the training because you'll get those responses.

JA 3 explained,

> I think anybody can benefit from training, and I think anybody can benefit from education. So as far as educating people about the uses or myths around naloxone, I would be in favor of that, but I wouldn't be in favor of giving them to inmates upon release.

JA4 stated,

> I'm going to say this kind of tongue in cheek, but I suppose most of them already know about it, and a lot of the inmates that we have, have been saved by naloxone before they came, so they do know about it.

JA 5 stated,

> I think they would benefit. I think that's a really tough question, though, too, right? Because if we adopt the position that naloxone availability increases the likelihood of overdose or increases the likelihood that someone might try something because they believe that there's this instant, life-saving thing that's right there, introducing that training to that particular population might be suspect.

IQ4-1 also provided responses that assisted in better understanding whether inmates enjoy training within the jail setting. These answers also solicited deeper knowledge regarding the administrator attitudes.

JA1 stated,

> I would say the general consensus is you know, most of them enjoy some kind of level of training. Whether it's just to get out of their housing unit for a little while, just to get out, or whether they really, sincerely want to better themselves.

JA 5 discussed, “They're receptive to it while they're incarcerated. However, while they get out, I think what they've learned will take following up on.” JA4’s statement aligned with the other participants “You get a lot of people that will go to every program you offer, and then you have a few people that don't want to go to any. But the majority of inmates, yeah, they will participate in training.” “I'd like to see a little bit more participation, but you probably have a 30 to 40% participation rate.” (JA6) JA2 felt they would enjoy trainings however may not be fully invested, “Listen, would be the better word. I think they enjoy trainings.”

The participant responses varied for IQ4-2 regarding training barriers within the jails. JA1 relayed that jail size can be a training barrier, “We don't have a lot of room to hold multiple training sessions. We have one area that we can do our trainings in”. Funding is another issue that county jails face “Funding for other stuff is always an issue, nobody wants to fund stuff in the county jail.” (JA2) Funding was also reference by JA6 in that without support and resources training barriers occur “There are belief systems that I'm going to have to fight against. So, unless I have some study that says this is good for you, as a community there'll be some tough arguments.” Technology within the jail setting can be a barrier “In our facility, the only barrier that we've run up across recently is technology, and we're working on that, is inmates getting internet access for some of the training that we'd like to provide with them.” (JA3) JA4 stated language can be a barrier, “we have some people that are Spanish speaking, and maybe they kind of understand English for getting along day-to-day, but they might not understand this training.” A specific barrier noted to naloxone training is stigma “Obviously, you have to get over the stigma of somebody that is addicted to heroin and treat it as a disease or illness versus a choice.” (JA5)

IQ5 sought to address whether the Jail Administrator believed that naloxone should be implemented in a jail setting. The majority of the participants did not feel naloxone distribution programs should be implemented in a jail setting. “I could see where it would be beneficial…targeting the folks that came in with drug problems. I think just a broad everybody gets a Narcan when they leave, I don’t think that’s a great idea.” (JA1) “It's my personal belief that use or issuing the Naloxone gives the thought process that they can use and abuse drugs and they're going to have that there to save them.” (JA3)

JA 4 stated,

> I think there's still that kind of sense of well, you're providing something for somebody that you don't know how they're going to use it when they get out. So, are they going to use this for their personal use? Are they going to pull this together and take it to a shooting party? And then I also think of this. Are we expecting the taxpayers to pay for something that is related-- if drug use is illegal, then how do you justify giving somebody a drug that kind of goes along with the use of an illegal drug.

JA 5 included,

> I would like the see are there any jails that are currently doing it and what cost benefits are to doing the program? If there's other facilities that are having a success rate with it, then I would be more apt to look at it. But if it's-- and then the cost as well. Who's paying for it?

IQ7 provided insight on the jail administrators perception on how receptive other jail personnel would be to a take home naloxone program. The responses relayed that the personnel likely would not be receptive due to stigma, negative feelings, time on the job, and personal feelings from being in the field of law enforcement. JA6 stated “Mixed feelings. I

mean, but that's a function of, I think, time on the job. I think my older, or more seasoned individuals don't necessarily have as progressive a view as the younger people that are coming in to work."

JA5 doesn't believe staff would be receptive,

> They would not be receptive…it's the stigma. Unless you actually work in law enforcement, those mentalities of the officers—I would say it would be divided. There are some that agree that we're trying to help these people and prevent deaths. And other staff members that'd be like, "Who cares? If they die it's"-- and I'm being honest-- If they die, they'd say, "it's tax-payer's money.

JA4 further stated,

> I think there's a lot of jail personnel that wouldn't necessarily buy into it and probably wouldn't encourage it. But if we had the program, the staff would go along with it but I think they would be-- you would get a lot of this attitude of "Okay, why are we even arresting these people if we're going to turn around and just give them this?

JA3 stated,

> I would say the majority of them would have the same mindset- a great tool for first responders but shouldn't be used in preventive measures. I'm sure there would be a few folks that think differently but I believe the majority of them would think the same way.

JA2 mentioned,

> There's always going to be some negative feelings in regard to attempting to help probably-- that's not the right word. But again, enable someone with a drug habit.

According to JA1,

> I would say it's probably a 60/40. Sixty would be against. Forty would be for. And again, it's just like getting by anything else, public perception. Then again, it comes down to, we're just going to give these people, the people that are negative, we're just going to give these people a safety net to go get high.

Research Question 3

The third research question was to identify the perceptions of rural jail personnel to implementing a take home naloxone distribution program for inmates being released. This information came to light through IQ5. IQ5 sought to address whether the Jail Administrator believed that naloxone should be implemented in a jail setting. The majority of the participants did not feel naloxone distribution programs should be implemented in a jail setting. “I could see where it would be beneficial…targeting the folks that came in with drug problems. I think just a broad everybody gets a Narcan when they leave, I don’t think that’s a great idea.” (JA1) “It's my personal belief that use or issuing the Naloxone gives the thought process that they can use and abuse drugs and they're going to have that there to save them.” (JA3)

JA4 added,

> I think there's still that kind of sense of well, you're providing something for somebody that you don't know how they're going to use it when they get out. So, are they going to use this for their personal use? Are they going to pull this together and take it to a shooting party? And then I also think of this. Are we expecting the taxpayers to pay for something that is related-- if drug use is illegal, then how do you justify giving somebody a drug that kind of goes along with the use of an illegal drug.

JA 5 expressed,

> I would like the see are there any jails that are currently doing it and what cost benefits are to doing the program? If there's other facilities that are having a success rate with it, then I would be more apt to look at it. But if it's-- and then the cost as well. Who's paying for it?

IQ7 provided insight on the jail administrator's perception on how receptive other jail personnel would be to a take home naloxone program. The responses relayed that the personnel likely would not be receptive due to stigma, negative feelings, time on the job, and personal feelings from being in the field of law enforcement. JA6 stated "Mixed feelings. I mean, but that's a function of, I think, time on the job. I think my older, or more seasoned individuals don't necessarily have as progressive a view as the younger people that are coming in to work."

JA5 doesn't believe staff would be receptive,

> They would not be receptive…it's the stigma. Unless you actually work in law enforcement, those mentalities of the officers-- I would say it would be divided. There are some that agree that we're trying to help these people and prevent deaths. And other staff members that'd be like, Who cares? If they die it's"-- and I'm being honest-- If they die, they'd say, "it's tax-payer's money.

JA4 stated,

> I think there's a lot of jail personnel that wouldn't necessarily buy into it and probably wouldn't encourage it. But if we had the program, the staff would go along with it but I think they would be-- you would get a lot of this attitude of okay, why are we even arresting these people if we're going to turn around and just give them this?

JA3 stated,

> I would say the majority of them would have the same mindset- a great tool for first responders but shouldn't be used in preventive measures. I'm sure there would be a few folks that think differently but I believe the majority of them would think the same way.

JA2 mentioned, "There's always going to be some negative feelings in regard to attempting to help probably-- that's not the right word. But again, enable someone with a drug habit." According to JA1,

> I would say it's probably a 60/40. Sixty would be against. Forty would be for. And again, it's just like getting by anything else, public perception. Then again, it comes down to, we're just going to give these people, the people that are negative, we're just going to give these people a safety net to go get high.

Research Question 4

The final research question addressed the perceived barriers to implementing the take home naloxone program within the jail. This question was addressed through a variation of responses from all the research questions. Jail administrators highlighted barriers including funding, "Funding for other stuff is always an issue, nobody wants to fund stuff in the county jail." (JA2) "There are belief systems that I'm going to have to fight against. So, unless I have some study that says this is good for you, as a community there'll be some tough arguments for the use of taxpayer dollars." (JA6) Staff perception and buy-in were also highlighted barriers, "There's always going to be some negative feelings in regard to attempting to help probably-- that's not the right word. But again, enable someone with a drug habit." (JA2) "It's my personal belief that use or issuing the Naloxone gives the thought

process that they can use and abuse drugs and they're going to have that there to save them." (JA3)

JA 4 expressed,

> I think there's a lot of jail personnel that wouldn't necessarily buy into it and probably wouldn't encourage it. But if we had the program, the staff would go along with it but I think they would be-- you would get a lot of this attitude of Okay, why are we even arresting these people if we're going to turn around and just give them this?

JA 5 explained, "Because we are finding, in a law enforcement setting, we're finding abuses with Narcan."

JA6 stated,

> Mixed feelings. I mean, but that's a function of, I think, time on the job. I think my older, or more seasoned individuals don't necessarily have as progressive a view as the younger people that are coming in to work." Most participants felt that the inmates would be receptive of a training however there is the potential for misuse.

JA1 stated, "I would say the general consensus is you know, most of them enjoy some kind of level of training." JA2 felt they would enjoy trainings however may not be fully invested, "Listen, would be the better word. I think they enjoy trainings." "They're receptive to it while they're incarcerated. However, while they get out, I think what they've learned will take following up on." (JA5)

Summary

This chapter included the study setting, demographics, and evidence of trustworthiness, as well as results of the study. In Chapter 5 I interpret the research findings, limitations and recommendations, and implications for positive social change.

Chapter 5: Discussion, Conclusion, and Recommendations

Introduction

The intent of this study was to understand and explore the perceptions of jail administrators regarding take home naloxone kit training and distribution in rural prisons and jails in upstate western New York. Through review of the research it is indicated that jail personal have knowledge and training of opioid overdose and naloxone utilization. Jail administrators have attitudes and perceptions that do not support naloxone as a harm reduction method and would likely not be receptive to a naloxone distribution program within the jail setting. Personnel would be concerned with misuse and abuse of the kits, as well as must deal with their own ideals and experiences that wouldn't support the naloxone distribution.

Interpretation of the Findings

The recent research collected in the literature review focused on opioid overdose strategies to reduce deaths. Harm reduction was one of those strategies. Harm reduction approaches are in favor of the availability of preventive measures to reduce the risks of opioid use and death from overdose. As varied community settings begin to implement naloxone dispensing programs the research presented in chapter 2 asserted that this strategy may be feasible in other community settings. It became apparent after analyzing the data from this research study that utilizing a harm reduction model within the jail setting is not likely feasible and would need to encompass community/tax payer approval, practice and policy change, and a shift in the attitudes and perceptions of all staff.

The various themes that arose from the data allow for an explanation of whether the previous research supports or does not support the findings of this research. The first theme, naloxone acts as a safety net for drug users, was not supported by previous research within

the literature review. Maxwell et al., 2006) reported that participants of overdose training programs report less drug use after training program attendance. The study also revealed unforeseen reductions in drug use providing an argument for the opposition that naloxone education and distribution kits increase drug use and provide users a safety net. The data collected from the participants provided similar insights in that jail administrators believe naloxone can increase drug use and act as a safety net for users. The participants identified many misuses they see regarding naloxone. Wagner et al. (2010) also concluded from a study to assess a naloxone education program, increased knowledge and response behavior among those who attended the training. The study also revealed unforeseen reductions in drug use providing an argument for the opposition that naloxone education and distribution kits increase drug use and provide users a safety net. The perceptions from jail administrators do not align with the harm reduction theory. The harm reduction model encompasses the acceptance of drug use is integral to improving health behavior (Harm Reduction Coalition, n.d.). Jail administrators feel the accepting drug use by providing a life-saving mechanism such as naloxone would only act as a safety net.

The second theme, jail personnel are knowledgeable of opioid overdose and naloxone administration, was supported by the research in the literature review. The majority of the participants responded to have all jail personnel or at least medical staff trained in responding to opioid overdose and knowledgeable of naloxone administration. A recent study by Wagner, Bovet, Haynes, Joshua, and Davidson (2016) a pilot training program of law enforcement officers was evaluated. The qualitative data revealed that the law enforcement officers had positive experiences using the skills they learned or enhanced through the training. Overall the conclusions include increases in knowledge and confidence of law enforcement officers in responding to opioid overdose situations as well as positive

effects for overdose victims. That research supports that a certain level of training can have a positive effect on those trained. This effect may assist in staff support for a training program. The information provided by jail administrators does align with the harm reduction model in that training and education can lead to prevention and improve health outcomes in regards to behaviors (Harm Reduction Coalition, n.d.).

The third theme, jail personnel would likely not support a naloxone program, was reinforced through research within the literature review. Sherman et al. (2008) relayed that perceptions and attitudes of jail administrators and their perceptions of jail staff indicated negativity toward naloxone and its effectiveness as a harm reduction method. While participants do believe the drug saves lives it should not be provided as a preventive method due to misuse and abuse. If a naloxone program were to be introduced into a rural jail setting, the need to engage senior staff would be similar to that relayed by Sondhi et al. (2016). Support and direction would need to be shown and provided by senior staff to address stigma and negative perceptions/attitudes from jail staff. The research findings were also supported by another nontraditional distribution site. Zaller et al. (2013) reviewed data from a rapid policy assessment and response project to determining the barriers in implementing the community based distribution model in a pharmacy. Barriers including interpersonal relationships between the user and pharmacy staff including lack of support, mutual impressions, and perceived stigma arose from their conclusions. Jail administrator perceptions and beliefs in regards to this theme does not align with the harm reduction model. The jail administrators do accept the reality of drug use but do not support the utilization of a preventive drug to reduce risks to the consequences from the drug use (Hawk et al., 2015).

The fourth theme, naloxone training within the jail would likely be appreciated by inmates, could not be supported by any of the research provided in the literature review. While research may exist regarding whether certain populations appreciate naloxone trainings or inmates generally enjoy training this information was not incorporated into the literature review. This theme aligns with the harm reduction model in that it addresses the harm reduction principals: the individual's choice to use is accepted, the individual is treated with dignity, the individual is expected to take responsibility for behaviors, the individuals have a voice, a reduction in harm, and no pre-defined outcomes (National Health Care for the Homeless Council, 2011).

The fifth theme, training barriers, was supported with research from the literature review. Participants asserted multiple barriers would limit training including stigma and funding. The previous research identified training barriers in multiple settings that included lack of support, mutual impressions, and perceived stigma (Zaller et al., 2013). Funding barriers and institutional stakeholder support was also reported as a training barrier to recovery coaches implementing a take home naloxone program within a hospital (Samuels, 2014). This theme also addresses the harm reduction principals identified in theme four. Barriers to training could exist however could be overcome to comply with the harm reduction principals.

The sixth theme, harm reduction programs are not favored by jail administrators, was supported from the literature review. The participants provided insights to personal beliefs, funding, and public support as issues to the limited favorability and efficacy to implementing this program in a rural county jail. Public support would also be a key determinant to implementing a naloxone program in a rural county jail according to the jail administrators interviewed. Public support is also a key factor in community dispensing models for

naloxone in general. Bachhuber et al. (2015) researched specific messaging that increased support for naloxone distribution policies. This theme does not align with the harm reduction theory. The harm reduction model encompasses the acceptance of drug use is integral to improving health behavior (Harm Reduction Coalition, n.d.). Jail administrators feel the accepting drug use by providing a life-saving mechanism such as naloxone would only act as a safety net. Jail administrators believe that the framework of harm reduction model would enable individuals and provide more risk than benefit.

The findings from this phenomenological study might allow for a better understanding of the feasibility of a take home naloxone program in a rural jail setting. The perceptions identified among jail administrators provides significant examples that a harm reduction program of this type would not be acceptable in a jail setting.

Limitations of the Study

A limitation identified regarding this research study was the number of participants. The participant base being limited to jail administrators within a rural setting reduced the number of participants. The willingness for participation was very low and arose through the recruitment process. The findings from this study are also not generalizable to all jail administrators due to the rural demographic chosen. Therefore, jail administrators in urban locations were not included in the study.

Recommendations

It is recommended based on the findings of this research that future qualitative studies focus on the perceptions of all jail staff as well as the tax payers of rural communities. This recommendation stems from the participant responses in that they often need public support when implementing programs within the jail setting, this includes funding. The recommendation to identify the perceptions and attitudes of all jail staff is

needed to ensure that it is the culture of the workplace that leads to the stigma and negative perceptions. This research could be expanded to interview the inmates to determine their stance regarding take home naloxone programs and its feasibility and efficacy within a rural county jail. Another recommendation would be to further assess this research against a similar study with urban county jails and determine the differences and similarities among the data from the two studies.

Implications

This study has implications for positive social change in that it could change perceptions in the community regarding harm reduction approaches, as well as increase knowledge of barriers that surround nonmedical and nontraditional community dispensing models. The perspectives of these stakeholders may assist in improving only one prong of the issue and health outcomes regarding opioid overdoses, however will contribute to research unavailable before. This was the first research study found focusing on implementing a take home naloxone program within rural county jails. That said the findings are significant as the research may drive future policy decisions and improve prevention focused programming. The data provided information beneficial to overcoming implementation barriers to harm reduction programs in rural jails.

Additionally, this research promotes community awareness of a growing public health concern and may open conversations on collaborations toward a public health and safety approach to substance use and abuse, as well as increase public support for programs when they are educated of their efficacy.

Conclusion

The opioid overdose concern continues to be a critical public health issue, as well as a standard discussion within political agendas. Although recent changes in opioid overdose

prevention laws have created a movement for states throughout the United States to modify their laws and policies to adhere to the harm reduction theory. Harm reduction approaches come with many concerns to communities. The current literature provided evidence that the harm reduction strategy of take home naloxone programs is effective. The strategy was proven effective in settings within large cities and settings focused solely on reducing drug abuse. The results of this research continue to relay similar concerns regarding the efficacy of take home naloxone programs from jail administrators in rural locations. The research provided insight that the feasibility of implementing this program within a county jail would not be difficult yet more importantly who would support it. Support would be needed from the community as well as from resources to fund the program. The results identified a major barrier with staff regarding negative perceptions and attitudes stemming from workplace culture and their experiences. The perceptions collected from this research were used to understand the perceived effectiveness of a community based dispensing model with this high-risk group in a rural setting. In conclusion reviewing all the data in its entirety it is determined that a rural jail setting is not an implementation site that would be easy to begin the take home naloxone program. A rural jail needs to address external factors such as community and tax payer support, as well as political encouragement. Internal factors such as stigma and negativity need to be addressed and policy change supported from the top down would be an important inclusion to address program feasibility.

Public health professionals need to continue to educate the community on the efficacy of harm reduction methods, reduce risk factors, and increase protective factors. Saving a life utilizing a harm reduction method needs to be linked with follow up and referral to other resources to ensure a multi-pronged approach to reducing opioid overdoses in a rural community.

References

Albert, S., Brason, F., Sanford, C., Dasgupta, N., Graham, J., & Lovette, B. (2011). Project Lazarus: community-based overdose prevention in rural North Carolina. *Pain Medicine, 12*(2), 77-85. doi: 10.1111/j.1526-4637.2011.01128.x

American Society of Addiction Medicine. (2016). Opioid addiction 2016 facts and figures. Retrieved from http://www.asam.org/docs/default-source/advocacy/opioid-addiction-disease-facts-figures.pdf

Bachhuber, M. A., McGinty, E. E., Kennedy-Hendricks, A., Niederdeppe, J., & Barry, C. L. (2015). Messaging to increase public support for Naloxone distribution policies in the United States: Results from a randomized survey experiment. *PLoS ONE, 1M0*(7), e0130050. http://doi.org/10.1371/journal.pone.0130050

Banta-Green, C.J., Kuszler, P.C., Coffin, P.O., Schoeppe, J.A. (2011) Washington's 911 Good Samaritan Drug Overdose Law: Initial evaluation results. Alcohol & Drug Abuse Institute, University of Washington. Retrieved from http://adai.uw.edu/pubs/infobriefs/ADAI-IB-2011-05.pdf

Banjo, O., Tzemis, D., Al-Qutub, D., Amlani, A., Kesselring, S., & Buxton, J. (2014). A quantitative and qualitative evaluation of the British Columbia Take Home Naloxone program. *Canadian Medical Association Journal, 2*(3), E153-E161. doi: 10.9778/cmajo.20140008

Barocas, J. A., Baker, L., Hull, S. J., Stokes, S., & Westergaard, R. P. (2015). High uptake of naloxone-based overdose prevention training among previously incarcerated syringe-exchange program participants. *Drug and Alcohol Dependence, 154*, 283–286. http://doi.org/10.1016/j.drugalcdep.2015.06.023

Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *Qualitative Report, 13*(4), 544-559. Retrieved from http://nsuworks.nova.edu/tqr/vol13/iss4/2

Bazzi, A., Zaller, N., Fu, J., Rich, J. (2010). Preventing opiate overdose deaths: Examining objections to take-home naloxone. *Journal of Health Care for the Poor and Underserved, 21*(4), 1108-1113. doi:10.1.1353/hpu.2010.0935

Binswanger, I., Nowels, C., Corsi, K., Glanz, J., Long, J., Booth, R.E., & Steiner, J. F. (2012). Return to drug use and overdose after release from prison: a qualitative study of risk and protective factors. *Addiction Science & Clinical Practice, 7*(3), doi: 10.1186/1940-0640-7-3

Bourgeault, I., Dingwall, R. & De Vries, R. (2010). Phenomenology. *The SAGE handbook of qualitative methods in health research* (pp. 229-248). London, SAGE Publications Ltd. doi:10.4135/9781446268247.n13

Canadian Pediatric Society. (2008). Harm reduction: An approach to reducing risky health behaviors in adolescents. *Pediatrics & Child Health, 13*(1), 53–56. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528824/

Centers for Disease Control and Prevention. (2014). Opioid Painkiller Prescribing, where you live makes a difference. Atlanta, GA: Centers for Disease Control and Prevention. Available at http://www.cdc.gov/vitalsigns/opioid-prescribing/.

Centers for Disease Control and Prevention. (2015a). Injury prevention & control: prescription drug overdose. Retrieved from http://www.cdc.gov/drugoverdose/data/overdose.html

Centers for Disease Control and Prevention. (2015b). Poisoning deaths involving opioid analgesics- New York State 2003–2012. *Morbidity and Mortality Weekly Report, 64*(14), 374-380. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6414a2.htm

Centers for Disease Control and Prevention. (2015c). Quickstats: rates of deaths from drug poisoning and drug poisoning involving opioid analgesics- United States 1999-2013. *Morbidity and Mortality Weekly Report, 64*(1). Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6401a10.htm

Centers for Disease Control and Prevention. (2016). Increases in Drug and Opioid Overdose Deaths — United States, 2000–2014. *MMWR. Morbidity and Mortality Weekly Reports.* Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (Laureate Education, custom ed.). Thousand Oaks, CA: Sage.

Chang, Z., Lichtenstein, P., Larsson, H., & Fazel, S. (2015). Substance use disorders, psychiatric disorders, and mortality after release from prison: a nationwide longitudinal cohort study. The Lancet Psychiatry 2(5), 422-430. doi:10.1016/S2215-0366(15)00088-7

Cicero, T., Ellis, M, Surratt. H., & Kurtz, S. (2014). The changing face of heroin use in the united states: a retrospective analysis of the past 50 years. *JAMA Psychiatry, 71*(7), 821-826.

Corey, D. (2015). Naloxone for community *opioid overdose* reversal. Public Health Law Research. Retrieved from http://phlr.org/product/naloxone-community-opioid-overdose-reversal

Dasgupta, N., Sanford, C., Albert, S., & Wells Branson, F. (2009). Opioid drug overdoses: a prescription for harm and potential for prevention. American Journal of Lifestyle Medicine. doi:10.1177/1559827609348462

Davis, C., & Carr, D. (2015). Legal changes to increase access to naloxone for opioid overdose reversal in the United States. *Drug and Alcohol Dependence, 157,* 112-120. doi: http://dx.doi.org/10.1016/j.drugalcdep.2015.10.013

Doe-Simkins, M., Quinn, E., Xuan, Z., Sorensen-Alawad, A., Hackman, H., Ozonoff, A., & Walley, A.Y. (2014). Overdose rescues by trained and untrained participants and change in opioid use among substance-using participants in overdose education and naloxone distribution programs: a retrospective cohort study. *Biomed Central Public Health, 14*. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4004504/pdf/1471-2458-14-297.pdf

Drug Policy Alliance. (2015a). 911 good samaritan laws: prevention overdose deaths, saving lives. Retrieved from http://www.drugpolicy.org/resource/911-good-samaritan-laws-preventing-overdose-deaths-saving-lives

Drug Policy Alliance. (2015b). *Harm reduction*. Retrieved from http://www.drugpolicy.org/harmreduction.

Dwyer, K., Walley, A. Y., Langlois, B. K., Mitchell, P. M., Nelson, K. P., Cromwell, J., & Bernstein, E. (2015). Opioid Education and Nasal Naloxone Rescue Kits in the Emergency Department. *Western Journal of Emergency Medicine, 16*(3), 381–384. http://doi.org/10.5811/westjem.2015.2.24909

Faul, M., Dailey, M. W., Sugerman, D. E., Sasser, S. M., Levy, B., & Paulozzi, L. J. (2015). Disparity in naloxone administration by emergency medical service providers and the burden of drug overdose in US rural communities. American *Journal of Public Health, 105*, E26-E32. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4455515/

Giorgi, A. P., & Giorgi, B. M. (2003). The descriptive phenomenological psychological method. In P. M. Camic, J. E. Rhodes, L. Yardley, P. 0. Camic, J. E. Rhodes, L. Yardley (Eds.), Qualitative research in psychology: Expanding perspectives in methodology and design (pp. 243-273). Washington, DC, US: American Psychological Association. doi:10.1037/10595-013

Green, T., Dauria, E., Bratberg, J., Davis, C., & Walley, A. (2015). Orienting patients to greater opioid safety: models of community pharmacy-bases naloxone. *Harm Reduction Journal.* doi: 10.1186/s12954-015-0058-x

Groot, E., Kouyoumdjian, F., Kiefer, L., Madadi, P., Gross, J., Prevost, B., Jhirad, R., Huyer, D., Snowdon, V., & Persaud, N. (2016) Drug toxicity deaths after release from incarceration in ontario, 2006-2013: review of coroner's cases. PLoS ONE 11(7): e0157512. doi: 10.1371/journal.pone.0157512

Gu, Q., Dilon, C.F., & Burt, V.L. Prescription drug use continues to increase: U.S. prescription drug data for 2007–2008. NCHS data brief, no 42. Hyattsville, MD: National Center for Health Statistics. 2009. Available from: http://www.cdc.gov/nchs/data/databriefs/db42.htm.

Hawk, K. F., Vaca, F. E., & D'Onofrio, G. (2015). Reducing Fatal Opioid Overdose: Prevention, Treatment and Harm Reduction Strategies. *The Yale Journal of Biology and Medicine, 88*(3), 235–245. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4553643/

Harm Reduction Coalition. (n.d.) Principals of harm reduction. Retrieved from http://harmreduction.org/about-us/principles-of-harm-reduction/

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013) Rigor in qualitative case-study research. *Nurse Researcher, 20* (4), 12-17. Retrieved from http://journals.rcni.com/doi/pdfplus/10.7748/nr2013.03.20.4.12.e326

Horyniak, D., Higgs, P., Lewis, J., Winter, R., Dietze, P. and Aitken, C. (2010), An evaluation of a heroin overdose prevention and education campaign. Drug and Alcohol Review, 29, 5–11. doi:10.1111/j.1465-3362.2009.00083.x

Klitzman, R. (2013). How good does the science have to be in proposals submitted to institutional review boards? An interview study of institutional review board personnel. *Clinical Trials: Journal of the Society for Clinical Trials, 10*(5), 761–766.

Leece, P., Hopkins, S., Marshall, C., Orkin, A., Gassanov, M., A., & Shahin, R. (2013). Development and implementation of an opioid overdose prevention and response program in Toronto, Ontario. *Canadian Journal of Public Health, 104*(3), e200-4.

Lowe, S. S., Milligan, C., Watanabe, S. M., & Brearley, S. G. (2015). A Grounded Theory approach to physical activity and advanced aancer: A qualitative study protocol. *International Journal of Qualitative Methods, 14*(5), 1-10. doi:10.1177/1609406915617161

Madah-Amiri, D., Clausen, T., & Lobmaier, P. (2016). Utilizing a train-the-trainer model for multi-site naloxone distribution programs. Retrieved from http://www.drugandalcoholdependence.com/article/S0376-8716(16)30034-5/pdf

Matrix Global Advisors, LLC. (2015). Health care costs from opioid abuse: a state-by-state analysis. Retrieved from https://drugfree.org/wp-content/uploads/2015/04/Matrix_OpioidAbuse_040415.pdf

Maxwell, S., Bigg, D., Stanczykiewicz, K., & Carlberg-Racich, S. (2006). Prescribing naloxone to actively injecting heroin users: A program to reduce heroin overdose deaths. *Journal of Addiction Disorders,25*, 89-96. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/16956873

McWilliam, C. (2010). Phenomenology. In Bourgeault, I., Dingwall, R. & De Vries, R. *The SAGE handbook of qualitative methods in health research* (pp. 229-248). London: SAGE Publications Ltd. doi: 10.4135/9781446268247

Merrall, E. L. C., Kariminia, A., & Bird, S. M. (2010). Meta-analysis of drug-related deaths soon after release from prison. *Addiction , 105*(9), 1545–1554. http://doi.org/10.1111/j.1360-0443.2010.02990.x

Moustakas, C. (1994). Phenomenological research: analyses and examples. In *Phenomenological research methods* (pp. 120-154). Thousand Oaks, CA: SAGE Publications. doi:10.4135/9781412995658.d9

National Care for the Homeless Council. (2010). Harm reduction: preparing people for change. Retrieved from http://www.nhchc.org/wp-content/uploads/2011/09/harmreductionFS_Apr10.pdf

National Institute on Drug Abuse. (2014). Prescription drug abuse. Retrieved from https://www.drugabuse.gov/publications/research-reports/prescription-drugs/opioids/what-are-opioids.

Prunuske, J., Hill, C., Hager, K., Lemieux, A., Swanoski, M., Anderson, G., & Lutifiyya, M.N. (2014). Opioid prescribing patterns for nonmalignant chronic pain for rural versus on –rural US adults: a population-based study using 2010 NAMCS data. *Biomed Central Health Services Research, 14.* Retrieved from http://www.biomedcentral.com/1472-6963/14/563/

Rudestam, K. E., & Newton, R. R. (2015). *Surviving your dissertation: A comprehensive guide to content and process* (4th ed.). Thousand Oaks, CA: Sage.

Salkind, N. J. (2010). *Encyclopedia of research design*Thousand Oaks, CA: SAGE Publications Ltd doi: 10.4135/9781412961288

Samuels, E. (2014). Emergency department naloxone distribution: A Rhode Island department of health, recovery community, and emergency department partnership to reduce *opioid overdose* deaths. Medicine and Health Rhode Island, 97(10), 38-39. Retrieved from http://ezp.waldenulibrary.org/login?url=http://search.proquest.com/docview/1586095729?accountid=14872

Sherman, S., Gann, D., Scott, G., Carlberg, S., Bigg, D., Heimer, R. (2008). A qualitative study of overdose responses among Chicago IDUs. *Harm reduction Journal, 5*(2). doi: 10.1186/1477-7517-5-2

Simon, M. (2011), Dissertation and Scholarly Research: Recipes for Success. Seattle, WA: Dissertation Success LLC

Sondhi, A., Ryan, G., & Day, E. (2016). Stakeholder perceptions and operational barriers in the training and distribution of take-home naloxone within prisons in England. *Harm reduction* Journal, 131-8. doi:10.1186/s12954-016-0094-1

Substance Abuse and Mental Health Services Administration. (2013). *Opioid overdose* toolkit. Retrieved from http://store.samhsa.gov/shin/content//SMA14-4742/Overdose_Toolkit.pdf

Substance Abuse and Mental Health Services Administration. (2015a). Opioids. Retrieved from http://www.samhsa.gov/atod/opioids

Substance Abuse and Mental Health Services Administration. (2015b). Prescription Drug Use and Misuse in the United States: Results from the 2015 National Survey on Drug Use and Health. Retrieved from https://www.samhsa.gov/data/sites/default/files/NSDUH-FFR2-2015/NSDUH-FFR2-2015.htm

Townley, C. (2016). New York joins state-led fight to combat opioid crisis, passes new legislation. National Academy for State Health Policy. Retrieved from http://nashp.org/new-york-joins-state-led-fight-to-combat-opioid-crisis-passes-new-legislation/

Trochim, W. (2006). The research methods of knowledge base. *Social Research Methods, 2*. Retrieved from www.socialreserachmethods.net/kb

Turner, D. (2010). Qualitative interview design: a practical guide for novice researchers. *The Qualitative Report, 15*(3), 754-760. Retrieved from http://nsuworks.nova.edu/tqr/vol15/iss3/19

Voight, M. L., & Hoogenboom, B. J. (2012). Publishing your work in a journal: understanding the peer review process. *International Journal of Sports Physical Therapy, 7*(5), 452–460. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474310/

Wagner, K., Bovet, J., Haynes, B., Joshua, A., Davidson, P. (2016). Training law enforcement to respond to opioid overdose with naloxone: Impact on knowledge, attitudes, and interactions with community members. *Drug and Alcohol Dependence, 165*, 22-28. doi: 10.1016/j.drugalcdep.2016.05.008

Wagner, K., Valente, T., Casanova, M., Partovi, S., Mendenhall, B., Hundley, J., Gonzalez, M., & Unger, J. (2010). Evaluation of an overdose prevention and response training programme for injection drug users in the Skid Row area of Los Angeles, CA. International Journal on Drug Policy, 21(3), 186-196. doi:10.1016/j.drugpo.2009.01.003. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4291458/

Walden University. (n.d.-j). Research ethics & compliance: Guides and FAQs. Retrieved December 18, 2014, from http://academicguides.waldenu.edu/researchcenter/orec/guides

Walden University. (n.d.-k). Research ethics & compliance: Welcome from the IRB. Retrieved December 18, 2014, from http://academicguides.waldenu.edu/researchcenter/orec

Walley, A., Xuan, Z., Hackman, H., Quinn, E., Doe-Simkins, M., Sorensen-Alawad, A., Ruiz, S., & Ozonoff, A. (2013). *Opioid overdose* rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. *British Medical Journal, 346*. Retrieved from http://www.bmj.com/content/bmj/346/bmj.f174.full.pdf

Warner, M., Chen, L., Makuc, D., Anderson, R., & Minino, A. (2011). Drug poisoning deaths in the United States, 1980-2008. *NCHS Data Brief, 81*, 1-8. Retrieved fromhttp://www.ncbi.nlm.nih.gov/pubmed/22617462?access_num=22617462&link_type=MED&dopt=Abstract

Watt, D. (2007). On becoming a qualitative: the value of reflexivity. *The Qualitative Report, 12* (1). Retrieved from http://www.nova.edu/ssss/QR/QR12-1/watt.pdf

Yokell, M. A., Green, T. C., Bowman, S., McKenzie, M., & Rich, J. D. (2011). Opioid overdose prevention and naloxone distribution in Rhode Island. *Medicine and Health, Rhode Island*, 94(8), 240–242. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/2527165

Young, A., Havens, J., & Leukefeld, C. (2012). A comparison of rural and urban nonmedical prescription opioid users' lifetime and recent drug use. *American Journal of Drug Alcohol Abuse*, 38(3): 220–227. doi: 10.3109/00952990.2011.643971

Zaller, N., Yokell, M., Green, T., Gaggin, J., & Case, P. (2013). The feasibility of pharmacy-based naloxone distribution interventions: a qualitative study with injection drug users and pharmacy staff in Rhode Island. *Substance Abuse & Misuse, 48*, 590-599. doi: 10.3109/10826084.2013.793355

Zucker, H., Annucci, A. J., Stancliff, S., & Catania, H. (2015). Overdose prevention for prisoners in New York: a novel program and collaboration. *Harm Reduction Journal*, 121-2. doi:10.1186/s12954-015-0084-8

Appendix A: Recruitment Letter

Jaclyn Woollett
PhD Student, Community Health
Walden University
jaclyn.woollett@waldenu.edu

March 16, 2017

Dear Jail Administrator:

I am Jaclyn Woollett a PhD student in Walden University's Community Health program. I am writing you to see if you'd be willing to assist me in conducting my doctoral research. I will be collecting information about jail administrator's perceptions of administering a take home naloxone program in rural county jails (see enclosed fact sheet if you are not familiar with this program).

I chose this research topic due to my experiences both in residing and working in a rural community. As I'm sure you are aware the rates of opioid abuse and overdose continue to rise in rural communities. Studies have shown that recently released inmates are at high risk for overdose when placed back in the community due to several factors. I feel by understanding the barriers to implementing this program in rural jails program planners can make decisions based on research rather than general thought that this program may work or not work if implemented.

My goal is to recruit local jail administrators to participate in one on one interviews. The interview can be face to face or by phone. The interview is expected to last at least an hour. Participation is completely voluntary and I will ensure confidentiality throughout the research process.

If you would be willing to participate in the study, please read the informed consent form attached to this email and respond by replying to this email with the words 'I Consent'. I can field any questions through email at jaclyn.woollett@waldenu.edu or by phone at 607-382-4076.

I appreciate your time and consideration for participating in this study.

Sincerely,

Jaclyn Woollett
Enclosure included

Appendix B: Informed Consent Form

You are invited to take part in a research study about providing a take home naloxone program within a jail set ting. I will be inviting rural jail administrators to take part in the study. I obtained your name/contact info via the department website. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Jaclyn Woollett, who is a doctoral student at Walden University.

Study Background:
The purpose of this study is to understand and explore the perceptions of key rural stakeholder perceptions regarding take home naloxone kit distribution in rural prisons/jails.

Study Participants:
Study participants include jail personnel from rural locations in Upstate Western New York. The participants must be administrative staff and employed with the agency for at least 3 years. The goal is to recruit six-eight participants for one on one interviews.

Voluntary Participation:
The consent form allows for participants to understand the research and decide on participation. Participation is completely voluntary and a participant may choose to withdraw at any time. Notification of withdraw is preferred however not needed. There will be no compensation for participation.

Duration:
The interviews will last no longer than 60 minutes.

Process:
One on one interviews will be conducted that will last no longer than 60 minutes. The participant will have the decision to have a face to face interview or a phone interview. Participants can opt out of answering a question if they prefer. The interviews will be recorded for responses to be transcribed.

Interview Questions:
Question I: Do you have any knowledge of opioid overdose?

Question 2: What are your perceptions of naloxone? (educate on naloxone if needed)

Question 3: What are your thoughts on whether naloxone can reduce overdose deaths if kits are provided to members of the community?

Sub-question 1:Should it be distributed to just anyone?

Sub-question 2: What type of training should be provided?

Question 4: Do you believe inmates would benefit from a naloxone training program?

Sub-question I:What are your perceptions on whether inmates enjoy trainings within the jail setting?

Sub-question 2: Are there any training barriers that occur within the jail with current programs?

Question 5: Do you think naloxone distribution programs should be implemented in a jail setting?

Question 6: What potential barriers do you see to implementing this program in a jail setting among inmates?

Question 7: What potential barriers do you see to implementing this program in the jail setting among jail personnel?

Question 8: Do you have any other thoughts you'd like to share that would be pertinent to the research?

(Fact sheet is provided on a take home naloxone program- Appendix D)

Risks, Benefits, and Sharing the Results:
There are limited risks associated with participating in this study. An example of a potential risk is that our might feel un able to disclose specific processes involved with employment. Your safety and well-being are not at risk by participating in this sstudy.

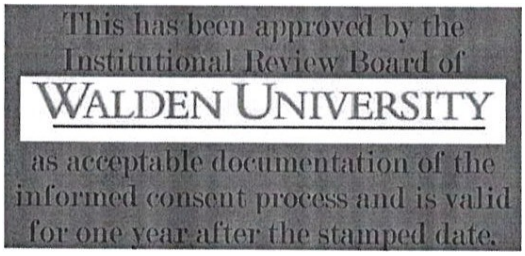
All information provided through recruitment and during the interview will not be shared with anyone other than the researcher. You will be identified with a participant number not associated with your name. I will provide a I to 2-page summary of the research results to you after I complete the data analysis. I will later share the information with the public. The information collected from the study could influence whether jails are a potential community distribution site for naloxone.

Confidentiality:
All information provided will be kept confidential and deidentified using numerical coding, participants will be identified as participant I, 2, 3, etc. instead of by name. All information will be stored in a password protected file on my personal computer system which is secured. I will store this information for at least 5 years following publication of the study. This agrees with Walden University requirements.

Contact Information:
Please feel free to contact me at any time. You may ask any questions you have now. Or if you have questions later, you may contact me via email at Jaclyn.woollett@waldenu.edu or by phone at 607-3824076. If you want to talk privately about your rights as a participant, you can call the Research Participant Advocate at my university at 612-312-1210. Walden University's approval number for this study is **02-28-17-0054244** and it expires on **February 27th, 2018.**

Statement of Consent: If you've read the informed consent form and are willing to participate please reply by email with the words 'I Consent'.

If you would like a copy of this consent form, please save or print a copy for your records.



Appendix C: Interview Guide

The purpose of this interview is to understand and explore the perceptions of jail administrators regarding take home naloxone kit distribution in rural jails. The questions allow for open ended dialect between us to share perceptions on take home naloxone programs and the feasibility to implement them in a jail setting. If you do not understand what the program entails a fact sheet is provided for you and we can discuss any questions you may have.

The questions will be asked in the order that was presented to you beforehand, I've also provided a copy for you to view today. If you do not feel comfortable with any question, please feel free to excuse yourself from those you don't want to answer. Please answer the questions openly and honestly.

The interview will be recorded to ease transcribing during data analysis.

The interview will last no longer than 60 minutes.

As a reminder, your safety and well-being are not at risk by participating in this study. All information provided through recruitment and during the interview will not be shared with anyone other than myself. You will be identified with a participant number not associated with your name. All information will be stored in a password protected file on my personal computer system which is secured. I will store this information for at least 5 years following publication of the study. This agrees with Walden University requirements. I will provide a 1 to 2-page summary of the research results to you after I complete the data analysis. I will later share the information with the public via a published journal article.

My contact information is provided for you if you need to contact me at any time, as well as the contact information for Walden University's Center for Research Quality.

Since you've already established informed consent we do not need to address consent again.

Do you have any questions before we begin? I will now turn on the recorder and begin.

Question 1: Do you have any knowledge of opioid overdose?

Question 2: What are your perceptions of naloxone? (educate on naloxone if needed)

Question 3: What are your thoughts on whether naloxone can reduce overdose deaths if kits are provided to members of the community?

> Sub-question 1: Should it be distributed to just anyone?
> Sub-question 2: What type of training should be provided?

Question 4: Do you believe inmates would benefit from a naloxone training program?

> Sub-question 1: What are your perceptions on whether inmates enjoy trainings within the jail setting?
>
> Sub-question 2: Are there any training barriers that occur within the jail with current programs?

Question 5: Do you think naloxone distribution programs should be implemented in a jail setting?

Question 6: What potential barriers do you see to implementing this program in a jail setting among inmates?

Question 7: What potential barriers do you see to implementing this program in the jail setting among jail personnel?

Question 8: Do you have any other thoughts you'd like to share that would be pertinent to the research?

Thank you for your time, I greatly appreciate your participation. I will be in contact over the next couple of months by email to provide you the research summary. Please don't hesitate to contact me if needed and I thank you again.

Appendix D: Fact Sheet

What is Naloxone?
Naloxone is a prescription medicine that is used to reverse an opioid overdose. Opioids include heroin and prescription pain medications such as morphine, hydrocodone, and oxycodone.
Naloxone is safe and effective; medical professionals have used it for decades.
Naloxone also goes by the brand names of “Narcan” and “Evzio”.

How Does Naloxone Help?
Naloxone is an antidote to opioid drugs. Opioids can slow or stop a person's breathing, which can lead to death. Naloxone helps the person wake up and continue breathing. An overdose death may happen hours after taking drugs. If a bystander acts when first noticing a person's breathing has slowed, or when the person will not wake up it is time to call 911 and start rescue breathing (if needed) and administer naloxone.

How Does a Person Administer Naloxone?
A bystander can safely and legally spray naloxone into the nose or inject it into a muscle. The “Good Samaritan” component of the “Opioid Antidote and Overdose Prevention Act” provides legal protections, both civil and criminal, to the overdose victim and the person who seeks medical assistance, including the administration of naloxone, for the victim of an opioid overdose.

Into the Nose (intranasal spray):
Naloxone for nasal use is given with the application of an atomizer that is placed onto a syringe then placed into each nostril. Intranasal naloxone has not been approved by the FDA (i.e., it is an "off-label" delivery method), but it can be legally prescribed by a physician or approved pharmacist. First responders often give naloxone intra-nasally.

Into the Muscle (intramuscular injection):
Naloxone also can be injected into the upper arm muscle (the deltoid) or the outer thigh. In an emergency, it is safe to inject through clothing.

How Long Does Naloxone Take to Work?
Naloxone acts within 2-5 minutes. If the person doesn’t wake up after a 5-minute period, bystanders should dispense a second dose. Rescue breathing should be done while you wait for the naloxone to take effect. Naloxone typically wears off within 30-90 minutes following administration.

What are the Next Steps Following Administration of Naloxone?
Call 9-1-1 and stay with the individual. If you are in a position to help the overdose victim get into treatment for opioid addiction, learn about the available resources and encourage his/her treatment participation.
Source: http://www.nj.gov/humanservices/dmhas/resources/Naloxone_Fact_Sheet.pdf