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Lived Experiences of Police Officers and Their Roles During Opioid Overdose

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Abstract

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MA, Walden University, 2016

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Dissertation Submitted in Partial Fulfillment

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Abstract

Researchers have conducted multiple studies regarding opioid users, opioid addicts, relatives of addicts, and health professional responses. The opioid crisis has been a focus for scholars following the first wave of prescription in 1991 (CDC, 2016). However, there is limited research that examines the lived experiences of law enforcement officers and their roles during an opioid overdose. As the opioid crisis has continued to negatively affect individuals, families, communities, cities, and countries, federal, state, and local policymakers have searched for ways to combat the opioid crisis. For many law enforcement agencies, policymakers have enacted policy that mandates patrol officers carry and administer Narcan/naloxone. This qualitative phenomenological study examined the lived experiences of police officers who are mandated to carry and employ Narcan/naloxone during a perceived opioid overdose. To gain a better understanding of how law enforcement officers perceive the requirement that seemingly changes their role from law enforcement to an emergency medical technician (EMT). The research design for this study was Colaizzi's descriptive phenomenological method with thematic-based analysis. While each participant expressed their own experiences individually, four major themes (duty to serve, saving life, job hazard, and frustration) emerged. The findings from this study can help law enforcement officials and policymakers further understand their officers' perceptions of the harm reduction process related to the opioid crisis. Additionally, these findings could lead to positive social change by making the law enforcement officers and community members' stakeholders in developing positive relationships surrounding response to opioid incidents.

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Dedication

To my children, Natalia and Sean William. I know you are too young to understand what this milestone means, but I trust that in time you will see achieving the impossible is only a matter of time. I love you both.

Acknowledgments

I wish to thank the many people who have had an impact on my life throughout this journey. First, I would like to thank my wife, Inga, for always keeping things running and belief in me. I honestly couldn't have done this without you. We made it, Babe! To my church sister and friend Verlindsey Stewart, Ed.D, for your encouragement, it kept me going. To my brother, my mentor, my friend Dr. Boderick Bennett, thanks for sparking the fire and tending the flames. I am forever grateful and would like to thank my dissertation chair, Dr. Tina Jaeckle, without your continuous support, tough love, and motivation I wouldn't have made it. To my committee team leader, Dr. Barbara Benoliel, thank you for all your kind words, phone calls, tough love, and encouragement. Most importantly, I give thanks to God; through Him, I can do all things.

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Chapter 1: Introduction to the Study

In America, lethal drug overdoses claimed the lives of 52,404 people in 2015 (American Society of Addiction Medicine, 2016; NIDA, 2017; Rudd et al., 2016). 20,101 were attributed to prescription pain relievers, and 12,990 were related to heroin (American Society of Addiction Medicine, 2016; NIDA, 2017; Rudd et al., 2016). In 2016, the number of lethal drug overdoses grew to 63,632 in one year. More specifically, opioids were found to be part of 42,249 of the overdose deaths, which is a significant increase from 2015 (American Society of Addiction Medicine, 2016; NIDA, 2017; Rudd et al., 2016). Scholars note the escalation can be attributed to the increase in synthetic opioid overdoses, which doubled between 2015 and 2016. A 2018 report showed 72,306 overdose deaths in 2017 (National Emerging Threats Initiative, 2018). These deaths show an increase of 21% from 2016 data. Of the 72,306 fatal overdoses, nearly 68% involved opioids (National Emerging Threats Initiative, 2018).

Between 2014 and 2018, in response to the growing concern of opioids, Alaska, Arizona, Florida, Maryland, Massachusetts, Pennsylvania, South Carolina, and Virginia have all declared a state of emergency in response to the epidemic (Rutkow & Vernick, 2017). In Alabama, the number of overdose deaths including opioids climbed 82% from 2006 to 2014 (Adams et al., 2016; Nelson et al., 2015; NIDA, 2017; Rudd et al., 2016; Young, 2016). In Jefferson County, Alabama, there were 436 accidental deaths in 2016; drug-related deaths accounted for nearly 55%, which is the most significant reported number since 2000 (Jefferson County Coroner-Medical Examiner's Office, 2017).

Data, dating back from 1999 to present, has shown a steady and substantial increase in the use of opioids and opioid-related deaths. With the constant rise in opioid use and the wide-reaching distress, experts and other involved parties are exploring the different possible responses available. During a White House press briefing, on October 26, 2017, the President of the United States declared the opioid crisis a national public health emergency (Christie et al., 2017). Beyond the personal tragedy experienced by families and loved ones, the opioid crisis has had a significant impact on many state institutions, including hospitals, schools, prisons, and law enforcement. One initiative that has been both widespread and controversial is equipping law enforcement officers with the anti-opioid drug Narcan/naloxone (The White House, 2018; Christie et al., 2017). In September 2016, the US Attorney General issued a memorandum stating a public health crisis in the opioid epidemic. The memorandum called for the use of naloxone as prevention. Since then, numerous law enforcement agencies across the country have implemented Narcan/naloxone programs (The White House, 2018; Christie et al., 2017).

In response to the opioid crisis, Alabama state officials have tasked Jefferson County law enforcement with the intervention, which includes the use of Narcan (Naloxone; Alabama Department of Public Health, 2017; Birmingham Police, 2017; Jefferson County Sheriff, 2017). With this order, the various field officers in Jefferson County carry and are called upon to administer the opioid antidote Narcan when responding to individuals experiencing a possible opioid overdose (Alabama Department of Public Health, 2017; Birmingham Police, 2017; Jefferson County Sheriff, 2017).

Using law enforcement officers as a force multiplier increases the number of trained personnel able to respond during a possible opioid overdose. Law enforcement officers must negotiate between their duties to enforce the law on illegal drug trafficking and illicit narcotics use. Now, law enforcement officers take on their new role as an EMT, which has implications for their role according to social identity theory (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000). The law enforcement officer social identity means they see things from the group perspective commonly shared by other law enforcement officer (Ashforth, 2016; White et al., 2016; Stets & Burke, 2000). The responsibility of administering Narcan/naloxone contrasts with their identity, due to this particular role switch (law enforcement officer to EMT), which puts pressure on the individual to control the surrounding environment outside of their usual social identity and skills (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000). The expected switch from law enforcement officer to EMT makes the law enforcement officer vulnerable to attack from overdose victims becoming combative. The administering law enforcement officers must secure their weapon when dispensing the Narcan. If the victim becomes aggressive during this time, the law enforcement officer is defenseless, and there is potential his/her weapon can be taken and used against them by the overdosed combatant.

Although there is a healthy amount of research into training medical-first responders witnessing an opioid overdose, I found no formal studies on law enforcement officers negotiating their responsibilities of guardian/protector and medical responder during opioid incidents as it relates to social identity. I conducted a qualitative,

phenomenological study to document the lived experiences law enforcement officers in Jefferson County, Alabama, face when responding to potential opioid incidents.

Background

Smith (2016) and Carter (2013) provided information on how identity shift can change behavior dependent on role or group shifting. Identity can define a person, and a significant life change can impact the identity of most people. Becoming part of a group may expose an individual to certain conforming behaviors, beliefs, and expectations with social support (Biddle, 1986). Police officers join a police organization with a commitment to integrate socially into the department for the best functional working environment. Social membership in a police organization is essential for an individual's self-esteem, and to stand in solidarity with their peer group is critical against any outside opposition that may harm a member of the group (Chattopadhyay & George, 2001). According to Chattopadhyay and George (2001), lower self-esteem and negative social identity may be associated with work-status dissimilarities between peer groups. Individuals may feel a loss of status and personal satisfaction when a critical role has changed (Biddle, 1986). For decades hospitals, medical service providers, and paramedics have been equipped and charged with administering anti opioid medications during apparent drug overdose incidents. With the shift in approach to drug use from prohibition and abstinence to harm reduction and social work philosophy, legislators across the nation have made local law enforcement bear the burden of a medical responder.

As we have seen in the news, the consequences are tragic, nationally, in 2013, drug overdoses claimed more lives than traffic accidents (Adams et al., 2016; Nelson et al., 2015). Since 2000, the rate of deaths from drug overdoses has increased 137%, including a 200% increase in the rate of overdose death involving opioids (Adams et al., 2016; Nelson et al., 2015). According to Hedegaard et al. (2017), the age-adjusted rate of drug overdose deaths in the United States has tripled from 6.1 per 100,000 standard population in 1999 to 19.8 in 2016. The Centers for Disease Control and Prevention (CDC) released provisional data for 2016, which reported 64,070 lethal drug overdoses in the United States from January 2016 to December 2016 (CDC, 2017). This data represents a 22% increase from the 52, 898 lethal drug overdoses reported in 2015 (CDC, 2017). The perceived answer to these mounting issues is to equip law enforcement with naloxone (Narcan).

In a summary report from The National Institute on Drug Abuse (2019), Alabama's drug overdose deaths increased 17.6% when comparing year totals from 2016 (13.1 per 100,000) to 2018 (15.4 per 100,000; National Institute on Drug Abuse, 2019). Although the majority of drug overdose deaths in 2017 involved opioids, opioid overdose deaths are not included for the state, with 107.2 opioid prescriptions written for every 100 persons (National Institute on Drug Abuse, 2019). No longer able to ignore these numbers, the US Department of Health and Human Services (HHS) initiated a survey of pain management clinics through a patient satisfaction survey (Adams et al., 2016; Nelson et al., 2015). The outcomes of this two year survey led the CDC to release new guidelines for prescribing opioids nationwide and continues to promote education on

chronic pain management and the risks of opioid use (Adams et al., 2016; Nelson et al., 2015). With all of this, the opioid crisis continues to plague the country, and there has been a steady increase in opioid-related deaths in the United States.

In April 2019, the Jefferson County Coroner/Medical Examiner's Office (JCCMEO), published a report noting there was a 15.2% decrease in the total drug deaths from 2017 (269 drug deaths) to 2018 (228 drug deaths; JCCMEO, 2019). Additionally, there was a 14.4% decrease in opioid deaths from 2017 (201 opioid deaths) to 2018 (68 opioid deaths; JCCMEO, 2019). However, opioid deaths are still the leading factor in drug overdose deaths in Jefferson County, Alabama (JCCMEO, 2019).

Statistics alone do not portray the devastating impact of the opioid epidemic on communities like Jefferson County, Alabama. Reading the firsthand experiences of law enforcement officers who deal with the victims, the grieving family members, and the addicts themselves will develop the whole picture of this epidemic. The opioid epidemic has continued to evolve from its beginning of nonmedical use of prescription medications to heroin to the synthetically produced products such as fentanyl. Even the sources of the drugs have evolved to include doctors in prescription pill-mills, neighbors, friends, foreign laboratories on the dark web, to teens who steal medications from the medicine cabinet. There is no discrimination in this fight; all backgrounds, education levels, and socioeconomic status' have and will continue to be affected.

In 2019, the Drug Enforcement Administration (DEA) listed prescription opioids, heroin, and fentanyl as the principal drug-related threats to the United States. Although prescription opioids, heroin, and fentanyl may fall under a different schedule, they are

similar in composition (DEA, 2018; Rudd et al., 2016; Young, 2016). One could argue that drugs such as heroin and fentanyl are more illicit than prescription opioids such as oxycodone, hydrocodone, methadone, etc. However, the aftermath of abuse and overdose drives the need for naloxone. Naloxone is an opiate antidote that works to block the opioid receptors and effectively reverses an overdose for a limited period (CDC, 2018).

As of November 1, 2013, all states and jurisdictions of the United States passed legislation that allowed paramedics to carry and administer naloxone. Most notably, in many jurisdictions, paramedics have been carrying and administering naloxone for decades. However, as the number of overdose cases continued to skyrocket, the need for expanded use of naloxone has been debated as an effective answer. In more rural areas of the country, law enforcement officers typically have a faster response time than their paramedical counterparts. With this in mind, this study seeks to examine the lived experiences of law enforcement officers in Jefferson County, Alabama, who are mandated to carry and administer Narcan (naloxone). As the opioid epidemic continues to plague the United States, police officials have received public backlash for their hesitation to equip their officers with naloxone. Currently, there has not been much research that has examined how law enforcement officers feel about this additional responsibility.

The relevance of this study is two-fold; one, we are currently living through an opioid epidemic in which naloxone has become the "life-saving drug." Secondly, not all law enforcement agencies have embraced the legislation authorizing police to carry naloxone. Additionally, many agencies that have enacted the policy may be experiencing

difficulty in receiving and maintaining adequate funding opportunities to continue this policy.

This study provided a firsthand account of the insights and perceptions of various law enforcement officers, who are required by their current policies to carry and administer Narcan (naloxone). This study aimed to identify how law enforcement officers and their day-to-day interactions were affected by the naloxone use policies. Conducting this study using the perceptions and insights of the frontline officers concerned offered a new analysis of this relevant topic. This study's results can provide policymakers and police officials a greater understanding of the challenges and issues their frontline officers deal with day to day enacting the naloxone policies.

Problem Statement

The devastating effects of the opioid epidemic have resulted in several policy changes designed to address the growing number of related opioid overdoses better. No matter the right intentions, any of these changes have a ripple effect on the people subject to these changes. Identity is the characteristic of a person, wherein identification with a specific group of people can give strength and well-being to an individual (Belmi et al., 2015). One of these policy changes directly affects the day-to-day roles and responsibilities of many law enforcement officers. The problem is that the patrol officers who are mandated to carry and employ Narcan/naloxone are now responding in a capacity more suited to that of an EMT then in law enforcement.

According to the North Carolina Harm Reduction Coalition (NCHRC), as of November 2018, 2,482 law enforcement agencies in the United States have enacted

naloxone policies (NCHRC, 2017). Most notably, this number only includes law enforcement agencies registered with the NCHRC. There is no reason to believe this number will not continue to increase as opioid use and the prevalence of overdoses continue to rise. With this rise is the possibility of a loss of identity. Loss of identity can often mean a loss of status and family with feelings of rejection and grief (Burns, 2015).

As a medical procedure, administering naloxone is viewed by many as requiring those authorized to carry the product to receive training before equipment. Carter (2013) sought to understand how identity and behavior are influenced by environmental factors. Results indicated that moral identity influenced individual behavior when alone or in a group. Research is needed to examine the effects of the identity verification process in new social context situations (Carter, 2013). Since the inception of naloxone, paramedics have carried the product as part of their daily equipment. Some argue the naloxone policies that allow law enforcement officers to administer Narcan/naloxone represent a shift in their regular duties and responsibilities. For clarity, in recent years, naloxone has evolved to the current option, a nasal spray "Narcan," which is a less cumbersome option then the injectable naloxone. Nevertheless, with administering any medication, there are potential complications that may arise with using Narcan (naloxone). To the public and some policymakers and police officials, these policies may seem necessary and even overdue. However, this research seeks to provide insight to all those involved with the naloxone policy, specifically the perceptions of law enforcement officers who are mandated to carry and administer naloxone.

In early 2015, Alabama state representative Allen Treadaway (former assistant chief of the Birmingham Police Department) proposed a bill to address the growing number of overdose deaths in the state (Alabama Legislative Services Agency, 2019). The bill would allow police officers, family members, and addicts to carry Narcan (naloxone) and legally administer it to a user who has overdosed (Alabama Legislative Services Agency, 2019). Paramedics in Birmingham, Alabama have been equipped with Narcan/naloxone since the early 2000s; however, in rural parts of Jefferson County, law enforcement officers were able to respond quicker then paramedics and were often first on the scene. At this time, Alabama joined more than 30 US states to pass laws to increase access to naloxone. The proposed bill included a Good Samaritan clause designed to protect those who call the authorities in overdose cases. These people who are violating misdemeanor drug or underage drinking laws will not be arrested if they report an overdose and remain at the scene to help the victim (Alabama Legislative Services Agency, 2019).

Purpose of the Study

The purpose of the research was to gain an understanding of the law enforcement officer's perceptions of the mandated Narcan/naloxone policy as they negotiate the roles and responsibilities of both law enforcement officers and EMTs during a perceived opioid overdose. This study presented information regarding the lived experiences Jefferson County law enforcement officers face during an opioid overdose and their perspectives.

Research Question

The following research question was used to address the identified gap in the literature and to address the stated problem:

Research Question 1 (Qualitative): How do law enforcement officers, who are mandated by policy to carry and administer naloxone, perceive this policy change as it relates to their day-to-day work identity?

Theoretical/Conceptual Framework

The conceptual framework for this study is social identity theory which deals with intergroup relations and how people see themselves as a member of a group (i.e., law enforcement community) as compared to people not in the group and the consequences of this categorization (Ashforth, 2016; Hogg et al., 2002; Stets & Burke, 2000; Tajfel & Turner, 1979). Henri Tajfel and John Turner developed a social identity theory in 1979, which includes components of self-categorization, social identity, and social comparison. Tajfel and Turner (1979) proposed that the groups (e.g., police, EMT, fire dept., etc.) which people belong to be a valuable source of pride and self-esteem.

Groups give us a sense of social identity and belonging. To increase our self-image, we as individuals enhance the status of the group to which they belong. We as individuals also increase our self-image by discriminating and holding prejudiced views against the group(s) to which we do not belong, the out-group. Through social categorization, we as individuals divide the world into "us" and "them," in-group being "us" and the out-group being "them" (Tajfel & Turner, 1979). Using this theory, I examined the lived experiences of law enforcement officers in Jefferson County Alabama

who are asked to carry Narcan/naloxone as part of their patrol responsibilities, discussing their understanding of their identity within their organization and their role in response to possible opioid overdose (Birmingham Police, 2017; Jefferson County Sheriff, 2017).

In contrast, an individual's role means they act in a way to fulfill the duties and expectations assigned to the role, serving as an EMT although the individual is a law enforcement officer (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000; Tajfel & Turner, 1979). The distinction between these two perspectives asserts social identity is a uniform perception and actions among in-group members (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000; Tajfel & Turner, 1979). The role of the officer resides in differences in perception and actions of the individual acting in a specific role (i.e., law enforcement officer/EMT) as it relates to counter-roles which require negotiation (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000; Tajfel & Turner, 1979). This perception is particularly applicable in the discussion on equipping law enforcement officers with naloxone. This study aimed to develop a better understanding of law enforcement officers' perceptions of the use of Narcan (naloxone) in the field, as it is essential to differentiate between general law enforcement officers' views on naloxone itself, and their view of themselves as law enforcement officers.

Nature of the Study

This phenomenological study focused on the negotiation between roles law enforcement officers face when responding to possible opioid overdose. This study's nature was qualitative with an interpretive phenomenological perspective, which sought to understand the meaning of experiences of a person or a group of individuals in context

to their daily work practices and socialization (Lopez & Willis, 2004; Moustakas, 1994; Van Manen, 2017). Phenomenology is a scientific method of inquiry understood through the investigation of individuals' personal experiences (Lopez & Willis, 2004; Moustakas, 1994; Van Manen, 2017). Employing social identity theory as it relates to the law enforcement officer who categorize, identify, and compare themselves as part of the group (Ashforth, 2016). However, these officers, as mentioned earlier, must negotiate between roles of law enforcement and EMT, from an interpretive, phenomenological perspective (Ashforth, 2016; Creswell, 2014; Hatch, 2002; White et al., 2002; Moustakas, 1994; Stets & Burke, 2000; Tajfel & Turner, 1979; Van Manen, 2017). Human science focuses on multiple aspects of phenomena including studying, defining, describing phenomena, and collecting associated information. Any phenomena can be the starting point for a phenomenological study (Hatch, 2002; Moustakas, 1994; Tajfel & Turner, 1979; Van Manen, 2017).

Definitions

Aftercare: Subsequent or follow up care (Adams et al., 2016).

Analog: According to the Drug Enforcement Administration, "A controlled substance analog is a substance which is intended for human consumption and is structurally or pharmacologically substantially similar to or is represented as being similar to a Schedule I or Schedule II substance and is not an approved medication in the United States" (DEA, n.d.).

Bitcoin: Bitcoin is a form of digital currency that allows the buyer to remain anonymous. Once bitcoin is acquired, it is stored in a digital wallet, housed in the cloud,

or on the owner's computer (Yellin, Aratari, & Paglieryet, n.d.). Bitcoin transactions are logged; however, the identity of the buyer and sellers are not released. Instead, the users are tracked solely by their digital wallet number. For this reason, bitcoin has become the primary currency for illicit transactions in the darknet marketplace.

Canteen Culture: Sub-cultural police talk of the world when officers are away from management (Ainsworth, 2002).

Civilian: An individual who is not a member of a particular group or profession like a police force (Ainsworth, 2002).

Collective Identity: Group membership, commitment, and closeness to other group members; sharing behavioral characteristics (Dimitrova et al., 2014).

Dark Web: Deep and dark web are used interchangeably; however, this is not accurate. Thompson (2015) defined the dark web as "Accessible, albeit anonymously hosted, websites that exist within the Deep Web." To access the dark web, the user must utilize software designed to mask the user's IP address. The onion browser, aka TOR, is a commonly used software (Thompson, 2015).

Darknet Marketplace: Anonymous marketplace which facilitates the sale of potentially illicit materials (Thompson, 2015). The use of the dark web protects the identity of the seller and consumer. Silk Road is an example of a well-known illicit, dark web marketplace.

Deep Web: The deep web is the section of the World Wide Web, which is not indexed by conventional search engines (Thompson, 2015).

Disengagement: The process of withdrawal or separation from a particular group (Tewksbury & Copenhaver, 2016).

Diaspora: A social entity of individuals who identify with each other even when separated (Degli Esposti, 2017).

Doctor Shopping: Doctor shopping refers to patients who see multiple doctors attempting to receive several prescriptions within a short time (Melville 2013). Specifically, an individual is considered to be "doctor shopping" when he/she sees five or more prescribers and visits five or more pharmacies in 90 days. This allows patients to fill multiple prescriptions at once, often for the same medications, unbeknownst to the providers. Prescription drug monitoring programs have helped physicians and pharmacists better monitor the actions of patients and therefore curtail the prevalence of doctor shopping.

Drug Diversion: Drug diversion occurs when a legally prescribed control substance is transferred from the individual for whom the prescription is written to another individual, for an illicit purpose, such as use or sale (DEA, n.d.). Drug diversion was prevalent during the "pill-mill era." Notably, the DEA employs countless "diversion investigators," a position designed solely to combat drug diversion.

Harm Reduction: An umbrella term for interventions aiming to reduce the problematic effects of behaviors (Marlatt, 1998).

Identity: The characteristic put forth by a person, wherein identification with a specific group of people can give strength and well-being to an individual (Belmi et al., 2015).

Identity Transition: A life change that forces adaptation to different life situations, like a change in employment status (Belmi et al., 2015).

Life Course Perspective: Examination of life events using different variables (Bennett et al., 2016).

Naloxone: Naloxone is an FDA approved medication used to prevent and reverse the effects of the opioid. Naloxone is typically administered when an individual is undergoing an opioid overdose. The medication blocks opioid receptors and can reverse the damage of the overdose (SAMHSA, 2016).

Narcan: Narcan is a form of naloxone that is administered through the nasal cavity (SAMHSA, 2016).

Over-identification: Extreme internalization; loss of identity within an organization (Galvin et al., 2015).

Oxy Express: The nickname of the Florida highway system due to the prevalence of overdoses that occur while individuals were traveling to and from Florida with the sole purpose of acquiring OxyContin and other prescription drugs (Department of Justice, AG Remarks, 2011). Florida's lax prescription laws and the absence of a PDMP (until 2011) appealed to non-Florida residents in the surrounding area, where regulations are more stringent.

Pain Management Clinic: Health care clinics designed to detect, diagnose, and manage chronic pain (SAMHSA, 2016).

PDMP: A Prescription Drug Monitoring Program is a statewide database that collects data about the dispensing of certain substances. PDMP's are a resource used to combat prescription drug diversion and abuse (SAMHSA, 2016).

Peritraumatic dissociation: A coping mechanism used to protect oneself in a traumatic situation (McCanlies et al., 2017).

Pill Mill: The term "pill mill" is typically used to describe a health clinic, doctor, or pharmacy that irresponsibly and recklessly prescribes or dispenses controlled substances (Rigg et al., 2010).

Pill Mill Legislation: In 2011, the Florida legislators passed the Anti-Pill Mill Bill, which put measures to address the pill mill issues in the state (Department of Justice, AG Remarks, 2011).

Pluralistic ignorance: An individual's behavioral change following the perception of what other group members support (Karaffa & Koch, 2016).

Psychological well-being: mental well-being (Asebedo & Seay, 2014).

Relational Identification: Connections with members belonging to one's workgroup (Zhang et al., 2014).

Resiliency: The ability to recover quickly (Adams et al., 2016).

Role: in sociology, the behavior expected of an individual who occupies a given social position or status. A role is a general pattern of behavior that is socially recognized, providing a means of identifying and placing an individual in a society (Belmi et al., 2015).

Schedule of Controlled Substances: Drugs, substances, and certain chemicals used to make drugs are classified into five distinct categories or schedules depending upon the drug's acceptable medical use and the drug's abuse or dependency potential (DEA, n.d.). Schedule I drugs have no approved medical use and are deemed "extremely addictive", whereas Schedule V drugs represent the lowest potential for abuse (DEA, n.d.).

Self-categorization: To perceive collections of people and define oneself as part of a particular social group (Dimitrova et al., 2014).

Self-stigma: An individual's internal fear of rejection (Dimitrova et al., 2014).

Social comparison: Determination of social and personal self-worth based on the perception of being like others (Lancee & Radl, 2012).

Social Connectedness: Participation in social interactions with family, friends, community, and volunteering (Lancee & Radl, 2012).

TOR: Software that allows access to the dark web (Thompson, 2015).

Transition: The process of changing from one condition to another (Transition, n.d.).

Work Centrality: The extent that an individual identifies with a work role (Armstrong-Stasson et al., 2012).

Assumptions

The following assumptions were made about the participants of this research study: (a) the participants cooperated fully throughout the study, (b) if at any time the participants no longer wished to participate in the interview, they would have informed me, (c) all participants were current/active law enforcement offices in Jefferson County,

Alabama, (d) all participants had firsthand experience with an opioid response, and (e) all participants had firsthand knowledge and experience with Narcan/naloxone.

Scope and Delimitations

The purpose of this study was not to measure the effectiveness of Narcan or Naloxone, nor to represent the experiences of all law enforcement officers who are required to carry antiopioid medications as part of their issued equipment. Only the experiences of the participants were represented. This study does not include individuals outside of Jefferson County, Alabama, who participate in similar intervention strategies or individuals who did not respond to the request for participants.

Limitations

The snowball method relied on people's willingness to forward their colleagues the invitation to participate in the study. Also, some law enforcement personnel were not willing take part in the study. Another limitation was the number of law enforcement officers compared to their level of experience on the force and experience with Narcan/naloxone. Additionally, participants were not randomly selected due to the critical need to utilize law enforcement officers with experience using Narcan/naloxone as well as officers who have responded to an opioid overdose.

Yin (2017) defined a six-step process that may be utilized when conducting a qualitative case study. The first step is defined as the "planning stage." During this time, I conducted a literature review and identified the notable gaps. I utilized research questions that served to address the topics (Darke et al., 1998). In this instance, I was able to

examine the opioid epidemic as a whole. I examined the ever-changing epidemic, the current climate at the time, and the role of law enforcement officers.

Although there was current research on the topic, there was ample detail to address changing policies and additional applicable statistics. The growing number of statistics and the changing policies demonstrate how these changes can affect the community. However, the research had not examined the thoughts and opinions of the law enforcement officers in Jefferson County, Alabama. This literature review was conducted to fill the gap in the research.

Significance

Law enforcement officers' primary tasks are crime prevention, emergency response, and providing support services (Birmingham Police, 2017; Criminal Justice USA, 2018; Jefferson County Sheriff, 2017). The upward trend in opioid overdose deaths has lead Alabama state officials to include the antiopioid drug Narcan (Naloxone) as part of Jefferson County law enforcement officers' routine patrol equipment (Alabama Department of Public Health, 2017; Birmingham Police, 2017; Jefferson County Sheriff, 2017). With this additional responsibility, law enforcement officers have to negotiate its role between law enforcement officer and EMT providers. The proposed study seeks to provide pertinent information regarding the lived experiences law enforcement officers in Jefferson County, Alabama, tasked with responding to possible opioid overdose, face as they negotiate their dual roles.

This executive decision to require officers to administer Narcan/naloxone significantly alters the prototypical duties and responsibilities of law enforcement

officers. However, at the time, little research had been conducted on the perceptions of law enforcement officers concerning the new expectation and alteration in their duties and responsibilities. This study aimed to bridge the gap in the research and develop a better understanding of how law enforcement officers feel about this added responsibility and the new role they are expected to fill in the war on drugs. In light of the constant coverage of the opioid crisis, the topic was both timely and relevant. Additionally, this provides those officers an outlet to voice their opinions on this controversial topic.

Summary

This research aimed to identify and further examine the lived experiences of law enforcement officers regarding policies that require the officer to carry and administer naloxone. Additionally, this research was designed to fill the gap in research which failed to address the ever-evolving role of law enforcement officers in the continuing battle against opioids. This research can provide policymakers, politicians, law enforcement officials, and other consumers' overdue data which can aid high-level discussions regarding the role of law enforcement in the opioid epidemic. Ideally, this research will allow law enforcement officers to provide accurate and meaningful data that can help guide future policy decisions.

In 1995, Purdue Pharma issued the "Extended-release" version of OxyContin. Twelve years later, in 2007, the federal government criminally prosecuted Purdue Pharma for misleading consumers on the addition-potential of OxyContin, among other charges. In 2011, Florida began cracking down on pill mills through legislation and the inception of the PDMP. Through all of this, the law enforcement community was charged

with combatting the opioid epidemic from a police perspective (Ainsworth, 2002; Lawson, 2014). The current approach has shifted law enforcement expectations, which potentially creates an "us versus them" mentality for police officers in the media and community (Ainsworth, 2002; Lawson, 2014). There are zero arguments that there are various efforts designed to combat the opioid epidemic; however, through the desperation associated with this growing epidemic, law enforcement officers have seen a shift in their responsibilities. Officers who were once instructed to crack down on drug use are now expected to carry and administer an opioid reversing medication. Additionally, Good Samaritan legislation generally prevents officers from charging drug users using illicit paraphernalia identified when responding to an overdose episode (Davis, 2017). This research aimed to address the unheard voice of law enforcement officers on the frontline affected by these policies regarding law enforcement's role in combating the opioid epidemic.

Chapter 2: Literature Review

This literature review sought to develop a better picture of the daily lives of law enforcement officers who are dealing with the current opioid epidemic. The purpose of the research was to examine the lived experiences of law enforcement officers in Jefferson County. They are tasked to negotiate the roles and responsibilities of both law enforcement officer and EMT as they are tasked to administer Narcan (Naloxone) during a possible opioid overdose. During a potentially hostile situation, EMT personnel are trained to wait for the police before entering the incident scene. When law enforcement officer arrives on a possible opioid overdose scene, they are expected to react to the unfolding events without hesitation, which could require Narcan (Birmingham Police, 2017; Jefferson County Sheriff, 2017). During a response, the law enforcement officer on-scene is expected to switch from their natural state (social identity) as guardian/protector to their assigned role as a medical first responder, during this time they are vulnerable (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). This study looked to present information regarding the lived experiences Jefferson County law enforcement officer faces during an opioid overdose.

Literature Search Strategy

The goal of this literature review was to identify pertinent articles, journals, and dissertations related to an individuals' identity. In order to conduct a comprehensive review of the literature, numerous databases were used. The literature's initial search was limited to the previous five year period (2014 – 2019). The search was extended to beyond five years in order to develop more depth on the topic. This extension was due to

limitations in the number of resources available to support the research question. The selected articles were seminal, which establishes credibility and foundation for the study. The discovery of solid material included searching the local library and searching the following databases: ProQuest, EBSCO, JSTOR, National Criminal Justice Reference Service, and Sage Online. Additionally, Google Scholar and attending seminars on the growing opioid epidemic were used as sources. The initial search terms included *addiction, fentanyl, heroin, naloxone, Narcan, opioid,* and *prescription pill*. These terms were cross-referenced with a*ddiction, epidemic, law enforcement, morality,* and *overdose*. The studies and information that fit the criteria for the literature review were sorted based on the topic of the study. The articles selected were an amalgamation of various sources, all focused on individual identity, law enforcement officers, and the opioid epidemic. The relevant articles were categorized by topic and organized by date. Sorting by date allowed me to focus on the most recent reports.

This literature review included a variety of different studies, including quantitative, qualitative, and mixed methods. Additionally, due to the topic at hand, a significant amount of the research was published by government entities. The literature review is broken up into three sections. The first section discusses social identity theory, the second section looks at the opioid epidemic as a whole, and the transition from licit to illicit opioids. The third section presents the topic of naloxone.

Theoretical Foundation

Individuals strive to become unique to others, unique to a specific role, or exclusive to social identity (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets

& Burke, 2000). Based on this theory, social identity theory deals with intergroup relations and how people see themselves as a member of a group (i.e., law enforcement community) as compared to people not in the group and the consequences of this categorization (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000).

An individual's particular social identity means they are with a specific group (in-group), which means they view themselves as they see others who are also part of the in-group e.g. law enforcement community (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). Becoming part of a particular group leads to self-categorization and social comparison, both having different consequences (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000).

The consequence of self-categorization and social comparison establishes a heightened sense of in-group similarities as well as a heightened sense of differences from those viewed as out-group members (Ashforth, 2016 Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). The differentiation of in-group members from out-group members exceeds superficial constructs and effect all attitudes, beliefs, values, reactions and behavioral norms as well as style of speech (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). Another consequence of self-categorization and social comparison is the impact to the individuals' self-esteem as it relates to the in-group and whether they are judged positively or negatively (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000).

Self-categorization and social comparison are key to how the individual sees thEMTelves in structured society and only exists concerning contrasting categories (i.e., Law Enforcement Officers vs. Emergency Medical Technicians); each group having more or less power, prestige, or status (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). Social identity theory seeks to address the behaviors of individuals who categorize themselves as part of an in-group to experience positive emotions (Smith, 2016). This association answers the question of "who am I" and thus has a direct impact on the individuals' level of connectedness, empowerment, and sense of meaning (Ashforth, 2016; White et al., 2002; Smith, 2016; Stets & Burke, 2000).

Social identity theory was first introduced in 1979 and included components of self-categorization, social identification, and social comparison (Ashforth, 2016; Smith, 2016). The suggestion is individuals seek to enhance their self-esteem, self-pride, and a positive self-image by becoming a member of a specific group, which is seen as superior to other groups (Ashforth, 2016; Smith, 2016). This belief can affect the law enforcement officer’s view as it relates to non-police duties (out-groups) and leads to feelings of loss of importance when required to complete nonpolice assignments. From the perspective of the law enforcement officer, an individuals' social identity is not solely related to the parent group (law enforcement officers), but also the underlying in-groups such as their specific group location, department, shift, etc. (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). Additionally, members of the in-group view a situation from that group's perspective; for example, to serve and protect, enforce the law, etc. (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000).

Literature Review

The proposed study examined the lived experiences of law enforcement officers who are asked to carry Narcan as part of their patrol responsibilities. Discussing their understanding of their identity within their organization and their role in response to possible opioid overdose (Birmingham Police, 2017; Jefferson County Sheriff, 2017). In contrast, one's role means they act in a way to fulfill the duties and expectations assigned to the role, serving as an EMT provider although you are a law enforcement officer (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). The distinction in these two perspectives asserts social identity is a uniform perception and actions among in-group members (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000). An individual's role resides in differences in perception and actions of the individual acting in a specific role (i.e., Law Enforcement Officer/EMT provider) as it relates to counter-roles which require negotiation (Ashforth, 2016; Heaven et al., 2013; White et al., 2002; Stets & Burke, 2000).

Social Identification

Social identification (social identity) is the definition of oneself within a group affiliation; this can include a role-specific group such as a law enforcement officer (Ashforth, 2016; Smith, 2016). An individual can gain self-knowledge through organizational affiliation, i.e., law enforcement officer can identify with their organization/department (Ashforth, 2016; Smith, 2016). An unsatisfactory transition out of a role or workplace can occur with a perceived loss of organizational affiliation and confuse the individual's social identity (Ashforth, 2016; Smith, 2016). Operating in a

capacity outside of viewed roles can shift identity. SIT can show how identity is affected when law enforcement officer duties transition to those of EMT.

Identity

Brown (2015) noted an individuals' identity is connected to their past, present, and future projected self. An individual's total identity is made up of the self, social relations, and occupational combination and is tied to emotions (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). An individuals' positive-identity is associated with good self-esteem and strong resilience (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). An individual's identity can be determined based on their view of a situationally appropriate image of behavioral expectations (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). Brown (2015) suggests identity is made up of evolved meanings that the individual attaches to themselves through personal awareness of identity formation and social interaction. This personal identity can be created and maintained through activities that support that specific identity (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). An individual's identity can be composed of emotionally charged processes, and these emotionally charged identities can occur through the work identity of law enforcement officers, which leads to a sense of stability (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014).

Recruits to an organization are looking to identify. They are influenced by seasoned members to conform to their new social norms and develop a negative view of others i.e., out-group (Ainsworth, 2002: Brown, 2015). However, this identity can be lost immediately with a career change or role transition (Brown, 2015; Conroy & O'Leary-

Kelly, 2014; Lawson, 2014). Law enforcement officers' physical identity is readily observed when they are in uniform. When the law enforcement officer wears their badge, duty belt, and sidearm, their social identity is immediately associated with similar situations and group membership (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). Threats to an individual's group identity devalue one's group, due to negative stereotyping, which can affect work attitude and performance (Belimi et al., 2015).

Collective Identity

An essential part of individual identity is group membership, which depersonalizes an individual with collective identification to work together cohesively for group success (Zhang et al., 2015). Collective identity is self-perceived social membership and commitment with a symbolic group (Dimitrova et al., 2014; Miscenko & Day, 2015). This ideal includes an attachment, the group's importance to self-identification, behavioral involvement, and self-categorization as a member in a specific social group (Dimitrova et al., 2014; Miscenko & Day, 2015). Scholars note that collective identity and psychological wellbeing result in greater wellbeing in individuals with stronger collective identity consisting of the collection of categorical identities of family, religion, and ethnicity (Dimitrova et al., 2014). The collection of identities can enhance belongingness and meaningfulness, positively related to wellbeing; positive identity is psychologically beneficial to an individual's wellbeing (Dimitrova et al., 2014).

Work Identity

Work can also be considered a source of identity (Kira & Balkin, 2014; Miscenko & Day, 2015; Wille & De Fruyt, 2014). Work identity comes from organizational membership meanings and is defined as self-meaning for an individual regarding characteristics, social roles, or group membership (Kira & Balkin, 2014; Miscenko & Day, 2015; Wille & De Fruyt, 2014). When employees define and internalize themselves in terms of the organization, they identify with that organization (Kira & Balkin, 2014; Miscenko & Day, 2015; Wille & De Fruyt, 2014). Occupational identification is when an occupation is internalized within the self, and within occupational socialization, personality traits shape individuals over time (Kira & Balkin, 2014; Miscenko & Day, 2015; Wille & De Fruyt, 2014). With this in mind, Ashcraft (2013) noted, an occupation is tied to social identity. Occupations are unique social collective identities, and for some individuals, self may be defined by occupational work, which can also affect identity outside of the workplace (Ashcraft, 2013; Meister et al., 2014). Even a case of mistaken identity at work can negatively affect individuals. Meister et al. (2014) noted how important it is to the individual that their true identity, desired, and perceived image was recognized, not just their professional identity. Misidentification at work can influence relationships wellbeing, wellbeing, and be destructive to the workgroup (Ashcraft, 2013; Meister et al., 2014).

Work Groups

Most individuals prefer exclusive workgroups in an organization for identity fit, meaning, and function (Grant et al., 2014; Millward & Haslam, 2012). In law

enforcement, an exclusive workgroup could be Investigations, Internal Affairs, or SWAT. Job titles can also be necessary for an individuals' satisfactory work identity experience (Grant et al., 2014; Millward & Haslam, 2012). Self-reflective job titles are symbolic social and cultural identity badges, symbols of status, and they construct images that are presented to the world (Grant et al., 2014; Millward & Haslam, 2012). Employees who are involved in creating job titles are said to lead to a reduction in stress, reduced emotional exhaustion, and develop meaningful employee identity within an organization (Grant et al., 2014; Millward & Haslam, 2012). Identity is expressed and recognized by others, which reduces emotional exhaustion in a stressful work environment and increases psychological safety (Grant et al., 2014; Millward & Haslam, 2012).

Work identity may be associated with relationships, memberships, and roles that can reduce the uncertainty of who an individual is (Conroy & O'Leary-Kelly, 2014; Grant et al., 2014). Changes in the work environment can trigger disruption, which creates uncertainty and modifies the meanings attached to the self (Conroy & O'Leary-Kelly, 2014; Grant et al., 2014). Misalignment of work and identity can create negative emotional consequences (Kira & Balkin, 2014; Miscenko & Day, 2015). Strong workgroup identity leads to lower turnover rates, job satisfaction, and positive involvement within the organization (Kira & Balkin, 2014; Miscenko & Day, 2015). Job satisfaction can occur with a strong professional identity, self-worth, and internalized meaning attached to a specific role (Kira & Balkin, 2014; Miscenko & Day, 2015).

Over-Identification

Over-identification can occur when the individual's perception that others believe the individual's performance is associated with the organization becomes relevant to the individuals' sense of self (Galvin et al., 2015). Although it is extreme, over-identification may occur when the self is diminished, organizational goals are internalized, and the individuals' wellbeing is sacrificed (Galvin et al., 2015). An individual may identify highly with being interchangeable, have a perception of oneness, or is central to an organization. The organization then defines the self with power, authority, and interest (Galvin et al., 2015). However, loss of this over-identification from an organization due to transition may be detrimental to one's psychological wellbeing (Galvin et al., 2015).

Prescription Opioid Epidemic

The abuse of prescription and illicit opioids has skyrocketed in recent decades, resulting in a crisis affecting virtually all aspects of society. From the 1990s to the present, we have seen a notable increase in the prescribing of opioids, the use of opioids, and the rate of drug overdoses. In the same period (1997 – 2007), opioid prescriptions in the United States skyrocketed an astounding 700% (Boyer, 2012). From 1999 to 2014, drug overdose deaths in the United States practically tripled (Rudd et al., 2016; Young, 2016). In 2010, the annual number of opioid prescriptions reached 210 million, an increase of 135 million from 1991 (Guohua et al., 2014). The National Survey on Drug Use and Health (NSDUH) anticipated 12.5 million Americans misused a prescription medication in 2015 (SAMHSA, 2016). In 2014, 47,055 deaths were found to be a direct result of a drug overdose, 28,647 of which were determined to have involved an opioid

(Rudd et al., 2016). In 2015, 52,404 deaths were found to be a direct result of a drug overdose, 33,091 of which were found to have involved an opioid (Rudd et al., 2016). In the one year, between 2014 and 2015, drug overdose deaths increase by 11.4% (Rudd et al., 2016). At the same time, opioid death rates increased by 15.6% (Rudd et al., 2016).

In 2015, the DEA reported overdose deaths, particularly from prescription drugs and heroin, have reached epidemic levels (DEA, 2014). It was reported the drug overdose death rate substantially rose from 12.3 per 100,000 populations to 16.3 per 100,000 populations in 2010 and 2015, respectively (Rudd et al., 2016; Young, 2016). The United States experienced a significant increase in the number of dispensed opioids as well as the number of drug overdoses from the 1990s to the present. Perhaps the most notable is the substantial increase in opioid-related overdoses and subsequent fatalities. Before 2011, the Drug Abuse Warning Network (DAWN) kept track of the number of hospital visits that involved pharmaceutical opioids. From 2004 to 2011, DAWN found medical emergencies involving pharmaceutical opioids rose 183% (SAMHSA, 2011). This number likely would have continued to increase; however, DAWN was discontinued by SAMHSA.

The five-year period between 2010 and 2015 saw a 2.6% increase in the death rates for natural, semisynthetic opioids, 20.6% increase in the death rates for heroin, and 72.2% increase in the death rate for synthetic opioids, excluding methadone (Rudd et al., 2016). These increases were consistent among all demographics and locations. The years between 2010 and 2015 saw a 9.1% decrease in the methadone death rate (Rudd et al., 2016). Rudd (2016) also attributes the reduction to increased efforts in the early 2000s to

reduce the use of methadone. In late 2016, the DEA classified prescription drugs, heroin, and fentanyl as the top drug-related threats to the United States (Rudd et al., 2016; Young, 2016).

Provisional data collected by the CDC indicated in the 12 months between August 2015 and August 2016, there were 59,417 drug-related overdose deaths (Ahmad et al., 2018). Compared to the following 12-month period ending August 2017, this number increased by 13.3% to 67,344 overdoses (Ahmad et al., 2018). Of the 67,344 drug overdoses reported from August 2016 to August 2017, 45,200 were found to be caused by opioids (Ahmad et al., 2018). Of the opioid-related overdoses (45,200), synthetic opioids, heroin, and natural/semisynthetic opioids attribute to roughly 25,382, 15,358, and 14,344, respectively (Ahmad et al., 2018). Notably, the number of synthetic opioid-related overdoses increased from 15,256 in the period ending in August 2016 to 25,382 in August 2017 (Ahmad et al., 2018). NSDUH projected "30.5 million Americans aged 12 or older were current illicit drug users" (SAMHSA, 2018). NSDUH defined a current drug user as an individual who used an illicit drug last month (SAMHSA, 2018). When categorized by the drug of choice, marijuana was found to be the most commonly used (26.0 million), followed by prescription pain relievers (3.2 million). In 2017, NSDUH estimated that 2.1 million people were suffering from opioid addiction (SAMHSA, 2018). The overwhelming majority (1.7 million) were said to have a prescription pain reliever disorder, whereas the remaining (.7 million) were found to misuse heroin (SAMHSA, 2018).

When discussing drug overdose statistics, it is important to note the difficulty in ensuring the accuracy of the data. Drug overdoses often occur when an individual ingests more than one type of drug. However, depending on the timeliness of the autopsy, it may be difficult, if not impossible, for the medical examiner to determine which drug caused the overdose. Hedegaard et al. (2017) noted that in roughly 1 in 5 drug overdoses, the type of drug is not listed on the medical certificate. With that said, it is possible that the number of opioids involved overdoses is underreported.

As news stations continue to inundate viewers with heart-wrenching statistics, politicians aim to present their angle on the daily circuit. The White House works to develop a plan to tackle the ever-growing epidemic, and we still appear no closer to a drug-free society. Each state has taken it upon themselves to develop legislation designed to combat the opioid epidemic in their respective territories better. However, addicts continue to outsmart the system and exploit areas with weaker legislative policies. This literature review aims to deeply explore the opioid epidemic, more specifically, the series of events that cultivated an environment conducive to growing the epidemic, the growth and danger of synthetic opioids, and the importance of naloxone in working to prevent opioid-related overdoses from turning fatal.

Defining Pain

In 1998, "pain" was officially classified as the fifth vital sign (Quinones, 2015). Pain is primarily viewed in the same category as pulse, blood pressure, respiration, and body temperature (Quinones, 2015). This classification represents a seismic shift in how the medical community responds to and treats a patient's pain level. Before the second

half of the 1900s, many doctors publicly expressed their distaste for pain management treatment. These medical professionals argued that pain was beneficial to the patient and beneficial and necessary for the healing process (Lembke, 2012). However, as medicines began to evolve, the views on pain and pain management followed suit.

In the late 1980s, medical professionals were encouraged to view pain as a subjective experience for the patient (Lembke, 2012). This notion was reinforced through the use of patient satisfaction surveys. A typical patient satisfaction survey includes a component of the doctor's ability to address the patient's pain (Lembke, 2012). The results of these surveys may be used to determine a physician's bonus, job security, etc. Doctors who refused to prescribe pain killers to patients who described their pain level using terms such as "unbearable," "intolerable," "debilitating," etc., may be viewed as withholding necessary treatment measures. One patient summed up the conundrum doctor's face; she stated: I am addicted to (opioids), and it's the doctors' fault because they prescribe them. But I'll sue them if they leave me in pain" (Lembke, 2012).

A typical medical professional does not undergo extensive training in pain management (Lembke 2012; Quinones 2015). However, on the job training indicates that a quick visit with a patient resulting in a pain prescription is more cost-effective than the alternative (Lembke 2012; Quinones 2015). Doctors who choose to take the time to educate their patients on addiction or utilize counseling techniques may be criticized for their inability to "turn patients over" quickly and efficiently (Lembke 2012; Quinones 2015). These shifting views, coupled with the popular notion that pain counteracts the euphoric effects of opioids, has led to disaster (Lembke 2012; Quinones 2015). As

physicians began to open their minds to the use of prescription opioids, pharmaceutical companies such as Purdue Pharma, seized the opportunity to fill a growing need (Lembke 2012; Quinones 2015).

Big Pharma. Purdue Pharma first introduced OxyContin in 1996 (Zee, 2009). Purdue Pharma revolutionized the advertising tactics for pain medicine. They utilized aggressive techniques and substantial monetary tactics to capture the market. In 2000, OxyContin sales reached over $1 billion, a substantial increase from the $48 million posted in 1996 (Zee, 2009). These financial strides were the result of aggressive advertising, coupled with a very liberal approach to pain management (Zee, 2009).

In the five years between 1996 and 2001, Perdue Pharma held over 40 national conferences, in which more than 5,000 medical professionals accepted invitations to attend, free of charge (Zee, 2009). While in attendance, medical professionals were recruited and subsequently trained to speak on behalf of Purdue Pharma (Zee, 2009). Specifically, Purdue Pharma targeted doctors who demonstrated a high tendency to prescribe medications (Zee, 2009). Additionally, Purdue Pharma developed a lucrative incentive system designed to motivate sales representatives to utilize any marketing tactics to increase sales in their respective territories (Zee, 2009). In 1996, the Purdue Pharma sales force consisted of 318 employees, and this number increased to 671 by 2000 (Zee, 2009). Sales representatives inundated doctors with OxyContin merchandise such as hats, pens, t-shirts, etc.

Perhaps most notably, a chart that indicated a patient's prescription for another pain medication was crossed out and replaced with OxyContin (Quinones, 2015).

Additionally, Purdue Pharma distributed a coupon that allowed new patients to receive a free supply of OxyContin (Zee, 2009). Regarding the OxyContin marketing campaign, the DEA stated no company had ever utilized such tactics in the advertising of a schedule II drug in history (Quinones, 2015).

Purdue Pharma utilized numerous different avenues such as videos, conferences, spokespeople, etc. to inform consumers that the chance of patients becoming addicted to OxyContin was extremely rare. Purdue Pharma cited the timed-release formulation of OxyContin to present the idea that it was less addictive. The company relied upon that the slow release of the opioid, prevented patients from experiencing extreme highs and lows, which are prevalent in addiction (Zee, 2009). Sales representatives were trained and encouraged to communicate that the chance of addiction was "less than one percent" (Zee, 2009). Purdue Pharma exploited the limited staff of the Food and Drug Administration (FDA) and released OxyContin promotional videos to medical professionals before receiving the FDA stamp of approval. This video was later deemed inappropriate due to the minimization of the risk and promotion of the unsupported benefits. However, in 2007, a partner company of Purdue Pharma, Purdue Frederick Company Inc., along with three high ranking employees pled guilty to the misrepresentation of OxyContin (Zee, 2009). They were subsequently ordered to pay $634 million in damages.

In August 2010, Purdue Pharma released a new version of OxyContin. This new version was designed to help prevent users from crushing and subsequently snorting of injecting the pills. Data collected from the Rocky Mountain Poison Control Center Drug

Diversion Monitoring Program demonstrated a subsequent decrease in the demand for OxyContin following the release of the new formula (Iwanicki et al., 2016). The same data set showed that the illicit market price for OxyContin dropped 50 percent, following the release of the pills' reformulated version (Iwanicki et al., 2016). Cicero et al. (2012) conducted a study to gauge the effectiveness of the reformulation. Before the release, 35.6% of surveyed respondents designated OxyContin as their preferred drug of choice (Cicero et al., 2012). This percentage dropped to 12.8%, 21 months following the release of the reformulated pills. All participants who admitted to abusing both versions of OxyContin preferred the original formula (Cicero et al., 2012). 66% of the participants, who previously indicated OxyContin as their drug of choice, switched to a different opioid (typically heroin) following the release of the reformulation (Cicero et al., 2012). One participant stated, "most people that I know don't use OxyContin to get high anymore. They have moved on to heroin [because] it is easier to use and much cheaper and available" (Cicero et al., 2012). Although not necessarily corroborated by statistical data, it is essential to note the previous statement, maybe a reliable indicator for the gateway between prescription opioids, specifically OxyContin and heroin use.

Prescription Drug Monitoring Program. The National Alliance for Model State Drug Laws defines a prescription drug monitoring program (PDMP) as a centralized, comprehensive database that houses statewide data regarding prescribed substances (DEA, 2016). Currently, most states require practitioners to diligently update the PDMP with patient information, specific dosage details, current medications, etc. (Astho, n.d.). Depending on the state, this information may be provided to various agencies or parties

such as public health agencies, physicians, public safety agencies, pharmacies, etc. (Astho, n.d.).

The first PDMP was established in California in 1939 (Wixson et al., 2015). By the early 1990s, 10 states had active PDMPs (Wixsonet al., 2015). At this time, there was no established blueprint to follow when establishing a PDMP. As a result, each PDMP differed in the design of the program. The overall goal of the early PDMPs was unified among the states (Wixsonet al., 2015). Unfortunately, the lack of standardization among the different programs made it increasingly difficult to open communication lines and share information among neighboring states (Wixsonet al., 2015).

In the early 2000s, the abuse and diversion of controlled substances continued to increase. With the financial support of Congress, the Bureau of Justice Assistance (BJA), Office of Justice Programs in the U.S. Department of Justice, established the Harold Rogers Prescription Drug Monitoring Program (Wixsonet al., 2015). These grants were designated to assist states in the planning, implementation, or enhancement of a PDMP. The U.S. Department of Health and Human Services followed in kind and created the National All Schedules Prescription Electronic Reporting Act (NASPER) as another support element (Wixsonet al., 2015). For the Harold Rogers Grant and NASPER Act, President Obama proposed allocating $7 million and $2 million, respectively, in the budget for the fiscal year 2010 (Wixsonet al., 2015).

Each state has the autonomy to develop and utilize the PDMP to serve the state's needs best. The majority of the established PDMPs are housed in the state public health agency; however, a handful of states house the PDMPs with a law enforcement agency

(Astho, n.d.). The administrative details and the housing agency differ among states; however, the underlying concept of the PDMP is typically similar (Wixsonet al., 2015). Generally, PDMPs are established in an attempt to combat the diversion of controlled substances. However, many states cite the importance of improving the pharmaceutical treatment of patients (Astho, n.d.). Critics of PDMPs cite the danger of refusing to prescribe patients who are in legitimate pain.

The lack of uniformity among state PDMPs has made it increasingly difficult for states to share PDMP data. As a result, doctor shoppers may travel across state lines to receive prescriptions from doctors, unaware of their medical history in other states. Other differences in PDMPs among states may include the number of scheduled drugs (Gugelmann et al., 2012). For example, the PDMP in Pennsylvania only requires medical professionals to track the dispensing of Schedule II drugs (oxycodone and hydromorphone). More commonly, PDMPs require the tracking of Schedule II-IV drugs (Gugelmann et al., 2012). Additionally, states may differ in the time allowed before updating the system (Gugelmann et al., 2012). For example, Alabama allows medical professionals and pharmacies a two-week window to update the system with newly acquired data (Alabama Department of Public Health, 2019).

Another difference among states is the accessibility of the PDMP. Typically, states allow a combination of pharmacists, prescribers, medical professionals, and law enforcement agencies, limited or full access to the database. Various law enforcement agents have expressed frustration with their lack of access to the information housed in the PDMP. Gugelmann et al. (2012) stated that a handful of states prevent prescribers

from accessing the data available on the PDMP before prescribing a controlled substance. This legislation is designed to prevent the subscriber from facing civil liability. One could argue that this policy may negate the purpose of the PDMP. The inability of out of state data sharing among states limits the effectiveness of PDMPs. The differences among states allow addicts to exploit the weaknesses of various states and reap the potential benefits of less stringent legislation.

The Climate in Alabama

Many Alabamians are prescribed opioids for various ailments; however, many of these individuals become long-term users. A report by the CDC, Alabama leads the nation in opioid prescriptions, with an average of 1.2 prescriptions per person compared to the national average of 0.71 (CDC Wonder, 2018). As a result of the ever-growing rate of addiction, there is an associated increase in illicit opioid use, which directly impacts the state's economy (Gau and Brooke, 2017). On the law enforcement front, economic impacts include an increase in the costs for law enforcement officers and their associated equipment, prosecution, and incarceration of offenders, as well as an emergency room and hospitalization of drug users (Gau and Brooke, 2017).

In the early 2000s, Alabama took a wait and see attitude towards prescription drug diversion. Locals and addicts from neighboring states traveled highway 65, seeking to fill prescriptions. As more states began implementing PDMP legislation, Alabama was still relatively open and became a destination for those addicted to opioids. The lax regulatory oversite of physicians and pharmacies, coupled with the lack of prescription drug monitoring programs, cultivated an environment conducive to prescription drug diversion

(Alabama Board of Medicine, 2018). Between 2005 and 2010, the prevalence of oxycodone related deaths in Alabama continued to climb (Department of Justice, AG Remarks, 2018).

Johnson et al. (2014) states in 2010, 98 of the top 100 oxycodone dispensing prescribers were located in Florida. During this time, four of the five Alabama counties that border Florida were top opioid prescribers in the nation (CDC, 2019). Of the 67 counties in Alabama, 40 of those counties were prime subscribers (CDC, 2019). In 2010, the DEA reported that Alabama had two unregulated pain management clinics (Alabama Board of Medicine, 2017). As the opioid epidemic continues to plague the nation, we have seen a steady increase in opioid-related deaths in the United States.

A qualitative analysis conducted on law enforcement perceptions of prescription pill abuse indicated that many law enforcement officers are quick to disregard the severity of prescription pill addiction (Gau & Brooke, 2017). With hard drugs such as heroin, cocaine, meth, etc. on the streets, there was little time to focus on a doctor prescribed medication. One law enforcement officer stated, "Five or six years ago it was like the wild, wild west. There was no regulation. They [pill-mill physicians and owners] weren't afraid. They in no way had any fear of arrest or of being incarcerated of anything like that" (Gau & Brooke, 2017). Notably, a portion of the individuals interviewed argued that the pill-mill clinics might have outsmarted the system and simply relocated (Gau & Brooke, 2017).

In recent years, there has been an increase in the successful prosecution of doctors involved in pain management clinics. However, in order to charge a physician under

Alabama statues regarding the lawful prescription of controlled substances, the prosecutor must prove the physician "knowingly" prescribed opioids to patients who were abusing the medication of distributing for financial gain (Gau & Brooke, 2017). Essentially, the prosecutor must prove that the doctor incorrectly gauged the level of pain experienced by the patient (Gau & Brooke, 2017). Pain management clinics are mostly legal, as is the distribution of prescription opioids (Gau & Brooke, 2017). Therefore, law enforcement and prosecution must identify and prove the criminal intent of the general legitimate operation (Gau & Brooke, 2017). Law enforcement officers cited numerous difficulties in building air-tight cases against physicians. For one, doctor-patient confidentiality makes it difficult for law enforcement officers to access a patient's medical records (Gau & Brooke, 2017). Additionally, and perhaps most notable is the knowledge possessed by physicians (Gau & Brooke, 2017). One law enforcement officer mentioned he was ill-equipped to determine how many pills a patient should receive, making it challenging to prove ill intent (Gau & Brooke, 2017).

Diversion of Prescription Pills

The overwhelming presence of pain clinics or pill-mills coupled with the ease of obtaining prescriptions for opioids and onsite pharmacies created the perfect combination for diversion. In this case, diversion is the act of transferring legally obtained prescription opioids out of the individual's control for whom it was prescribed and distributing for illicit use (Surratt et al., 2014). The lack of pill-mill legislation in Alabama, throughout the first decade of the 2000s, made it extremely difficult to identify and subsequently combat instances of diversion. Many patients utilized the concept of "doctor shopping" to

acquire additional prescriptions. A "doctor shopper" is a patient who actively seeks medical prescriptions from multiple doctors without informing the other doctors of their obtained medicines (Melville, 2013). In a study conducted in the United States, researchers concluded that the average doctor shopper received 32 prescriptions for opioids from ten different medical professionals (Melville, 2013). Other methods that often lead to diversion include forging prescriptions, stealing from patients and pharmacies, and under the counter sales by physicians. Between 2008 and 2010, pill-mills were found to be the primary source of prescription opioids sold on the illicit market (Surratt et al., 2014).

In 2014, the NSDUH, reported the majority (63.6%) of illicit prescription pill users, received the drugs from friends or relatives (Substance Abuse and Mental Health Service Administration, 2014). The remaining individuals received drugs from physicians (21%), drug dealers (4.3%), and online avenues (0.1%) in that order (Substance Abuse and Mental Health Service Administration, 2018).

Using law enforcement data in Alabama, researchers found the diversion rate for oxycodone and several other opioids, decreased following the PDMP implementation and various legislative efforts (Surratt et al., 2014). Surratt (2014) found that the diversion of fentanyl, hydromorphone, buprenorphine, and tramadol neither increased nor decreased during the analysis period.

Heroin was first created in 1874 by a Bayer Pharmaceutical chemist, Heinrich Dresser (Quinones, 2015). Initially, heroin was marketed as a non-addictive pain remedy. The claim of the non-addictive nature of the drug, coupled with the lack of available

medicine, resulted in widespread use and subsequent high rates of addiction (Quinones, 2015). Around this same period, numerous government campaigns sought to frame addicts as criminals (Quinones, 2015). Although the medical benefits of heroin were de-debunked, heroin soon became a staple on the illicit market. Heroin was a dealer's dream, cheap to make, easy to produce, and simple to traffic. Over time competition among dealers led to diluted products and discounted rates.

Similar Effect, Different Chemical Makeup

In the 1970s, US Congressman Robert Steele, analyzed the drug use report of US service members during the Vietnam War (Frontline, 2014). Steele's analyzed reports concluded an addiction rate of 10 – 15% (Frontline, 2014). This finding, together with the overwhelming amount of Vietnam service members who returned from the war addicted to heroin, fast-tracked the issue to then-President Nixon's drug agenda. In 1971, President Richard Nixon declared drugs, particularly heroin, to be the biggest enemy the country faced (Gerstein & Green, 1993).

Currently, you cannot listen to a news broadcast without hearing a discussion centering on the drug epidemic plaguing our nation. However, although heroin is a vital aspect of the current epidemic, the user population is starkly different from that of the 1970s (Cicero et al., 2014). Historically, heroin users were viewed as minorities living in low-income, primarily urban areas. Currently, the stereotyped heroin user is an affluent White living in a suburban or rural area of the country (Cicero et al., 2014). The shift in the average heroin consumer may be attributed in part to the increase in prescription

opioids' use and the subsequent transition from prescription opioids to heroin (Cicero et al., 2014).

Cicero et al. (2014) conducted a study in which they examined the transition from opioid use to heroin and vice versa. Of the participants who reported they began using opioids in the 1960s, at least 80% indicated their experimentation with opioid drugs, began with heroin (Cicero et al., 2014). When examining the participants who started using opioids in the 2000s, 75% reported their experimentation began with a prescription drug (Cicero et al., 2014). Cicero et al. (2014) found that the current wave of heroin users exhibited similar patterns of abuse as those individuals abusing prescription opioids. In that sense, the results indicated that prescription opioid users might shift to heroin at some point in their addiction timeline. Numerous studies have determined that heroin is easily accessible and subsequently more affordable than prescription opioids. This quote exemplifies the potential conundrum many prescription opioid users may face:

> All of my friends use heroin, and I know multiple people who will sell it to me or help me find some who has it. Also, if I have money, I wanna spend it on something I know will get me high. If I buy pills, I might not have enough money to make sure I get high. (Cicero et al., 2014, p. 825)

In a study of 103 patients, derived from individuals entering drug treatment programs in the United States between 2009 and 2012, 47.4% reported using OxyContin, 30 days before the reformulation of OxyContin. Following the reformulation of OxyContin, this number dropped to 30% (Moyer, 2013). In the same time frame, using the same study population, reports of heroin use practically doubled (Moyer, 2013).

Although there is not a clear line connecting the increase in heroin use to the crackdown on prescription pill mills and diversion, many argue this relationship is casual at the very least.

Prescription Opioids to Heroin

In 2014 the deputy attorney general, James M. Cole, spoke at the "Pills to Needles: The Pathway to Rising Heroin Deaths" Event. Deputy Attorney General Cole stated the following in regards to the current opioid epidemic:

> Abuse of prescription drugs leads to dependency, and that dependency leads to demand for more prescription drugs. That demand, users find, ultimately cannot be satisfied by the harder-to-obtain and more expensive prescription pills. That is where heroin problems sneak in. The readily available and lower cost of heroin makes it a smooth and cheap alternative with tragic consequences. (Department of Justice, 2014, p. 2)

Deputy Attorney General James M. Cole stated the DEA revamped and increased efforts along the border to address heroin trafficking better. The amount of heroin seized along the southwest border, skyrocketed 320% from 2008 to 2013. This statistic is reflective of both an increase in the attempt to traffic heroin across the border, as well as the exhaustive efforts of the DEA to address the issue (Department of Justice, 2014).

In 2013, it was estimated that 681,000 individuals engaged in heroin use in the past year. This number represented an 82.6% increase from the data collected in 2007 (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014; Votawet al., 2016). Notably, the 2017 NSDUH estimated 886,000 people had used heroin

in 2017. This number represents a rise of over 200,000 people from the data collected in 2013.

Pain and addiction specialists warn that by shutting down pill mills and eliminating the prescription opioid users' ability to access their prescriptions, we may see these users turn to the illicit drug market to obtain opioids (Moyer, 2013). Heroin, being a cheaper and more available product on the illicit market, may serve as a substitute for prescription opioid users, in the event the user can no longer obtain or afford prescription opioids (Moyer, 2013). Nicholas Kardaras, Ph.D., stated prescription opioids and heroin cause the same neurochemical effect, which may entice prescription opioid users, who are strapped for cash, to seek heroin, a cheaper alternative (Moyer, 2013). Pain management specialist, Lynn Webster MD, revealed she had seen an increasingly high number of patients switch from prescription opioids such as OxyContin to heroin after OxyContin was reformulated to prevent users from crushing and injecting (Moyer, 2013).

From 2009 to 2012, many states enacted various legislative efforts to combat the diversion of prescription opioids. Although these efforts are often viewed as successful, in terms of reducing the amount of pain management clinics and the illicit diversion of prescription opioids, many researchers argue these changes may have led to an increase in heroin and other easily accessible street drugs (Compton et al., 2016). The National Survey on Drug Use and Health (NSDUH) reported that 79.5% of new heroin users indicated they had used a prescription opioid before heroin use (Dart et al., 2015). The CDC reported a slight decrease in opioid-related deaths in 2012 and 2013; however, in 2014, the number of opioid-related deaths increased from 16,235 to 18,893 (Compton et

al., 2016). In 2014, the NSDUH projected that 917,000 people had engaged in heroin use during their lifetime; this represents a 145% increase since 2007 (Compton et al., 2016). Additionally, there were 10,574 heroin-related deaths in 2014, up from 1,842 in 2000 (Compton, 2016). Muhuri et al. (2013) conducted a study utilizing data collected from the 2002 – 2011 NSDUH study. The results indicated a notable association between using pain relievers with no medical purpose (NMPR) and heroin in the year following NMPR use (Muhuri et al., 2013). Muhuri et al. (2013) reported that the initiation of heroin use was 19 times higher in individuals who reported using NMPR.

Dart et al. (2015) conducted a study to examine diversion and abuse trends between 2002 and 2013, using five programs from the Research, Abuse, Diversion, and Addiction-Related Surveillance System (RADARS). Data from the National Poison Data System indicated that heroin-related deaths are inversely correlated with prescription opioid-related deaths (Dart et al., 2015). Dart et al. (2015) reported that heroin-related deaths remained constant between 2002 and 2010; however, heroin-related deaths increased yearly from 2010 to 2013 (Dart et al., 2015). In contrast, prescription opioid-related deaths spiked between 2002 and 2006, remained constant from 2006 to 2008, and steadily decreased from 2010 to 2013 (Dart et al., 2015). The availability of prescription opioids began to increase in the 1900s and continued upward until a plateau in 2011. Dart et al. (2015) reported findings consistent with numerous other studies, which indicated an increase in abuse of prescription opioids before 2011.

According to the Drug Abuse Warning Network (DAWN), hospital medical emergencies associated with prescription opioids increased 183% from 2004 to 2011

(Dart et al., 2015; Drug Abuse Warning Network, 2013). However, recent trends indicate a decrease in the availability and subsequent diversion of prescription opioids. Dart et al. (2015) attributes this reduction to various legislative measures and an associated decrease in prescription pill mills, etc. Notably, although the direct cause may be unknown, this study demonstrates the fluctuation of the rate of opioid and opioid analgesics abuse is correlated with the rise in heroin-related deaths (Dart et al., 2015).

Peavy et al. (2012) conducted a study in which they interviewed 553 syringe-exchange clients, 443 admitted to heroin in the four months before the interview. Of these participants, 39% reported using some sort of prescription opioid before experimenting with heroin (Peavy et al., 2012). These participants were typically younger, White , and appeared to have a more stable living situation. These results can have implications for the trajectory of drug use in the United States in the past decade. For one, the indication that those individuals who reported using prescription opioids before heroin were generally younger than the alternative may be the result of the availability of prescription opioids through both licit and illicit channels. This notion would be in line with the argument that prescription opioid non-medical use may be a gateway to heroin use.

Synthetic Opioids

Synthetic opioids and natural opioids are similar in that they target the same receptors. However, natural opioids are naturally occurring substances, whereas synthetic opioids are synthesized in a laboratory (DEA, 2017). Synthetic opioids are cheaper to produce and more accessible to acquire than natural and semisynthetic opioids, such as heroin. As a result, many street dealers mix synthetic opioids with heroin, in order to

increase profits. Often, synthetic opioids are clandestinely produced as counterfeit prescription opioids, such as OxyContin (DEA, 2017). The abuse pattern of synthetic opioids is very similar to heroin and prescription opioids (DEA, 2017). However, synthetic opioids are extremely and often fatally potent. Consumers cannot determine the potency of a clandestinely produced synthetic opioid, which heightens the risk of overdose (DEA, 2017). Prekupec et al. (2017) stated there were 9,580 deaths attributed to synthetic opioids, excluding methadone, in 2015. Recently collected law enforcement data demonstrated a surge in the street presence of novel synthetic opioids (NSOs), including but not limited to acetyl, fentanyl, butyrylfentanyl, furanylfentanyl, and U-47700 (Prekupec et al., 2017).

Organized crime groups identified the potential profit in the drug trade and have spent recent decades infiltrating the marketplace. In order to stay one step ahead of law enforcement, organized crime groups have partnered with drug manufacturers located primarily in China to benefit from the manufacturing capability in Asian countries (Prekupec et al., 2017). As the United States government works to designate new illicit substances as illegal, manufacturers are developing analogs of these substances, to serve as a replacement (Prekupec et al., 2017). Recent estimations indicate hundreds of thousands of counterfeit prescription pills can be manufactured from just one kilogram of new psychoactive substances (NPS), such as fentanyl analogs (Prekupec et al., 2017). These tablets can be purchased online and imported through international delivery services and US mail. The small quantities of each shipment make it extremely difficult

for mail inspectors and law enforcement officers to identify and seize the packages (Prekupec et al., 2017).

As China continues to create fentanyl analogs, US law enforcement agencies and subject matter experts struggle to stay up to date with the latest trends and substances. In order for scientists and toxicologists to determine the chemical composition of each new analog, the substance must be identified and confiscated by law enforcement and quantified in the seized drug (Prekupec et al., 2017). Biological samples from those individuals who ingested the substance can be used for testing. Notably, a standard urine toxicology screen can detect heroin and morphine but cannot identify opioids with unique structures, such as fentanyl and fentanyl analogs (Prekupec et al., 2017). Prekupec et al. (2017) explained that fentanyl could be identified using an enzyme-linked immunosorbent assay (ELISA). However, more sophisticated methods are needed to differentiate between fentanyl and fentanyl analogs (Prekupec et al., 2017). Prekupec et al. (2017) stated: "to date, no antibody-based methods are commercially available to detect non-fentanyl analogs such as AH-7921, U-47700, or MT-45." It has become challenging to develop immunoassays for all NSOs, at the rate of which they are created. With that said, it is suggested that the frequency of NSO use is likely underreported.

U-47700 "Pink." U-47700, commonly referred to as "pink," is a synthetic opioid. In November 2016, the DEA officially classified U-47700 as a Schedule I drug, which means it offers no medical benefit but yields strong potential for addiction. The National Forensic Laboratory Information System (NFLIS) indicated the first report of U-47700 occurred in October 2015 (DEA 440, 2016). The DEA reported based on the collected

evidence, the consumption pattern of U-47700 mirrors heroin and prescription opioids (DEA 440, 2016). Recent seizures identified U-47700 in tablet form, designed to appear as a pharmaceutical opioid or stamped with logos to mimic heroin (DEA 440, 2016). Reports indicate that U-47700 has been identified as a solitary and mixed substance with various substances such as heroin, fentanyl, and fentanyl analogs (DEA 440, 2016). The majority of U-47700 is distributed through online channels or street dealers. Since this substance is distributed through non-regulated sources, the user is in grave danger of overdosing. Currently, U-47700 is advertised through various online channels as a "research chemical" (DEA 440, 2016). The DEA identified at least 46, U-47700 related fatalities from late 2015 to mid-2016 (DEA 440, 2016).

In 2017, Alabama officials began seeing a different version of U-47700 in overdose cases. On the street, it is called "gray death" because of the similar appearance to concreate. Several reports note the need for two doses of naloxone to revive overdose victims (Alabama Department of Public Health (ADPH), 2019). It is important to note; the Medical Examiners Commission did not explicitly request reporting of occurrences of U-47700. Due to the rapid rise of deaths associated with U-47700, many Medical Examiner Districts voluntarily reported data; however, the data is not complete.

Fentanyl

In the 1960s, Janssen Pharmaceuticals manufactured a synthetic opioid, referred to as Fentanyl (Lozier et al., 2015). The CDC (2017) defines fentanyl as a "synthetic and short-acting opioid analgesic," typically prescribed for patients diagnosed with advanced forms of cancer. The potency of fentanyl makes it incredibly dangerous. In some cases,

ingestion of only .25 mg can be fatal. Notably, a dose of fentanyl can be up to 100 times more potent than morphine and 30-50 times stronger than heroin (CDC, 2017; DEA, 2015). Dealers have been using illicitly manufactured Fentanyl (IMF) or a fentanyl analog to mix with heroin, to meet the ever-rising heroin demand and match the demand, without diminishing the potency (Bode et al., 2017).

In the 1970s, clandestine laboratories began to synthesize fentanyl derivatives; these analogs were comparable in pharmacokinetics but differed in potency (Lozier et al., 2015). Lozier et al. (2015) stated in the early 1980s, IMF and fentanyl analogs were flooding the illicit channels. Misaildi et al. (2017) reported over 1400 fentanyl analogs had been manufactured in the recent decades, of which pharmacologists have studied 200, and 12 have been identified in the illicit drug market in the last five years. In past decades, we have seen several waves of fentanyl-related overdoses throughout the Country (Lozier et al. (2015) . In 2013, as a result of fentanyl seizures, the number increased to 3,344 (DEA, 2015). Traces of Fentanyl were identified in 90% of the 281 accidental overdoses, which occurred in Ohio for two months in early 2017 (Morgan & Jones, 2018).

The DEA stresses the importance of differentiating between pharmaceutical fentanyl and illicitly manufactured Fentanyl (IMF). Although the diversion of prescription fentanyl is undoubtedly a factor, the drastic increase in fentanyl-related overdose deaths can primarily be attributed to the IMF (DEA, 2016a). Prekupec et al. (2017) stated that the number of overdose deaths involving synthetic opioids might be grossly underreported. Typically, medical examiners and crime laboratories do not

conduct testing to determine the presence of Fentanyl of NSOs, unless instructed to do so. As a result, overdose, which may be solely attributed to heroin, maybe mischaracterized.

Not only is fentanyl extremely potent, but it is also easy to acquire through the dark web or a tor browser (software that allows access to the dark web) and significantly more profitable than heroin (Kulbarsh, 2016). In the period between 2010 and 2014, heroin-involved deaths skyrocketed, increasing more than three-fold (Macmadu et al., 2017; Compton, Jones & Baldwin, 2016). Additionally, from 2013 to 2014, synthetic opioid-related overdoses increased by 80% (Macmadu et al., 2017; Rudd et al., 2016).

Gladden et al. (2016) found that when purchasing drugs through illicit channels, and the user is typically unaware of the chemical makeup of the substance. Therefore, it is difficult for a user to argue how much he/she must inject to achieve the high but avoid the overdoses. Drug purchasers who unknowingly purchase products, laced, or cut with fentanyl, are at a heightened risk of overdosing due to the intense potency of fentanyl. Macmadu et al. (2017) conducted a study to examine the use of fentanyl among young adults who reported non-medical prescription opioid use in the United States. Of the participants who reported using fentanyl in the six-month study period, 59% admitted being unaware that they were using fentanyl until after consumption. Unanimously, the participants recognized the potential overdose danger of using fentanyl (Macmadu et al., 2017).

A DEA report noted that 251 deceased individuals were found to have fentanyl in their system in 2012 (DEA Fentanyl, 2016). This number increased by 263% to 911 in 2015 (DEA Fentanyl, 2016). In 77.4% of the noted cases in 2015, fentanyl was

determined to be the cause of death. These number represents a 418% increase from the data collected in 2012 (DEA Fentanyl, 2016). From 2013 to 2014, fentanyl submissions in Alabama jumped 493% from 33 to 196 (CDC, 2016). At the same time, Alabama experienced a 115% increase in fentanyl-related deaths, which totaled 397 fentanyl-related deaths (Gladden, Martinez & Seth., 2016). In the period between January and June 2015, fentanyl analogs (acetyl fentanyl, butyryl fentanyl, and beta-hydroxthiofentanyl) were identified in 49 lethal drugs, overdoses (Gladden, Martinez & Seth., 2016). Gladden et al. (2016) identified additional substances present in the wake of a deadly fentanyl overdose. From 2013 to 2014, 33% of fentanyl deaths were positive for cocaine, 19% tested positive from heroin, and 28% tested positive for morphine (Gladden, Martinez & Seth, 2016).

It is important to note, heroin quickly metabolizes to morphine, and therefore it is possible the morphine positive fentanyl deaths could be attributed to the metabolism of heroin (Harruff eta l., 2015). The detection of other illicit substances present in the case of a fentanyl overdose provides support for the notion that illicitly manufactured fentanyl is likely to blame. The dramatic increase in fentanyl-related deaths demonstrates the high potency of fentanyl and the danger of engaging in IMP use. Notably, most recreational and habitual drug users are often unaware of the heroin or other illicit substances they are ingesting may be mixed with fentanyl or a fentanyl analog.

Acetyl Fentanyl

Acetyl Fentanyl is a synthetic opioid derived from Fentanyl. The chemical composition of acetyl fentanyl may be similar to Fentanyl; however, the DEA classifies

acetyl fentanyl as a Schedule I substance without medical use (Stogner, 2014). Although acetyl fentanyl has been linked to a slew of overdoses in recent years, many deaths and overdoses associated with acetyl fentanyl may be deemed heroin-related, due to the absence of testing identify the chemical makeup further (Stogner, 2014). Stogner (2014) stated in the case of an overdose, patients would likely respond similarly to naloxone, as in heroin overdose; however, a more potent dosage would probably be needed.

In 2014, drug traffickers were exploiting a grave weakness in the war against drugs. At this time, acetyl fentanyl was not scheduled under the Controlled Substance Act. The fact that it was a fentanyl analog made it illicit for human consumption. Nevertheless, if the packaging indicated the contents were not for human use, it would be difficult to seize and subsequently prosecute (Stogner, 2014). Stogner (2014) referred to this conundrum as the "analog loophole." It was important to note in July 2015, acetyl fentanyl officially became classified as a Schedule I substance. However, the "analog loophole" is still very problematic due to the immense efforts of clandestine drug manufacturers to create new analogs, and inundate the marketplace, before law enforcement can identify the new products.

Dealers may mix a small amount of heroin with a dose of acetyl fentanyl and market the product as pure heroin to keep buyers content and increase profits. This mixing allows the dealer to use less heroin, which is more expensive and harder to traffic products. Stogner (2014) mentioned that acetyl fentanyl might be manufactured and packaged to imitate prescription pills, typically oxycodone. Stogner (2014) stated that

analogs of schedule I substances have been marketed as cleaners and plant food and sold in various drug paraphernalia stores.

Butyrylfentanyl

Butyrylfentanyl, a fentanyl analog, was first discussed in scientific journalism in the 1980s. NFLIS reported that the first confiscation of Butyrylfentanyl occurred in March 2014 in Kansas (Prekupec et al., 2017). As of 2015, the DEA attributed Butyrylfentanyl to at least 40 deaths (Prekupec et al., 2017). The DEA stated that the potency and toxicity of Butyrylfentanyl are unknown due to insufficient scientific data (DEA, 2016a). However, the pharma logical profile is similar to that of Fentanyl and other fentanyl derivatives. Additionally, the abuse pattern of this substance is related to heroin, Fentanyl, and other fentanyl analogs. In May 2016, Butyrylfentanyl temporarily placed into the Schedule I category of the controlled substances. The final order stated the substance offered no medical value and served as a danger to users and first responders due to the clandestine nature of its production (DEA, 2016a).

Furanylfentanyl

Furanylfentanyl, a fentanyl analog, was first mentioned in a patent text in 1986 (Prekupec et al., 2017). There is limited knowledge as to the potency and toxicity of this substance due to the lack of human testing. NFLIS first noted Furanylfentanyl in January 2016 (DEA, 2016e). In the period between January 2016 and May 2016, 80 law enforcement reports indicated the confiscation and identification of Furanylfentanyl (E.A., 2016e). The DEA identified at least 128 Furanylfentanyl related deaths in 2015 and 2016. Due to the lack of medicinal value and the potential for addiction and

overdose, in September 2016, Furanylfentanyl was temporarily placed into Schedule 1 of the schedules of controlled substances (DEA, 2016e).

Carfentanil

Carfentanil is a synthetic opioid designed to tranquilize elephants and other large mammals (DEA, 2016e). Carfentanil is a derivative of Fentanyl; however, it is 100 times more potent than Fentanyl, and 10,000 times more potent than morphine (DEA, 2016e). Due to the lack of human testing, experts are unsure of the lethal human dose of Carfentanil. In 2015, the United States produced 19 grams of Carfentanil for a legitimate purpose (Melendez, 2016). In 2016, the DEA identified one shipment from that contained more than 50 times that amount (Melendez, 2016). U.S. Customs and Border Patrol reported five Carfentanil seizures between October 22, 2016, and June 27, 2017 (U.S. Customs and Border Protection Office of Field Operations, 2017). The amount of Carfentanil seized in these shipments totaled nearly 2 kilograms (U.S. Customs and Border Protection Office of Field Operations, 2017).

The DEA reported Carfentanil is typically trafficked from Mexico and China and sold directly into the illicit drug market, often through the dark web (Melendez, 2016). Like Fentanyl, Carfentanil is cheap to produce and easy to acquire (DEA, 2016e). The potency of the drug allows dealers to mix it with heroin to keep the cost down and make a more significant profit (DEA, 2016e). Notably, because Carfentanil is exceptionally potent, fewer quantities are necessary for trafficking purposes. Therefore, it is easier to send and disguise through mail channels (DEA, 2016e).

The DEA reported overdose rates skyrocketed in August and September 2016. The Midwest and Appalachian regions seemed to be hit the hardest (Sanburn, 2016). Hamilton County Ohio reported 200 overdoses in seven days in August 2016 (Sanburn, 2016). The DEA estimated that the Midwest region saw about 300 overdoses in less than a month. Tom Synan, the director of the Hamilton County Heroin Coalition, hypothesized the Carfentanil originated in China and traveled to Mexico in response to online purchases. Mexican drug traffickers then transported the product to the United States and distributed it via illicit channels (Sanburn, 2016).

Misailidi et al. (2017) stated that up until March 2017, Carfentanil was not regulated in China; therefore, there was no limitation on the production, manufacturing, or sale. Misailidi et al. (2017) explained that Carfentanil is openly marketed on the dark web, typically as a "research chemical." In 2016, a dark web search yielded 118 websites in which Carfentanil was available to purchase (Misailidi et al., 2017). Melendez (2016) quoted one dark web vendor who warned potential consumers of the potency of Carfentanil "Again, we can't stress this enough, Carfentanil is meant to be purchased by "only" experienced fentanyl users with a high tolerance, this stuff is NO JOKE."

Cryptomarkets

Unbeknownst to many, the dark web, aka the deep web, is an online platform that anonymizes users. The dark web will enable users to anonymously purchase items such as guns, ammunition, etc. using bitcoin. Bitcoin is a digital currency that operates independently of a central bank and utilizes various encryption methods to ensure anonymity (Yellin et al., n.d.). Gilbert and Dasgupta (2017) defined a crypto market as an

online, internet-based platform that allows users to operate under false personas to conduct transactions for various information and commodities. The privacy of the dark web, coupled with the bitcoin's anonymity, created the ultimate market for drugs. Perhaps one of the most popular crypto markets, before its 2013 shutdown, was Silk Road (Gilbert & Dasgupta, 2017). Silk Road, created in February 2011, flourished for two years before it was eventually shut down as the result of an FBI investigation. Once Silk Road was shut down, crypto markets began to multiply due to the potential profit and the open market. Gilbert and Dasgupta (2017) estimated in early 2017 about 50 crypto markets were in operation.

Although numerous cryptomarkets popped up after the Silk Road shut down, Alphabay appeared to be the most profitable. Like Silk Road, Alphabay was an online marketplace, located in the deep web, designed to facilitate anonymous transactions between users. According to the FBI, Alphabay became operational in December 2014 (FBI, 2017). It took several months to gain the trust and support of the dark web marketplace; however, within six months, Alphabay was flourishing (FBI, 2017). At the time of the shutdown, Alphabay had over 200,000 users, 40,000 venders, and 250,000 drug products and toxic chemicals listed for sale (FBI, 2017). To put this in comparison, in 2013, when Silk Road was shut down, it had about 14,000 listings for illicit drug products (FBI, 2017). The number of vendors advertising for heroin and Fentanyl was 238 and 122, respectively (FBI, 2017).

Some including the attorney of Dread Pirate Roberts, aka Ross Ulbricht, the founder of Silk Road, argued that Silk Road provided a "safe" environment for drug users

to purchase products. Essentially, the argument holds that Silk Road eliminated the drug dealer/drug user relationship. As a result, drug users were provided an avenue to purchase drugs without traveling to a shady area of town, establishing connections with drug dealers, etc. However, the counterargument holds, Silk Road and other crypto markets result in the "amazon" effect. Primarily, the ease of purchase appeals to consumers. Law enforcement professionals argue that many crypto market customers may never have purchased a drug if it wasn't for the cloak of anonymity "guaranteed" through TOR and bitcoin.

Barratt et al. (2016) conducted an ethnographic study with 17 individuals who reported purchasing drugs on the Silk Road. The results indicated that at least "some" of the study population admitted Silk Road was the start of their drug use. One participant explained that he had no avenues to purchase drugs before the establishment of the Silk Road (Barratt et al., 2016). 14 of the 17 participants indicated an immediate increase in drug use, following the first purchase from Silk Road (Barratt et al., 2016). Notably, several participants reported their drug use "steadied" after the initial excitement (Barratt et al., 2016). Many of the participants reported finding a new crypto market following the closure of Silk Road.

Quintana et al. (2017) conducted a study in 2015, in which they sent four samples, marketed in a crypto market on the dark web as heroin to Energy Control for evaluation. The results indicated that each of the four samples contained products other than heroin. All four of the samples were found to contain Ocfentanil, a synthetic opioid derived from Fentanyl. A test conducted using lab rates yielded Ocfentanil is about 2.5 times more

potent than Fentanyl and 1,300 times more potent than morphine (Blanckaert, 2017). As with other fentanyl analogs, Ocfentanil I dangerously more potent than heroin.

Products marketed as heroin, which contain fentanyl analogs, are hazardous to users due to the increased potency. Proponents of crypto markets argue the substances offered are typically pure and potent, as a result of the rating scale. "Dealers" are concerned with their rating, so they are sure to be honest about the product they are marketing. However, this study demonstrates that substances sold on the dark web may not always be pure and could be cut or mixed with other substances.

Naloxone

The first part of this literature review was provided to demonstrate the prevalence, rapid expansion, and danger of the opioid epidemic in the United States. The remainder of this literature review will examine the currently available literature on the use of naloxone. The difference between getting an opioid from a trusted source such as a doctor and getting an opioid through any variety of illicit channels such as a street dealer or dark web can be the difference between life and death. As the number of overdoses continues to skyrocket, and China continues to infiltrate the drug market with synthetic opioids, the need for naloxone is stronger than ever.

Substance Abuse and Mental Health Services Administration (SAMHSA) published naloxone is an FDA approved medication used to prevent opioid overdoses. Amid a drug overdose, naloxone is often used as a last-ditch effort to block the opiate receptor sites and ideally stop and reverse the respiratory-damaging effects of an overdose (SAMHSA Naloxone, 2016).

Fairbairn et al. (2017) explained that there are four naloxone delivery methods that are currently on the market. These methods include: intramuscular via vial, intramuscular via an auto-injector (Evzio®), multi-step off-label intranasal spray, and a single-step nasal spray (Narcan) (Fairbairn et al., 2017). Resnick (2014) quoted a fire official who stated, "there is somebody who's on the ground, who's dead, sometimes they're blue, sometimes they're black, and you administer this stuff and sometimes in a minute or two or three they're actually up and talking to you" (p. 1).

In 2014, 47,055 fatal drug overdoses occurred in the United States, 61% (28,647) were attributed to prescription opioid analgesics and heroin (FDA, 2016). The FDA (2016) explained that the pathophysiology and critical response time of an overdose attributed to a legally obtained prescription opioid is comparable to an overdose, resulting from an illegally obtained opioid. Simplistically speaking, regardless of where/how the opiate is obtained, the response to an overdose will be the same. Research shows higher doses of opioids can cause respiratory depression to occur, affecting the oxygenation of the blood, which can lead to a reduction of oxygen for the brain and the heart (Boyer, 2012; FDA, 2016). The deprivation of oxygen from the heart and the mind will eventually result in death (FDA, 2016).

In most cases, respiratory depression can take up to 3 hours, and it can be reversed until mortality (Boyer, 2012). Naloxone is used in the wake of an overdose to reverse respiratory depression by "displacing opioids from the opioid receptor and block the binding of the additional opioids for 20 to 90 minutes" (Boyer, 2012). Notably,

depending on the amount and type of opiate injected, the user may reenter respiratory depression after the application of naloxone.

Although naloxone is currently the "talk of the town" and is debated, naloxone is not new, by any means. In the late 1990s, amidst the "heroin era," syringe needle access programs (SNAP) were initiated in cities such as New York to reduce the impact of sharing syringes linked to HIV and other infectious disease transmissions. Fairbairn et al. (2017) explained community-based programs partnered with SNAP and began dispensing naloxone to drug users, specifically those who inject drugs. These programs were found to be very successful in reducing heroin-related deaths.

Walley et al. (2013) conducted a study comparing the opioid overdose death rates in communities where overdose education and nasal naloxone distribution (OEND) were implemented to communities with no OEND programs. Communities, where OEND was implemented, saw a decrease in opioid overdose death rates. Notably, there is a myriad of other factors that could have impacted the reduction in opioid overdose deaths. However, this study adds support for the importance of community education and the potential positive effects of distributing naloxone.

Fairbairn et al. (2017) stated that in 2010, the United States saw a dramatic increase in heroin overdose rates. During the same time, the U.S. saw a decrease in the number of opioid prescriptions supplemented by an increase in the production of synthetic opioids. Although heroin overdoses are apparent and problematic, the current crisis is more complicated than the heroin era of the 1990s. Fentanyl, fentanyl analogs, and other clandestinely produced synthetic opioids are flooding the drug marketplace.

The potency of these alternative substances has had a devastating effect. Heroin users have always "gambled" with the purity/potency factor, which is considered an overdose risk; however, synthetic opioids drastically increase the risk of overdose.

The optimal dosage of naloxone depends on the amount of the substance injected/ingested, as well as the potency of the substance. This combination has proven extremely problematic in the current drug climate. Recent studies have found that a fentanyl overdose may require multiple doses of naloxone to reverse the overdose (Somerville et al., 2017; Sutter, Gerona, Davis, Roche, & Colby, 2017; Fairbairn et al., 2017). This need was demonstrated in British Columbia, Canada, in 2016. According to medical professionals and first responders, patients who reported smoking crack-cocaine, which was later determined to be furanyl-fentanyl, required notably high doses of Naloxone (Klar et al., 2016). Several patients require 3.0 mg of injectable naloxone, which is more than seven times the typical dosage of 0.4 mg. (Klar et al., 2016).

In 2014, the World Health Organization (WHO) suggested that individuals who have a strong chance of being present at the time of an opioid overdose should carry Naloxone (WHO, 2014). As opioid overdoses continue to ravage the United States, the need to educate users and the community on how to react in case of an overdose has become increasingly apparent. It is customary for medical facilities that administer opioid medication to carry naloxone (Wheeler et al., 2015). Additionally, ambulances and other medical transportation systems are typically equipped with naloxone. However, many argue it makes the most sense to provide addicts and family members with naloxone, which will allow them to respond quickly in the event of an overdose (Wheeler

et al., 2015). From the early 1990s to the present day, we have seen a notable increase in the programs designed to educate and equip individuals with the tools to handle an opioid overdose effectively (Wheeler et al., 2015).

The Harm Reduction Coalition (HRC) conducted a study in which they sought to identify how many naloxone kits had been distributed as of June 2014 May. They contacted, through an online survey, executives of 140 organizations that distribute naloxone kits. Such organizations included pharmacies, health care providers, rehabilitation facilities, etc. (Wheeler et al., 2015). Wheeler et al. (2015) reported from 1996 to June 2014; the 136 responding organizations provided 152,283 individuals with appropriate training and overdose kits, including naloxone. Of the 136 responding agencies, 109 collected overdose metrics; these agencies documented 26,463 overdose reversals, 8,000 of which occurred in 2013 (Wheeler et al., 2015).

The Legal Journey

Naloxone is characterized as a prescription drug; however, it is not classified as a controlled substance (van Dorp et al., 2007). Although classified as a prescription drug, naloxone has no potential for abuse and a low overall risk of harm (Davis & Carr, 2017). In recent years, both the Federal and State government have pushed to expand access to naloxone to equip laypersons better (Davis & Carr, 2017). However, numerous overdoses that have resulted in death are often viewed as preventable if naloxone was on hand for immediate application (Davis & Carr, 2017). Naloxone can be a potent, lifesaving tool; however, it must be administered as soon as possible to avoid permanent cell death and

other potential adverse effects (Davis & Carr, 2017). Time is of extreme importance when it comes to opioid over-induced respiratory depression (Davis & Carr, 2017).

Due to the impending clock and the prevalence of overdoses, numerous medical health associations advocate for the importance of equipping laypersons and addicts with take-home naloxone kits (Davis & Carr, 2017). However, even though naloxone is not a controlled substance, it is defined as a prescription substance and, therefore, typically requires the prescriber to examine the individual seeking the prescription before writing the prescription (Davis & Carr, 2017). Nevertheless, given the current state of the opioid epidemic, in recent years,' numerous states have adjusted the stringent guidelines, which prevented widespread naloxone distribution.

Davis & Carr (2017) explained that most states had disregarded the constraints which required naloxone to be administered only for use on an individual for which the prescribing doctor had an established prescriber-patient relationship. In 44 states, third-party prescription laws allow naloxone to be prescribed and distributed to any individual who may be present at the time of an overdose (Davis & Carr, 2017). Alternative means of distribution occur via non-patient specific standing orders (NPS). These orders are typically written to allow the dissemination of naloxone to any individual at risk of an overdose (Davis & Carr, 2017). NPS orders fall widely under the best judgment of the prescriber. Furthermore, in recent years, 32 states have enacted legislation that provides naloxone prescribers with criminal immunity for "state law violations to pharmacists that dispense naloxone as authorized by the law" (Davis & Carr, 2017, p. 183). Many states have removed some of the legal barriers to the prescribing and dispense of naloxone.

Good Samaritan Laws

As mentioned above, time is of the essence when it comes to responding to an opioid overdose. With a product such as naloxone available, one may assume that the majority of opioid overdoses may be preventable (Banta-Green et al., 2013; Davis, 2017). However, often, the individuals who witness the overdose have drug paraphernalia, under the influence of an illegal substance, or solely at the wrong place/wrong time and concerned about how they may be treated in light of law enforcement intervention (Banta-Green et al., 2013; Davis, 2017). These fears have prevented countless individuals from contacting the authorities in the wake of an overdose and may have delayed a potential lifesaving effort (Banta-Green et al., 2013).

Based on the information reviewed in July 2017, 40 states and the District of Columbia were enacting Good Samaritan legislation (Davis, 2017). Although the inner workings of each law differ by state, overall, the legislation is designed to offer individuals who in good faith contact authorities in the wake of an overdose, some sort of protection. Depending on the state, Good Samaritans may be granted protection from drug paraphernalia or illicit substances, as well as protection from probation or parole violations, and various other charges.

Price and Products

The FDA first approved naloxone in 1971 (Gupta et al., 2016). The rapid and widespread increase in opioid overdose led to the formulation of the auto-injector formula (Evzio®) (Gupta et al., 2016). The auto-injector formula allowed individuals with no medical training an easier route to deliver naloxone.

In 2015, the FDA again accelerated the approval process for a nasal-spray product designed to deliver naloxone. The nasal-spray, also known as naloxone, was intended to reduce the risk of administering naloxone by the untrained professional. As the theory of supply and demand would indicate, in recent years, we have seen steep increases in the cost of naloxone. Perhaps most significantly, Evzio®, the auto-injector version of naloxone, increased from $690.00 in 2014 to $4,500 in 2016 (Gupta et al., 2016).

Recent data indicate two nasal-spray doses of naloxone costs approximately $178 for government agencies, first responders, health departments, and other qualifying groups when they purchase directly from the manufacturer, law enforcement officer, or its authorized distributors (Evzio, 2018). The lack of competition in the marketplace, coupled with the growing demand allows retailers to raise prices continually. In recent years, states such as California and Vermont have enacted legislation designed to prevent unnecessary price gouging (Gupta et al., 2016).

Childs (2015) listed several roadblocks that law enforcement agencies may face in the implementation of naloxone policies. The first and perhaps most notably is the ever-increasing price of naloxone. The gravity of the potential expenses associated with equipping law enforcement with naloxone has resulted in backlash from the law enforcement community. Law enforcement agencies maintain that they do not have the funding available to implement naloxone programs requiring them to purchase naloxone and ensure officers are trained to administer the medication properly. Although there are cheaper versions of naloxone available, such as the syringe-based formula, law

enforcement officers in individual states are not authorized to administer the medication through injection, limiting the purchasing options (Childs, 2015).

The argument against the price of naloxone has continued to strengthen due to the continuous emergence of synthetic opioids. Synthetic opioids such as fentanyl and fentanyl analogs have been found to require a more potent dose of naloxone. In the past, the starting dosage of naloxone was recommended to be 0.4 mg; however, in recent years, it has been recommended to immediately start with a 2.0 mg dose (Prekupec et al., 2017). Prekupec et al. (2017) stated that there are known cases that have required 10 mg to 20 mg doses of naloxone.

Additional barriers to law enforcement implementation of naloxone policies include liability concerns, lack of Good Samaritan laws, and medical doctors who refuse to write a standing order for the dispense of the Naloxone (Childs, 2015). Since naloxone is a prescription medication, but not a controlled substance, first responders must be authorized to carry and administer the drug (BJANTTAC, n.d.). Typically, a licensed prescriber can issue a "standing order" to an entire department, which would allow first responders to carry and administer Naloxone (BJANTTAC, n.d.).

Commonly, the law enforcement agency and the collaborating health care agency sign a memorandum of agreement to legitimize the relationship (BJANTTAC, n.d.). New York was the first state to work directly with the Board of Pharmacy to simplify the process and enact legislation that allows law enforcement agencies to purchase naloxone directly from a wholesaler, eliminating the need for a prescription and a standing order (BJANTTAC, n.d.). In some states, law enforcement agencies have established working

relationships with EMT agencies to streamline naloxone training and purchasing (BJANTTAC, n.d.).

Adversaries of Naloxone

Many adversaries of naloxone distribution programs argue that by distributing naloxone kits to addicts, family members, and friends, we are essentially enabling addicts to abuse illicit drugs. Seal et al. (2003) conducted a study in which they surveyed a population of 82 San Francisco based drug users who reported experiencing at least one heroin overdose. An overwhelming 87% of the participants indicated they would be inclined to participate in an overdose training program to learn situational awareness and receive take-home naloxone (Seal et al., 2003). Thirty-five percent of the respondents indicated the distribution of naloxone might allow them to feel more comfortable when using heroin and subsequently use higher doses (Seal et al., 2003). However, to date, research has not demonstrated that overdose education and naloxone distribution programs OEND) lead to an increase in drug use for participants (Doe-Simkins et al., 2014).

Seal et al. (2003) found that if provided naloxone, 62% of respondents reported they might refrain from calling law enforcement in the event of an overdose. Notably, 30% of participants indicated they would leave the scene following the application of Naloxone (Seal et al., 2003). Due to the potency of many synthetic opioids currently on the market, it is essential to monitor an individual following the use of naloxone. In a qualitative study designed to gauge officers' perceptions on the overdose epidemic, in regard to naloxone, one officer stated:

I think it is a 'get out of jail free' card because if you take the naloxone, "Oh, you know what? Hey, I screwed up, and I fell off the wagon. Let me just take the naloxone, and I'll start over again. It gives them a way out (Green et al., 2013, p. 10).

Naloxone and Law Enforcement

As the opioid epidemic continues to worsen and overdoses become increasingly prevalent, states have begun developing new initiatives to combat the growing epidemic better. Community-based programs have been vital in equipping addicts, friends, and family members with opioid overdose training and an overdose prevention kit, including naloxone. Since the late 1960s, paramedics have been carrying doses of naloxone to be prepared for an overdose call. However, as opioid overdoses continue to increase, many states, along with the Federal Government, have stressed the importance of equipping other first responders with Naloxone (Davis et al., 2014). Since 2010, the National Drug Control Strategy has urged state and local authorities to implement policies that equip better officers and first responders with Naloxone (Executive Office of the President of the United States, 2016).

The Federal Government has also implemented several initiatives designed to combat the opioid epidemic. The Department of Defense (DOD) has begun to equip first responders stationed on military bases with naloxone kits and opioid overdose training (Executive Office of the President of the United States, 2016). Since 2013, the Department of Veterans Affairs distributed over 45,000 naloxone kits, 39,000 of which went to veterans (Executive Office of the President of the United States, 2016). The Food and Drug Administration fast-tracked the evaluation process of Narcan®, the nasal spray

version of naloxone, to provide first responders and laypersons an alternative to the injection route (Executive Office of the President of the United States, 2016). From the fourth quarter of 2013 to the second quarter of 2015, we have seen a drastic 1170% jump in the pharmacy distribution of Naloxone (Jones et al, 2016).

Since the release of naloxone in the 1960s, it has been a staple in hospitals, paramedic kits, ambulances, and other medical facilities that use prescription opioids (Belz et al., 2006). As the number of opioid overdoses and subsequent fatalities continue to increase, the need for law enforcement and EMTs to carry naloxone has become a controversial topic (Kitch & Portela, 2016). The debate is especially pertinent in rural areas where it may take a more extended period for a paramedic to reach the scene of an overdose (Kitch & Portela, 2016). In contrast, officers or EMTs may be closer in proximity and able to respond in a shorter period (Kitch & Portela, 2016). A study conducted in 2006 found that by equipping EMTs with naloxone, the time to reach the scene of the overdose would be reduced anywhere between 5.7 and 10.2 minutes (Belz et al., 2006). Belz et al. (2006) highlighted the potential efficiency that could be a result of utilizing EMTs to respond to overdose calls, rather than paramedics.

Kitch and Portela (2016) conducted an observational study examining the officer's experiences and outcomes when administering naloxone. The results indicated that within 48 hours, officers who had received training in overdose identification and naloxone application were successful in administering naloxone to four overdose victims. Kitch and Portela (2016) explained that although the initial results appeared to be positive,

equipping law enforcement with naloxone requires funding, internal agency communication, and consistent training.

As the government continues to encourage law enforcement agencies to equip officers with naloxone, adversaries cite potential liability charges as a deterrent factor. Davis et al. (2015) stated a review of the available research indicated no cases regarding law enforcement and naloxone administration.

The Danger for Law Enforcement Officers

In 2010, the Office of National Drug Control Policy (ODNP) stated: "naloxone should be in the patrol cars of every law enforcement professional across the nation" (The White House, 2013). With that said, each law enforcement agency has the autonomy to decide whether to equip officers with naloxone. Paramedics typically administer naloxone through injection; however, in 2015, the FDA approved a nasal spray, commonly referred to as naloxone. Naloxone allows police officers to deliver potentially lifesaving medicine through a nasal spray, subsequently avoiding the potential risk associated with needle exposure (Ray et al., 2015).

Green et al. (2013) conducted a qualitative study examining the officer's attitudes toward overdose prevention strategies. Green et al. (2013) found many officers considered it part of their job duties to protect the community and ensure public safety; however, many of the participants reported concerns regarding the additional responsibility of preventing overdoses. Additionally, many participants communicated feelings of helplessness due to the lack of treatment options available for addicts (Green et al., 2013). On the topic of law enforcement officers carrying naloxone, one supervisor

stated, "I know I don't want my officers giving people shots and pills. We get sued for enough stuff. Let people with some health training issue that" (Green et al., 2013).

Summary and Conclusions

The literature review related to opioid use/abuse and social identity was solely focused on law enforcement officers' roles in response to a suspected overdose. Law enforcement officers have been tasked to step-up to the front line in the opioid crisis. With the shift from prohibition to the implementation of harm reduction and social work philosophy, officers had to alter their approach to the law enforcement mission. Multiple databases were reviewed on Narcan/naloxone, opioids, and social identity theory as it related to law enforcement, precisely their responses. While there was limited research on the specific view from the law enforcement officer's perspective, no gaps were found.

Being tasked with carrying and administering Narcan (naloxone) during a suspected opioid overdose, law enforcement officers must negotiate their roles and responsibilities during a potentially hostile event. This study focused on examining the lived experiences of police officers and their roles during an opioid overdose. Using the social identity theory as a lens, we examined how law enforcement officers deal with intergroup relationships as well as how they viewed themselves in their new role (Ashforth, 2016; White et al., 2002; Stets & Burke, 2000).

This phenomenological study explored the lived experiences of law enforcement offices tasked with carrying and possibly administering anti-opioid medication (naloxone), which is a departure from their primary role as law enforcement to a differing role as an EMT. Social identity theory was the framework for understanding and

exploring the challenges to the officers' transitioning roles and how they view their identity.

Chapter 3: Research Method

Introduction

The following chapter provides a reminder of the studies purpose, the planned research design and rationale, the role of the researcher, the planned methodology, and any issues of trustworthiness. As previously stated, the purpose of the research was to gain an understanding of the law enforcement officer's perceptions of the mandated Narcan/naloxone policy as they negotiate the roles and responsibilities of both law enforcement officers and EMTs during a perceived opioid overdose. This study sought to present information regarding the lived experiences Jefferson County law enforcement officer faces during an opioid overdose and their unheard perspectives.

Edmonds and Kennedy (2013) noted that the qualitative method aims to reveal and understand phenomena within a particular context without attempting to infer any type of causation. For this qualitative phenomenological study, Colaizzi's descriptive phenomenological method was utilized (Morrow et al., 2015). Descriptive phenomenology reveals the essential structure of the phenomenon being investigated (Morrow et al., 2015). In 1978, Colaizzi developed a seven-step process specifically focused to provide rigorous analysis throughout, to remain close to the data (Morrow et al., 2015). Utilized correctly, the results will be a concise yet all-encompassing description of the phenomenon being studied, including validation from the participants (Morrow et al., 2015). To achieve the desired results, the process starts with rich first-person accounts of their experience through face-to-face interviews, as well as other ways that includes online interviews, and written narratives. Additionally, Colaizzi's

descriptive phenomenological method is valuable in areas where existing research is limited (Morrow et al., 2015).

In the case of law enforcement officers' lived experiences with Narcan/naloxone, this approach was employed to address the limited research on the topic, including interviews and observations. Often, qualitative research is used to pave the way for future quantitative analysis in which causation may be inferred (Edmonds & Kennedy, 2013). Law enforcement officers in Jefferson County, Alabama, have been responding to opioid episodes for many years. Lawmakers instituted a policy that required law enforcement officers to carry and employ Narcan/naloxone during perceived opioid overdoses. This research examined the perspectives of law enforcement officers and how they view the policy effects on their work identity. How has the philosophical change from enforcement to harm reduction impacted the officer's view of their identity under the current mandate? Social identity theory addresses individuals who categorize themselves as part of a group to experience positive emotions (Chattopadhyay & George, 2001). As it relates to social identity theory, how is the individual's identity affected by the policy changes that require law enforcement officers to carry and administer Narcan/naloxone, which has traditionally been a medical-type procedure. Due to the limited amount of available research as it relates to law enforcement officers' perceptions of using Narcan/naloxone, this study utilized a qualitative approach to develop a better understanding of the topic at hand.

Research Design and Rationale

The research method for this study was Colaizzi's descriptive phenomenological method with thematic-based analysis. The theory used in this study was social identity theory. Social identity theory addresses individuals who categorize themselves as part of a group to experience positive emotions (Chattopadhyay & George, 2001). Simon and Goes (2013) contend that a qualitative study is one in which the researcher collects data in the natural setting or environment. The participants had direct and personal experience of the studied phenomenon, and I tried to understand how the participant made sense of the phenomenon.

The descriptive tradition of phenomenology originated with the writings of Husserl and was further developed by Merleau-Ponty (Sundler et al., 2019). Husserl described lived experiences as a lifeworld approach, which is crucial and is the starting point for understanding (Sundler et al., 2019). Understanding of lived experiences is linked to the idea of intentionality of consciousness (how meaning is experienced; Sundler et al., 2019). It is proposed the intentionality of consciousness is directed towards something when we experience the phenomenon, it has meaning for the individual, can be described and does not require interpretation (Sundler et al., 2019).

Role of the Researcher

A significant concern with any study is bias, the potential bias of the researcher. As the primary data collector and sole data collecting tool, it was crucial to address the potential bias that may have presented itself in the research. Any researcher who can identify their personal views and distinguish personal ideologies would be more

successful in hearing and digesting the behaviors of the interviewees (Dibley 2011; Fields & Kafai, 2009). Although I have a degree in criminal justice and a background in military law enforcement, I did not have any experience with Narcan/naloxone or any personal or professional relationships with the proposed participants. Additionally, there were no foreseen conflicts of interest with my work environment or power differentials because I did not live or work in Jefferson county. I also did not provide incentives for participants and none were provided.

Clarification of research bias and detailed and thick description were the verification methods used in the study. Clarification of researcher bias was critically essential in the proposed research. The reader needs to understand the researcher's position concerning the topic (Spiers et al., 2018). I am a former military law enforcement member, however, never civilian law enforcement. I had no previous experiences with drug use, opioids, heroin, or Narcan/naloxone. I was conscious of his experiences and bracketed them accordingly.

When researching the lived experiences, openness to the lifeworld and the phenomenon must be emphasized. Therefore, I maintained the attitude I do not know the participant's experience. Also, I am trying to understand the phenomenon in a new light as to see things previously unseen. This was accomplished by setting aside previous experiences, assumptions and continuously questioning. Much like bracketing, I refrained from positing my sense of reality onto the participant's experiences (Sundler et al., 2019; Van Manen, 2017). I also recognized his personal beliefs, theories, or assumptions as to not restrict one's openness. Any pre-understanding or prejudice in

interpreting the studied phenomenon, could have led to a description of the researcher's own experiences, instead of the participants' experiences (Sundler et al., 2019).

Methodology

The research design for this study was Colaizzi's descriptive phenomenological method with thematic-based analysis. Thematic-based analysis is a method of analyzing qualitative data, usually applied to text such as interview transcripts. The process for this study included collecting primary data through one-on-one interviews of law enforcement offices, who have experience with both Narcan/naloxone and opioid overdose response. The focus was on the officer's description, perception, and lived experiences, which distinguishes it from a case study design (Bernard, 2013; Stake, 2006; Yin, 2017). Also, the design was not ethnographic since data collected was not reliant on a specific period (Sangasubana, 2011).

It was not a grounded study because the purpose was not related to generating a new model or theory. Finally, the study was not narrative since the goal was to understand and describe a group of law enforcement officers' perceptions and understanding of their experiences with Narcan/naloxone. Narrative research focuses on one or two individuals and re-telling their stories. Phenomenological inquiry uses an open-ended, emergent design, that document details and events that chronicle the law enforcement officer's personal experiences in the field (Roulston, 2011). Narratives accounts offered by the sample of law enforcement officers were audio and video recorded digitally and hand-transcribed documenting the exact words for contextual perspective later in the analysis (Al-Yateem, 2012). Data was be collected through semi-

structured interviews, and participants met in a neutral location such as a public library or community meeting room. The selection provided a modicum of privacy and comfort to the individual (Jacob & Furgerson, 2012; Mikėnė et al., 2013). The focus of this study was on an intense and dynamic situation. Using a descriptive phenomenological approach, I was able to provide firsthand depictions of these events described by the individuals who were directly involved. This level of detail and exposure should help others comprehend how this phenomenon has affected the lives of the people who face the opioid crisis daily.

Participants

The target population for this study was law enforcement officers in Jefferson County, Alabama, who are mandated to carry and administer naloxone as part of their routine duties. All participants were current/active law enforcement offices in Jefferson County, Alabama. All participants had firsthand knowledge and experience with Narcan/naloxone. All participants had firsthand experience with an opioid response.

Jefferson County, Alabama is the densest populated county in the state of Alabama and includes the state capitol city of Birmingham. The area is approximately 1,124 miles with a population of 659,197 personnel (Jefferson County Commission, 2019). The study used participants from the different Jefferson County law enforcement agencies, urban or rural, who implemented the harm reduction policy that requires their officers to carry and administer Narcan/naloxone.

The phenomenological approach only required a small group of participants who meet the study parameters. However, the sampling strategy was attaining enough

participation to achieve data saturation. Fusch and Ness (2015) noted data saturation occurs once the researcher can no longer obtain new information or when the data collected could replicate the study without further coding. Conversely, larger sample size does not automatically ensure data saturation will be reached (Burmeister & Aitken, 2012). The sample size was instrumental, and it is essential to be mindful, and the selection of willing participants helps best fit the study's goals. For this study, I asked for volunteers among the Jefferson county law enforcement population. I collected data until saturation was reached.

Purposeful sampling was employed to ensure participants had at least one year police experience, and they had administered Narcan/naloxone at least once during an actual opioid overdose event. Purposeful sampling occurs when the researcher deliberately selects participants to provide quality information that cannot be gained from other sources (Maxwell, 2005). Before officially contacting the police officials through their Public Relations Manager/Public Information Officer, I worked through the IRB approval process. Official contact did not occur until after I received IRB board approval #09-24-20-0444856. I used the supplied recruitment flyer in Attachment A that provided a brief overview of the study and contact information. The goal was to get the flyer disseminated to the law enforcement officers in the different Jefferson county departments. Including my contact information eliminated the need for management involvement and provided confidentiality to participants or inquirers.

Instruments

It was necessary to approach each participant as a single entity while remaining true to the overarching purpose of the study. The plan for the study was to conduct semi-structured interviews with each voluntary participant. In order to accomplish this, I employed an interview guide to ensure the same questions were asked of each participant. An interview guide is a list of questions created by the researcher based on the research question (McNamara, 2009; Patton, 2003). The participant guided the interview as they provided their inputs, passion, and experiences. Follow-up questions were asked as well as clarifying questions regarding participant's opinions and experiences.

Primarily, data collection was supposed to be face to face interviews; however, with the states Coivd-19 protocols including the required social distancing rules, video conferencing and telephone interviews were utilized (i.e., Skype, FaceTime, Zoom, etc.). Additionally, I used a variety of mediums including a laptop, iPad, paper, and writing utensils for notetaking. I tried to ensure the participant and location were comfortable, and I made myself available to meet the participants' schedules. Because my participant pool was all law enforcement officers, the plan was to meet during non-work hours in a neutral location (library, community meeting room, etc.). I tried to ensure the participant and location are comfortable, and I made myself available to meet the participants' schedules.

At the conclusion of the interview, I thanked each participant for their valuable insights and openness. I reiterated the terms of informed consent and reassure them that all transcripts and recordings of the interview would be destroyed when no longer

needed. Once the participant departed, I made time to complete my field notes regarding the individual's demeanor or other observations.

Procedure/Data Analysis

As the sole data collector, I was responsible for collecting and maintaining data throughout the study. In qualitative research, the researcher must protect the participants' identity. For this study, I made sure the participant's identity remained confidential. No identities were disclosed and codes to identify each participant were used (i.e., Participant 1, Participant 2, etc.). Before contact was made with the participants, the final step was approval from the IRB.

Before all interviews, participants received either an email of text message with a consent form and confirmation of the date, time, and location. They were reminded their participation was voluntary, and they could terminate the interview at any time. All participants completed the consent form before the interview, and we discussed any questions or concerns related to the interview process. Before any recording, I obtained verbal permission from each participant to ensure they are aware and comfortable using any recording devices (Hancock & Algozzine, 2017). Stuckey (2014) noted that by recording the interview, the researcher is free to fully concentrate on the conversation and responses of the interviewee rather than capture any notes. Each interview was recorded using one or more of the following devices, a Livescribe Echo smartpen, iPhone, or screen captured. Interviews were transcribed by me in their entirety, making note of tone and inflection to garner the full picture. After each the interview was complete, and the data was transcribed, I begin the coding process.

Coding

The process of coding allows the researcher to break up the data into small portions and then reassemble it to express the narrative (Saldana, 2016; Stuckey, 2015). I will use descriptive coding to assign labels to the data in order to summarize in a word or short phrase (Saldana, 2016). The premise of coding allows the researcher to connect similar data for interpretation and association (Chowdhury, 2015; Saldana, 2016; Stuckey, 2015). Descriptive coding is appropriate for most qualitative studies and is well suited for beginning qualitative researchers (Saldana, 2016). The data included in all coding was interview transcripts and field notes as applicable. Analyzing that data from each interview informed the questions for the following interview. Part of the coding process was identifying nodes and developing themes from each participant interview.

Trustworthiness

This study relies fully on the participant interviews and their truthfulness is paramount. Although I was not able to control the participant's honesty, I ensured the questions and atmosphere of the interview location lends itself to a quality interview. To ensure the collected data was quality, I tried to build trustworthiness with all participants. Anney (2014) stated that trustworthiness includes four criteria: credibility, transferability, dependability, and conformability.

To build credibility, I maintained contact with each participant and completed member checks to ensure their portion is believable and accurate. Member checks allowed the participant to review a summary of their interview, granting them the opportunity to make comments or corrections. I provide rich, thick descriptions

developed from the participant's own words. Triangulation was not used, as there will not be any organizational information available.

Transferability refers to usefulness and relevance of the finding in a study and there is no guarantee no matter the method used. In qualitative studies, it is challenging to achieve transferability, but not impossible. However, providing detailed descriptions and quotes helps build towards transferability (Sundler et al., 2019). Additionally, all interviews were recorded to ensure verbatim transcripts were available.

Dependability requires the researcher to make their data available for other researchers (Cope, 2014). When another researcher can replicate the findings and use them in a similar setting, the study is considered dependable. I created a USB flash drive to keep track of my notes, documents, and other records. Confirmability is similar to dependability as it relates to audits, documentation, and notes. Cope (2014) noted that researchers could enhance conformability by ensuring that the collected data is only the participants' responses and not the researcher. This leads to reflexivity, which acknowledges the researcher as a participant in the process and not just an outsider/observer (McNair et al., 2008; Spence, 2016). As the sole data collector, I maintained a journal to note my thoughts, observations, and interpretations. I made these entries after the completion of the participant interviews.

Verification of Findings

The proposed research findings were verified instead of validated. The verification of findings helps maintain the spirit of a qualitative study (Spiers et al., 2018). The verification process involved a minimum of two (of the eight) recommended

steps. The final form of verification involved detailed, thick descriptions. The purpose of a detailed description allowed the reader to transfer information to other settings and to determine whether the findings can be transferred based on shared characteristics (Spiers et al., 2018).

Summary

The opioid crisis has caused devastation across the country and around the world. Federal, state, and local officials have implemented policies to combat the ever-growing epidemic. As it relates to law enforcement's roles, desperation for action has trumped accurate, evidence-based research on the results. Advocates of the harm reduction policy argue there is no detriment equipping law enforcement officers with naloxone. Hyperbolic statements like "it saves lives" and "if it saves one life, it is worth it" are made in support of this position. However, counterarguments can be made as to why law enforcement officers are tasked to carry Narcan/naloxone and not epi-pens.

Unfortunately, the opioid crisis is not showing signs of improvement, and the role of law enforcement will likely continue to expand. To date, research has not addressed law enforcement's perceptions of this role change. More specifically, this study sought to add to the limited research regarding law enforcement officer's perceptions of carrying and administering anti-opioid medications. A significant amount of information regarding opioids, pain reduction, and naloxone is discussed. The focus of the study was the perceptions of the law enforcement officers who are tasked to carry and administer the anti-opioid medication Narcan/naloxone.

This qualitative research provided a view into the officer's day-to-day experiences with Narcan/naloxone and opioid responses. The data collected garnered a better understanding of the policy change and how it affects the participants. The result could aid law enforcement officials and potentially alter their approach to drafting and implementing future anti-opioid policies. Additionally, officers' that support this initiative can produce a positive social change through officers making more compassionate and appropriate decisions by understanding their direct impact on the lives of the individuals in crisis.

Chapter 4: Results

Introduction

This qualitative study was designed to examine police officers' lived experiences and their roles during an opioid overdose. In this chapter, I will present my findings with a strong emphasis on the participants' direct quotes. This method will allow the true voice of the participant to resonate. The data collected in this study was derived from semistructured interviews with each participant. The findings presented in this chapter are solely based on my analysis of the interview transcripts. To ensure each research question was addressed, I created an interview guide that helped me focus on the research question. Having the interview guide as support allowed the interview to proceed organically. The interview guide helped keep the conversation on track when the conversation required guidance. However, all the interviews flowed naturally and covered the research question with minimum probing. My knowledge and interest in the topic along with, the participants' candor and passion for their job, allowed for a natural and thorough discussion. This study's sample size consisted of 12 law enforcement officers, with varying degrees of experience, from Jefferson County, Alabama.

Setting

All 12 participants were interviewed remotely due to the state-wide safer at home order issued by the governor and social distancing requirements. Five participants were interviewed using the Zoom video conferencing application, the remaining seven completed telephone interviews because of multiple reasons including no computer access to zero desire to use the Zoom application. The individuals who agreed to

participate via Zoom were sent a meeting notification that included a hyperlink for the agreed date and time. The remaining seven were contacted via text message to coordinate a meeting time. Each participant freely selected their interview location, and I explained the process would take approximately 1 hour, and it would be best if they were alone. After introductions, I reminded each participant that they were not required to participate, and they could stop the interview at any time. I asked if they reviewed the consent form, and I made a specific point to remind each participant the interview was voluntary. Their identity would be kept confidential. If needed, they could contact the 24-hour crisis referral service listed on the consent form. Once they acknowledged these things, I asked if they could verbally consent, all 12 verbally consented. Ten of the participants completed their interviews at home; one completed his interview in his vehicle, and one spoke with me in a work conference room to ensure a quality Wi-Fi connection.

The methodology employed was Colaizzi's descriptive phenomenological method with thematic-based analysis. In order to examine the topic, the following research question was created:

Research Question 1: How do law enforcement officers, who are mandated by policy to carry and administer naloxone, perceive this policy change as it relates to their day-to-day work identity?

Demographics

The sample in this study was comprised of law enforcement officers with experience ranging between 5 years and 22 years in law enforcement. There were 12

volunteer participants, all participants had been certified to carry Narcan/naloxone for a minimum of 1 year. All participants had deployed Narcan/naloxone in a real-life situation at least one time. These participants were all active officers from Jefferson County, Alabama, with firsthand knowledge and experience with multiple opioid responses. Table 1 gives a brief description of the 12 individuals who participated in my research project. Participants are identified with the pseudonym of participant followed by the numerals that randomly indicate the number of participants.

Table 1

Participant Demographics and Characteristics

Participant #	Sex	Ethnic Group	Marital Status	Years of Police Service	Years Carrying Narcan
Participant 1	Male	White	Married	5	2
Participant 2	Male	White	Married	22	4
Participant 3	Male	White	Married	15	4
Participant 4	Male	White	Married	10	3
Participant 5	Male	White	Married	8	2
Participant 6	Female	White	Married	5	2
Participant 7	Male	White	Married	5	2
Participant 8	Male	African American	Married	11	4
Participant 9	Male	Latino	Married	6	1
Participant 10	Female	White	Married	5	2
Participant 11	Male	White	Married	7	4
Participant 12	Male	Latino	Married	3	1

Of the 12 individuals who agreed to complete the interview, seven were White males, two were White females, two were Latino males, and one was an African American male. Of the 12 participants, 10 were still on active patrol, one was a patrol supervisor, and one was now working in the evidence room. The participants in this study were chosen based on their experience level. Purposeful sampling was employed to ensure each participant had an experience related to the research topic. All 12 participants completed the interview without incident.

Data Collection

The data collection consisted of one-on-one interviews with each participant, five via the Zoom video conferencing application and seven over the phone. All the participants were law enforcement officers from Jefferson County, Alabama. Once an officer was selected to participate, they were contacted via email or text message to schedule an interview time and date. All participants were asked to choose the interview date and time; their location was of their choosing. The interviews lasted a minimum of 38 minutes to nearly 90 minutes. After the interview, I immediately summarized what I deemed key points, reviewed notable statements, and noted any pertinent observations. All the participant interviews were transcribed using Otter.ai, a speech to text transcription application. At a later date, the transcribed interviews were reviewed by me, and I corrected any transcription errors manually. Each Zoom interview was a video teleconference; recording started once the participant gave their consent to record. The phone interviews were recorded via Otter.ai. I repeated the same process depending on

the interview style. There were no notable situations or mishaps which would have altered the data collection process.

Data Analysis

Before the interview, I provided a brief overview of the research and the purpose of the study. During the interview, I wrote down key terms and notable content; the interview was recorded entirely once consent was given and later transcribed. Immediately following each interview, I drafted a summary of the meeting, including my reactions, key moments, any notable body language, etc.

One of the more rigorous parts of qualitative research is developing themes. The first step is to become well acquainted with each transcript. To do so, listened and watched each interview, ensuring the transcription was 100 percent accurate. During my reviews, I would highlight or note any memorable statement or comments that caught my attention. This process helped me develop a deep understanding of each transcript, and I referred to any notes related to that interview. This process allowed me to develop a deeper association between the conversational cues and behaviors I noted and the transcript's verbiage.

To develop the themes unique to the research question, I read the section of the transcript related to the same interview question numerous times to identify repetitive words, themes, comments, etc. This process was repeated for each interview question. Although each participant spoke about a different experience and provided their individual opinions, there were clear and decisive similarities between their experiences and thought process. Analyzing these experiences allowed for the creation of

overarching themes, consistent throughout the interview transcripts. These themes are explored at a deeper level in the forthcoming section. The identified themes include duty to serve, saving life, job hazard, and frustration.

Evidence of Trustworthiness

Anney (2014) noted trustworthiness includes four criteria: credibility, transferability, dependability, and conformability. I established credibility by maintaining contact and implementing member checks with all participants. At the conclusion of each interview, I informed the participants they would receive a transcribed summary of the interview. I asked them to review the document and ensure the information contained accurately reflects their thoughts, ideas, and opinions. Each participant was sent an email, and all replied with not issues or corrections. Additionally, I ensured the participant had my contact information.

Transferability allows other researchers and readers the information on the study process to allow the study to be duplicated. To achieve this, I provided detailed descriptions of my process, direct quotes from the participants, and the research methodology (Sundler et al., 2019). Additionally, all interviews were recorded to ensure verbatim transcripts are available.

Cope (2014) noted dependability requires the researcher to make their data available for other researchers. For this, all the related data for this study is saved on a secure drive. Any manually generated notes were inserted into the transcript document and transferred to the secure drive. Additionally, researchers could enhance conformability by ensuring that the collected data is only the participants' responses and

not the researcher (Cope, 2014). Reflexivity acknowledges me, the researcher, as a participant in the process (McNair et al., 2008; Spence, 2016).

To achieve conformability, eliminate personal feelings, and ensure accurate data collection, I conduct semi-structured interviews using an interview guide. The researcher created the interview guide questions based on the research question (McNamara, 2009; Patton, 2003). Employing the interview guide allowed me to guide each interview while allowing the conversation to flow naturally.

Results

This study was developed to examine police officers' lived experiences and their roles during an opioid overdose. The interview framework was developed to create a conversational approach to each participant interview and establish a positive rapport. The interview guide's questions allowed me to establish a rapport while capturing important data on the law enforcement officer as it relates to their path into the career field, their view of the job overall, and their normal activities. These questions laid the groundwork for capturing their lived experiences and perceived role during an opioid overdose. The goal was to identify any underlying feelings of loss of importance as law enforcement officers are asked to perform non-police duties. Understanding the participant's view provides insight into their social identity and belonging. The participant interviews, conversational cues, and observation made during the process yielded the following themes: duty to serve, saving life, job hazard, and frustration. Table 2 shows how the identified themes relate to the interviewed participants.

Table 2

Themes

Theme	Participant	Text Segment
Duty to Serve	P1, P2, P3, P4, P5, P8, P10, P11	Respectable; Honorable; Always wanted to be a police officer; Always dream of being a cop; I followed in my Father's footsteps; I wanted to be like my father's friend who I would see in his police uniform; My father retired from this department; Great job with a lot of freedom; I love being a police officer because of the freedom; I dreamed of being in the military or being a police officer; I felt being on the police force was a great thing
	P1, P2, P3, P4, P5, P6, P8, P9, P10, P12	Only supervisors were allowed to carry Narcan and they offered me the opportunity to carry; Only sergeants carry, and they asked me; I was not a supervisor but the gave it to me; I was the only female in the training class; I was proud to be nominated for the class; I wanted the opportunity; I carry for my K9; I am the only female on my shift; It looks good on me to carry
	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12	It's just another tool in the toolbox; It is a good tool; It is a great tool; It is another tool in the toolbox; It is a valuable tool; It is an unbelievable tool
	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12	I like helping people, I always want to help people, I am out here to help people, I just want to help where I can,
	P1, P2, P3, P4, P5, P6, P7, P8, P9, P12	I just want to keep people safe

Theme	Participant	Text Segment
Saving Life	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11	It is simple to use; Narcan is simple; It's really easy to use
	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11	The fire department/EMT taught the class; The health department came in and trained us; It was just like CPR training; We do our refresher training with our CPR class
	P1, P2, P3, P4, P5, P7, P8, P9, P10, P11	The training was really good; The training was great; The training put me at ease; It was just like the training
Job Hazard	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12	You have to be careful once you give them the Narcan, they usually come up fighting; They are combative once they get narcanned; They don't know what happened, so they come up swinging
	P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, P11, P12	Sometimes you are the only person on scene and it could be two or three people around; Did I miss something; I was the only officer on scene; Most times on Narcan calls the individual is not alone; Usually they have buddies with them so you have to be careful; I've seen junior officers rush into the scene ignoring all their safety procedures; The junior officers are so excited to have Narcan, the blow into the room so they can do what they were trained for
Frustration	P1, P2, P3, P6, P7, P8, P9, P10, P12	I feel like we go to the same houses every other weekend; It seems like we are narcanning the same people all the time; I get angry when I see someone fighting for their life and this jughead is shooting up; They act like it is no big deal and say they will just do it again;
	P1, P2, P3, P5, P6, P7, P8, P9, P10, P11, P12	Some folks get angry when you give them Narcan; The guy was mad I ruined his high; We had to force them to go to the hospital; We have to force them to get in the ambulance; We have to force them to go with EMT;

Additionally, there were notable comments made that did not fit under the aforementioned themes.

Duty to Serve

All 12 participants viewed their law enforcement career as respectable, which allowed them to make a positive difference in the community they serve. One participant noted he had drawings from grade school depicting himself as a police officer. Another participant noted, his father was a police officer, and he was serving in the department his father retired from. Nine of the participants pursued careers other than law enforcement before joining the force. Six of the participants stated, they considered joining the military and four served in the Armed Forces before getting into law enforcement. All twelve participants indicated they agreed with the police to carry Narcan/naloxone, however, one noted he was initially hesitant. He stated, “I saw the medics give a guy overdosing a shot and I thought that was going to be on me now, I didn’t want to do it.”

Each specifically noted it was not mandatory for them by the policy; they were asked and agreed. Several participants reiterated, "We actually don't have any type of requirement to carry”. One participant specifically noted, “I look at it as it looks good on me, and I like helping people." Two of the more junior officers noted they were asked to carry Narcan when the shift supervisors and sergeants were only carrying it. One participant stated, "Our shift didn't have a supervisor, and they asked me because I had the most experience." Additionally, ten of the 12 participants stated they're just trying to keep people safe. All participants maintained an overall view that Narcan/naloxone is just

another tool in their toolbox that allows them to help people, and helping people is their job.

Saving Life

All participants were asked their training requirements and their thoughts on administering Narcan/naloxone as a law enforcement officer. All eleven of the twelve participants stated the use of Narcan is simple. The fire department trainers trained all but one of the participants. One participant noted, the Narcan was demonstrated by one of his fellow officers at roll call and they were given written instructions that appeared to be copied from the Narcan container. The other 11 participants completed initial training, which consisted of an eight-hour course. Part of the class included PowerPoint slides explaining what Narcan is, how it works, and how to administer the drug correctly. The final portion is a practical application on a CPR-type dummy.

One participant noted the importance of application speed. He stated, "I learned the hard way not to "slam it" if you do, they will vomit all over the place." Another participant noted, "you are supposed to administer 50/50; I thought I did it wrong my first time because I gave her one-fifth in one nostril and the rest in the other." “One participant stated, “it took me what seemed like a long time to actually give the Narcan my first time, I was so nervous that I had to read the instruction twice before I help her.” Eleven of the twelve participants noted annual training/certification is completed in conjunction with CPR training/certification. All participants also noted, the fire department and EMTs are routinely dispatched first and often are on scene first. One participant noted, he was shocked he got to the scene first. In case, law enforcement does arrive on the scene first,

the individual is turned over to fire/EMT for further treatment and transfer to a medical facility. One participant stated:

> When we started carrying Narcan, our role changed; now, we are a provider. It is our responsibility to try to get there as soon as possible to provide this medical assistance to this person in an attempt to save their life.

This officer noted that the policy changed to allow an officer to run "code" during medical assistance call once officers were equipped with Narcan/naloxone. "Code is running lights and sirens." Prior to carrying Narcan, law enforcement officers were not allowed to run code to medical assistance calls.

Job Hazard

Each participant was asked if they had any fear or concerns with public backlash if something went wrong after administering Narcan. Three of the twelve participants stated, no matter what happens, they will be viewed negatively. One participant stated, "if you give someone Narcan and they die, they were dead anyway, you just sprayed liquid in their nose, so any anger is misplaced." Eight of the twelve participants were more concerned with the individual being combative after being "Narcanned." Several of the participants noted, some individuals have no idea what is happening, and they come up swinging. One participant stated, he is always thinking, "did I miss something" with concern for his surroundings. During his first Narcan application, one participant noted he was the only officer at the scene, and the overdose victim was lying on the floor, and his friend was watching. With that visual in mind, another participant stated:

> My only concern is the more junior officers are more worried about administering Narcan, and they are not thinking about making the area safe, the scene safe. Chances are they have friends with them who are not happy with your presence, but you're more worried about getting their buddy some Narcan.

This participant further explained he feels a change with the younger officers. He noted:

> I've seen and heard junior officers when they hear that overdose call; they get there as fast as they can, they ignore all their safety procedures, and they blow into the house and run-up to this unconscious person and pop that Narcan as fast as they can because they want to help this person. They want to use this Narcan; they want to do what they're supposed to do, what they trained for. But they ignored every safety procedure, every officer safety procedure on the way there.

He stated he had not seen this from a senior officer standpoint, just the junior officers.

> They are excited about having the Narcan, and they get a call for medical assistance; they run code and blow into the room and hit the individual with the Narcan because that is what they have trained to do.

Frustration

Ten of the twelve participants expressed a feeling of frustration as it relates to repeat responses to chronic users. One participant noted on one of his earliest responses to a Narcan call, the overdosed individual came back and was angry they had ruined his high. The officer went on to state that 15 minutes later, he had to assist the fire department with a dying cancer patient. He stated, "here she is fighting and doing everything she can to live, and I was like, man, we got this jughead over here shooting up

and don't give a crap about his life." He further noted, it took some time for him to adjust to situations like this. Another participant noted on his second Narcan experience, it made him mad, stating:

> The guy overdosed, we went into his house, we gave him Narcan, and he woke up and did the same old stuff. He didn't want to go to the hospital; we had to force him to go to the hospital. I would usually follow up with these people at the hospital 30 minutes later, just to chit-chat because they can't go anywhere. He literally looked at me, and he was like, man, this ain't no big deal, I'll overdose again, you should have let me die.

The officer told the individual it is his job to help; it is his job to save his life. The individual stated, "I'm gonna do what I do no matter what you do, you can save me every day, and the following day, I'm gonna use heroin again." Another participant noted he is "50/50" on the fence about carrying Narcan/naloxone, stating:

> If I wanted, I could give it back right now, but I've seen drug use in my family, and I try to give a pep talk or point you in the right direction, but if they don't want to stop, it is the same with alcoholics, it is the same with people speeding up, and down the street, you can give as many tickets as you want, but some people they just really don't care, they just keep doing it.

Another officer stated:

> Part of the job of being a police officer is helping people in situations of need, but I learned, and you know I have family members who are addicts, you're never going to help someone until they want help. Parents can spend thousands of

dollars sending their kids to and relatives to rehab, but if that person doesn't want it, it's never gonna happen. Unfortunately, a lot of times, it is necessary for them to go to jail because a judge can order rehab, a judge has the power to mandate things a police officer can't. Basically, do you want prison, or will you submit to rehab.

Summary

The research quest in this study yielded an array of responses supporting law enforcement officers. Overall, the participants hold a strong sense of duty to serve, do whatever it takes to help people, and keep them safe. Universally the participants believe Narcan is a valuable tool that saves lives, and all carry Narcan by choice, not mandate. The more senior officers have a growing concern for job hazards, with the focus seemingly shifting from officer safety to Narcan deployment. With the number of repeat users, there is a growing level of frustration among all the participants. However, having a firm belief in their immediate leadership and trust that the decisions being made are best for the department and community. Chapter 5 provides a review of the study results, limitations of the study, and recommendations for future research and social change implications.

Chapter 5:

Introduction

The purpose of this study was to obtain the firsthand experiences of law enforcement officers who are required to carry and employ Narcan/naloxone during a perceived opioid overdose. I hoped to provide the participating officers the opportunity to share their stories and experiences. The study examined the negotiation between the primary roles of the law enforcement officer and assumed the posture of a medical technician when responding to an opioid overdose. This chapter includes a discussion of all the major findings.

Interpretation of the Findings

While each officer's personal experiences, perceptions, and professional careers differ, each of the four identified themes applied to each officer's experiences. Additionally, the identified themes go beyond the deployment aspects of their Narcan/naloxone experiences. Still, they expose the deep dedication to the law enforcement officer's role and true concern for community safety. Responding to an opioid overdose call is a very dangerous scene for the responding officer, and they must switch from their natural state and perform a potentially life-saving procedure. During Narcan/naloxone's application, when the officer is on the scene, it is challenging, if not impossible, for them to maintain a posture of guardian/protector. Although the application of Narcan is simple, it requires a focus on the downed individual, and the officer is vulnerable. An officer on patrol is normally alone; all the participants patrolled alone except the canine officer, who had a patrol dog. Nevertheless, all participants

conveyed a strong sense of duty and a desire to serve with a seeming acceptance of the dangers.

Duty to Serve

The study concluded that each officer interviewed believed they have a duty to serve. When asked their thoughts on the requirement for law enforcement officers to carry Narcan, they all had a similar response. First, there is no organizational requirement for an officer to carry Narcan, it is offered to select officers, and all 12 participants had agreed to carry Narcan. Secondly, each participant conveyed in their own words a desire to be of service to the community. Purviance et al. (2017) conducted a study of law enforcement officers' attitude towards Naloxone training, noting the results showed law enforcement officers were receptive. Smyser & Lubin (2017) noted in their study Pennsylvania police chiefs either agreed or strongly agreed to the benefits of the Naloxone programs. There is a general acceptance of Narcan/naloxone training and use within the law enforcement community in both these studies. Nationwide, the opinions towards drug users, the legal policy, treatment options vary; however, the availability is viewed as a benefit.

Saving Life

Although the 12 participating officers are not from the same department, 11 of the 12 received initial training from fire department personnel. The training was described using words like easy, straightforward, and thorough. All recertification training was held in conjunction with the CPR training. Only one of the participating officers stated he was given a demonstration of the Narcan during roll call. All officers, during their

interviews, described Narcan as a tool. Eleven of the 12 participants felt prepared and capable during their first Narcan deployment. One participant did note his hesitation during the first application.

Much of the literature on this subject conveys the same idea, Narcan is a tool, easy to use, and officers will be trained hand-in-hand with CPR training (Kenyon, 2018). Ray et al. (2015) also conducted a study that gauged law enforcement officers' attitudes towards naloxone training (intranasal). The results of this study showed the training was not difficult, and the properly trained officers felt using intranasal naloxone would be relatively simple.

Job Hazard

Each participant was asked what reservations if any, they had about administering Narcan/naloxone. Eleven of the 12 participants clearly stated they did not have any reservations. One participant, who was a patrol supervisor, stated concern for junior officers. When asked about reservations due to public backlash, they all stated they did not have any; they universally noted that they would be painted in a negative light no matter the interaction with the public. Six of the participating officers noted various degrees of social media backlash when the department announced officers would deploy with Narcan. The general sentiment from the dissenting public complained officers did not carry Epi-Pens or insulin for allergic reaction or diabetics. Davis et al. (2015) noted some departments delayed equipping their officers with Narcan/naloxone due to liability concerns. Fisher et al. (2016) concluded there are no significant adverse effects or outcomes with police deployment.

It is important to note; one participant was very concerned about junior officers' desire to use Narcan, which is leading to concern for their safety. He stated multiple times junior officers are seemingly so eager to deploy the Narcan, they ignore officer safety protocols and try to get to the overdose scene as quickly as possible. With this in mind, there is the potential of a role shift as junior/newer officers are learning the job with Narcan as a tool early in their career. The Narcan element was not part of the senior officer's early training; the focus was strictly police policy and procedure.

Frustration

At some point during each interview, the participating officers conveyed some measure of frustration with repeat users and those resistant to medical treatment after an overdose. One participating officer expressed frustration with the community's lack of support, stating there was no counselor to call to talk to the individual after an overdose. Another officer stated some users seem to rely on the fact they can count on the police to respond with Narcan if they overdose. Haug et al. (2016) noted some who oppose Narcan/naloxone use are fearful that widespread availability will lead to a false sense of security for the user. One officer noted, if he was strictly a civilian, he would never give Narcan to someone due to potential liability.

In many of the other studies, many of the participants noted the cost of Narcan/naloxone. The only time any of the twelve participants mentioned the cost was to note it should not be a concern due to the availability of grants. One participant stated, in his department they rarely use the Narcan, it is replaced because it expires more often

than not. However, all the frustration presented by the participating officers seemed to stem from a desire to do more.

Limitations of the Study

Study limitations are facets of research that are uncontrollable and have the potential to negatively affect the study outcomes (Simon & Goes, 2013). There were limitations of this study that must be mentioned. First and foremost is the number of participants. The study included only twelve law enforcement officers. Also, the number of years' experience and the familiarity with Narcan/naloxone varied among participants. Additionally, due to the importance of using individuals who have experience using Narcan/naloxone as well as officers who have responded to an opioid overdose, I did not receive a large response to my participation requests. Unfortunately, there were only two female and three minority participants; because of the small sample of willing participants, there was limited diversity. The sample consisted of seven White males, two White females, two Latino males, and one African-American male.

With all qualitative studies, the data collection process is solely dependent on the trustfulness, candor, and willingness to share personal beliefs of each participant. These concerns were address by allowing each participant to not answer any question or discontinue the interview at their discretion without exception. I hoped this would prevent the participant from including false information or feeling pressured to answer questions. Additionally, I tried to maintain a conversational rapport with the interviewee and cultivate an environment suitable for free information sharing.

A final limitation of the study is the potential for research bias. As the sole researcher, data collector, and analyzer, it is possible I developed preconceived opinions prior to the data collection phase. Being aware of this potential issue, I made a conscious effort to review the data with an open mind and free from pre-conceptions. I used otter.ie for transcription and did a manual review for corrections. Going into the study, the plan was to use NVivo software to assist with coding. Due to the small number of participants, I felt comfortable with completing descriptive coding manually.

Recommendations

Primarily, this study's results only focus on a small number of law enforcement officers from Jefferson County, Alabama. Although there is a significant number of officers available, conducting a study with a larger number of participants will hopefully achieve a significant level of diversity. Additionally, when asking questions related to the department's harm reduction policies, with the exception of the patrol supervisor, the officers did not seem confident in their understanding or familiarity with the policy. Seemingly, the policy can be socialized more to the junior officers or included as part of Narcan training.

This study can add to the understanding of the important role law enforcement officers play in combating opioid overdose deaths, along with the number of people who have the opportunity to go to rehab in the wake of an overdose. A similar study can aid in the understanding of additional resources needed to support law enforcement officers' mental wellbeing affected by losing overdosed individuals after administering Narcan.

Implications

This study can help create positive social change by bringing about awareness of law enforcement officers' concerns regarding their actions to save lives. The law enforcement officers had an opportunity to express their thoughts, concerns, and feelings regarding their involvement in harm reduction. From the police department's point of view, this study could provide awareness to supervisors, leadership, and other policymakers. From the community standpoint, awareness from this study could provide a more positive light on the deployment of Narcan by law enforcement officers and their efforts to help combat the opioid epidemic.

Employing personal interviews as the methodology of this study allowed each participant to be open and honest regarding their feelings towards the topic. The interview questions brought awareness and allowed the participants to acknowledge aspects of their mental wellbeing that may not be considered or addressed.

Conclusion

This qualitative phenomenological study provided the lived experiences of law enforcement officers and their roles during an opioid overdose. Conclusions based on the study findings include a deep-seated duty to serve their community. It is important to note an individual's social identity is not solely related to their parent group, but also the underlying in-groups (Ashforth & Mael, 2016; Heaven et al., 2013; Smith, 2016). As it relates to this study, it can be concluded, the growing employment of Narcan is redefining the law enforcement community and thus creating a new in-group. No matter the charge, these officers are committed to saving lives, even when facing life-threatening

hazards. This is all accomplished while combatting daily frustrations. Brown (2015) noted an individuals' identity could be defined by their future projected self. Currently, the future projected self for law enforcement officers includes the employment of Narcan. This study focused on the motivation in becoming a law enforcement officer in order to understand their motivations. Through the questions about law enforcement's family history, the officers painted a picture of their path into the career field.

The values of the participants were also expressed through this research. Each officer voluntarily completes the required training as well as equipping themselves with Narcan daily. They view the responsibility as an honor, and though there is no requirement, they respond to overdose calls routinely. Although work in the law enforcement career field is inherently dangerous, officers are increasing their risk by adopting the additional role during an opioid overdose episode. The data of this study revealed there is no negative view of the new roles. An individual's positive identity is associated with good self-esteem and strong resilience (Brown, 2015; Conroy & O'Leary-Kelly, 2014; Lawson, 2014). As law enforcement officers view their employment of Narcan as a positive act, Narcan employment is being adopted as part of the law enforcement officer's predefined social identity.

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Appendix: Semistructured Interview Guide

Introduction:

Thank you for agreeing to participate in this interview. We are conducting this interview to gain an understanding of how law enforcement officers feel about the harm reduction policy that requires you to carry and employ Narcan/naloxone during an opioid crisis. Your participation in this study is voluntary and your decision to participate or not participate will not affect you in any way. You are not obligated to answer any of the questions asked and may terminate the interview at any time. This interview should take approximately one hour depending on how much information you would like to share.

With your permission I would like to record this interview, so I do not miss out on any of your valuable comments.

All responses will be kept confidential, meaning your de-identified interview responses will only be shared with my research team members and we will ensure any information included in our report does not identify you as the respondent. You may decline to answer any question or stop the interview at any time, for any reason. Do you have any questions?

May I turn on the recorder?

Research Question:

How do law enforcement officers, who are mandated by policy to carry and administer naloxone, perceive this policy change as it relates to their day-to-day work identity?

Establish Rapport:

Before we begin, please tell me a little about yourself.

How did you end up in Alabama?

Alabama or Auburn?

Are you married?

Any children? (Boy/Girl/Age)

How does your family feel about you being in law enforcement?

What lead you into the Law Enforcement career field?

How long have you been in law enforcement?

Tell me about any friends or family members who were in Law Enforcement before you joined.

What do you enjoy most about being a law enforcement officer?

Now that you have been in law enforcement for this long,

How similar is the job then you imagined?

How different is the job then you imagined?

Tell me about the area you normal patrol.

How would you describe your patrol area?

Tell me about the inhabitants of your patrol area.

What is the training and certification requirements for your assigned weapons?

How much additional equipment are you required to carry on duty?

How much equipment is on your duty belt?

How does the requirement to carry Narcan/naloxone apply to your duty equipment?

What is the process in your department for officers to carry Narcan/naloxone?

How long have you been carrying Narcan/naloxone?

Tell me about the training or certification requirement to carry and administer Narcan/naloxone.

What are the requirement per shift, to carry Narcan/naloxone?

What are your thoughts on the requirement to carry Narcan/naloxone?

What are your thoughts on the requirement for law enforcement officers to carry and administer Narcan/naloxone as a law enforcement officer's typical duties?

What do you feel is your role when interacting with illegal drug users?

Tell me how your expected role aligns with the harm reduction policy?

What is a typical response if you suspect an individual is in possession of illegal drugs?

Tell me how your expected response aligns with the harm reduction policy?

What reservation do you have about administering Narcan/naloxone?

How often have you had to administer Narcan/naloxone in the line of duty?

Tell me what affects does carrying Narcan/naloxone have on your ability to focus on your duties?

How did the individual react when you administered Narcan/naloxone?

How would you describe the procedure of administering Narcan/naloxone?

What is the difference between law enforcement and medical personnel when administering Narcan/naloxone?

Tell me any fears or concerns you have of public backlash if something were to go wrong after administering Narcan/naloxone.

This concludes my interview questions; would you like to add anything or make any type of statement to be included in your interview?

Is there a question I should ask on my next interview?

Thank you for your time and candor, once I complete the report on our discussion I will email you a copy for your review. If you find anything in the report misrepresents your intentions, please provide that feedback.

Again, thank you.