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# EXPLORING INDIVIDUAL EXPERIENCES OBTAINING MEDICATION-ASSISTED TREATMENT FOR OPIOID USE DISORDER IN RURAL NEW MEXICO

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by

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DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**Doctor of Philosophy in Nursing**

The University of New Mexico  
Albuquerque, NM

May 2019

## **DEDICATION**

This dissertation is dedicated to the individuals who participated in this research. Their honest and open dialogue about their experiences has led to a deeper understanding of the inherent strengths that are central to improving the healing capacity of individuals, families, and the community.

This dissertation is also dedicated to my parents, Chester and Linda Canary, and to my brothers, Dennis, Stephen, and Thomas. To my partner, Michael Zuscik, and my family, thank you for your unwavering support and patience during my educational journey.

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**ABSTRACT**

In the United States, more than 2.5 million people struggle with opioid use disorder. Compared to people living in urban areas, rural residents are twice as likely to overdose from opioid misuse. Reasons for this increase include excessive opioid prescribing and illegal diversion of opioids. This holds true in the rural counties of northern New Mexico, where drug overdose deaths are among the highest in the nation. Although medication-assisted treatment (MAT) with buprenorphine, methadone, or naltrexone is globally accepted as the most effective treatment, it is still accessed half as often rurally. The reasons for this imbalance are unknown, and there is no information about how the perspectives and knowledge of rural individuals seeking MAT might contribute. To identify key drivers of this imbalance, a descriptive qualitative design was used (a) to explore the perspectives and knowledge of individuals in rural New Mexico with opioid use disorder regarding medication-assisted treatment and (b) to describe their experiences seeking MAT.

Six major themes emerged from the data. As participants became addicted, “The chase” for opioids encompassed a set of lifestyle choices aimed at avoiding the sickness

and pain of opioid withdrawal. Participants described several challenges in obtaining MAT that made it “hard to have to wait,” including long wait lists, ultimately leading to drug diversion for the purpose of self-medicating. Overwhelmingly, participants favored buprenorphine over heroin and buprenorphine over methadone, with the general themes emerging that suboxone was “better” because it helped them to live a “normal life.” Finally, participants discussed the importance of working with a knowledgeable provider, accessing self-help groups, and building a support system for “staying clean.” Despite treatment successes with MAT, participants continued to experience stigma in the community, establishing the theme that “no matter what, you’re labeled.” In conclusion, although key system-level barriers have been identified and addressed, the rural-urban disparity in access to MAT persists. Results from this study contribute to our knowledge about opioid use disorder (OUD) and its treatment in rural communities. These findings reveal the important factors contributing to the rural-urban MAT disparity, leading to clinical and policy implications that could serve to address this problem.

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>CHAPTER 1</b> .....  | <b>1</b>  |
| <b>INTRODUCTION</b> .....   | <b>1</b>  |
| Problem Statement .....   | 1         |
| Background and Rationale .....  | 2         |
| Purpose and Aims .....  | 5         |
| Operationalization of Key Terms.....  | 5         |
| Opioids .....   | 6         |
| Opioid Dependence.....  | 6         |
| Opioid Withdrawal Syndrome .....  | 7         |
| Opioid Use Disorder .....   | 7         |
| Stigma .....  | 8         |
| Recovery from Opioid Use Disorder .....   | 9         |
| Medication-Assisted Treatment (MAT) .....                                       | 10        |
| Summary .....   | 10        |
| <b>CHAPTER 2</b> .....  | <b>12</b> |
| <b>THEORY AND LITERATURE REVIEW</b> .....                                       | <b>12</b> |
| Theoretical Frameworks .....  | 12        |
| Critical Social Theory .....  | 12        |
| Intersectionality Theory .....  | 13        |
| Brain Opioid Theory of Social Attachment .....                                  | 15        |
| Application of Theoretical Frameworks to the Study of Opioid Use Disorder ..... | 16        |
| Literature Review.....  | 17        |



|  |           |
|--|-----------|
| Chronic Pain and the Opioid Use Epidemic .....                       | 17        |
| Opioid Use in New Mexico .....                                       | 18        |
| The Concept of Risk Environment .....                                | 22        |
| Rural Environment and the Opioid Epidemic.....                       | 23        |
| Economic Environment .....   | 24        |
| Social Environment.....  | 26        |
| Physical Environment .....   | 28        |
| Policy Environment .....   | 29        |
| Medication-Assisted Treatment for Opioid Use Disorder .....          | 31        |
| Methadone.....   | 31        |
| Buprenorphine.....   | 33        |
| Naltrexone.....  | 35        |
| Psychosocial Interventions and Medication-Assisted Treatment .....   | 36        |
| Primary Care-Based Models for Medication-Assisted Treatment.....     | 38        |
| Existing Related Research .....                                      | 39        |
| Factors Impacting Medication-Assisted Treatment Adherence.....       | 39        |
| Study of Medication-Assisted Treatment Decision Making.....          | 40        |
| Study of Patient Experiences with Medication-Assisted Treatment..... | 41        |
| Significance of the Research.....                                    | 43        |
| <b>CHAPTER 3 .....</b>   | <b>45</b> |
| <b>METHODS .....</b>   | <b>45</b> |
| Research Design.....   | 45        |
| Rationale for Study Design.....                                      | 45        |

|   |           |
|---|-----------|
| Setting .....                               | 46        |
| Location and Population Demographics .....  | 46        |
| Sample.....                                 | 49        |
| Participant Demographics.....               | 49        |
| Inclusion Criteria .....                    | 49        |
| Exclusion Criteria .....                    | 49        |
| Inclusion of Special Populations.....       | 50        |
| Recruitment.....                            | 50        |
| Data Collection Strategy .....              | 50        |
| Data Analysis .....                         | 51        |
| Methodological Rigor .....                  | 53        |
| Credibility .....                           | 53        |
| Transferability.....                        | 54        |
| Dependability .....                         | 55        |
| Confirmability.....                         | 55        |
| Protection of Human Participants .....      | 56        |
| Potential Risks and Protections .....       | 56        |
| <b>CHAPTER 4.....</b>                       | <b>58</b> |
| <b>FINDINGS AND DESCRIPTIVE THEMES.....</b> | <b>58</b> |
| Demographic and Descriptive Data .....      | 58        |
| Sample Demographics .....                   | 58        |
| Descriptive Themes .....                    | 59        |
| Theme: “The Chase”.....                     | 59        |

|   |           |
|---|-----------|
| Theme: “It’s Hard to Have to Wait” .....  | 68        |
| Theme: “Suboxone is Better” .....   | 73        |
| Theme: “Able to Live a Normal Life” .....                                       | 79        |
| Theme: “Staying Clean” .....  | 83        |
| Theme: “No Matter What, You’re Labeled” .....                                   | 89        |
| Conclusion .....  | 94        |
| <b>CHAPTER 5 .....</b>  | <b>96</b> |
| <b>DISCUSSION .....</b>   | <b>96</b> |
| Summary of Key Findings .....   | 96        |
| Factors Contributing to Initiation of Opioid Use Disorder .....                 | 96        |
| Factors and Lifestyle Characteristics that Perpetuate Opioid Use Disorder ..... | 99        |
| Addicted to the Act of Shooting Up .....  | 101       |
| Knowledge of Medication-Assisted Treatment Options .....                        | 102       |
| Preference for Buprenorphine over Methadone .....                               | 102       |
| Barriers to Medication-Assisted Treatment .....                                 | 104       |
| Wait lists are a Barrier to Medication-Assisted Treatment .....                 | 104       |
| Inadequate Treatment Access Drives Drug Diversion .....                         | 106       |
| Male Gender is a Barrier to Medication-Assisted Treatment .....                 | 107       |
| Psychosocial Support and Narcotics Anonymous .....                              | 108       |
| Overcoming Stigma .....   | 110       |
| Policy and Clinical Implications .....  | 112       |
| Expanding Medication-Assisted Treatment Access .....                            | 112       |
| Providing Targeted Community Education .....                                    | 113       |

|  |            |
|--|------------|
| Study Limitations.....   | 113        |
| <b>APPENDICES.....</b>   | <b>116</b> |
| Appendix A: DSM-V Diagnostic Criteria -- Opioid Use Disorder .....       | 117        |
| Appendix B: Theoretical Framework Model.....                             | 118        |
| Appendix C: U.S. County-Level Drug Overdose Death Rates, 2000-2016 ..... | 119        |
| Appendix D: Recruitment Flyer.....                                       | 120        |
| Appendix E: Demographic Form.....  | 121        |
| Appendix F: Participant Demographics.....                                | 122        |
| Appendix G: Thematic Matrix.....   | 123        |
| <b>REFERENCES.....</b>   | <b>124</b> |

# CHAPTER 1

## INTRODUCTION

### Problem Statement

The United States is experiencing an opioid overdose epidemic, which is most pronounced in rural areas where the largest increase in the rate of fatal overdose has taken place over the past decade (Mack, Jones, & Ballesteros, 2017). Excessive opioid prescribing and illegal diversion of these prescriptions have driven the expansion of the crisis rurally (Gale et al., 2016). Morbidity parallels mortality, with prescription opioid overdose twice as likely in rural versus urban areas (Mack et al., 2017). This holds true in the rural counties of northern New Mexico, where the national opioid crisis emerged in the late 1990s (Rossen, Bastian, Warner, Khan, & Chong, 2017) and where the rate of drug overdose deaths remains among the highest in the nation (Centers for Disease Control and Prevention [CDC], 2016).

Medication-assisted treatment (MAT) with buprenorphine, methadone, or naltrexone is the global gold standard treatment for opioid use disorder (OUD) (World Health Organization [WHO], 2017). Because of its efficacy, MAT has become widely available in urban and rural areas, both nationally and in New Mexico (Komaromy et al., 2016). Despite this expansion in availability, MAT is still accessed half as frequently by rural residents versus urban residents, contributing to the twofold higher death rate for rural opioid misusers (Hirschak & Murphy, 2016). The reasons for this imbalance in obtaining MAT are unknown, and little information is available about how the perspectives and knowledge of rural individuals seeking MAT might contribute.

This research explored the experiences and perspectives of rural individuals pursuing MAT for OUD. Findings addressed the gap in our understanding about patient-level barriers to seeking MAT in rural areas. Understanding these barriers will be valuable in uncovering ways to protect social justice, to enhance individual and community recovery capacity, and to identify new treatment alternatives.

### **Background and Rationale**

Nearly 2.5 million Americans struggle with a substance use disorder involving opioids (Substance Abuse and Mental Health Services Administration [SAMHSA], 2015). Within this group, 1.9 million people engage in prescription opioid misuse, while 586,000 abuse heroin (American Society of Addiction Medicine [ASAM], 2016b). In 2012, healthcare providers in the United States wrote 259 million prescriptions for opioids to manage pain. This is enough for every American adult to have their own prescription. Also, as of 2012, drug overdose became the leading cause of accidental death in the United States (ASAM, 2016b), with more than half of these fatalities opioid related (CDC, 2015). In fact, since 1999, opioid-involved drug deaths have quadrupled, with recent statistics reporting that more than 115 Americans die each day from an opioid overdose (National Institute on Drug Abuse [NIDA], 2018). This parallels a fourfold increase in the sales of prescription pain relievers and a six-fold increase in the treatment admission rate during that span (ASAM, 2016b). Finally, in addition to opioid misuse causing premature death, users are exposed to an increased risk of blood-borne viral infection and criminal activity, which in aggregate lead to economic costs that exceed \$78.5 billion annually (Schuchat, Houry, & Guy, 2017). Thus, the clinical and economic burdens of opioid-related morbidity and mortality are unprecedented.

This opioid addiction crisis is largely driven by the overprescribing of opioids to treat chronic pain. Chronic pain is a major public health problem affecting more than 116 million Americans each year (Slomski, 2011); this is more than the total number affected by cancer, diabetes, and heart disease combined (Institute of Medicine, 2011). In the 1990s, the realization that chronic pain was vastly undertreated, especially among disadvantaged groups (Katzman et al., 2014; Slomski, 2011), prompted more comprehensive assessment and ultimately led to hypervigilance by physicians and expanded prescribing of opioids for pain management. Concurrently, the pharmaceutical industry was developing and aggressively marketing new formulations of long-acting opioids that were inaccurately represented to have less addictive potential (Haffajee & Mello, 2017; Okie, 2010). This confluence of events allowed for the emergence of a national epidemic of overprescribing and an emergence of widespread nonmedical use of diverted opioid prescriptions.

By 2003, nearly half of all physicians prescribing opioids were primary care providers (Van Zee, 2009), and the trend has continued to shift toward the majority of opioid prescriptions originating from that context. A key problem was that many primary care providers who managed patients with chronic pain were not sufficiently trained in pain management, in the formal diagnosis of OUD, or in the available specialty care options to treat patients diagnosed with OUD (Katzman et al., 2014; Slomski, 2011). Consequently, by 2014, two million Americans abused or were dependent on prescription opioids, and more than 35 million Americans 12 and older reported having used opioids nonmedically at least once in their lifetime (CDC, 2014).

The effect of this opioid epidemic has been most pronounced in rural areas, which have experienced the largest increase in frequency of fatal overdose to opioids over the past two decades (Mack et al., 2017). Higher rates of opioid prescription use for nonmedical purposes (Wang, Fiellin, & Becker, 2014), coupled with illegal diversion of prescription medications and unenlightened and punitive U.S. drug policies, (Gale et al., 2016) represent seminal contributors to the opioid crisis in rural communities. Accordingly, opioid-related mortalities in rural regions are attributed mostly to nonmedical use of prescription opioids (Wang, Becker, & Fiellin, 2013).

The origins of the national prescription opioid misuse problem can be traced to rural America (Monnat & Rigg, 2016). In rural areas, the percentage of the populace working in labor-based occupations is higher, leading to increased numbers of work-related injuries and associated disability due to chronic pain (Florence, Pack, Southerland, & Wykoff, 2012). Because treatment of chronic pain in this context historically involved the use of a prescription opioid, use of opioids is perceived as less harmful and even necessary to maintain steady employment, embedding their use into the structure of rural culture (Keyes, Cerda, Brady, Havens, & Galea, 2014). Moreover, given that prescription opioids are more expensive, less potent, and are becoming increasingly difficult to access due to enhanced prescription monitoring programs, many rural prescription opioid misusers have transitioned to injection heroin use (Cicero & Kuehn, 2014). This has led to a dual prescription opioid and heroin crisis in rural regions, implicating rurality as an unrecognized risk factor for opioid-related harms. Rural northern New Mexico was the epicenter of the emergence of this opioid overdose epidemic that gained national attention in the late 1990s (Rossen et al., 2017; Rudd, Seth,



David, & Scholl, 2016), suggesting a unique convergence of factors putting this region particularly at risk.

As mentioned above, MAT using buprenorphine, methadone, or naltrexone is globally accepted as the most effective treatment for OUD (WHO, 2017). MAT reduces (a) dependence on illicit opioids, (b) the morbidity and mortality caused by opioid misuse, (c) the spread of needle-borne infectious disease, and (d) the incidence of illegal behavior with evidence also suggesting improved social functioning following therapy (Jones, Campopiano, Baldwin, & McCance-Katz, 2015; Sigmon, 2014). Because of its well-documented track record of efficacy, MAT has become more widely available in urban and rural areas, both nationally and in New Mexico (Komaromy et al., 2016). Despite this, MAT is accessed less frequently in rural settings compared to urban settings (Hirschak & Murphy, 2016).

### **Purpose and Aims**

The reason for the reduced use of MAT to treat OUD in rural versus urban areas is undefined, and no information is available about how the perspectives and knowledge of rural individuals seeking MAT might contribute to this disparity. The purpose of this qualitative, descriptive study was to explore the perspectives of individuals living in rural northern New Mexico, a region with a high incidence of opioid-related deaths.

The aims of the study were to:

- Explore the perspectives and knowledge of individuals in rural northern New Mexico with OUD regarding MAT.
- Describe the experiences of these individuals when seeking MAT.

### **Operationalization of Key Terms**

## **Opioids**

Opioids are either endogenous or exogenous substances that act on opioid receptors in the central nervous system to produce pain-relieving effects (Stahl, 2013). The human brain makes a variety of endogenous agonist opioids. Although these natural neurotransmitters signal in response to harmful stimuli, a process known as nociception, they also play a role in mediating reinforcement and pleasure in the reward circuitry pathway (Stahl, 2013). Exogenous agonist opioids, including pain-relieving narcotic medications, bind to and signal through the same opioid receptors and elicit the same pain-relieving and pleasurable effects as the endogenous ligands. Included in this class of drugs are prescription pain medications, such as oxycodone, hydrocodone, morphine, and fentanyl, as well as the illicit drug heroin (NIDA, 2015). Exogenous agonist opioids are effective at relieving acute pain, but they also induce an intense euphoria that is the primary reinforcing property of the drug. This brief euphoric state, or high, is then followed by a sense of tranquility that can last for hours (Schuckit, 2016; Stahl, 2013).

## **Opioid Dependence**

In humans, chronic use of synthetic opioids leads to a state of dependence on these agents to maintain functional opioid receptor signaling. When opioids are used chronically, opioid receptors are downregulated, causing reduced signaling even in the presence of an agonist, a process known as tolerance. When used short-term and in low doses, the body produces enough endogenous opioids to counteract this tolerance. However, as tolerance increases, the body is no longer able to maintain a state of baseline physiologic signaling. Consequently, exogenous opioid dosing must be increased in level and-or frequency to activate signaling, leading to a cycle of dependency (Schuckit, 2016;

Stahl, 2013) and increasing the risk for opioid overdose and overdose-related mortality. To prevent the life-threatening respiratory depression caused by opioid overdose, naloxone (Narcan), an opioid full-antagonist, can be administered as an antidote (Keane, Egan, & Hawk, 2018). In an effort to reduce opioid-related deaths nationwide, opioid-overdose prevention programs have been developed to provide bystanders with naloxone for peer-administration if they witness an opioid overdose (Keane et al., 2018).

### **Opioid Withdrawal Syndrome**

Abrupt termination of opioid use leads to opioid withdrawal syndrome, which is associated with significant physical and emotional discomfort. Eventually, opioid use becomes less about relieving pain and achieving euphoria and more about preventing the unpleasant symptoms of withdrawal syndrome. Opioid withdrawal syndrome is characterized by dysphoric mood, insomnia, and symptoms of autonomic hyperactivity that include nausea, vomiting, muscle aches, running nose, pupillary dilation, teary eyes, goose bumps, diarrhea, and fever (American Psychiatric Association, 2013; Stahl, 2013). Although these opioid withdrawal symptoms are not life threatening, they are very uncomfortable, and opioid users will often stop at nothing to obtain another dose to relieve the unpleasant physical and psychological symptoms (Bart, 2012; Stahl, 2013).

### **Opioid Use Disorder**

OUD is the clinical diagnosis for a mental health condition associated with physical and psychological impairments related to the nonprescriptive use of opioids. The Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V), defines OUD as a problematic pattern of opioid use that includes signs and symptoms that reflect compulsive and prolonged self-administration of opioids for no legitimate

medical purpose or at doses that exceed what is prescribed (American Psychiatric Association, 2013). Specific criteria must be met for diagnosis (Appendix A). Individuals using prescription opioids solely as prescribed and for a legitimate medical purpose would not be diagnosed with OUD, even though they might develop tolerance to and dependence on the opioid. Physical dependence can occur without addiction, and addiction can occur in the absence of tolerance and physical dependency (Stahl, 2013), requiring that diagnosis of OUD be based on accepted clinical criteria that include key physical and psychological impairments. It should be noted that the terms opioid dependency and opioid addiction are no longer used clinically or scientifically to describe the phenomenon of OUD, due to their ambiguity, lack of clear definition, and stigma.

### **Stigma**

Stigma is the social process by which an individual possessing a particular attribute is marginalized and excluded from full participation in the larger society (Goffman, 1963). Stigma is socially constructed in the context of negative stereotypes, prejudice, and extant power differentials that allow the dominant group to successfully devalue those individuals with the undesirable attribute (Lucas & Phelan, 2012; Pescosolido, 2013). This multidimensional process involves both the reactions of others in the larger society toward the stigmatized individual and the resulting individual experiences of self-blame, guilt, and shame, which exacerbate social rejection (Lucas & Phelan, 2012; Sharfstein, 2012).

As with other forms of addiction, OUD is considered a non-normative attribute warranting a mental health diagnosis that is reflective of an individual's lack of self-restraint and fragile moral character (Campbell, 2012; Kaye, 2012; Olsen & Sharfstein,

2014). The social discourse that emerges from this dominant culture worldview drives stigmatization via social labeling, stereotyping, status loss, and discrimination. This discourse also provides the foundation for the criminalization of opioid misuse, which serves to further marginalize and socially isolate this group. Societally, individuals suffering from OUD experience social exclusion and have limited access to social, economic, and political power. For individuals with OUD, stigma is a barrier to recovery and full participation in society (Hansen & Roberts, 2012; Kaye, 2012; Olsen & Sharfstein, 2014).

### **Recovery from OUD**

OUD is a chronic, relapsing illness that is treatable but for which there is no cure. Because the underlying vulnerability never abates, the goal of recovery is to effectively manage symptoms of the illness to support affected individuals in leading productive and fulfilling lives (Olsen & Sharfstein, 2014). The clinical course of OUD is characterized by periods of exacerbation, remission, and relapse due to persistent symptoms and incomplete patient adherence to treatment (American Psychiatric Association, 2013). Recovery is facilitated with psychosocial and pharmacologic interventions. Although the DSM-V defines the criteria for remission, it does not define cure or recovery. Among opioid-using individuals and in the literature, recovery is the preferred term. Although recovery from substance use disorders in general has been defined as a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship (Betty Ford Institute Consensus, 2007), this definition does not adequately define recovery from OUD. This general definition is rooted in the assumption that recovery is a linear process leading to sobriety, with sobriety implying abstinence from all opioids. However,

evidence-based treatment guidelines for OUD include the long-term use of opioid agonist therapy (SAMHSA, 2016a; WHO, 2017), precluding abstinence in recovery for many patients.

### **Medication-Assisted Treatment (MAT)**

The use of medication to treat OUD is often referred to as medication-assisted treatment (MAT). MAT with buprenorphine or methadone is globally accepted as the most effective treatment option for OUD (NIDA, 2016; SAMHSA, 2016a; WHO, 2009). In addition to buprenorphine and methadone, a third FDA-approved MAT pharmacotherapy is available for long-term treatment of OUD: long-acting naltrexone. Opioid receptor agonists buprenorphine and methadone reduce cravings and symptoms of opioid withdrawal by occupying opioid receptors in the brain, whereas the opioid antagonist naltrexone blocks the signaling pathway that supports the rewarding effect of opioid use (SAMHSA, 2016b). Overall, effective delivery of MAT leads to reductions in morbidity, mortality, the spread of needle-borne infectious disease, illicit drug use, and crime (Olsen & Sharfstein, 2014; Schuckit, 2016; Sigmon, 2014; United States Department of Health and Human Services, 2016), hence, its acceptance globally as the gold standard treatment approach for patients suffering from OUD.

### **Summary**

Across the country, residents of rural areas experience higher rates of opioid-related morbidity and mortality. Although MAT, the globally accepted treatment for OUD, has become more available rurally, it is still accessed less frequently in this context. The factors underlying this rural-urban imbalance are not defined, and there is no information about how the experiences of rural individuals seeking MAT impact this

disparity. Because New Mexico ranks near the top of the nationwide rate of opioid-related deaths in rural counties, this qualitative descriptive study aimed to explore the knowledge and perspectives of individuals in rural New Mexico with OUD regarding MAT and to describe their experiences seeking MAT.

## **CHAPTER 2**

### **THEORY AND LITERATURE REVIEW**

This chapter describes the overarching theoretical considerations that guided this research. It also provides a review of pertinent background literature related to the opioid epidemic, OUD, and the social dynamics that influence its treatment in the context of a rural environment.

#### **Theoretical Frameworks**

##### **Critical Social Theory**

Critical social theory is a philosophical approach that aims to raise consciousness about institutionalized inequities to provide transformative opportunities for social action, which in turn improve equity and foster community empowerment (Kincheloe, McLaren, & Steinberg, 2011). The underlying theoretical assumption of critical social theory is that individuals are influenced by historical and social forces that serve to acculturate positions of domination and subordination rather than of true equality and independence (Kincheloe et al., 2011). Language, which is fundamental to human conscious and unconscious awareness, has a constructive role in framing discourse, power, and knowledge (Foucault & Gordon, 1980). Critical social theory embraces certain fundamental assumptions that include (a) all knowledge is negotiated by power relations that are socially and historically constituted, (b) there are various forms of oppression that are interconnected with certain groups in any given society being privileged over others, and (c) oppression is historically reproduced when nonprivileged groups accept without challenge a repressive or subordinate social status (Kincheloe et al., 2011). Overall, this



framework emphasizes critical analysis of the social perceptions, assumptions, and expectations that drive social interactions and dictate oppressive sociopolitical conditions.

Critical social theory offers a conceptual framework in which social, cultural, economic, and political factors can be integrated into the critical evaluation of complex phenomena, such as that of OUD and its treatment. Critical social theory assumes a social justice perspective that calls attention to the socially constructed and historically constituted overarching power relations that influence the societal response to the opioid epidemic. Specifically, persistent misconceptions about the nature of OUD as a condition of moral flaw and deliberate choice rather than a medical illness has negatively impacted the public health response to the opioid epidemic (Olsen & Sharfstein, 2014). In the United States, opposing discourses framing addiction as a moral problem versus a medical problem continue to permeate our cultural and societal understanding of this complex phenomenon. Unfortunately, this has led to addiction treatment policies and societal responses that pivot on the belief that addiction is a social and moral problem. Thus, OUD is seen as a form of resistance to the expectations that are dictated by the dominant class (Singer, 2012) which imposes social control over use and misuse of substances in general. The classification of OUD as a “problematic pattern” (American Psychiatric Association, 2013) serves to stigmatize those who struggle with opioid dependency and simultaneously provides the basis for social punishment (Singer, 2012).

### **Intersectionality Theory**

The underlying theoretical assumption of the intersectionality theory is that multiple systems of structural, political, and representational oppression are interconnected, forming social identities and societal power dynamics (Carbado,

Crenshaw, Mays, & Tomlinson, 2013; Crenshaw, 1991). The intersecting relations of race, class, gender, and sexuality, and the inherent power dynamics associated with each shape individual and group identities within the larger society (Collins, 2012; Crenshaw, 1991). Use of the intersectionality theory involves examination of the complex social inequalities that individuals face by exposing and dismantling the manifestations of marginalization while simultaneously bringing about social justice. This approach draws attention to how the identity of a group has been centered on the intersectional identity of a few as a means of negotiating social justice (Crenshaw, 1991). The distinctive social location of individuals within intersecting power relations has important epistemological implications, given that knowledge cannot be separated from the overarching power relations that structure it and to which it contributes (Collins, 2012). Scholars using this theoretical framework embrace certain fundamental assumptions, which include (a) intersectionality is structural and converging forms of domination are multilayered and routinized, hindering the ability to create alternatives for marginalized groups; (b) intersectionality is political, with individuals situated within two subordinated groups finding themselves in conflicting political agendas; (c) intersectionality is representational with social identity and established hierarchical classifications driving cultural imagery; and (d) intersectional disempowerment occurs when the structural, political, and representational aspects of intersectionality converge to yield an individual social identity that is situated within conflicting power relations (Crenshaw, 1991). Additionally, relationality, which is defined as the process by which social positions acquire power, or are depleted of power, in relationship to other social positions (Collins, 2012), is central to intersectionality theory. Relationality affects society and permeates

every aspect of social identity, including race, gender, social class, immigration status, and sexuality. The resulting systems of power are interconnected, directly influencing one another to yield social realities that mutually construct one another (Collins, 2012).

Intersectionality theory is rooted in a complementary and critical perspective through which the complex phenomenon of OUD can be viewed. This framework is ideal for examining how societal assumptions and stratified positional power drive addiction policy and access to treatment and how these factors further marginalize rural opioid-using individuals. Specifically, intersectional disempowerment is experienced by individuals with OUD; their “addicted” status forms their social identity, which is situated within conflicting power relations to yield social exclusion (Netherland, 2012). Furthermore, scholars working in the field employ the intersectionality theory to focus on the impacts of race, gender, social class, immigration status, and sexuality on the predisposition for opioid use in rural populations. This also involves a critical evaluation of how the structural, political, and representational aspects of social identity contribute to and influence recovery from OUD.

### **Brain Opioid Theory of Social Attachment**

The brain opioid theory of social attachment postulates that endogenous opioids are released when humans experience social bonding; these opioids act at mu-opioid receptors to mediate positive affective responses of social bonding (Inagaki, 2018; Inagaki, Ray, Irwin, Way, & Eisenberger, 2016). Endogenous opioids play a key role in the interpersonal and relational feelings that emerge from social connection, and they also alleviate the feelings of separation distress that occur with experiences of social loss, separation, and loneliness (Machin & Dunbar, 2011). According to the brain opioid

theory of social attachment, experiences of social loss can lead to reduced opioid activity, which then lead to feelings of disconnection and separation distress (Inagaki et al., 2016; Nocjar & Panksepp, 2007; Zellner, Watt, Solms, & Panksepp, 2011). Furthermore, research has demonstrated that in humans, social rejection activates the mu-opioid receptor system in the brain in a pattern that is similar to physically painful stimuli (Hsu et al., 2015; Hsu et al., 2013). Thus, the emotional pain of social rejection is regulated by the same opioid pathways that alleviate physical pain.

ODD is characterized by persistent social and interpersonal problems, resulting in the failure to fulfill social, financial, and legal obligations. The consequences of ODD are numerous and often include social rejection, loss of one's occupation, loss of custody of one's children, legal problems, and incarceration. Furthermore, ODD often develops in the context of negative social environments that are correlated with increased risks for depression, anxiety, low self-esteem, and reduced social support (Garland, Froeliger, Zeidan, Partin, & Howard, 2013; Hsu et al., 2015). Collectively, these rejection-related stressors trigger reduced endogenous opioid activity in individuals with opioid use disorder. Accordingly, the brain opioid theory of social attachment suggests that these individuals might seek exogenous opioids because they abate the feelings of disconnection and separation distress, supporting the idea that the factors leading to ODD are complex and deeper than the rewarding effects of the opioid.

### **Application of Theoretical Frameworks to the Study of ODD**

The frameworks of critical social theory, intersectionality theory, and brain opioid theory of social attachment were used to ground this research theoretically. Critical social theory was used to examine the socially constructed and historically constituted

overarching power relations. However, this singular approach does not account for the unique impact of individual social identity, at the micro level, which is necessary to more fully understand individuals' experiences seeking MAT. Integrating intersectionality theory facilitated exploration of patient-level experiences and perspectives as they inadvertently become enmeshed in overarching power systems that create oppressive sociopolitical forces that impact MAT utilization. Integrating brain opioid theory of social attachment provided a framework to explore the role of opioid use as it relates to feelings of disconnection and social loss, which are reinforced by multiple systems of oppression at the macro and micro levels. Because OUD is a dynamic, multifaceted phenomenon that is both individual and social, these complementary theories offer a lens through which the interconnecting forces that influence opioid use and its treatment can be viewed (Appendix B). In summary, the integrated application of these theoretical frameworks uncovered ways to overcome stigma related to OUD and MAT, to promote social justice, and to enhance individual and community recovery capacity.

## **Literature Review**

### **Chronic Pain and the Opioid Use Epidemic**

The highest per-capita use of prescription opioids in the world is in the United States (Shiels et al., 2017). Opioid-involved drug overdose deaths and the kilogram quantity of prescription opioid sold in the United States have quadrupled over the past two decades (CDC, 2016), and parallel increases in the risk of blood-borne disease and criminal activity have been documented (Schuchat et al., 2017). A key factor driving this surge in opioid use and its associated morbidity and mortality was the realization by clinicians that chronic pain was widely undertreated, particularly in minority and

underrepresented patient populations (Katzman et al., 2014; Slomski, 2011; Varrassi et al., 2010). This led to hypervigilance by physicians, particularly primary care providers, and to an expanded use of opioids for management of chronic pain (Rosenblum, Marsch, Joseph, & Portenoy, 2008). Occurring concurrently with these changes was the aggressive marketing of prescription opioids by pharmaceutical companies, some of which misrepresented opioid drugs as nonaddictive (Dasgupta, Beletsky, & Ciccarone, 2018; Haffajee & Mello, 2017; Okie, 2010). This confluence of events drove the emergence of the national epidemic of overprescribing and the widespread nonmedical use of diverted opioid prescriptions.

The opioid epidemic and the circumstances surrounding it occurred at a time when there was no overall change in the incidence of reported pain in the United States (CDC, 2016). The nature of this disconnect suggests that opioids are desired for more than just managing chronic physical pain. To date, little is known about the role that emotional pain contributes to opioid-seeking behaviors, and the role of social loss and emotional pain in the context of OUD is poorly understood. As described above, the emotional pain of social rejection is regulated by the same opioid pathways that alleviate physical pain, and social losses can lead to activation of the mu-opioid receptor system in the brain in a pattern that is similar to physically painful stimuli (Hsu et al., 2015; Hsu et al., 2013; Inagaki et al., 2016). Thus, opioid use serves to alleviate feelings of emotional distress that occur in the context of social loss, separation, and loneliness. Paradoxically, as opioid use progresses, the social losses that occur as a consequence of opioid use exacerbate emotional and physical pain in a vicious cycle.

### **Opioid Use in New Mexico**

For the past two decades, New Mexico's drug overdose rate has been among the highest in the nation. In 2014, New Mexico ranked second in the nation for total drug overdose deaths (CDC, 2016), with a rate of 27.3 per 100,000 population (Rudd et al., 2016). Efforts to address the problem have helped the situation, but the state still ranks 30<sup>th</sup> according to the most recent data (New Mexico Department of Health, 2018). Research has documented geographical disparities in the availability of opioids across the state. An analysis of medical examiner data for all unintentional drug overdose deaths in New Mexico during 2005-2009 revealed that residents living in the southern part of the state, along the U.S. border with Mexico, were more likely to have died from a prescription opioid overdose, whereas residents in the northern part of the state were more likely to have died from a heroin overdose (Shah, Lathrop, Flores, & Landen, 2012). Given the proximity to the Mexico border, heroin in New Mexico is relatively pure, available in greater quantities, and is sold at a much lower price compared to other areas of the country (Shah et al., 2012). Historically, heroin overdose rates have remained high among Hispanic males and females, while prescription opioid overdose rates have been the highest among non-Hispanic Whites (Levy et al., 2016). The overall costs associated with opioid abuse, dependence, and misuse in New Mexico are approaching \$1 billion annually (New Mexico Department of Health, 2017).

U.S. public health statistics clearly identify an opioid epidemic in rural communities, with significantly higher levels of morbidity and mortality compared to urban locations. It follows that because New Mexico is a largely rural state, it experiences disproportionate rates of opioid-related morbidity and mortality because of its rurality. The Health Resources and Services Administration (HRSA) defines rural as

all population centers and land area not included in urbanized areas of 50,000 or more people or in urban clusters of between 2,500 and 50,000 people (Health Resources and Services Administration [HRSA], 2017). Comparatively, frontier areas are defined as sparsely populated rural areas with fewer than six people per square mile (HRSA, 2017). Of New Mexico's 33 counties, 26 are considered rural (HRSA, 2016), and 15 of those are designated as frontier based on population density and distance in minutes and miles to population centers where resources, including healthcare, are concentrated (Rural Health Information Hub, 2017). It is well-understood that environment plays a prominent role in the health of individuals. Thus, in the context of a health crisis such as the opioid epidemic in New Mexico, the unique contribution of environment to increased risk establishes the concept of rurality as a risk environment for OUD.

The high rates of heroin use in the Hispanic population of central and northern New Mexico are well-documented. Ethnographic study of heroin use in the Española Valley of northern New Mexico has revealed the ways in which heroin was and is used by the people to treat reoccurring pains associated with the historic and perpetual experience of loss and displacement that characterize Hispanic life in this region of New Mexico (Garcia, 2010; Trujillo, 2009). Experiences of trauma and loss date to the early 17<sup>th</sup> century when this region became the site of the first Spanish colonial settlement in the southwestern United States (Barrett, 2012; Garcia, 2010; Zentella, 2004). Spanish colonization of the Española Valley marked a violent and traumatic time, with Spanish colonization inflicting immeasurable harm on the Native American Pueblo communities, contributing to the long-standing opposition and tensions among Spanish and Native American cultural groups (Guthrie, 2013; Zentella, 2004). Perpetual conflict between the



Spanish colonists and the indigenous pueblos in the region stretched over a century, until 1821 when Mexico won independence from Spain. Mexico then claimed this region until the Mexican-American war 1848 at which time the region became a U.S. territory (Zentella, 2004). The U.S. government promptly seized the land grants awarded to Hispanic colonizers, sparking another cycle of loss and displacement that included annexation, confiscation, and poverty. Ultimately, the Anglo re-colonization left both groups politically disenfranchised, reinforcing the oppositional configuration among the ethnic groups residing in northern New Mexico (Barrett, 2012). Ultimately, the marginalization of the Spanish-speaking and Native American people played a pivotal role in feelings of disconnection, separation distress, and the emotional pain of social loss. The net effect of historical, social, and experienced traumas has contributed to the initiating role this region in New Mexico has played in the national opioid crisis.

The Española valley of northern New Mexico has been defined in the literature as the core of Hispanic art, architecture, and religion in the region (Guthrie, 2013). For the Hispanic population of northern New Mexico, there exists a strong religious devotion to Catholicism and a commitment to a traditional way of life, including a strong spiritual connection to the land. As an example, the region is the site of Roman Catholic pilgrimages to the Santuario de Chimayó, a church believed to have been erected on holy ground (Guthrie, 2013). While community leaders and scholars have suggested that the heroin epidemic in the region is primarily attributed to culture loss, ethnographic research has documented that Hispanic drug users in the region remain highly engaged in traditional aspects of culture (Trujillo, 2009). Thus, the strong connection to Hispanic culture might represent a curative force. Engagement and promotion of cultural

traditions might facilitate resiliency. Importantly, to better understand the drug epidemic in the region, there is a need to look at the role of structural factors such as underemployment, economic marginalization, and social disposition (Garcia, 2010; Trujillo, 2009).

It warrants noting that while the use of opioids among the Hispanic population of the Española Valley region is documented, little is known about opioid use among the other groups living in the region, which includes a large Native American population (Garcia, 2010). Statistics indicate that from 2012-2016, the drug overdose death rate in Rio Arriba County, which includes the city of Espanola, was 119.1 for every 100,000 Hispanic residents and was 38 per 100,000 American Indian residents. While we know that opioid use in this population is a problem, there is no data available other than these statistics. Each of these groups share an overlapping history of conquest, trauma, and negative social circumstances (Garcia, 2010), which are correlated with increased risks for depression, anxiety, and addiction (Garland et al., 2013). Recognizing and exploring the complex social, economic, and multicultural aspects of OUD and its treatment in the context of these diverse populations in the rural northern New Mexico environment will be instrumental in facilitating change that can promote health and recovery.

### **The Concept of Risk Environment**

In the field of addictions research, an increasing emphasis has been placed on understanding the relationships between individuals and their social and economic environments. Key considerations are how this impacts the production and reduction of drug harms and how these dynamic and multifaceted relationships between individuals and environments overlap and intersect to create a risk environment (Rhodes, 2002).

Risk environment is broadly defined as the space in which a variety of factors interact to increase the chances of harm (Rhodes, 2009). The risk environment model is comprised of two key dimensions: types of environments and levels of environmental influence. Included are the economic, social, physical, and policy environments, and each of these are constructed and influenced by micro-level and macro-level considerations (Rhodes, 2009).

### **Rural Environment and the Opioid Epidemic**

Over the past 20 years, excessive prescribing and illegal diversion of prescription medications have contributed to the opioid crisis in rural communities. The origins of the prescription opioid epidemic can be traced to rural America (Monnat & Rigg, 2016). Since 1995, when Oxycontin was initially marketed and became widely prescribed to manage chronic pain (Okie, 2010; Young & Havens, 2012), the largest increase in fatal opioid overdose has been in rural areas (Mack et al., 2017) and is mostly attributed to prescription opioid use (Wang et al., 2013). Rurally, morbidity parallels mortality, with individuals living in rural communities twice as likely to overdose on prescription painkillers as people living in urban areas (CDC, 2011). Moreover, given that prescription opioids are more expensive, less potent, and are becoming more difficult to access due to enhanced prescription monitoring programs, many rural prescription opioid users have transitioned to injection heroin use (Cicero & Kuehn, 2014). This has led to a dual crisis in rural regions of abuses of prescription opioids and heroin.

The increase in prescription opioid and heroin abuse, overdose, and addiction in rural communities is exacerbated by a lack of access to medical treatment. While 19% of the U.S. population lives in a rural area, only 9% of all healthcare providers practice in

those regions (Bolin et al., 2015). This limits access to all healthcare services, including specialty services such as mental health and substance abuse treatment, including MAT with buprenorphine or methadone (Jones et al., 2015; Sigmon, 2014). Overall, geographic maldistribution of physicians and methadone clinics coupled with the physical isolation of rural communities combine to drive the high rates of opioid-related morbidity and mortality that plague rural America. Based on these factors alone, rurality creates a unique space that increases the chances of opioid-related harms. Compounding these seminal drivers of opioid risk are a variety of synergistic factors that are financial, social, physical, and are related to local and national policy.

**Economic Environment.** Rural regions in the United States have been disproportionately impacted by economic recessions, causing significant economic stress to families by limiting opportunities for economic growth and stability. It is well-documented that opioid-related deaths and emergency department visits increase during times of failing economic conditions (Hollingsworth, Ruhm, & Simon, 2017). In addition to economic strife, rural regions face higher rates of unemployed and uninsured people and overall poorer health among their residents (National Advisory Committee on Rural Health and Human Services, 2016). From 2011-2015, compared to the national average, New Mexicans had lower rates of earned income and higher rates of poverty. The state ranked 46<sup>th</sup> among all states in median household income earned, which was \$44,963, compared to \$53,889 nationally. New Mexico also had the third highest poverty rate in the country, which was 19.8%, compared to 12.7% nationally (United States Census Bureau, 2016).

In rural areas, a higher value is placed on work than on education; thus rural residents are much less likely to go to college, and in most rural counties it is common for fewer than 10% of residents to be college graduates (Florence et al., 2012). Moreover, there are great disparities in the quality of available educational options, minimizing the opportunity for people living in rural areas to establish long-term careers with potential for upward mobility (Keyes et al., 2014). All of these trends apply to the predominantly rural New Mexico. Currently, only 84.2% of New Mexico residents have a high school diploma or higher, ranking 45th nationally (United States Census Bureau, 2016). Overall, rural communities in New Mexico are faced with higher rates of unemployment, deteriorating economic conditions, decreased wages for low-skilled jobs, and a lack of an available industry/employment base. Each of these factors are associated with OUD (Keyes et al., 2014; Rigg & Monnat, 2015). It is likely that these poor rural economic conditions contribute to social losses, which are tied to emotional and physical pain and thus exacerbate the problem.

In rural areas, a high value is placed on work and on being employed (Keyes et al., 2014). However, given that the available employment opportunities are primarily labor based, there is an increase in the prevalence of occupational injuries and associated disability due to chronic pain (Dasgupta et al., 2018; Florence et al., 2012). In remote and geographically isolated areas, chronic pain is typically treated medically with opioids. In rural communities nationwide, providers historically have been more likely to prescribe larger quantities of prescription opioids in response to their patients' limited access to medical facilities (National Advisory Committee on Rural Health and Human Services, 2016). Ultimately, prescription drug use has become embedded in the culture

as an acceptable means to maintain steady employment (Keyes et al., 2014). This prescribing pattern leads to a greater number of unused prescription opioid circulating in the community that ultimately becomes available for nonmedical use. Overall, the dependence of rural communities on labor-based employment contributes to higher rates of physical pain, which triggers the pattern of overprescribing, driving the higher incidence of opioid dependence.

**Social Environment.** Social factors play a key role in the development of and recovery from OUD. Social relationships in any community are critical to its capacity for health, and these relationships are integral to social capital. Social capital, which is defined as a sense of reciprocity, trust, and cooperation among community members, is linked to positive health; a better perceived quality of life is central to good health and positive health behaviors in a community (Crosby, Wendel, Vanderpool, Casey, & Mills, 2012; Wendel et al., 2012). While social capital is generally considered to be an asset that is linked to better health in rural communities, greater levels of social capital have also contributed to prescription opioid use in rural regions, paradoxically serving to exacerbate the opioid epidemic.

Over the past 20 years, opioid use for pain management has become increasingly common, creating a higher density of available opioids (Keyes et al., 2014). In rural communities, prescription opioids are perceived as less harmful because they can be taken orally and do not involve a route of administration that is associated with social stigma and customarily connected to adverse health consequences, such as injecting or smoking (Keyes et al., 2014). In rural community social networks, prescription opioid use is not stigmatized because of the broad acceptance of the notion that one must pursue

whatever means available to stay employed. Thus, the social network itself represents the primary distribution source of diverted prescription opioids in rural communities (Keyes et al., 2014). Moreover, the same social networks that serve as initiators of addiction do not provide an effective mechanism of support for recovery. Individuals living in remote rural settings are commonly more prideful, inhibiting their willingness to reach out for help in general (Crosby et al., 2012) and in the face of an addiction crisis specifically. Furthermore, in the rare instance when treatment options are accessible, concern about anonymity in small, tight-knit communities reduces the likelihood that people in need of treatment will seek medical help (McCord, Elliott, Brossart, & Castillo, 2012).

While all of these factors have impact in rural New Mexico communities, additional problem exists. For rural New Mexico youths, a perceived lack of available social and educational opportunities has been identified as a conduit to drug use. Specifically, youths identify drug use as a normalized activity that can be used to resolve boredom and social isolation and can distract from the economic deprivation within families and the larger community (Willging, Quintero, & Lilliot, 2014). While drug use begins as a socially acceptable behavior to cope with stressors, the social responses of others and legal consequences of the behavior soon lead to drug use becoming a source of social stigma that further drives social isolation. Furthermore, the societal response to drug use among youths in New Mexico varies depending on social identity. Research has documented differential treatment within the New Mexico juvenile justice system, with White youths receiving preferential treatment over non-White youths (Willging et al., 2014). The marginalization and negative labelling of non-White youths contributes to

compounding social loss that leads to and perpetuating opioid misuse in this population. For non-White youths in northern New Mexico, the intersecting power relations of race and addicted status reinforce a relegated social identity within the larger community, perpetuating the long-standing pattern of social and political exclusion that has characterized the Española Valley.

Social factors also play an important role in recovery from OUD. Research suggest that for individuals with OUD, a change to a recovery identity is critical for success, and positive social relationships trigger treatment-seeking behaviors (Dingle, Cruwys, & Frings, 2015). As described, individuals with OUD experience intersectional disempowerment, losing important structural, political, and representational social identities as a result of their addiction. While maintaining social ties to other opioid-using individuals is associated with relapse and poorer treatment outcomes, adaptive social network changes can positively influence recovery (Dingle et al., 2015).

**Physical Environment.** New Mexico is a large, rural state with 60% of its population living in rural or frontier counties (Kaufman et al., 2010). This geographic vastness presents many challenges to the delivery of effective healthcare, including mental health care and substance abuse treatment. Despite greater healthcare needs, fewer resources exist for rural dwellers; many rural areas do not have ample or modernized healthcare facilities, nor can they support a range of health services to meet physical and mental healthcare needs of the rural communities they serve (Roberts, Johnson, Brems, & Warner, 2007). To obtain mental health and substance abuse treatment, many rural residents are required to seek healthcare in urban areas, and in doing so they face significant geographic barriers and extended travel time and associated



costs. In New Mexico, 30 of its 33 counties are designated as health profession shortage areas. Most rural areas of New Mexico have insufficient numbers of generalists and mental health specialists (Kaufman et al., 2010). Thus, for those suffering from OUD, the physical environment can serve as barrier to obtaining MAT.

**Policy Environment.** In the United States, substance abuse prevention and treatment has become a national priority, and increased access to treatment providers and substance abuse services has been set as a benchmark goal (U.S. Department of Health and Human Services, 2012). Yet, significant disparities in substance abuse treatment persist nationally in rural areas. Overall, treatment for substance use disorders is accessed half as frequently in rural versus urban areas, translating into a doubling of the death rate for rural opioid misusers (Hirschak & Murphy, 2016). In response to the opioid crisis nationally, the federal government has allocated significant financial resources to ensure safer opioid prescribing practices and to reduce the diversion of controlled pharmaceuticals. In fact, Congress allocated \$60 million annually from fiscal years 2006 to 2010 to improve prescription monitoring programs alone (Meyer, Patel, Rattana, Quock, & Mody, 2014). However, this commitment of federal resources to enable safer prescribing and reduced prescription diversion has failed to effectively mitigate the opioid epidemic. This is a bigger problem rurally because prescription diversion occurs primarily via family and social networks that cannot be monitored easily using current avenues of monitoring. Overall, these policy strategies have caused prescription opioids to become more expensive and more difficult to access, driving the transition of many rural prescription opioid users to injection heroin use (Cicero & Kuehn, 2014).

In New Mexico, the policy environment has been volatile. In June 2013, the state's gubernatorial administration accused 15 of the state's nonprofit behavioral health centers of mismanagement and Medicaid fraud (Willging, Lamphere, & Rylko-Bauer, 2015; Willging & Semansky, 2014). At the time, the 15 behavioral health organizations operated 75% of the state's core service agencies for behavioral health and substance abuse treatment, collectively serving 88,000 of New Mexico's most vulnerable individuals (Willging et al., 2015). Importantly, these accused organizations ran the state's community mental health centers in rural areas all over the state. In the wake of the initial accusation, Medicaid reimbursements were withheld by the state Health and Human Services Department, which forced the accused organizations to either submit to a takeover by five selected Arizona companies or close down. The forced transition was chaotic, resulting in truncation of behavioral care and a statewide crisis. Prompted by complaints from New Mexico communities and lawmakers, the Centers for Medicare and Medicaid Services investigated the access and quality of care, finding that in some instances, the Arizona companies were operating at only 67% of the previous service levels (Willging & Semansky, 2014). Ultimately, the forced transition was unsuccessful, and services across the state were significantly disrupted, especially in rural areas. It has since been determined that a flawed audit led to the unfair and illegal disabling of the very agencies responsible for the care of the most fragile and underserved populations in New Mexico (State of New Mexico Office of the Attorney General, 2016). Unfortunately, this has little impact in rural communities currently because many of the accused companies have disappeared during the six-year period since the shutdown in 2013. Moreover, companies that have disappeared have not been replaced by other

services bearing the mission of providing behavioral healthcare and substance abuse treatment to those needing it the most: residents living in the rural and frontier communities scattered across New Mexico.

### **MAT for OUD**

There are three FDA-approved MAT pharmacotherapies for long-term treatment of OUD: buprenorphine, methadone, and long-acting naltrexone. MAT reduces morbidity, mortality, and the spread of needle-borne infectious disease; decreases illicit drug use and crime; and increases adherence to medical treatment (Olsen & Sharfstein, 2014; Schuckit, 2016; Sigmon, 2014; United States Department of Health and Human Services, 2016). Research suggests that MAT mitigates the negative health and societal effects of OUD, evidenced by reduced morbidity, mortality, spread of needle-borne disease, and crime (Olsen & Sharfstein, 2014; Schuckit, 2016; Sigmon, 2014; United States Department of Health and Human Services, 2016) Despite this, MAT remains largely inaccessible in the United States due to legal prescriptive restrictions (Dick et al., 2015; Jones et al., 2015). To date, there are no data reporting the numbers of individuals receiving each of these treatments nationally or at the state level.

**Methadone.** Methadone is a synthetic, long-acting opioid agonist medication that is administered orally to treat chronic pain and for maintenance treatment for OUD. Methadone maintenance treatment for OUD occurs in three phases: induction, stabilization, and maintenance (Schuchat et al., 2017). Globally, methadone has been widely used in the treatment of OUD; it is effective in ameliorating opioid cravings, symptoms of withdrawal, and the negative effects of illicit drug use (Dennis et al., 2015). However, in the United States, access to methadone is restricted, and maintenance

treatment is offered only through structured and licensed addiction programs. Under the Harrison Narcotics Tax Act of 1914, physicians are not allowed to prescribe narcotics to treat addiction (United States, 1919). Thus, methadone, a schedule II-controlled substance and can be prescribed only for the treatment of OUD to individuals enrolled in a federally approved and licensed methadone maintenance program.

In the United States, the demand for methadone treatment in every state exceeds the treatment capacity. As of 2014, the wait lists to initiate methadone treatment have reached an all-time high and by early 2019, the waiting time for treatment averaged two years (Sigmon, 2014). As of 2019, methadone maintenance therapy is used only by approximately 25% of individuals with OUD who are in treatment (Dennis et al., 2015). In addition to long waiting periods for treatment entry, limited geographic coverage and limited insurance coverage represent significant barriers to accessing methadone treatment (Hansen & Roberts, 2012; Jones et al., 2015). Due to federal regulations governing methadone dispensing, treatment programs routinely require patients to attend the clinic daily, where the medication is administered on-site and under direct observation (Hansen, Siegel, Wanderling, & DiRocco, 2016). For individuals with OUD who are unemployed, a lack of transportation and-or lack of financial resources present additional barriers to accessing treatment.

For those living in rural areas, access barriers to methadone treatment are compounded. Compounding factors include high poverty rates; distance to treatment centers; limited or no mass transit options; high personal costs for transportation that include extended travel times, cost of fuel, and automobile maintenance; and weather and terrain conditions that prohibit long-distance travel (Gryczynski, Schwartz, Salkever,

Mitchell, & Jaffe, 2011; Sigmon, 2014). Of the 16 federally registered opioid treatment programs in New Mexico, nine are located in Albuquerque (SAMHSA, 2017), suggesting that patients requiring care in outlying rural areas of the state must travel to urban locations where treatment options are concentrated. Overall, methadone treatment is very difficult to access for most rural residents, leaving an estimated 75% of individuals with OUD to either seek another form of MAT or go without treatment (Dennis et al., 2015).

**Buprenorphine.** Buprenorphine is a semisynthetic mu-opioid receptor partial-agonist medication that is administered sublingually in tablet or in sublingual film formulations or subcutaneously as an injection or implant for the treatment of chronic pain and OUD (Barnwal et al., 2017; Bart, 2012; Brady, McCauley, & Back, 2016; Itzoe & Guarnieri, 2017; United States Food and Drug Administration, 2017). Buprenorphine (Subutex), buprenorphine/naloxone (Suboxone), buprenorphine extended release (Sublocade), and buprenorphine implant (Probuphine) are established as safe and effective treatment options. Like methadone, buprenorphine blocks the rewarding effects of superimposed illicit opioids, and for individuals experiencing opioid withdrawal syndrome, buprenorphine ameliorates the symptoms of withdrawal (Bart, 2012; Stahl, 2013). Prior to 2000, MAT for OUD included only methadone via federally approved treatment programs. Because buprenorphine is a narcotic, as described above, the Harrison Narcotics Tax Act of 1914 prohibits physicians from prescribing buprenorphine to treat addiction because it is a narcotic. To expand access to MAT and to integrate the addiction treatment into primary medical practice, the 2000 Drug Addiction Treatment Act (DATA) (DATA, 2000) was passed, enabling qualifying physicians to provide office-based treatment for OUD. Specifically, the law enables qualifying physicians,

who complete additional specialized training, to request a waiver from the Substance Abuse and Mental Health Services Administration (SAMHSA), permitting them to prescribe schedule III, IV, or V controlled medications to treat substance use disorders (Jones et al., 2015). Initially, DATA-waivered physicians were permitted to simultaneously prescribe buprenorphine to a maximum of 30 patients per provider with OUD during the first year of their active waiver. However, the DATA law was amended in 2006, raising the patient threshold to a maximum of 100 patients per provider at one time. Despite this expansion of buprenorphine prescriptive capacity, geographic maldistribution of waived physicians, along with practice size restrictions, has continued to limit availability and access to buprenorphine treatment.

As of 2015, only 2.2% of U.S. physicians centralized in urban areas had obtained waivers, and only 46.6% of U.S. counties nationwide had a practicing physician with this privilege (Rosenblatt, Andrilla, Catlin, & Larson, 2015). Again, this contributes to the MAT disparity rurally, leaving more than 30 million rural persons without access to MAT with buprenorphine (Rosenblatt et al., 2015). Furthermore, most waived physicians do not deliver buprenorphine treatment to the maximum number of patients allowed under the law (Rosenblatt et al., 2015). Research has indicated key reasons for this, including the need to hire additional office staff to manage difficult patients; increased costs; additional billing and documentation requirements; and the lack of secondary treatment providers, such as therapists and mental health clinicians (Rosenblatt et al., 2015; SAMHSA, 2014). A 2015 national study found that 25% of all waived physicians in the United States were not treating any patients with buprenorphine and that the other 75% of waived physicians were treating an average of only 25 patients

(Rosenblatt et al., 2015). Historically, the unwillingness of physicians to obtain waivers and the reluctance of those with waivers to prescribe buprenorphine at full capacity represented a significant barrier to accessing MAT with buprenorphine.

In 2016, the Comprehensive Addiction and Recovery Act (CARA) was signed into law. CARA increased the maximum number of patients who can be treated by DATA-waived physicians from 100 to 275 (Drug Policy Alliance, 2016). Also, CARA expanded buprenorphine prescriptive privileges to include nurse practitioners (NPs) and physician assistants (PAs) who have a DEA license and meet the additional requirements to be eligible for a DATA waiver (Fornili & Fogger, 2017). As of 2017, eligible NPs and PAs who complete additional specialized training can request a waiver from SAMHSA to prescribe schedule III, IV, or V controlled medications to treat substance use disorders (ASAM, 2016a). Eligibility was expanded in 2018 to include certified nurse midwives (CNMs) and certified nurse anesthetists (CNAs). Given that advanced-practice nurses are more likely to work in federally designated primary care shortage areas, which tend to be the rural areas most impacted by the opioid epidemic (DesRoches et al., 2013), it is anticipated that CARA will facilitate expanded access to buprenorphine treatment in rural areas (Andrilla, Patterson, Moore, Coulthard, & Larson, 2018) where methadone is not accessible and the worst opioid-related death rate is found.

**Naltrexone.** Naltrexone is a mu-opioid receptor antagonist medication; it blocks mu-opioid receptors, preventing exogenous opioids from binding, precluding the euphoric and rewarding effects from opioid illicit use (Stahl, 2013). In 2010, long-acting injectable naltrexone was approved by the Federal Drug Administration (FDA) for the treatment of OUD. While the oral formulation of naltrexone has been deemed ineffective

in the treatment of opiate use disorder due to a lack of patient adherence, long-acting naltrexone therapy can be administered monthly by intramuscular injection, supporting compliance and abstinence. In fact, research has shown that naltrexone decreases reactivity to drug-conditioned cues and cravings for opioids (SAMHSA, 2016a). Associated with this, more than 50% of the patients receiving long-acting naltrexone remained on treatment and refrained from illicit opioid use (Dennis et al., 2015).

Unlike methadone and buprenorphine, naltrexone is not a controlled medication, which means there are no prescriptive restrictions on its use to treat OUD. Naltrexone's safety is well-established, and unlike opioid agonist medications, it does not induce euphoric effects and is not behaviorally reinforcing (Bart, 2012). Thus, naltrexone poses minimal risk for abuse and diversion. However, naltrexone removes a tolerance to opioids, leading to increased risk of overdose; should patients discontinue MAT therapy and return to illicit opioid use, the dosage of opioid that was previously used could have lethal consequences (Substance Abuse and Mental Health Services Administration, 2016a). Research suggests that opioid-related deaths associated with oral naltrexone use are three to seven times higher than those of methadone (Dennis et al., 2015). Moreover, initiation of treatment requires seven days of abstinence prior to administration of the first dose (Stahl, 2013), which is feasible only to ensure in inpatient or incarceration settings. Ultimately, while fewer barriers exist to accessing MAT with naltrexone, the risk for overdose is a serious concern that outweighs potential advantages.

### **Psychosocial Interventions and MAT**

Current treatment guidelines for OUD recommend the use of psychosocial interventions in conjunction with MAT pharmacologic interventions for best treatment



outcomes (NIDA, 2016; SAMHSA, 2016b; WHO, 2017). MAT pharmacotherapy, combined with psychosocial interventions, is associated with reduced rates of opioid use and overdose, retention in treatment, and improved social functioning (Krawczyk, Negron, Nieto, Agus, & Fingerhood, 2018). However, there is no consensus as to which psychosocial interventions are most effective when combined with MAT to treat OUD (Krawczyk et al., 2018). Traditional evidence-based psychosocial treatments for substance use disorders, which include cognitive and behavioral therapy and contingency management approaches, require access to providers with expertise and specialized educational training. However, there is limited access to basic psychosocial services in most rural areas due to provider and facility shortages (Pullen & Oser, 2014). This leaves many individuals with OUD needing to rely on self-help and peer-recovery interventions.

Utilization of self-help peer support groups such as Narcotics Anonymous (NA) and Alcoholics Anonymous (AA) are the preferred psychosocial supports for many individuals living with substance use disorders. For individuals with OUD, NA is widely accessible, offering routine meetings to provide recovery support and to prevent relapse (Krawczyk et al., 2018; White, 2011). Participation in NA is voluntary and consists of group members with a shared understanding of addiction and recovery. Despite the numerous advantages, NA is guided by the 12-step, sobriety-based model, which requires abstinence from all opioids (White, 2011). Based on this philosophy, individuals receiving MAT with opioid-agonist medications are not abstinent from opioid use. This has led to prejudice against individuals receiving MAT with methadone or buprenorphine because these individuals are perceived to be substituting one opioid addiction for another. The NA philosophy of opioid abstinence as a requirement for recovery

contributes to the pervasive stigma against MAT, which is documented to exist among NA groups (Krawczyk et al., 2018). For individuals living in rural areas who depend on NA for psychosocial support, stigma related to MAT might have a detrimental influence on treatment outcomes.

### **Primary Care-Based Models for Providing MAT**

The U.S. Department of Health and Human Services has identified improved access to MAT as a strategic priority for reducing opioid-related harms (U.S. Department of Health and Human Services, 2015). To best accomplish this goal, MAT has been integrated into primary care settings. Due to the limited availability of specialists in addiction medicine and to substance abuse treatment programs in rural and frontier regions, models of care that integrate MAT into primary care have proven to be the most effective. The Extension for Community Healthcare Outcomes (ECHO) model, which was developed as a platform to deliver the best evidence-based medical services to rural, medically underserved populations (Arora et al., 2016), aims to develop knowledge and capacity through established networks that connect rural medical providers with interdisciplinary and medical specialty experts (Arora et al., 2016). Specifically, the ECHO model uses telehealth technology to leverage scarce healthcare resources while providing rural providers with the ability to better manage physical and mental health conditions that require specialty expertise (Dubin et al., 2015). Nationally, the ECHO model has been a key resource in providing continuing medical education as well as enhanced support services for the treatment of chronic pain in a manner that reduces excessive opioid prescribing (Komaromy, Bartlett, Manis, & Arora, 2017; Korthuis et al., 2017).

In New Mexico, the ECHO model has been adapted to support rural primary care providers in MAT management for OUD. Specifically, ECHO links primary care clinics in rural New Mexico with a University of New Mexico-based health system for direct support, mentoring, and education to assist providers in delivering MAT pharmacotherapy. The ECHO model has also been used to recruit providers for DATA 2000 waiver training, supporting enhanced access to MAT with buprenorphine rurally in New Mexico (Komaromy et al., 2016; Korthuis et al., 2017). As a result, New Mexico has achieved one of the highest per capita numbers of DATA-waivered physicians (Komaromy et al., 2016). Remarkably, despite this expansion of MAT availability, opioid-related deaths in rural areas of New Mexico remain high.

### **Existing Related Research**

#### **Study of Factors Impacting MAT Adherence**

The current state of research investigating the causal factors driving discontinuation of OUD treatment includes a number of studies either directly reporting on or alluding to providers' and patients' reasons for abandoning buprenorphine-based MAT. These are informative because MAT with buprenorphine has become the preferred treatment method due to its accessibility in less restrictive, office-based, primary care settings. In addition to being highly effective at reducing opioid cravings, buprenorphine treatment is also linked to high levels of patient satisfaction and treatment adherence (Strobbe, Mathias, Gibbons, Humenay, & Brower, 2011). Despite this, many patients discontinue buprenorphine treatment shortly after initiation, and a systematic review of quantitative research published by Bentzley et al. (2015) summarized the findings of studies that identified patient and provider perspectives on key factors that

drive discontinuation (Bentzley, Barth, Back, & Book, 2015). While initial search strategies identified a large pool of published literature alluding to patient (N = 203) and provider (N = 97) information associated with discontinuation of MAT, only two and three articles, respectively, were included in the systematic analysis. The rationale for exclusion of all but these five studies was based on absence of quantifiable reasons for treatment discontinuation by the patient or the provider. Thus, in aggregate, only five of 300 studies identified in the searches performed in this systematic review directly and quantifiably addressed patient and-or provider perspectives about MAT discontinuation. Analysis of the five included studies that involved weighted-least-squares regression of reported variables with weights determined by study sample size. The primary findings of the analysis revealed three potential predictors of a positive urine test outcome, which included previous heroin use, taper duration, and buprenorphine maintenance dose. Regression analyses of previous heroin use ( $\beta = 0.61, p = 0.28$ ) and taper duration ( $\beta = 0.44, p = 0.28$ ) in relation to outcome were not significant. Comparatively, lower mean buprenorphine maintenance dose ( $\beta = -0.90, p = 0.04$ ) was predictive of higher abstinence rates based on urine opioid testing. Overall, this is important clinical information about factors that impact adherence to MAT that is useful in designing treatment interventions to maximize retention. However, the key limitations of the body of work summarized in this systematic review include a lack of information about patient-level experiences obtaining and adhering to MAT and a study of unique circumstances that impact treatment adherence in rural settings.

### **Study of MAT Decision-Making**

Little published information is available related to factors that influence MAT decision making for individuals with OUD. A study by Yarborough et al. (2016) explored how patient preferences and previous experiences with MAT influence treatment decisions. As part of a larger study that examined the adoption of MAT in two integrated health systems, adults with opioid dependence (N=283) were recruited to participate in qualitative interviews that focused on their treatment experiences, knowledge of medication options, preferences for treatment, and experiences with chronic pain treatment as they related to opioids (Yarborough et al., 2016). The qualitative analysis revealed seven predominant themes. The thematic areas of consideration for MAT decision making were awareness of treatment options, treatment expectations, prior experience, need for accountability and structured support, preference to avoid methadone clinics and stigma, fear of continued addiction and withdrawal, and pain control among individuals with chronic pain (Yarborough et al., 2016). Although this knowledge about factors that influence MAT treatment decision making has important implications for treatment engagement and retention, it is important to note that there were limitations to consider. First, access to treatment options was limited by differences in MAT coverage between two health systems, only one of which covered methadone. Second, the regulations limiting access to buprenorphine changed over the course of the study, and that impacted access to MAT. Finally, 100% of the participants in this study were privately insured, thus, findings might not be indicative of perspectives held by individuals who lack insurance, a common economic barrier for rural residents seeking MAT.

### **Study of Patient Experiences with MAT**

Research to understand patient-level experiences that influence obtaining MAT for OUD is limited. One recent study reporting findings in this context surveyed out-of-treatment opioid users to explore how perceived access to MAT shaped their preferences regarding treatment (Huhn, Tompkins, & Dunn, 2017). In this study, demographic information, insurance status, attitudes toward OUD treatments, and self-reported symptoms of OUD were collected from 357 male workers associated with the Amazon Mechanical Turk platform, an on-demand workforce service commonly used in biomedical research to garner nationally representative samples. Chi-square analysis of survey-based results indicated that participants' first attempt at treatment most commonly involved seeking counseling ( $\chi^2 = 30.19, p < 0.001$ ), participants knew that local MAT providers would recommend MAT as the first line of treatment ( $\chi^2 = 26.85, p < 0.001$ ), and participants with insurance would most likely attempt a local physician visit and that their primary reason for seeing the physician was not to obtain MAT ( $\chi^2 = 24.75, p < 0.001$ ) (Huhn et al., 2017). The primary limitations of this study included (a) gender bias because only male participants were enrolled, (b) the use of a questionnaire with binary responses for most questions that could not obtain deep patient-level perceptions about the process and environment they uniquely face obtaining treatment, and (c) a lack of focus on the impact of rurality on pursuit of MAT for OUD.

Other work has documented that rural individuals seeking treatment for OUD are impacted by environmental, economic, and system-level barriers, including a lack of prescribing physicians, geographic misdistribution of treatment facilities and options, lack of healthcare insurance coverage, and logistical issues related to the physical isolation of rural communities (Oliva, Maisel, Gordon, & Harris, 2011). These barriers

are compounded by federal regulations governing MAT delivery and provider-level barriers that inhibit patients from initiating MAT, including inadequate information and/or education, stigmatizing provider perceptions, and inadequate training (Oliva et al., 2011). While these barriers impact access to treatment for rural OUD patients, strategies to mitigate them have not improved the persistent rural-urban imbalance in seeking care and have not uncovered the patient-level barriers to MAT utilization. This is the central gap in our understanding that this project aimed to address. Understanding factors that shape the perceptions of rural OUD patients regarding MAT is critical in designing interventions that effectively impact and successfully engage this population.

### **Significance of the Research**

The most widely accepted evidence-based treatment for OUD is MAT. Because MAT has such a well-documented track record of efficacy, it has become more widely available in urban and rural areas, nationally and in New Mexico (Komaromy et al., 2016). Despite this, MAT is accessed half as frequently in rural versus urban areas, paralleling a doubling in the death rate for rural opioid misusers (Hirschak & Murphy, 2016). The reasons for this imbalance in obtaining MAT are not defined, and no information that might contribute is available about the perspectives and knowledge of rural individuals seeking MAT. This is the central unmet need that this research aimed to address. Tapping into the experiential perspective of those most affected addresses a gap in our understanding that could have an impact on approaches for effective delivery of care to this group. To build knowledge about the perspective of individuals dealing with OUD and MAT, a qualitative descriptive study was conducted to explore the knowledge

and perspectives of individuals with OUD in rural New Mexico regarding MAT and to describe their experiences seeking treatment.



## **CHAPTER 3**

### **METHODS**

Individuals with OUD living in rural areas seek MAT less often than residents of urban settings. Because New Mexico ranks near the top for of the greatest number of opioid-related deaths in rural counties, this qualitative descriptive study aimed to (a) explore the knowledge and perspectives of individuals in rural New Mexico with OUD regarding MAT; and (b) describe the experiences of these individuals when seeking MAT.

#### **Research Design**

##### **Rationale for Study Design**

A descriptive qualitative approach was used to achieve the study aims. Data were collected through semi-structured interviews, field notes, participant observations, and demographic questionnaires. Qualitative description embraces a naturalist approach to inquiry and has a commitment to inductive analysis and creative synthesis (Sandelowski, 2010). Unlike other qualitative approaches, qualitative description entails low-inference interpretation, facilitating greater consensus in the analysis of findings and allowing for the presentation of data in everyday language (Sandelowski, 2000). The goal of qualitative descriptive studies is to provide a straightforward, comprehensive summary of specific occurrences experienced by individuals (Sandelowski, 2000).

As described, individuals with OUD living in rural areas seek MAT less often than residents of urban settings. The reasons for this imbalance are unknown. No data are available describing rural residents' perspectives regarding pharmacotherapy for OUD or their experiences seeking MAT. Furthermore, the specific experiences of the

racially and ethnically diverse population of individuals seeking MAT for OUD in northern New Mexico are poorly understood. Thus, the goal of this research was to gather descriptive qualitative data regarding individuals' knowledge about and experiences seeking MAT for OUD. It is established that qualitative methods are best suited to understanding subjective experiences (Creswell, 2013; Denzin & Lincoln, 2011; Patton, 2015). Qualitative description is an effective method to attain a straight and clear description of the knowledge and perspectives of individuals regarding MAT and to explore their experiences seeking it.

## **Setting**

### **Location and Population Demographics**

New Mexico's Rio Arriba County is the epicenter of the opioid overdose crisis in rural America. The drug overdose death rate spiked in this county between 1999 and 2000, and it has been either the highest or one of the highest in the nation since (Appendix C) (New Mexico Department of Health, 2017; Rossen et al., 2017). Between 2010 and 2014, 53% of drug overdose deaths in New Mexico were caused by prescription drugs, 33% were caused by illicit drugs, and 14% involved both. Data from the state medical examiner indicated that 48% of unintentional overdose deaths during this time were due to prescription opioids, with 34% of these caused by heroin (New Mexico Department of Health, 2017).

Compared to the rest of the state, northern New Mexico experiences a disproportionate drug overdose death rate. Specifically, Rio Arriba County had the highest total drug overdose death rate among all New Mexico counties between 2011 and 2015, with 85.8 deaths per 100,000 people. This rate was more than triple the state

average of 24.6 deaths per 100,000 and was more than five times greater than the national average of 16.4 deaths per 100,000 (New Mexico Department of Health, 2017). In fact, Rio Arriba County had the highest rate of drug-related deaths per capita of any county in the United States (Rossen et al., 2017). Thus, Rio Arriba County was an ideal setting to study the experiences of people seeking MAT.

New Mexico is a predominantly rural state. As described in Chapter 2, HRSA defines rural as all population centers and land areas not included in urbanized areas of 50,000 or more people or in urban clusters of between 2,500 and 50,000 people (HRSA, 2017). Comparatively, frontier areas are defined as sparsely populated rural areas with fewer than six people per square mile (HRSA, 2017). Of New Mexico's 33 counties, 26 are considered rural (HRSA, 2016), and of these, 15 are designated as frontier based on population density and distance in minutes and miles to population centers where resources, including healthcare, are concentrated (Rural Health Information Hub, 2017). Of note for this research, Rio Arriba County is designated a frontier area.

Based on the most recent data documented in 2016, New Mexico's population was 2,088,070, with a density of 17 people per square mile (United States Census Bureau, 2016). Racial distribution was 48.5% Hispanic or Latino, 10.6% American Indian or Alaska Native, and 38.1% White, non-Hispanic or non-Latino (United States Census Bureau, 2016). In fact, New Mexico has had the largest percentage of Hispanic people of any state in the nation (Sanchez & Sanchez-Youngman, 2015). In 2016, New Mexico's per-capita 12-month income was \$25,257, with 19.7% of New Mexicans living in poverty (United States Census Bureau, 2016).

Northern New Mexico is a geographically and culturally diverse region. The Rio Grande runs through Rio Arriba County in north-central New Mexico, and its largest municipality is Española. The valley region along the Rio Grande is referred to as the Española Valley and is home to the Ohkay Owingeh and Santa Clara pueblos. This same region embodies the location of the first colonial settlement in the Southwest in the 17<sup>th</sup> century, which resulted in long-standing divisions and conflicts between the colonial populations and the area's indigenous communities (Garcia, 2010; Guthrie, 2013).

In northern New Mexico, Rio Arriba, Taos, Sandoval, and Los Alamos counties are HRSA-designated rural counties, while Rio Arriba is further classified as frontier (HRSA, 2016; Rural Health Information Hub, 2017). In 2017, Rio Arriba County had a population of 40,040, comprised of 70.8% Hispanic or Latino; 19.7% American Indian or Alaska Native; and 12.7% White, non-Hispanic, or non-Latino. Many Rio Arriba County residents trace their Hispanic or Latino ancestries to early Spanish colonizers (Garcia, 2010). In Rio Arriba County, based on 2016 data, the proportion of persons under age 65 without health insurance was 14.9%, compared to 10.8% for New Mexico as whole. The per-capita 12-month income was \$19,602, with 28.9% of Rio Arriba County residents living in poverty (United States Census Bureau, 2016).

Northern New Mexico is a culturally rich region that embraces long-standing traditions. The local community is recognized for its tight-knit, established familial and social networks that support positive health and well-being. Inhabitants are linked to the land through history and family lineage. Many community members can trace their familial roots to the early settlers of northern New Mexico and to land grants issued by the Spanish and Mexican governments beginning in the 17<sup>th</sup> century (Zentella, 2004).

This deep connection to the geography of the area is evident in the cultural and spiritual traditions that have played a central role in the history of and development of northern New Mexico art, music, and literature (Zentella, 2004). Overall, despite health challenges, the local indigenous and rural communities in northern New Mexico demonstrate unwavering resiliency and resourcefulness.

### **Sample**

Interviews for this study were conducted with 20 purposefully sampled individuals living in rural northern NM and seeking treatment at a regional health center in Española. Sample size was determined based on considerations about the study aim, sample specificity, expected quality of dialogue, and strategy for qualitative data analysis using a previously published approach for determining the size of the sampling population in qualitative interview-based studies (Malterud, Siersma, & Guassora, 2015). Based on these considerations, the necessary information power, or saturation, was achieved with a sample size of 20 participants.

### **Participant Demographics**

**Inclusion Criteria.** Male and female participants were recruited who were 18 or older; lived in Rio Arriba County in northern New Mexico; met DSM-V criteria for OUD, and were affected by MAT, either by receiving it, denied it, or opted out of the assistance.

**Exclusion Criteria.** Individuals who were unable to provide informed consent or were unable to read, understand, or speak English were excluded. Children were not eligible to participate because understanding pediatric or adolescent experiences seeking MAT was not the primary aim of this research. Finally, prisoners were excluded because

the conditions under which individuals receive MAT while incarcerated are unique and are not the focus of this research.

**Inclusion of Special Populations.** The study's inclusion and exclusion criteria drove decision making about the recruitment of these vulnerable populations. Regarding subject demographics, no participant was excluded due to race, and the population of recruited subjects matched the typical ethnic demographic profile of those commonly seeking MAT for OUD in rural northern New Mexico.

### **Recruitment**

A purposive sampling method was used to recruit participants from El Centro Family Health in Española, NM. At the time of this research, El Centro Family Health provided MAT, including treatment with buprenorphine, to more than 200 patients. Candidate participants who obtained MAT at El Centro Family Health were recruited using a flyer. The recruitment flyer (Appendix D) contained a brief description of the study and the contact phone information of the researcher and was posted in the waiting room and in exam rooms at El Centro Family Health. Interested potential recruits contacted the researcher directly, either in person or by phone, if they wanted to participate.

### **Data Collection Strategy**

Following the provision of informed consent, I conducted digitally recorded audio interviews with each participant. Prior to the interview, each participant completed a questionnaire documenting key demographic information, particularly as it related to their diagnosis of OUD and their current situation regarding MAT (Appendix E). Interviews were 40-90 minutes long and took place at a time and location that supported

privacy and was convenient for each participant. During the interview, I also recorded field notes about nonverbal communication and observations. The interviews were guided by a series of seven open-ended questions:

- Can you tell me about your experience with opioid use?
- Can you tell me about a time when you sought help for opioid use?
- When you sought treatment, why did you do so? Prompt: What was the experience like?
- What are your views about MAT?
- How do others in your community view MAT?
- What is your everyday experience with using MAT? Prompts for this question were based on the participant's experience regarding firsthand use or observations of others' use of MAT.
- How can healthcare providers and the community support you in achieving your best health?

Immediately following each participant interview, I documented observational and descriptive notes in a field journal; this instrument also served as documentation of every phase of the research process, which provided for a thorough audit trail and enhanced trustworthiness and credibility of the data (Creswell, 2013; Krefting, 1991; Thomas & Magilvy, 2011; Thorne, 2008).

### **Data Analysis**

Data analysis was an iterative process that proceeded along with data collection. This process improved accuracy in the interpretation of the data and allowed for a deeper exploration of its content. Because qualitative research relies on inductive reasoning,

concurrent data collection and analysis allowed for the analysis to inform the process of additional data collection, with new layers of data informing the analytic process (Thorne, 2000). Interviews were transcribed verbatim, and field notes were incorporated into the transcripts as observational notes. The final annotated transcripts were analyzed using conventional content analysis involving open, axial, and selective coding (Hsieh & Shannon, 2005). Annotated transcripts were read multiple times to generate the initial thematic coding. Continued analysis and thorough documentation of impressions led to the emergence of labels for the initial open coding scheme, which was then assessed for patterns and grouped into meaningful clusters. Participant quotes that exemplified key themes were highlighted to provide rich and descriptive information and to link the data as a whole (Hsieh & Shannon, 2005; Thorne, 2008). Throughout the data analysis process, I met regularly with my committee chair, an experienced qualitative researcher, to discuss coding and data analysis.

After completing a preliminary analysis of all of the qualitative data, follow-up meetings were arranged with nine participants to solicit feedback on the initial findings. These meetings allowed participants to review and respond to the research findings, thus enhancing methodological rigor. As with the interviews, the meetings were scheduled at a time and location that supported privacy and were convenient for each participant.

In each of the nine follow-up meetings, I spent the first 10-15 minutes verbally presenting a brief summary of my initial findings. The summary was crafted to succinctly lay out the preliminary themes that emerged from the data. After this informal presentation, each participant was provided the opportunity to reflect on the findings and to comment on their accuracy and comprehensiveness as they related to that person's



individual experience as well as to give impressions regarding the overall fit of the research findings to the larger experiences as the participant understood them. During each meeting, I documented additional field notes about body language, comments, and suggestions made by the participant. These field notes were added to the data and analyzed as appropriate to confirm or modify the research results.

### **Methodological Rigor**

The rigor of this research design was established by ensuring that the four components of trustworthiness that are relevant to qualitative research were addressed (Krefting, 1991; Thomas & Magilvy, 2011).

### **Credibility**

Credibility relates to the illustrative value of the research findings and occurs through the process of checking for the representativeness of the data as a whole (Thomas & Magilvy, 2011). Credibility was established through various inquiry elements, including reflexivity, triangulation, member checking, and peer examination. I conducted systematic and in-depth fieldwork collecting data and engaging in observation. Triangulation, which is the process of checking against other sources and perspectives, was used to reduce bias and enhance credibility (Patton, 2015). Triangulation of qualitative data sources also occurred, including qualitative interviews, participant observations, field notes, memos, and other relevant documents. As described, analytical triangulation enhances the trustworthiness of the research findings and provides an opportunity for participants to react to what is described and concluded (Patton, 2015). Additionally, member checking with participants to solicit evaluative feedback of the preliminary findings took place. As described, follow-up meetings with each participant

were scheduled so that participants could review and respond to the accuracy of the findings and could participate in the qualitative analysis process. Finally, peer examination through collaboration with other qualitative research experts (Thesis adviser and dissertation committee members) was carried out during the data analysis phase.

In an effort to enhance credibility, reflexivity was practiced throughout the course of data collection and data analysis. Reflexivity is defined as an intentional effort to reflect on the ways in which the researchers' positioning affects the research process (Bradshaw, Atkinson, & Doody, 2017). I am a psychiatric nurse practitioner with experience working with individuals diagnosed with substance use disorders, including OUD. Thus, I have biases related to MAT availability and effectiveness that stem from my experiences in clinical practice. Although I had no prior relationship with the recruited participants, critical self-reflection of prior assumptions and values was necessary to distinguish my role as a researcher rather than as a provider in the context of this research. To protect against researcher bias and to ensure trustworthiness, I routinely discussed my thoughts and feelings with other research team members. Reflexive field notes were used to separate my experiences, assumptions, and values from the methodological decisions made. This ensured that the data collected best represented the participants' experiences and perspectives.

### **Transferability**

Transferability relates to the extent to which the qualitative research findings of a particular study have applicability in other contexts, settings, or populations (Krefting, 1991; Thomas & Magilvy, 2011). Transferability was established by providing a dense description, which allows the reader to determine whether similar findings might apply in

other situations or with other groups. As described, key demographic data were collected from participants, and a thick description of the population studied was provided to ensure transferability when appropriate.

### **Dependability**

Dependability relates to the extent to which the reader can follow the decision trail that was used by the qualitative researcher (Krefting, 1991; Thomas & Magilvy, 2011). Dependability was established by ensuring that a thorough and detailed audit trail of each phase of the research process was documented and was available so that other researchers can easily replicate this research. As described, immediately following each participant interview, I documented observational and descriptive notes into a field journal; this instrument served as documentation of every phase of the research process. In addition to the objective observations, reflective memos documenting innate thoughts and feelings were recorded to provide for a thorough audit trail and to control for researcher bias. Additionally, memos were used to record the rationale for all methodologic decisions during data analysis.

### **Confirmability**

Confirmability ensues when credibility, transferability, and dependability have been established (Krefting, 1991; Thomas & Magilvy, 2011). Confirmability refers to the process of ensuring that the research is reflexive and that the researcher has examined personal biases and preconceptions that might impact the research (Thomas & Magilvy, 2011). Reflexivity is critical for establishing credibility and ensuring that new insights can emerge from the data that are not biased (Krefting, 1991; Thomas & Magilvy, 2011).

I kept detailed memos that documented personal feelings and biases throughout the research process to demonstrate reflexivity.

### **Protection of Human Participants**

Approval was obtained from UNM's Human Research Protections Office (study ID#: 18-273). The study was approved under review category "Expedited," with approval for behavioral research using social science methods involving collection of voice recordings. A waiver of documentation of consent was granted.

### **Potential Risks and Protections**

Recruitment took place from the population of patients receiving healthcare at El Centro Family Health. Flyers were posted on the walls in the waiting area and on the doors of the exam rooms. Participants were protected from coercion to participate by facilitating their ability to voluntarily obtain information from the flyers and by requiring them to initiate recruitment by contacting me directly. I did not have a prior relationship or clinical connection to any of the participants. Only participants who voluntarily agreed to participate were recruited for the research study. Possible risks to participants included emotional stress, social risk, legal risk, and inconveniences related to the travel and time commitment to participate. The most important personal risks were associated primarily with revealing information that might impact the participant legally, emotionally, or psychologically. These risks were considered to be minor, short in duration, and reversible. Appropriate medical staff members were available at El Centro Family Health in the unlikely event that a participant experienced any of these emotional risks.

Initial approval from UNM's Human Research Protections Office was obtained on May 18, 2018. Data was collected and analyzed through the end of 2018. The findings of this research are presented in Chapter 4 and discussed in Chapter 5.

## **CHAPTER 4**

### **FINDINGS AND DESCRIPTIVE THEMES**

This chapter includes a description of demographic characteristics of the participant sample recruited to address these questions, the major themes and subthemes that emerged from the collected data, and a presentation of the data matrices. A matrix guide was developed and continuously reviewed, revised, and refined throughout the data collection and analysis process. This chapter reports the data analysis results in narrative and matrix form.

#### **Demographic and Descriptive Data**

##### **Sample Demographics**

The total sample consisted of 20 participants with OUD who were either receiving, had been denied, or opted out of MAT treatment (Appendix F). The average age of the participants was 36 and ranged from 23-63. All participants spoke English. Of the 20 participants, 18 self-identified as Hispanic, one as Spanish, and one as Native American. Reported education levels varied, ranging from ninth grade to some college. Overall, 13 participants reported earning a high school diploma or GED, while six participants reported some college education. The average number of years using opioids was 13 and ranged from three to 35; 10 participants reported using only heroin, one participant reported using only prescription pain pills, while nine participants reported using both pills and heroin. The average length of time that participants had been receiving MAT was 3.5 years (ranging from one to 10 years), and the average length of time that participants waited before receiving MAT was 4.3 years, with some of them beginning MAT treatment in the first year and some waiting for 20 years to receive it.

##### **Descriptive Themes**

The major themes that emerged from the data were “The chase,” “It’s hard to have to wait,” “Suboxone is better,” “Able to live a normal life,” “Staying clean,” and “No matter what, you’re labeled.” These themes and their associated descriptors, which are depicted in matrix form in Appendix G, are fully described below.

**Theme: The chase.** Opioid use started out as a pleasurable experience for participants. In addition to the pain-relieving effects, opioids produced a pleasurable high that often was described as a numbing of the mind and body. However, the euphoric effects were short-lived, and there were persistent cravings to achieve the high, which over time became impossible to obtain. As participants became more addicted, the chase for opioids was an attempt to avoid the sickness and pain of opioid withdrawal. In the end, the need to get well led to a lifestyle of “hustling,” which is the term used to describe the activity of obtaining money by dishonest and illegal means to support the continuous cycle of opioid use.

**Subtheme 1: “Getting strung out.”** Participants described their initial experiences with opioids as a means to treat physical and emotional pain. Sixteen participants reported some type of prescription opioid use prior to starting to use heroin. For most, opioids were legitimately prescribed by a provider for some type of health condition, accident, or injury that resulted in acute and-or chronic pain. For others, prescription opioids were made available through family, friends, and acquaintances in the community. In addition to their pain-relieving effects, prescription opioids were desired for their physical and psychological numbing effects. As one participant said, “In the beginning, it was a mind thing where I just wanted it, to where I got addicted and my body needed it. It’s horrible. It’s the devil.”

Participants who were prescribed opioids by a medical provider said they did not feel that they received adequate education related to the risks of developing dependence. Because they were prescribed, the pills were free or available at a low cost through insurance carried by the participant. For many participants, prescription opioid use continued for several years. The opioids were perceived as safe because they were prescribed by a doctor, participants said. Five participants also said that in the past, certain providers were in favor of prescribing opioids for financial gain. As larger quantities and increased dosages of prescription opioids were requested and received, the use of opioids escalated. Here is what one participant said:

I hurt my back when I was 16 years old. I didn't tell my mother about it because it was on a motorcycle accident, so I thought she'd make me sell my bike, so I didn't say anything. I dealt with my back like that until I was 18. Then, I right away went and saw our family doctor at the time. Right away, he started prescribing me Percocet and Lortab. Lortab tens, and he'd give me Valium tens, ibuprofen, but more Lortabs than anything else. I stayed on the Lortab for years. It changed to different things. I went from Lortab to Percocet to morphine to Dilaudid. I tried everything. The doctor was real lenient, so he gave me plenty-- so as much as he'd give me is as much as I'd take. I didn't realize that I was going to end up getting strung out on them and didn't think that way back then. I know now, but back then, I didn't know.

Another participant said:

Yeah. He [doctor] was overboard, but that was him. It was about the money. That's all he was about. Like I say, he would prescribe me 360 at a time.



Imagine all those Lortab tens, 360 a month. I could take as many as I wanted. I'd get up in the morning, and I'd take six right off the bat. Six of them.

In time, access to prescription opioids became increasingly difficult. As long-time healthcare providers died, retired, or moved out of the community, new providers were not willing to continue prescribing. This left many participants without access to the desired quantities and doses of opioids. To avoid withdrawal, participants were forced to purchase opioids on the street. Some were cut off completely: "Once you were cut off cold turkey from the pain meds, that's when you had to start in [heroin]." Eventually, participants reached a point where they could not obtain a refill prescription and thus were forced to purchase diverted prescriptions. The higher cost of diverted prescriptions presented a financial obstacle, prompting the switch to heroin: "Then, from there, we couldn't afford it anymore, so we went to heroin, because it was cheaper and the high lasted longer, but the withdrawals were just awful."

Participants described a progressive pattern of heroin use that went from snorting to smoking and eventually to "shooting." At each phase of heroin use, they became increasingly "hooked." As they were no longer able to experience a high from the heroin itself, several described being "addicted" to the practice of shooting up:

Shooting up becomes its own addiction. It doesn't matter what you're shooting up; you just have to shoot up something, and it's sad because you get addicted to the pull, addicted to watching it register, addicted to the feeling you get when it hits you or whatever, and it's so much more dangerous because when you put it in your mouth, or whatever, you smoke it, it goes through your stomach first and takes up all the bad stuff, and then the other stuff hits your bloodstream. The

other way, it all hits your bloodstream. You have a chance of dying every time you do it.

Participants acknowledged understanding the risks associated with injecting heroin. In addition to death from overdose, many experienced infections and abscesses that resulted in visible scars on their body. Three participants described needing medical care to treat an infection, pointing out on their extremities where past abscesses had to be drained and debrided by a provider. Four participants discussed how the use of a dirty needle to shoot heroin resulted in hepatitis C infection. Specifically, participants discussed their experiences with sharing needles while in jail:

It's horrible because they don't realize what can happen to them when they start shooting up. I always said I would never do that. I would never do that, and that's when it turns around and bites you in the ass because you say, "I would never. I would never," and then that's when it happens. Then you get all these diseases, all these things, and nobody tells you. This one time, I was in jail--I didn't have anything, and I shot up in jail like an idiot. I didn't know that everybody had hep C. This girl said she had hep C, and so she wanted to borrow the same needle. I went up to them, and I told them, "She has hep C. Just letting you guys know." She was like, "No, we all have hep C." She's like, "So everybody does." I was like, "I don't. Now I guess I do." It was messed up because nobody told me, "We have hep C. Don't share or whatever." Me, like an idiot, I didn't know and then found out the hard way.

***Subtheme 2: "Waking up sick."*** Once addicted, the chasing of opioids was no longer about treating chronic pain or getting high, but rather it was about avoiding the

sickness of withdrawal. While many participants started the cycle to deal with chronic pain, once they were addicted, this was no longer the focus of attention, because the pain of opioid withdrawal superseded prior experiences with physical and emotional pain. Sixteen participants discussed their experiences with opioid withdrawal. They routinely used the word “dying” to describe the experience of waking up sick from withdrawal. The term “medicine” was used to describe heroin in the context of alleviating the symptoms of withdrawal because it was used to make them feel well. One participant said: “Yeah, it’s awful. It sucks to have to be like that, because once you open your eyes, that’s all you’re thinking about. You don’t care about anything else. Nothing matters until you get well.” As soon as the heroin, or medicine, was in their body again, they said they felt relief from the physical discomfort of withdrawal:

I believe that that’s how people honestly feel when they’re addicted to heroin.

It’s that they need their medicine [heroin] to get through the day. It’s an everyday struggle, and they have to get their medicine every single day, every morning, or they’re not going to be right. They’re going to get sick. The longer they go without it, the worse they’re going to feel. Physically, you’ll get really, really sick. It’s the worst sickness I’ve ever had to go through before, but at the same time it’s the best high you can get if you’re going to decide to try it.

In addition to the painful physical symptoms and sickness that come from withdrawal, there was a psychological component that participants described as an intense fear that drove them to do whatever they believed was necessary to obtain heroin to avoid “dying.” They described stealing from family members, friends, and businesses in the community, which triggered feelings of guilt, shame, and remorse. The constant

worry and pressure to get more heroin was always on their mind, they said. It was a process of first needing to find the money, then to locate a dealer, and the pressure to do this within a timeframe that was out of their control:

Yeah, with that [heroin], you could just function throughout your day. If not, you stay feeling like shit all day. Your body hurts, and as the time passes, you get worse and worse. You start gagging, and you start throwing up. It's hard, because you're on a time limit to try to get money, so you can get well, so you don't have to go through that. I think a lot of people don't understand the sickness of it. They think, "He's just doing it just to do it." Some people don't understand. Some people don't even care. They just think, "He's just a junkie. He needs his fix," but they don't understand the hurt, the way you feel. Then, after you do it, you feel bad because you're on it [heroin]. You're finally high, and you feel good, and you still feel like shit because of how you had to get the money, what happened. It's like you're just losing. You're just miserable all the time.

There was a strong desire to break the perpetual cycle of chasing opioids.

Routinely, promises were made that each time would be the last time and that tomorrow the cycle would end, participants said. However, the pain of withdrawal was too overwhelming, and the pattern continued:

Every single day, we'll do our stash, and then we're like, "This is it. Tomorrow, we're going to get sick and break," but then once you wake up sick, it's a whole other story. It's so bad that we're like, "Screw what I said yesterday. I'm going to go get better. It is so horrible. It's like the closest thing to death I've ever felt. It's bad."

*Subtheme 3: “Lifestyle of hustling.”* Participants described a lifestyle of hustling, which was characterized as the constant pursuit of obtaining money by dishonest and illegal means to support their addiction. They described engaging in behaviors that were inconsistent with their moral and ethical standards. These behaviors included panhandling, stealing, dealing drugs, and prostitution. Each day, they would wake up and begin the process of “figuring it out.” There was a routine of making sure that there was always enough heroin around, and it was a race to avoid the onset of withdrawal. In time, hustling became a methodical process that characterized their life:

When you’re an addict, I know we’re just dead. All we do is wake up, hustle, go to sleep, get high, go to sleep. Wake up, hustle, get high, go to sleep. Wake up, get high, the same thing every day, constantly. You don’t eat. You don’t do nothing. You look dead. You look like a zombie, just there not even knowing what’s going on. It’s like we’re dead already. Just getting money, just figuring it out. It’s just an everyday thing, figuring out how you’re going to get it, where you’re going to get the money from. Is your drug dealer going to be around? It’s just all those things. You can’t even sleep, because you’re just thinking about tomorrow and the next day and the next day. It’s just really awful, awful, awful, and I just wish I would have never experienced it, because it’s awful.

Another participant who relapsed and was not currently on MAT said:

It’s not fun to be strung out. It’s not an easy life to live, so you want the help. Once you know you have the problem, you want the solution so you don’t have to do it. It’s hard to wake up every day sick and to not feel good. Pretty much, once I would get strung out, I’d want to try to figure out a way to get off it right away

until I landed up in jail. In the beginning, it was all fun and games. Now, it's hell. Seriously. It's tiring. It's awful. Getting up in the morning and doing what I got the night before, because the night before, I don't want to be sick in the morning, so I make sure I have what I need. The rest of the day, I go out, and then, if I don't have the money, I'll have to go hustle it. It's walking around in the hot heat and getting sick. It's awful. Miserable. It's really, really miserable, sometimes having to just get up in pain, lay down somewhere, walking along. Your feet are tired.

A lifestyle of hustling resulted in numerous physical, social, emotional, and legal consequences. Seventeen of the 20 participants discussed their struggles with loss of housing. Those who had family support relied on family members to provide shelter, thus preventing homelessness. Others lived on the streets, which increased their risk for exposure and other harms. All of the participants described their experiences with loss of employment. Poor work attendance and theft were the primary reasons for losing employment. After loss of job-related income, most participants admitted to stealing from family members and robbing from stores. One participant said, "I stole from anybody I could, really. If there was an opportunity, I would take it." Ultimately, many participants started "dealing" to support their continued opioid use. This often was not enough to earn the money needed, so some resorted to stealing from family, robbing stores, panhandling, and prostitution. This caused participants to suffer physical harms and psychological trauma. Many of the hustling behaviors were inconsistent with their moral beliefs and gender role expectations. In particular, male participants recognized and acknowledged that a lifestyle of hustling was much harder for women because they

often ended up with the additional burden of supporting their male partners' opioid addiction as well as their own:

They [women] have their nice house, car. They're paying their bills. They're doing everything real good. Then, from one year to the next, you just see them lose it, lose it. The next time you see them there, they are walking by themselves telling you that they're hustling, and that's sad. It breaks my heart, because I don't think girls should do that. They sell [prostitution], too, because there's a lot of guys that have girls that will let them go out and do that stuff. I wouldn't do that. I wouldn't allow my girlfriend to do that, but there's guys that encourage it. Tell them to go do it. . . . Yeah, they don't have do anything. They just send their chick walking until they get picked up. For some reason or another, that girl goes back with the money to the guy that just sent her. I don't understand that for the life of me. I tell them, too, "Are you stupid? Why would you do that?" It's awful.

Fifteen participants discussed legal consequences, which included arrest, probation, and incarceration. This was a source of shame for most of them because the illegal behaviors in which they engaged were not consistent with their ethical and moral values. Incarceration fed a cycle of stigmatization socially, leading to negative view of self and self-destructive behaviors. Furthermore, illegal activity to obtain heroin had unintentional harmful effects on family members and loved ones. For nine participants, legal consequences included the loss of custody of their children. This was very difficult, and with this loss, it often pushed parents further into the cycle of addiction:

I started using. I started using immediately once they took him [child] from me. I said, “You know what? If they’re going to keep me abusing, I might as well use. They took my son. Tried to take him from me once and then took him from me again. I’m going to use, so I used. I got high for a long time. That was the worst decision I ever made.

**Theme: “It’s hard to have to wait.”** Participants described several challenges in obtaining MAT treatment, but overwhelmingly, the greatest barrier was the time to initiate treatment due to long wait lists. Methadone treatment policies, coupled with limitations on the number of patients who can be enrolled in methadone maintenance programs, led to long waiting times to initiate MAT with methadone. As for buprenorphine, restrictions on the number of patients who could be treated by any one provider at any given time also led to long wait lists and prolonged periods of time before treatment could be initiated. This contributed to the problem of drug diversion, and many participants relied on diverted buprenorphine prescriptions while they waited to begin MAT treatment.

***Subtheme 1: “Not accepting new patients.”*** Participants described long waits to initiate MAT with methadone. While a methadone maintenance program was available locally, there was little movement on the wait lists. In fact, participants said they believed they had a better chance of getting to the top of a wait list for access to buprenorphine, compared to methadone, because only one methadone treatment program was available in the community. Some participants described trying to gain access to methadone in surrounding counties, but this was difficult due to financial and travel limitations. There was an expectation that when called, participants would be ready and



able to show up for an initial appointment. Participants did not like needing to be available, on demand, as slots opened, and often, the long wait discouraged them from seeking treatment altogether. This often required them to arrive very early at the treatment center, wait for extended periods of time, and in the end still fail to be accepted. This was very frustrating, and there were always more people seeking treatment than would be granted access:

There's waiting lists; long, long lists, which I don't understand why it should be. They say it's a methadone clinic, but yet there's never room. It's always full. I've tried to get on it a few times, and it's a hassle. There's never enough times available. Like, if you go sign up, and there's openings, you have to be there like by 4 in the morning, just to have a spot at 9. Then, they're only taking there's like 30 people waiting, and they're only taking not even half of them, maybe 10 people will get signed in if they're lucky.

Another participant said:

There's a lot of people on it, a lot of people that couldn't get into the methadone program, so just imagine just waiting like this for who knows how long. It's like, when you want to quit, you want to quit, and if you can't, there goes your wanting to.

For most participants, unless they were pregnant, it was equally difficult to access MAT with buprenorphine. Participants found it challenging to locate a provider willing and able to prescribe buprenorphine and had availability on their caseload to accommodate another patient. As one participant said, "Everybody's booked, and all I mostly heard is, 'We're not accepting new patients.' Well, then how do you get on it?"

How? Nobody could answer that for me.” The experience of waiting and being denied access was frustrating, and some of the participants said this caused them to give up.

To initiate treatment with buprenorphine, participants were required to submit a urine sample proving their opioid addiction: “I had to throw a dirty UA for heroin in order to get started on the program.” Because dirty urine was required, participants seeking buprenorphine after a period of abstinence and who were not actively using heroin were denied access. After relapsing, they would then be placed on the wait list. Specifically, this was discussed in the context of seeking buprenorphine following incarceration:

I’d come in, and the doctor would be like, “I’m sorry. I don’t know why they put you on my case. I’m full.” I’d have to put it off for another three weeks, and then the other doctors that are here are full. That happened to me four times, to where finally I stopped trying, I guess. I just gave up, when I’m trying. I called, and they didn’t return my call for two months. By that time, I was already giving up. I came in here another time too. I had just gotten out of jail, and I didn’t want to start using heroin again, so I came here right away. Unfortunately, in order to start the Suboxone program, you have to be in withdrawal from heroin. You can’t be clean and start, which I think is so stupid. When they told me that, they basically told me, “You have to go out and get dirty to start the program,” so I didn’t start, and then I ended up doing it anyway. I just never came back.

***Subtheme 2: “For the men, there’s no help.”*** Gender differences were acknowledged and discussed by both male and female participants. Female participants, particularly those who were pregnant, were able to access buprenorphine more easily

than male participants. While pregnant females were not actively recruited, two participants disclosed during their interview that they were pregnant. Female participants who were married to, in a relationship with, or living with a male partner who was either on a MAT wait list or was unable to access buprenorphine, said they felt pressure to share their medications. For male participants, this disparity in access based on gender was a source of frustration, keeping them stuck in the cycle of opioid addiction, they said:

There's a wait list so then you're like, "I guess I'm going to go to my drug dealer. I'm going to go get high because there's a wait list. I'll sign the letter for the wait list, and if they call me, OK, but right now I'm ready to get clean." Then when they call you, they could have got all this money, they have all these drugs. Why are they going to want treatment then? When they wanted it, it wasn't there. They've tried, and it wasn't there, so why are they going to try? It seems like, when they want to try to get the help, it's not there. Not only do they give up on the system, but they give up on themselves. They're like, "I guess this is the way I'm going to die, because nobody wants to help me. I know I did this to myself, but I want to change. I want to do better, but I can't do it on my own, and there's nobody out there to help me. Nobody can tell me how. I can't do it for another two years if the funds are there. If there's not 20 pregnant women in front of me, because I'm a male." I think that's the biggest problem. There's no help. There's no--I don't know.

Some male participants, after experiencing long waits and an inability to access treatment, said they contemplated use of the legal system as a means to gain treatment access. When balancing the decision between living a life with long-term legal

consequences versus the risk of death, they did not want to die. The desire to live and to access treatment was a choice, despite the legal consequences of resorting to desperate measures. Thus, the need to commit a crime to get help was considered to be an option, particularly when it was perceived to be the only option:

That's the only other way. I guess, if you really want the help, you're going to have to go commit a crime, so the judge can tell you, "You need help. We'll help you get into a rehab." Out of state? I've seen people that have actually done that. They've done some small little crime like trying to rob some place, and it's like, "Why did you do that?" They're like, "I'm trying to get help, and I know if I do this, they'll send me to California. Then I'll get help. They'll help me get housing, a job. If I don't do that, I'm not going to change." Why should it come to that? Why should they have to come to violence or any kind of crime? It's just a cry for help, but that's the only way they can get it. Like I said, it's for the guys. The girls, you get pregnant; if you choose the help, it's there. For the men, there's no help for them unless they go to jail.

***Subtheme 3: "I had to buy them on the street."*** All of the participants were aware that diverted prescriptions were available to purchase on the street. Sixteen participants specifically discussed their experiences with MAT diversion, which included selling buprenorphine, having their prescription stolen, or buying diverted buprenorphine prescriptions. In each circumstance, the diverted buprenorphine was used to prevent opioid withdrawal for themselves or for someone else. Although some of the participants said some people in the community divert prescriptions for money, this was not a theme that emerged for participants. Conversely, for participants who were on a wait list to start

MAT treatment, purchasing diverted buprenorphine prescriptions on the street represented an option:

I wanted to start on it, but what happened is a lot of the doctors only took certain numbers of people, so I put myself on every waiting list that I could find that prescribed it. The whole six years, I bought them off the street is what I did. I had to do what I had to do, but it was better than buying heroin, so I would find somebody that had them. They were selling like five for \$20, four for \$20, so then I was set for four days, or maybe even eight. Sometimes I'd take half depending how I wake up or how early I took it the day before, so it all came from streets. It's like as bad as heroin. You can go up to somebody, and it's usually somebody with it and wanting to trade, so they can get heroin. That's how you meet somebody or what, and half the time they got the Subs with them. I'll buy it from them because I'm going to need them. I know I am. That's how I did it for those six years.

**Theme: “Suboxone is better.”** Overwhelmingly, participants said they favored buprenorphine over heroin and buprenorphine over methadone. All of the participants had some experience taking buprenorphine, and most were familiar with Suboxone, the sublingual formulation of buprenorphine with naloxone. The women participants described experiences taking Subutex, which was used during pregnancy. And one participant was taking Sublocade, the long-acting injection formulation of buprenorphine. Regardless of the formulation, participants said they routinely referred to buprenorphine as “sub.” At the time of the interviews, 17 participants reported taking buprenorphine, either as prescribed or via diverted prescriptions purchased on the street. The other three

participants were waiting to initiate MAT treatment with buprenorphine. Despite the many benefits of using buprenorphine, participants did not like that they were “still hooked” on a drug. Buprenorphine was considered to be “better” but not ideal because of their dependency on the medication.

*Subtheme 1: “Better than heroin.”* Participants described many advantages of taking buprenorphine over heroin, notably, “Because it’s legal. You have it for the whole month, and it works.” For participants, it reduced their cravings to use heroin. Many said they had little or no desire at all to ever use heroin when taking buprenorphine. Some participants described situations in which they were offered heroin or were around people using heroin, said they felt no urge to use at all while on “sub” in this context. However, for some participants who had become “addicted to shooting up”, buprenorphine reduced cravings for heroin, but it did not help alleviate the desire to inject. Also, participants said “it works” to prevent the pain and discomfort of withdrawal:

It’s better than heroin, because you don’t wake up as sick at all, to where with heroin, when I wake up, I’m dying. I’m like, “I’m dying.” You’re lying in a puddle of stinky sweat, and your whole body’s aching. Every time I get sick, every time I go to jail and get clean and go through withdrawal again on heroin, there’s always--some symptoms are always worse, and some are easier. Sometimes you’re constantly throwing up, and there’s other times where you’re not really throwing up, but you’re constantly using the restroom. With the prescription, Suboxone, I don’t wake up dying like that. I wake up, and I can actually function. I’m not all sweaty and yucky and dying. I can wake up and go

say, “Hi, good morning,” to my family and eat a little bit. I don’t need it immediately when I wake up. With heroin, I wake up, and the first thing I’m doing is trying to poke my arm. Suboxone is cool because you don’t wake up like that. I could wake up this morning at 6 and done it, and then I wake up tomorrow morning at 10 in the morning, and you feel all right. You’re still--you feel a little yucky, but it’s not nearly nothing as bad. Experiencing everyday using, this is way better than heroin--it’s better.

Having access to a legal prescription and a full-month supply eliminated the need to hustle and reduced many of the physical, social, emotional, and legal risks that are associated with a lifestyle of hustling, participants said. On buprenorphine, participants were able to feel well and function without opioid intoxication:

Yeah. It’s legal, and it’s more accessible. You have it right there in your bedroom with you. You don’t have to go wherever you have to go. Yeah, I think it’s a way better option. Even though you don’t get that feeling like you’re high and intoxicated, but at least it’s there and it’s legal, and you can try to start doing something different.

***Subtheme 2: “Better than methadone.”*** Participants overwhelmingly said they preferred buprenorphine over methadone. Eighteen of the 20 participants voiced negative beliefs about methadone and said that if given the choice, they would prefer buprenorphine. When compared with buprenorphine, methadone use was associated with various disadvantages, such as feeling intoxicated, continued poly-substance use, restrictive treatment policies, and various long-term health consequences of methadone use. Participants reported feeling high on methadone and that it was common practice to

continue heroin use while receiving methadone. Poly-substance use was also discussed in the context of methadone treatment, including the routine use of alcohol, cocaine, and methamphetamine while taking methadone to produce a better high. When comparing methadone to buprenorphine, one participant said:

I prefer to be either one way or the other. Like with methadone, you get high, and you still feel like you're using drugs when you're on the drug, because you're high. With Suboxone, you don't get high, you just get--I don't know what you--pretty good, too, because it helps you to make better choices. You're more alert, and your head starts to unfog. You start to clean up. You get back in your state of mind. With methadone, I think you just stay, but then some people like that. Some people don't want to be straight or sober. They just want something to where they could get high and do whatever and go about their day, and methadone is the answer for them.

For others, the restrictive policies guiding methadone treatment were a disadvantage. Methadone treatment required them to present to the dispensing clinic daily, and this was very difficult. If for some reason they were unable to make it in to the clinic, they experienced adverse consequences, including being denied their dose or having the dosage reduced. This felt punitive, and participants were unhappy with these policies. For participants, a missed or reduced methadone dose resulted in symptoms of opioid withdrawal, making them vulnerable to relapse:

I just think that methadone is not the--I just think that if they're going to prescribe somebody something, it should be Suboxone or Subutex because it is hard to get off of it, but it's so much worse when you do methadone. I think that they should



let people know if you miss one dose, you're really going to be hurting, and I think that if they're going to do methadone, they shouldn't say, "If you don't come by 11 [a.m.], you don't get your dose." No, because some people have different circumstances. You can't always make it there when they say, "Like jump," and they expect you to jump. They can't always do that, and it's hard because we're trying to get away from the addiction, not go further into the addiction. Some things just take you further in to where when you want to stop you can't.

Participants said they believed there were health concerns related to methadone use. Participants who had taken methadone reported experiences with calcium depletion, bone loss, tooth loss, and becoming "swollen" while on methadone. Participants who had not taken methadone but had knowledge about it expressed additional concerns that methadone causes bone cancer and "deterioration," making a person look as if they were "ready to pass away." In addition to the negative effects on their health, these side effects were easily observed by others in the community and were a sign of their methadone use and heroin addiction. Participants felt that the stigma and discomfort that caused these effects were not tolerable or preferable:

The methadone, that's how I lost my teeth. I was on the methadone for five years off and on, though, in those five years. I went two years, got off for a year, then got on for a year-and-a-half, then got off at six months. After that six months, I said, "I ain't doing this no more." By then, my teeth were already getting me in. They told me it screws with your calcium, so it's going to eat your bones. I said, all right. I had heard about the Suboxone. This was in 2003.

*Subtheme 3: “Still hooked on a drug.”* Although buprenorphine was the preferred treatment, participants did not like being dependent on it. They described their experience as “still hooked” and that treatment with buprenorphine had enabled them to become a “functioning addict.” There were several situations that could prevent them from accessing buprenorphine, including cost, issues with insurance, inadequate pharmacy supply, and medications being stolen. Most participants were hypervigilant about monitoring their prescriptions and described being very proactive about refilling as soon as they were able to avoid being without medication. However, when they were without access to it, they experienced withdrawal symptoms:

The withdrawals from Suboxone are terrible. It takes a tiny bit longer to get addicted to Suboxone. It takes maybe a week to 10 days. Once you do it for about 10 days straight every single day, you’re addicted to Suboxone just like you are heroin. Just the withdrawals aren’t—I guess it varies, because for me and a lot of people, the withdrawals aren’t as bad for Suboxone, but for my girlfriend, they’re worse. She gets sicker off Suboxone than she does on heroin.

Despite the several benefits to using buprenorphine, participants felt conflicted about their feelings related to the medication. Although there was positive impact on quality of life with buprenorphine, because of physiological dependence on it, participants had a difficult time separating opioid addiction from another. One participant said, “Yeah, people are functioning. We go to work, we do all the normal things that this world wants us to do, but it’s the same thing. It’s just a functioning addict.”

Another participant said:

I don't think there's any real difference, because even if you get prescribed it, it's still being hooked on a drug. You still need it. If you don't have it, you still get sick from it. Whether you get it from a doctor or you get it from the streets, it's still being dependent on a drug. Whether it's a pain killer from a doctor or buying it off of the streets, you still need it. . . . I don't get the way I did. I would always be nodding out, or asleep, or whatever. I can go to work. I can do everything I have to do, but at the end of the day, all I'm worried about is doing my sub, getting my sub. "I need to get my prescription. I need to go to the doctor." It's the same thing.

**Theme: "Able to live a normal life."** Participants described buprenorphine as a "miracle thing" because it helped them live a functional, productive, and "normal" life. While addicted and trapped in their routine of hustling to obtain opioids, participants described their life as being already dead because they were not able to attend to activities of daily living or to engage socially with family and friends. MAT freed them from their lifestyle of hustling and the continuous cycle of opioid-seeking behaviors. Staying clean was a requirement for living a functional, productive and normal life.

**Subtheme 1: "New normal."** Once participants started MAT with buprenorphine, they were able to resume their family, social, physical, and financial responsibilities. This new normal enabled them to break free from the pattern of social withdrawal, isolation, and illegal activity, prompting a desire to "live" again. Importantly, participants described the positive feelings that developed from being responsible for and in control of their buprenorphine prescriptions. Participants were

proud to share their treatment successes with the program. Taking their medications as prescribed facilitated their enhanced autonomy and self-responsibility for their recovery:

Suboxone just makes you normal. That's it. That's all it does. It puts you to be normal, to live normal. The Suboxone, to me, it's like I use it like as a crutch, because I know it helps me with my pain, but I don't take advantage of it. I don't ever take over more than I'm supposed to. I take it as I'm supposed to. As I'm taking it the way I'm supposed to, it works that way. I keep with the program. Like I say, I don't know how long I'm going to be on it, but as long as it helps me and it's not damaging, I'm going to be OK. You feel like, "Whoa, I'm normal again." It's my new normal. It was weird, because for 14 years, you've done all this, and when you get on it, it's just like a new normal. You're normal again. You're not like your old you. Now, you want to be around family. You want to go to family get-togethers. You want to live. You want to do things. You don't just want to stay in a room and just shoot all day. That's how it was. I'm able to do what I've got to do. I can go camping and leave town and stuff, as to where heroin or like that, you either have to have to get a big stash to go.

Participants also said they valued the sense of freedom that MAT with buprenorphine enabled. Unlike with methadone, which required them to adhere to dosing regimens, or heroin, which they had to routinely locate and purchase, participants had access to buprenorphine for one-month periods. While using heroin, participants described constantly "worrying about where you're going to get your next fix from," which was described as a feeling of "being on a leash." In particular, they disliked the loss of freedom to travel or spend any time away with family because of the need to be

near their supply. Heroin use restricted their ability to function socially and to maintain normal family activities. Buprenorphine alleviated this problem: “This way with my Suboxone, I can just go and stay however long. I enjoy the freedom.”

***Subtheme 2: “Learning how to live again.”*** Participants described feeling lucky when they were able to access treatment. Once accepted into MAT treatment with buprenorphine, participants felt relieved not to have to worry about the sickness of opioid withdrawal. They also did not have to spend their day hustling or engaging in illegal behaviors to obtain their next fix. This was a novel occurrence that many had not experienced for several years. Instead of waking up sick and needing to hustle, they were able to start their day feeling good and could enjoy the normal aspects of life:

It was good. It felt good to finally be clean and not have to worry about being sick in the morning and worrying about where your next fix is going to come from. It felt good to just have to care about your daughter and not worry about even getting the drug; worrying about where you’re going to get your next fix from. It was a good feeling.

In addition to feeling physically healthy, participants described psychological changes such as a renewed focus on family, an interest in healthy activities, and an optimism about the future. There was an understanding that recovery would be a long and difficult process. To ensure their success, they took steps to avoid triggers and were able to set realistic goals realistic goals. By accomplishing small goals and structuring their daily routine, participants developed confidence in their ability to stay sober. Participants compared the experience of being addicted to opioids to what they thought

being dead would be like. Thus, with sobriety, there was a need to learn how to live again:

I wake up, and I'm starting to go back to how I was before all of this came into my life. . . . I know that at one point in my life, I was doing very, very good, so I know I can get back there. I know I can get back to where I was at. I was almost considered to be a successful person in the eyes of society or whatever. To go in pretty much all the way to the bottom, but I know I can go and get myself back up to where I was at. It's just going to take some time. It's frustrating, and sometimes it's hard, but that's what I'm trying to do. I'm trying to set little, small-term goals to accomplish, taking it one day at a time, too, and keep reminding myself that I know that I can freaking get back to where I was at. It's probably going to take as long as it took me to get all the way to the bottom, so it's like five years, but I think in five years' time, I should be back to where I was. It's a long time. It's 10 years out of my life pretty much. . . . I'm starting to fill my day out, fill the different parts of my day out. Usually, I would be doing something illegal. I'm just trying to figure that out. I feel like I'm still a teenager barely learning how to live again. I'm trying to learn how to live.

Learning to live again also meant that participants had to embrace acceptance that they were forever changed as a result of their experiences. In recovery and on MAT, they still viewed themselves as different from others who have not shared their experience of living with opioid addiction. Participants described a separate reality, distinct from what a "normal" person experiences. This required a negotiation of their identity within a separate and parallel world. Living a normal life without opioid use required self-

forgiveness for the pain associated with opioid addiction. In sobriety, participants are forced to face the physical, social, emotional, and legal consequences of their opioid use. As difficult as this is, participants found strength in the belief that through their recovery, they could help others:

You've just got to push on. I don't know how a normal person would deal with it. I'm not normal. Fourteen years on that stuff, it does something to you. My mom can't understand. My mom drinks a half glass of wine and she buzzed (be sure of this quote) happy. She can't understand. She tries her hardest. I can't explain it to her. . . . You can get frustrated, so I've got to find my triggers. Slowly, you find out that, but when you're sober, you find out a lot about yourself that you didn't even know was there. It's hard, but--it's been a long--It's so much. It's hard. Hopefully, I can help people to try to get better. I tell them, "You'll never be perfect. You're going to be scarred for the rest of your life, but you can help yourself, and you can help other people." That's the only thing we can do. We can't go back and fix the people we hurt or ourselves that we hurt, but we can carry on and try to make it better for everybody else.

**Theme: "Staying clean."** The course of recovery was a long and challenging process which was described as "staying clean". Participants had to embrace a new way of thinking and develop different ways of coping with stress and their emotions. In addition to taking medications, participants acknowledged the importance of developing a strong support system. When describing their support system, participants referred to family, friends, and people they met while attending meetings. Participants also discussed their relationships with their healthcare providers as essential to recovery.

Participants described the importance of having a provider who was knowledgeable about MAT and the process of recovery.

*Subtheme 1: “Eventually you just stop.”* For participants in treatment, the process of “staying clean” while on buprenorphine was characterized by relapses. At first, refraining from opioid use was difficult, they said. Because opioid use is an epidemic in the community where the participants lived, they said avoiding exposure was impossible. One participant said “I just know everybody, and I know the wrong people.” Finding new people and places was particularly challenging, and it often took time, especially for participants who had family members living with them who were still using heroin. Having a provider who was understanding and willing to stick with them during their periods of relapse was very important. Finding “good environments” took time, but eventually, with the “sub,” they said they were able to maintain sobriety:

Every now and then, being that I’m an addict, and I could be on Suboxone and taking it, but then again, on the other hand, I’m still trying to weed out half of my friends and pull myself around good environments and good stuff like that, and that takes a long time, so when somebody comes with drugs, eventually you wind up getting the urge and the craving, and you mess up, and you do the drug, even though you know it’s not going to do anything, you still do it for whatever reason. You get weak at the time, or you’re trying to get high, or you just want to feel different, you still go back to it. It’s not because I’m not doing what I’m supposed to do. It’s just because in that one moment, I got weak, or I got too stressed out and turned to what I knew what would comfort me or what would comfort me prior to that the best. Just little things like that, that will set you up to



go and get high, and it's not necessarily that the Suboxone program is not working. I messed up or the holiday came up, and I wanted to get high, so I got high. Just little things like that. It's bad, and it looks bad because the doctors don't understand. To them, you're just giving them dirty UAs. They're thinking, "This guy's not getting it," and they [providers] don't want to stay prescribing to me. "He's just coming in dirty week after week," but, yeah, to me, I'm not strung out. I'm doing good and taking my medicine. I'm not having to hustle and all that, but then, I'm still not exactly staying clean. It's just hard, I guess. It's hard, but eventually you just stop [heroin].

***Subtheme 2: "Having a doctor that won't give up."*** Participants valued their relationships with their MAT providers. They appreciated having a doctor who "won't give up" on them, even during their times of weakness and setback. When they did experience a relapse, they were able to be honest about their circumstances because they felt safe. One participant said, "I know that I'm safe. I'm not going to get cut off or whatever, but being on this is better than lying." Within the safety of this provider-patient relationship, participants learned to accept responsibility for their relapses and to be accountable for their behaviors. This in turn empowered them to feel in control of their recovery. Their ability to be open and honest with their MAT provider fostered a therapeutic connection that served to facilitate their recovery and self-confidence:

Yeah, at the beginning it was pretty bad. There were very few Suboxone doctors to begin with, and then the doctors themselves had no idea about addiction or anything. They thought it was some kind of willpower or something like that. It's a lot harder than that. Now that they're learning more about it, they're

actually like, “OK, we can’t just kick them off the program for coming in positive for opiates or whatever.” They try to look for a different way to help them.

That’s why this doctor here is so good, because she never gave up on me, and that just gave me a little bit more confidence that I needed in myself, because it wasn’t there anymore. That little extra bit of confidence to just maybe tell myself that maybe, just maybe, I can stay for a week or a month. Now, I’m going for two months now. Yeah, it’s been a tough thing, but I’m very humble about the whole experience. I wish I could do something to try to help, but everyone keeps telling me, no, it’s too soon. I wish I could talk to some of my friends that are still using and tell them, “Hey, let’s try to get you on the right side of the tracks,” but everyone says, “No, it’s too soon. You can’t do that. Put yourself around them, and you’re going to go back to.

Depending on their history and health status, participants often had multiple care providers. Across care settings, inconsistencies in the policies regulating MAT access were noted. Ten of the 20 participants noted the disparities in healthcare providers’ knowledge about opioid use disorder and MAT, with one participant saying, “I’ve come across some doctors who don’t even know what Suboxone is. I found that kind of weird.” Some specialty healthcare providers felt uncomfortable providing care to individuals receiving MAT, especially if they themselves did not have the authority or training to do so. For others, they encountered providers with negative biases and who were dismissive of their health concerns once it was understood that the participant was on MAT. Participants avoided providers who were judgmental and those they believed

they could not trust. To stay “clean,” the participants said they needed to connect with providers who “understand” and “won’t give up on you.”

*Subtheme 3: “Building a support system.”* In addition to taking medications, participants discussed the importance of building a support system to facilitate recovery. They found counseling and self-help groups to be particularly helpful. Overwhelmingly, participants preferred self-help groups over provider-led groups. Participants found it difficult to connect with providers who had not shared the experience of living with an addiction. Participants found it therapeutic to be around others who also had a history of opioid use and were in recovery. In particular, they valued the knowledge that they gained from interacting with others. This behavioral skills training helped them learn new ways to manage their emotions and stress, preventing relapse:

They teach us so many things, like how to do things in a healthy way instead of just fall back on the drugs and fall back on the drugs. A way to reach out to someone. They set you up with a sponsor if you’re healthy, or there could be counseling. They have peer meetings with addicts that are like, “I know exactly how you feel.” Somebody who is not an addict is sitting there telling you that they know how you feel, it’s total bullshit because only an addict knows what an addict goes through. . . . I mean, someone who is clean 20 years talks to you about how they’ve been clean these 20 years, there’s more hope there than someone who is saying, “Just leave it. It’s easy. Just leave it. Just let it go. It’s not hard.” They don’t know what it’s like to have to quit the drug and leave it, how to handle that one year sober, how to handle that two years, five years, or 10 years. They don’t know what it’s like to have to hurt and what the degrading things that you

do to get that next high. We do a lot of things that we say we would never do to get that fix, and they don't understand that. They just think it's simple. "Oh, you just leave it. That's it," but it's not like that.

Eleven participants discussed using Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) as a support and as a part of their daily routine. For those who also struggled with alcohol use, AA was the preferred support group. Without the need to spend their time hustling to obtain alcohol and opioids, there was a need to fill this new-found time and to add structure to their schedules. They enjoyed spending time with others who shared a similar experience, and AA was an important part of their daily routine. One participant said, "Now that I don't drink, and I don't have to do criminal activities, I go to my meetings every day, AA. I've met a lot of beautiful people in it." Participants said that in AA, the focus is exclusively on issues with alcohol misuse: "AA is just about drinking. Taking other medications is an outside issue." While individuals in AA might also be receiving MAT with buprenorphine or methadone, issues with opioid use and other substance use disorders were not typically discussed in the context of the AA meetings. This was not true of NA, which focused on opioid use disorder but did not condone the use of MAT with buprenorphine or methadone. Thus, for participants who relied on NA as a means to avoid a relapse, they did not always feel supported in their recovery:

Yeah, you need a support system and stuff to help you if you want to stay clean and to be all right. There's other people who are trying to do what you're doing, but then there's other people that are in NA and AA, and all that they look at Suboxone as a drug, because to them, they don't accept it. Like I go to NA

meetings, and they don't accept it as treatment. They tell me that I'm still on drugs. I was going to them a lot, and then they started to talk to me and tell me shit like that, and I would tell them, "Are now, this is the only way I know how to stay off of drugs." Then, they'd argue, "You're not off of drugs." I'd tell them, "Yeah, I am." After having it so I'm not sick. I'm living a regular life. I'm off of drugs." They say, "No," because I'm still dependent on something.

**Theme: "No matter what, you're labeled."** Participants described their experiences with stigma related to their opioid use. While engaging in a lifestyle of hustling, participants were labeled as bad people by others in the community. Although participants often engaged in illegal behaviors to prevent the sickness that accompanied withdrawal, often making bad decisions, they felt tremendous guilt and remorse because these behaviors were not consistent with their moral and ethical beliefs. Despite their treatment successes with MAT, participants still experienced stigma in the community. Overall, participants felt that with more education, there would be more community acceptance and less stigma for those seeking treatment.

*Subtheme 1: "An addict, that's how they view you."* Once participants were identified as having an addiction to opioids, they were labeled as such. The community perceptions related to opioid misuse were consistently negative, which perpetuated feelings of loneliness, rejection, and social isolation. Unfortunately, this label did not go away with time and sustained sobriety: "Once you're an addict, you're an addict. That's how they view you." Participants described feeling as if they were always being judged:

I mean, once you become an addict, everybody just leaves you. You're all alone. All you have is your friends that aren't friends because they just want to use you

for your drugs, and so you walk into a store, they start following you around whether you have money or you don't. They start following you around saying you're stealing even if you're not. Even if you go to buy a candy bar, they're all on you like you're about to rob the place, and it's awful because they treat you so badly when you could be an honest person. You can just be in there to go buy something to drink. Go buy something, and they still treat you like if you're a criminal--like if you're the worst person. People see you, and their kids are there, they grab their kids, and they run away. They're like, "Oh, no, no, no, no." They just treat you like you're nothing, and maybe that's why they chose drugs in the first place. Just because somebody is homeless, maybe they never even used, but they're dirty, and they go into a store, they're labeled as an addict. No matter what, you're labeled as an addict, and people just look at you with such disgust like if you're the most disgusting, horrible person in the world. I'm sure they have done worse things, and they're sitting there judging you. It's so wrong.

Participants voiced a strong desire to have others in the community treat them with dignity, respect, and as a human being. Participants suggested this could be accomplished by changing language commonly used when referring to individuals with opioid use disorder. The routine and insensitive rhetoric associated with the word "addict" was hurtful, the participants said, and it perpetuated their social marginalization. There was a belief that if members of the community could move beyond labeling and judging, true opportunities for healing would open:

A lot of people talk about addicts, like, "They're so lazy. They're so this, they're so all these things," call them such bad names, when it's not their choice to be.

Yes, they chose to use the drugs, but they're running from something, and it's not OK to be like that with them, like, treat them like they're nothing sometimes, because we all make bad choices. Yeah. Everybody is just, like, "Ew, don't talk to them," or "Don't let them see me," or things like that. They just probably need to be loved, some people. It's just sometimes we don't know what we're looking for, and we look in the wrong places. . . . I think they should stop labeling addicts as addicts. They're just people who have scars. They're just people who are hurting. They're people who lack something in their life, whether it's spiritual guidance, or love, or whatever it is. Feeling lonely, anything, whatever it is that makes them use. Help people to show them that there's more to them than drugs. Put all that stupid crap aside, passing judgments and all that stuff, and just love them. Love drives out all evil. It helps so many people to change, to want better than just drugs.

***Subtheme 2: "Just another drug to get addicted to."*** Most community members had limited knowledge about MAT, which contributed to public misunderstandings and the belief that buprenorphine is "just another drug to get addicted to." Suboxone was mistakenly considered to be a "substitute" for heroin. Family members and others in the community assumed that when taking their prescribed buprenorphine, participants were doing so to get high. Thus, participants were considered to be "still addicted" despite the fact they were in recovery and no longer were using heroin:

They [family] thought it was just another drug to get addicted to. They thought that after that I would get back on heroin. . . . Even if you're on Suboxone, a lot of people can be hypocritical thinking that you're still doing drugs, even if it's

Suboxone. A lot of people think that it's just another drug to get addicted to. I think a lot of people should at least--they should be given more information on it; to the community so they at least know that it's not a harmful drug. Yes, it is a prescription that you can get addicted to. You won't get sick, but even elderly people take pain meds, and it's just the same thing. They may not think it is, because their doctor's prescribing it, but you're still addicted to it. If you don't have it, you will still go through withdrawals. I think that they should be giving more information on the Suboxone to let people know that it's not just a substitute for heroin.

***Subtheme 3: "They don't understand."*** Participants thought that by providing the community with information and education related to opioid addiction, there would be a greater acceptance of MAT treatment and reduced stigma related to opioid use and its treatment. Some community training was available related to opioid overdose prevention, specifically how to administer naloxone or Narcan when encountering a suspected opioid overdose. But aside from the Narcan training, little information was available in the community. Participants said they believed that having more educational opportunities for the general public focused specifically on opioid use disorder and MAT treatment would be instrumental in changing public misconceptions. Lack of community awareness and understanding perpetuates stigma and is a barrier to healing and recovery. Some of the participants said the lack of information contributed to misunderstanding, even within their own families:

The community doesn't understand. They judge, especially in a small town like this. They're super old fashioned and just everything about it, they just--a lot of



the community disagrees on it. But on the other side, there's a lot that does see it. It's just being the community could be more aware and more knowledge for them would be a good one, I guess, so that they understand and accepted you a little bit more. A lot of the time, addicts get judged by the past or by being addicts. A lot of times, like my grandma herself, she thought a person who did drugs was a really bad, awful, demon person. Soon to find out, her granddaughter is doing drugs. She's like, "I guess maybe they're not all bad people." I was like, "No, we're not bad people. We just make bad decisions, because we don't want to be sick." I think just understanding and being a lot more kindhearted toward the people, because an addict is still a person.

Participants identified opioid overdose prevention to be a public concern and noted that Narcan was made available to participants, emergency responders, and others in the community who were interested in having access to the medication. Six participants said they carried Narcan with them, and several had family members who had received opioid overdose prevention training. Despite the obvious advantages to making access to this life-saving training available, not everyone in the community supported this public health initiative:

You see it, too, about people about Narcan: "Us taxpayers have to pay for Narcan for these people that are overdosing. Why do we have to pay for it?" A lot of people don't choose addiction. It just happens, or it's a family thing sometimes. It's just hard. Like I say, people that have never experienced it and never done drugs in their life, they don't know. They don't know. They don't understand it.

A lot of people will be like, “That damn drug addict. I don’t know. They should just die already. Who cares? Get over it.”

Without having “lived a drug life” themselves, people in the community were perceived to struggle to understand how widespread availability of Narcan would potentially save lives and better the health of the community as a whole. Ultimately, because of those community members’ continued misconceptions related to MAT, this initiative was also not believed to be fully supported by the general public. Without further information, participants said they believed that “straight” community members would not come to a new understanding and thus transcend their predisposition to label:

Narcan, now, us Suboxone patients have to have it as well. It just brings somebody back from an opiate overdose. If you overdose from heroin, you bring them back from it. Yeah, because the cops and the paramedics. They’re making them carry it and stuff like that, so they’re thinking, “Why do the cops have to carry it?” and this and that. His mom was telling me about it. I’m like, “Because if the cops get there before the ambulance gets there, they could bring that person’s life back.” She’s against that. She’s like, “I don’t think the cops should carry it,” because she’s never lived the drug life. She doesn’t know the drug life. She’s straight, so she doesn’t understand it. It’s hard for a straight person that doesn’t really--she doesn’t care for Suboxone and Subutex and all that. Like I was telling you, she thinks it’s a substitute for a substitute, which it’s not. I don’t think it is. I think if it helps the person, then do it, but there’s other people that think different.

## **Conclusion**

Participants described being able to “live a normal” life with MAT because it is legal, and it ends the cycle of “the chase.” MAT with buprenorphine was preferred over methadone treatment because it is prescribed by a provider, reduces opioid cravings, is perceived to have fewer negative effects on health, and enables the drug user to live a “normal” life. At the same time, participants said they believed they were “still hooked” because of withdrawal symptoms and stigma associated with seeking treatment. Although strategic initiatives have been pursued to expand access to MAT, there are key barriers that prohibit access rurally, including inconsistencies in treatment policy, restricted access, long wait lists, provider lack of knowledge about drug use, and provider bias. These barriers perpetuate the problem of drug diversion and self-treatment. Despite the numerous personal and societal benefits of MAT, stigma and public misunderstandings related to MAT persist. Participants expressed a strong desire for more education, community support, and access to recovery-oriented resources to effectively deal with the opioid epidemic in their community. The central themes and key findings are placed into the perspective of the current literature and discussed in the next chapter.

## **CHAPTER 5**

### **DISCUSSION**

This chapter compares the key findings of this study to existing literature, relating the novel discoveries of this research to extant knowledge. I conclude with a presentation of the limitations, delineation of opportunities for future research, and a summary of how this research could have impact from policy and clinical perspectives.

#### **Summary of Key Findings**

Overall, this research uncovered several concepts related to the development of OUD, facilitators and barriers to accessing MAT, and personal experiences with MAT and recovery. Several key findings align strongly with the broader literature that focused on factors that contribute to initiation of OUD and lifestyle characteristics that perpetuate it. Novel findings revealed in this study include addiction to the act of shooting-up, knowledge about MAT options, preference for buprenorphine over methadone, barriers to obtaining MAT, the need for psychosocial supports, and challenges in overcoming stigma. Each of these key findings are fully discussed below within the context of extant literature.

#### **Factors Contributing to Initiation of OUD**

The present study confirms prior research suggesting that the overprescribing of prescription opioids for the treatment of pain has played a key role in the current opioid overdose epidemic. The expanded use of opioids, which were used to manage a variety of physical and chronic health conditions, led to a surplus of prescription pills, opioid dependence, and the subsequent cycle of opioid-seeking behaviors (Dasgupta et al., 2018; Katzman et al., 2014). In this research, participants reported inconsistencies in provider

practices regarding the medical management of chronic pain. Historically, a subset of providers in the community provided easy access to large quantities of prescription opioid medications, confirming previous findings that the guidelines for the treatment of chronic pain are not universally accepted by those treating chronic pain and substantial variability exists in opioid prescribing practices among providers (Varrassi et al., 2010).

Prescription opioids initially were perceived as safe by the participants in this study because they were prescribed by a medical doctor. However, inadequate information regarding the risks associated with opioid tolerance and dependence was cited as a key problem. It has been established that aggressive marketing strategies misrepresented opioid medications as nonaddictive (Haffajee & Mello, 2017; Okie, 2010). Additionally, providers themselves might not have initially been aware of the health risks associated with long-term use. In the end, there was a sentiment of mistrust toward providers and skepticism regarding the underlying motivation for treatment approaches. Participants noted that some stakeholders have benefited from the opioid crisis. Specifically, participants voiced concerns about the healthcare system and pharmaceutical companies, which at their expense might have benefited financially from opioid overprescribing. Consequently, this type of medical mistrust influenced participants' perceptions about MAT and their willingness to seek treatment for opioid use disorder, given that it was a legitimate medical treatment that prompted their opioid use in the first place.

In addition to opioid's pain-relieving effects, they ultimately became desired by participants for their psychologically numbing effects. While the term "pain" is used in a broad context, opioids serve a key role in modulating both physical and emotional pain.

The use of exogenous opioids to abate emotional pain, feelings of disconnection, and separation distress is supported in the literature (Hsu et al., 2015; Hsu et al., 2013). A study evaluating the role of social rejection and acceptance on opioid pathways as a mediator of depression found that in depressed adults, perceptions of social rejection were associated with reduced activation of the mu-opioid receptor system in a pattern similar to that experienced during physical pain (Hsu et al., 2015). Thus, use of an exogenous opioid in depressed individuals suffering social loss or emotional distress could compensate for this neurotransmitter-signaling deficit in this context. Social loss and rejection-related stressors are established to be strong predictors of developing major depressive disorders (Slavich, Thornton, Torres, Monroe, & Gotlib, 2009), but the role of interpersonal loss and social rejection as it relates to OUD has yet to be explored. The findings of this research indicate that this might be an important area for future investigation.

Although the role of the prescription opioid oversupply was a key factor driving the emergence of the OUD epidemic, larger societal dynamics influencing the role of opioid use as a refuge from physical, economic, and social impactors deserve consideration. Specifically, it has been suggested that by recasting pain as a broader condition that encompasses economic and social disadvantage, an alternative explanation emerges that defines key impactors driving the expansion of the OUD epidemic (Dasgupta et al., 2018). Participants in this study discussed how loss of housing, loss of employment, loss of children, lack of freedom (i.e., incarceration), poverty, and lack of opportunity drove them to pursue opioid use as a means to numb the emotional pain inherent in these losses. Exposure to these risks may have been enhanced in the northern

New Mexico region because of its cultural history and rural environment, suggesting the existence of a unique rural risk environment for development of OUD. Ultimately, the influence of these factors emerged to be more clearly defined risk factors for development of OUD than simple overprescribing of opioids. Overall, the present study highlights the need for future research that would explore these complex interactions and the nature of the rural risk environment in driving OUD.

### **Factors and Lifestyle Characteristics that Perpetuate OUD**

In this research, participants described the experience of opioid withdrawal as that of a slow and painful death. The pain of opioid withdrawal surpassed any prior experiences with chronic pain, and waking up sick from symptoms of withdrawal became their everyday experience. The concept of death emerged as central to their experience, which was discussed in terms of dying even though they were alive. A conscious awareness of death was apparent, and each time they engaged in heroin use, they were aware of the risks of fatal overdose and that they might never wake up again. Yet, when they did wake up, they felt like they were dying. To avoid the pain of opioid withdrawal, participants were forced to routinely engage in numerous illegal activities to obtain the resources for the illicit purchase of an opioid. Every participant interviewed in the study said this lifestyle of hustling led to legal trouble and-or incarceration. Additional consequences commonly included loss of children, loss of employment, and overarching social rejection.

The lifestyle of hustling is documented in the literature. Prior research has documented that crime is a way of life for individuals with OUD and that individuals take pride in their ability to hustle successfully. Preble and Casey (1969) found that among

individuals who inject heroin, the ability to successfully engage in criminal activities elevates one's status among fellow heroin users in the community. Thus, the hustle itself becomes a mark of respect and honor that both excites and provides a sense of accomplishment for the hustler (Preble & Casey, 1969). Similarly, Faupel (1991) documented that for individuals' who use heroin, success engaging in the criminal-addict subculture is the motivating factor for hustling behaviors, with the drug-crime relationship being reciprocal and contributing to the individual's stature in the subculture (Faupel, 1991).

Notably, the findings of the research presented here do not support the concept that the hustling lifestyle was a point of pride for the participants. All of the participants described feelings of shame and remorse for their lifestyle of hustling. In this research, the drug-crime relationship was causal rather than reciprocal. Hustling was used as means to avoid the sickness of opioid withdrawal, and in many cases, the participants described the regret of abandoning their moral and ethical standards to support the daily cycle of hustling. As a result of their criminal behavior, participants in this study faced legal consequences; a history of criminal record and legal involvement formed their social identity. Their social identity, which was situated within conflicting legal and social power relations, contributed to the cumulative effect of social loss and emotional pain. Overall, these feelings of remorse among the participants were markedly distinct from the previous research mentioned above, suggesting a set of circumstances contextually unique in the rural northern New Mexico environment that warrants further exploration. It is possible that a different set of cultural dynamics exists in rural Northern New Mexico that influenced the self-view of the participants in this study. Prior



ethnographic research has revealed that drug users in northern New Mexico remain highly engaged in the traditional aspects of their culture (Garcia, 2010; Trujillo, 2009). Participants mentioned the strong influence of religion, family, and community in their lives, with these factors potentially playing a key role in their OUD experiences. If these complex relationships to faith, family, and community are different from the prevailing cultural and historical contexts of the populations explored in previous studies, they could represent important key adaptive factors that could support individual healing and community transformation.

### **Addicted to the Act of Shooting Up**

A novel and unexpected finding of this study was that participants described being “addicted” to the act of shooting up. Prior research has provided evidence for reciprocal interactions between drugs and reward-related cues, with each modulating the response to the other (Leyton & Vezina, 2013). Similarly, two separate meta-analyses found that in individuals meeting DSM-V criteria for a substance use disorder, exposure to drug-related cues consistently activates the reward neurocircuitry in the striatum (Chase, Eickhoff, Laird, & Hogarth, 2011; Tang, Fellows, Small, & Dagher, 2012). The findings of this research suggest that there might be a similar neural pattern of striatal activation in response to the drug-related cues of preparing the heroin, drawing up the syringe, and intravenous injection of the needle. This represents an understudied area that warrants future research. This finding also has important implications for OUD treatment recommendations. For participants whom this is still an important component of their addictive behavior, additional interventions to facilitate recovery might be needed.

## **Knowledge of MAT Options**

Previous research has demonstrated that in addition to negative perceptions, patient preferences for MAT are also influenced by knowledge of MAT options (Uebelacker, Bailey, Herman, Anderson, & Stein, 2016; Volkow, Frieden, Hyde, & Cha, 2014). Participants in this study were aware of MAT pharmacotherapy with methadone and buprenorphine. However, none of the participants in this study were aware of naltrexone as an approved MAT treatment for OUD, nor had they been offered this as an option. This was an unexpected finding, given the barriers and long wait times associated with the initiation of treatment with methadone and buprenorphine. Because there are no prescriptive restrictions on the use of naltrexone to treat OUD, it could serve as a valuable treatment option for those who have been abstinent of opioids, particularly for those who are seeking MAT to prevent a relapse to heroin following release from incarceration. In the literature, Naltrexone's safety (Bart, 2012) and increased treatment retention rates (Dennis et al., 2015) are well-established. Among individuals seeking MAT, naltrexone is often preferred over MAT with opioid agonists because it requires only monthly visits, reducing the burden of multiple appointments (Uebelacker et al., 2016). Furthermore, naltrexone does not induce euphoric effects, and it is not behaviorally reinforcing, which might alleviate stigma related to not being drug-free while on MAT pharmacotherapy. The apparent lack of access to this effective MAT alternative in the rural setting that was the focus of this study is an important and unexpected finding that informs thought processes related to policymaking and care delivery to this population.

## **Preference for Buprenorphine over Methadone**

Participants perceived buprenorphine to be the superior MAT pharmacotherapy compared to methadone. Participants expressed negative feelings and beliefs about methadone, including that it is a dangerous narcotic with numerous deleterious side effects. Long-standing negative beliefs about methadone are documented in the literature, including that methadone causes calcium depletion, bone deterioration, tooth loss, swelling, skin discoloration, and weight gain (Gryczynski et al., 2013; Stancliff, Myers, Steiner, & Drucker, 2002; Zaller, Bazazi, Velazquez, & Rich, 2009). A study assessing perceptions of MAT efficacy and safety in an urban detoxification facility in Massachusetts found that among the 372 individuals surveyed, methadone was perceived as the least safe, least efficacious, and least consistent with being drug free (Uebelacker et al., 2016). Similarly, a study examining the reasons for choosing buprenorphine over methadone among individuals receiving MAT in an urban outpatient treatment program in Maryland found that methadone was perceived to be a harmful drug, ineffective in suppressing heroin cravings, associated with intensified cravings for other drugs, with overarching concerns about withdrawal from methadone (Gryczynski et al., 2013). The current study builds on the existing research in that perceptions about methadone were consistent among rural-dwelling participants in New Mexico. Specifically, the interviews revealed that participants were concerned about calcium loss, bone depletion, tooth loss, and becoming “swollen,” which were obvious signs of methadone use. The tooth loss and swollen physical appearance were particularly awkward for participants because they felt like those symptoms were considered by members of the community to be signs of their methadone use. Furthermore, participants said methadone made them feel high and did not help deter or prevent use of other substances, thus failing to help with recovery.

Overall, these findings are consistent with the above-mentioned research, which spanned various geographic settings and among both urban and rural populations.

In addition to being preferred over methadone, participants said buprenorphine was preferred over heroin. When prescribed, it is legally available in a monthly supply, providing participant autonomy and ownership in their management of MAT and recovery. Participants described their everyday experience with buprenorphine as the first thing they did each day. Upon waking, they would immediately take their medication to avoid symptoms of opioid withdrawal. Even if they woke up feeling sick, with buprenorphine, the pain of opioid withdrawal immediately subsided, they said. The participants said there was no longer a need to spend the entire day hustling and that they were able to return to normal activities of daily living. Interestingly, this transition from heroin use to life on buprenorphine was described as a “new normal.” While everyday life became more consistent with what is culturally considered to be normal, participants recognized a difference in themselves. Public attitudes about MAT and their own experiences of feeling dependent on a medication made life feel normal yet at the same time different. The participants said this forced them to construct a separate social world embedded in the culture of drug use and recovery. Negotiating their social identity within this “new normal” space was a central theme of their experience with MAT, they said.

### **Barriers to MAT**

**Wait lists are a barrier to MAT.** The long wait lists to initiate methadone and buprenorphine treatment are well-documented (Dennis et al., 2015; Jones et al., 2015; Sigmon, 2014). Nationally, the wait time to initiate methadone treatment is a recognized

problem, with an average two-year wait for a treatment slot (Sigmon, 2014). In the context of this study, there was only one methadone program in Rio Arriba County, and the long waiting periods for treatment entry represented the greatest barrier for participants trying to access this MAT treatment. Although this study did not seek to quantitatively evaluate the average wait time, participants seeking methadone-based MAT consistently described a significant delay in initiating treatment. The experience of rejection after making a commitment to seek help deflated participants' sense of hope and motivation to get help, serving as a frustrating and demoralizing deterrent to recovery.

Participants reported equally long wait times to initiate MAT pharmacotherapy with buprenorphine. The providers in the community were at full capacity in terms of the number of patients who could be treated. While this study did not seek to quantify the number of patients receiving buprenorphine-based MAT or the number of DATA-waivered providers in the community, participants reported long wait times in the context of rural northern New Mexico. Regarding policy regulation of buprenorphine-based MAT, CARA legislation in 2016 increased the maximum number of patients who can be treated by DATA-waived physicians from 100 to 275 (Drug Policy Alliance, 2016), and it expanded prescriptive privileges to include advanced-practice nurses (Fornili & Fogger, 2017). Although the CARA legislation intended to increase access to buprenorphine, restrictions on the numbers of patients who can be treated might still represent a barrier to buprenorphine access. Furthermore, CARA legislation does not mandate that all providers apply for a DATA waiver to prescribe buprenorphine. Thus, treating OUD and providing buprenorphine-based MAT is a provider choice rather than a requirement.

**Inadequate MAT access drives drug diversion.** Historically, concerns about buprenorphine diversion have been a key barrier to expanding MAT access (Carroll, Rich, & Green, 2018). Prior research has documented that diversion concerns and misuse of medication are consistently cited by providers as a key barrier to integrating buprenorphine-based MAT into their clinical practice (Andrilla, Coulthard, & Larson, 2017; Andrilla, Moore, & Patterson, 2018). Provider concerns are warranted, given that buprenorphine is a controlled substance, diversion is illegal, it is linked to nonadherence, and illicit use is associated with less-positive outcomes (Lin, Lofwall, Walsh, Gordon, & Knudsen, 2018). However, a large body of existing literature indicates that the buprenorphine diversion is driven mainly by inadequate access to MAT, and when it occurs, it is undertaken primarily for the purpose of self-treatment (Carroll et al., 2018; Schuman-Olivier et al., 2010). The current study builds on these previous findings related to buprenorphine diversion, with participants saying their pursuit of diverted buprenorphine was solely for the purpose of self-initiated treatment. Specifically, wait-listed males and females felt compelled to purchase diverted buprenorphine off the street to serve their acute goal of treating the symptoms of opioid withdrawal. Despite the legal perils associated with the street purchase of diverted buprenorphine, they said they believed this was their only option to avoid the sickness of withdrawal and that it was better than continuing to use heroin. Overall, results from this study align with the above-mentioned literature documenting wait lists as central barriers to obtaining MAT, fueling buprenorphine diversion. From a policy and provider perspective, a wait-list-dependent barrier to either methadone-based or buprenorphine-based MAT creates a missed opportunity to obtain life-saving treatment for individuals struggling with OUD.

**Male gender is a barrier to MAT.** Both male and female participants acknowledged that men typically experience longer wait times to initiate MAT. This was particularly the case compared to pregnant women, because MAT with buprenorphine or methadone is known to reduce maternal substance abuse and improve health outcomes for the mother and the unborn child (Klaman et al., 2017; Short, Hand, MacAfee, Abatamarco, & Terplan, 2018). This places pregnant women at an advantage when attempting to obtain treatment. Because of the health risks to the fetus in females with OUD, and as the prevalence of OUD during pregnancy increases (Roper & Cox, 2017), national efforts to expand access to MAT, particularly buprenorphine, have been initiated for this specific population (Short et al., 2018). Notably, because of limitations to the number of patients who can be treated by providers, this policy, which essentially moves pregnant women to the top of a wait list, has inadvertently reduced MAT access for men and for women who are not pregnant.

A novel finding of this study was that pregnant women were often living in a relationship with a man suffering from OUD and who lacked access to MAT. As a result, these women were in a home environment where heroin was accessible and where active opioid misuse was taking place. In this context, there was a desire on the part of these women to help their partner avoid opioid withdrawal. For these women, this raises the risk for both buprenorphine diversion and potential relapse to heroin. Although women who were pregnant were not a specific target population recruited for this research, there were several women who were pregnant at the time of data collection who contributed their observations on this aspect of MAT during the interview. This novel information could have an important impact from a policy perspective, where development of therapy

paradigms supporting maternal and fetal health must be prioritized within the context of holistic health for the entire family. To truly promote healing and recovery and to ensure positive health outcomes for pregnant women and their unborn children, the socio-cultural dynamics of the family environment and greater community must be considered.

Another novel finding of this study was that male participants contemplated committing low-level drug crimes as a means to expedite access to treatment. The legal system, which historically has focused on punishment for drug-related crimes rather than on treatment, has not broadly provided effective interventions for individuals with OUD. However, in the United States, there is an evolving movement to implement innovative programs to screen for and provide treatment to individuals with OUD involved in the criminal justice system. One such program, the Law Enforcement Assisted Diversion Program (LEAD), offers diversion from arrest into case management based on the type of crime (Brinkley-Rubinstein et al., 2018). Since it was established in the state of Washington in 2011, the success of the LEAD program in reducing crime has resulted in additional LEAD program sites, including one in Santa Fe, NM. For men who faced long wait times, the use of the criminal justice system was considered to be their only option, suggesting some peripheral awareness of this program as a means to gaining quicker access to MAT. Despite the moral conflict and legal consequences, the cost of committing a crime outweighed the risk of death for male participants.

### **Psychosocial Support and Narcotics Anonymous**

Evidence-based practice guidelines for the treatment of OUD recommend that MAT pharmacotherapy be combined with psychosocial interventions (NIDA, 2016; SAMHSA, 2016b; WHO, 2017). Traditional psychosocial treatments require access to



behavioral health providers who have the expertise and specialized educational training. Existing literature documents the national shortage of behavior health providers in rural areas across the United States (Andrilla, Patterson, Garberson, Coulthard, & Larson, 2018). Furthermore, traditional psychosocial interventions are provider led, costly, and are structured within the healthcare system. The findings of this study align with previous research in that few mental health providers were available in the community. As a result, participants voiced concerns about anonymity and difficulty adhering to a treatment schedule. They also said they were not able to form a therapeutic alliance with the behavioral health providers who were accessible. Thus, participants overwhelmingly preferred self-help groups over provider-led psychosocial interventions.

Community treatment and self-help groups such as NA represent a widely accessible option, offering routine meetings that are available to anyone, regardless of insurance status or ability to pay (Krawczyk et al., 2018; White, 2011). NA participation consists of group members with a shared understanding of substance use, addiction, and recovery. However, the philosophy of NA is guided by the 12-step, sobriety-based model, requiring abstinence from all opioids (White, 2011). Based on this viewpoint, individuals receiving MAT with opioid-agonist medications are not considered “clean,” and according to NA official literature, NA factions might choose to preclude individuals on MAT from participating in or leading groups (Krawczyk et al., 2018). Furthermore, individuals receiving MAT pharmacotherapy with methadone or buprenorphine are physiologically dependent on the drug and continue to experience opioid withdrawal upon abrupt discontinuation. It follows that a pervasive stigma exists against MAT for the treatment of OUD among NA groups (Krawczyk et al., 2018). This study builds on

prior findings as participants described similar experiences attending NA in their community. The paradox of being labelled as “still addicted” by others in NA, despite adherence to their recommended medical treatment, represented a key impediment for participants. This sentiment of “still hooked” on a drug became central to their everyday experience living with MAT. Ultimately, for participants dependent on NA for psychosocial support, the experience of stigma had a detrimental influence on treatment outcomes and perpetuated feelings of social pain and rejection.

### **Overcoming Stigma**

In the United States, the general public holds stigmatizing perceptions about substance use (Ashford, Brown, & Curtis, 2018; Barry, McGinty, Pescosolido, & Goldman, 2014; Netherland, 2012). The historically accepted view of addiction as a social and-or moral problem has contributed to negative perceptions of individuals’ who struggle with OUD, providing the rationale for discrimination, labeling, and de-humanization of those who are afflicted. In a 2014 web-based national public survey, participants conveyed a reluctance to have a person with an addiction work with them or join into their family through marriage, as well as a willingness to accept discriminatory practices, including those that oppose policies aimed at helping individuals with an addiction (Barry et al., 2014). The findings of this research align with these findings in that participants described similar experiences with negative perceptions among members of the community. While using heroin, they were labeled “an addict,” and yet, after they were in treatment and receiving MAT, they were labelled as “still addicted.” Ultimately, regardless of their treatment successes and sustained recovery, they continued to be stigmatized and treated differently. They voiced frustration that deep-rooted public

opinions were unwavering, making them feel perpetually marginalized. Participants also described struggles such as finding employment and having conflict with family members because of a relationship with a partner who had a history of addiction. Again, the public misconception that MAT pharmacotherapy was simply replacing one addiction for another intensified negative beliefs and stigma.

Prior research has demonstrated that public support of policy initiatives were influenced by negative public perceptions related to substance use and mental health disorders (McGinty, Goldman, Pescosolido, & Barry, 2015). A novel and unexpected finding of this research was the unsupportive public perceptions related to enhanced naloxone (Narcan) availability in the community. Current recommendations suggest that opioid overdose prevention efforts should prioritize Narcan distribution to families, friends, neighbors, and individuals with OUD (Mattson et al., 2018) because community naloxone distribution reverses opioid overdose and reduces death (Keane et al., 2018). Despite the obvious benefits of making Narcan available, there was a lack of understanding among certain members of the community. This suggests that there is a need for targeted education and represents an opportunity for new understandings to overcome negative perceptions and misunderstandings.

Overall, there is an urgent need for providers and policymakers to avoid language that implies negative bias toward individuals suffering from OUD. Research has documented that negative terms, including “opioid addict” and “substance abuser,” elicit greater negative explicit bias (Ashford et al., 2018). Altering the public discourse to include positive terms related to OUD and its treatment represents an opportunity for

transformation and new understandings, which are necessary first steps to overcoming stigma for individuals suffering from OUD and their families.

### **Policy and Clinical Implications**

Key system-level barriers have been identified and, in many cases, addressed, yet the rural versus urban disparity in access to MAT persists. Qualitative study to document rich information about individuals' experiences and knowledge about MAT has contributed to our knowledge about OUD and its treatment in rural communities.

### **Expanding MAT Access**

Although the number of DATA-waivered providers with the ability to prescribe buprenorphine-based MAT is increasing in both urban and rural areas, there remains inadequate treatment capacity for individuals suffering from OUD in northern New Mexico. This study revealed that the long wait lists for both methadone and buprenorphine represented a key barrier. This barrier was a central force driving buprenorphine diversion because diverted buprenorphine was sought for self-treatment. Legislative changes such as CARA have supported the general expansion of more providers; however, obtaining a DATA waiver is a choice, not a requirement, for healthcare providers. Another layer to this problem is the finding from this study that participants perceived a gap in knowledge, and in some cases bias, among providers in various specialties. A potential policy solution would be to require all providers to be educated in the treatment of OUD to reduce bias and to ensure a continuum of care for individuals receiving MAT. Another option would be to either incentivize or require all primary care and family practitioners to provide OUD treatment. This would directly expand buprenorphine-based MAT access and would address the novel key barrier

discovered in this study related to the male gender as a barrier to MAT. Providers would have the ability to treat pregnant women and their partners, promoting holistic health and alleviating the associated problem of buprenorphine diversion.

### **Providing Targeted Community Education**

A key novel finding revealed in the research was a general desire on the part of the participants to have enhanced education opportunities about OUD and MAT availability in the community. Participants voiced concern that MAT was generally viewed by the public as replacing one opioid addiction with another. This belief extended to psychosocial support resources, including NA, which viewed participants using MAT to recover from OUD as not yet clean and thus not aligned with the tenets of the 12-step, sobriety-based philosophy. Importantly, the language used and the persistent misconception that MAT pharmacotherapy is just another drug of addiction perpetuated the stigma of addiction, despite successes with recovery. To help overcome the opioid epidemic and to mitigate the destructive impact of stigma, targeted community-based outreach programming, supported by community members and leaders and individuals themselves in recovery, would be valuable. A key finding was the moral and ethical dilemma that participants faced in their day-to-day life chasing opioids and dealing with OUD. This represents an inherent strength and opportunity for resiliency that could be synergized with family and community support, further nurtured by targeted education and outreach.

### **Study Limitations**

The central limitation of this study is that rural-specific personal barriers to obtaining MAT experienced by those with OUD are likely regionally contextual. The

study's focus on rural areas in northern New Mexico revealed information that was uniquely rooted in the cultural, ethnic, social, historical, policy, and environmental characteristics of these specific communities. We argue that the findings of qualitative research are intended to report on the unique experiences of the participants and are not intended to be fully generalizable, although through rich description, the findings are likely transferable to other settings as appropriate.

Additionally, the small sample size could be considered a limitation of the study. It should be noted that data saturation was ensured through member checking, which allowed for the confirmation of data analysis and the opportunity for participants to discuss any additional relevant themes. Another common critique is that qualitative research lacks rigor. As discussed in Chapter 3, methodological rigor was maximized by employing the principles of credibility, transferability, dependability, and confirmability, in order to ensure trustworthiness, mitigating this limitation in the context of a qualitative study. Positioning of the researcher could also be considered a limitation, particularly due to my clinical activity as a psychiatric nurse practitioner with experience providing behavioral healthcare to individuals dealing with substance abuse challenges, including OUD. To protect against researcher bias and to ensure trustworthiness, reflexive field notes were used to separate my experiences, assumptions, and values from the methodological decisions made. This helped to ensure that the data collected best represented the participants' experiences and perspectives.

Finally, this research focused on obtaining deep information from individuals suffering from OUD and their experiences and perspectives seeking and utilizing MAT. It could be argued that restricting the focus to these individuals excluded the important

perspectives and knowledge of others, including providers, family members, and community members. Input from this broader group is indeed critical to fully understand the dynamics that influence experiences with MAT, and it would certainly be important for ongoing work to fully understanding the challenges from all angles. It should be noted that this study was restricted to the recruitment of participants suffering from OUD and seeking MAT to address a gap in the literature documenting the experiences surrounding MAT from this perspective. In short, it is likely that information from the individuals who experienced the challenges in obtaining their own care would be among the most important in shaping the future strategies to enhance care overall. In fact, to neglect the perspective of individuals with OUD as they navigate a path to recovery via MAT would only serve to perpetuate many of the barriers, either confirmed or discovered by this research. This concept alone supports the central importance of the approach taken and the value of the novel information presented.

## **APPENDICES**

Appendix A: DSM-V Diagnostic Criteria -- Opioid Use Disorder

Appendix B: Theoretical Framework Model

Appendix C: U.S. County-Level Drug Overdose Death Rates, 2000-2016

Appendix D: Recruitment Flyer

Appendix E: Demographic Form

Appendix F: Participant Demographics

Appendix G: Thematic Matrix



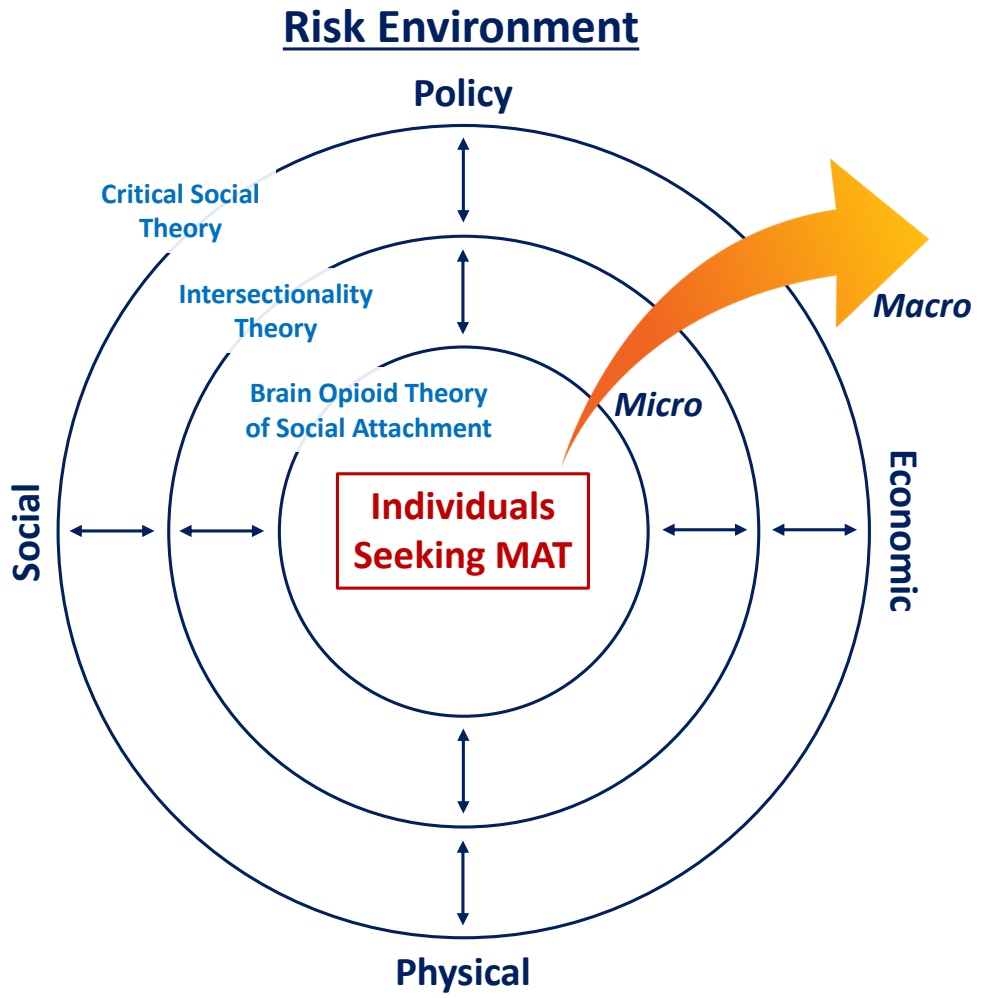
## APPENDIX A

### DSM-V Diagnostic Criteria -- Opioid Use Disorder

The American Psychiatric Association's (2013) DSM-V defines that to meet diagnostic criteria for OUD, at least two of the following must occur over a 12-month period: (a) opioids are often taken in larger amounts or over a longer period than was intended; (b) there is a persistent desire or unsuccessful effort to reduce down or control opioid use; (c) a great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects; (d) craving, or a strong desire or urge to use opioids; (e) recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home; (f) continued opioid use, despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids; (g) important social, occupational, or recreational activities are given up because of opioid use; (h) recurrent opioid use in situations in which it is physically hazardous; (i) continued opioid use, despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance; (j) tolerance, as defined by a need for markedly increased amounts of opioids to achieve intoxication or a desired effect or a markedly diminished effect with continued use of the same amount; and (k) withdrawal, as manifested by the characteristic of opioid withdrawal syndrome or opioids taken to relieve or avoid withdrawal symptoms (p. 541).

APPENDIX B

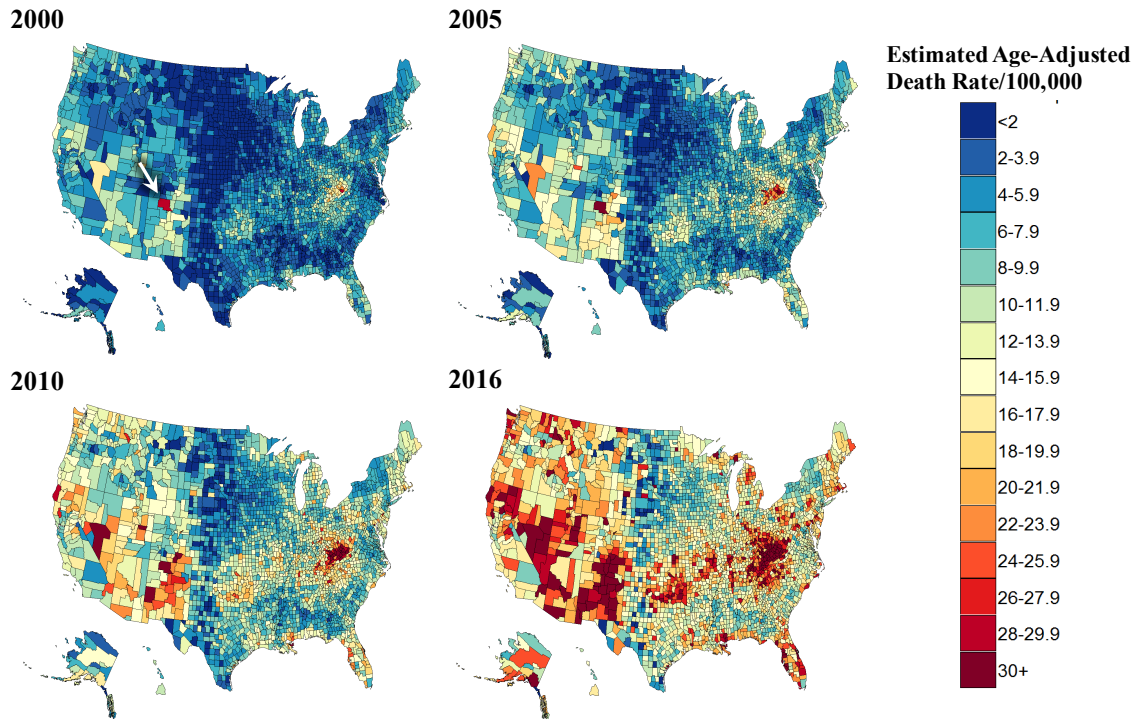
Theoretical Framework Model



Depiction of the integrated theoretical framework used to ground this research.

## APPENDIX C

### U.S. County-Level Drug Overdose Death Rates, 2000-2016



County-level age-adjusted drug overdose death rates in 2000, 2005, 2010, and 2016 are depicted in the above maps of the United States. Rio Arriba County in New Mexico is identified with the white arrow on the 2000 map. Images are modified from the National Center for Health Statistics, National Vital Statistics System, mortality data (Rossen et al., 2017).

## APPENDIX D

### Recruitment Flyer

(18-273)



# Volunteer for a Research Study

## Exploring Perspectives of Medication Assisted Treatment for Opioid Use Disorder

**We are looking for volunteers to help us find out more about their experiences seeking medication-assisted treatment for opioid use disorder.**

You may be eligible to participate if you:

- Are over 18 years old
- Live in Rio Arriba, Taos, Sandoval, Los Alamos, or San Juan County in NM
- Are diagnosed with opioid use disorder
- Have received, been denied, or opted out of receiving medication-assisted therapy (methadone, buprenorphine or naltrexone)

Participation includes completion of a survey and participation in two interviews, 60-90 minutes each

Participants will receive \$25.00 for each interview to compensate for time commitment and travel expenses



[For more information:](#)

**contact Krista Scorsone at:  
585-797-8337 (call or text)**

## APPENDIX E

### Demographic Form

| Participant Information   |                   |                                       |
|---|-------------------|---------------------------------------|
| Age   | Gender Preference | Opioid Used (Prescription or Heroin)? |
| Ethnicity   | Race              | Education Level                       |
| How long have you used opioids (prescription or heroin)?  |                   |                                       |
| Any other mental health or physical health problems?  |                   |                                       |
| Are you currently receiving medication-assisted therapy? (methadone, buprenorphine or naltrexone) |                   |                                       |
| How long have you receiving medication-assisted therapy for opioid use disorder?                  |                   |                                       |
| How long did you wait before seeking medication-assisted therapy?                                 |                   |                                       |

## APPENDIX F

### Participant Demographics

| <b>Characteristic</b>   | <b>Female<br/>(<i>n</i> = 10)</b>             | <b>Male<br/>(<i>n</i> = 10)</b>               |
|---|---|---|
| <b>Age</b><br>Mean<br>Median<br>Range   | 30.4 years<br>28.0 years<br>23-50 years       | 41.7 years<br>37.0 years<br>28-58 years       |
| <b>Opioid Used</b><br>Heroin<br>Pills<br>Heroin and Pills                         | 5<br>1<br>4                                   | 5<br>0<br>5                                   |
| <b>Ethnicity</b><br>Hispanic<br>Spanish<br>American Indian                        | 9<br>0<br>1                                   | 9<br>1<br>0                                   |
| <b>Education Level</b><br>Some High School<br>High School Diploma<br>Some College | 2<br>5<br>3                                   | 4<br>3<br>3                                   |
| <b>Length of Opioid Use</b><br>Mean<br>Median<br>Range                            | 10.2 years<br>8.0 years<br>2-35 years         | 16.0 years<br>18.5 years<br>4-27 years        |
| <b>Current MAT</b><br>None<br>Buprenorphine<br>Methadone                          | 2<br>8<br>0                                   | 1<br>9<br>0                                   |
| <b>Length of Time in MAT</b><br>Mean<br>Median<br>Range                           | 3.3 years<br>2.5 years<br>1-6 years           | 4.5 years<br>3.0 years<br>7 months - 10 years |
| <b>How Long to Start MAT</b><br>Mean<br>Median<br>Range                           | 3.8 years<br>2.0 years<br>5 months - 14 years | 4.7 years<br>3.3 years<br>0-20 years          |

## APPENDIX G

### Thematic Matrix

| <b>Themes</b>                    | <b>Subthemes</b>                       | <b>Description</b>   |
|----------------------------------|--|--|
| The chase                        | Getting “strung out”                   | Becoming addicted to opioids                               |
|                                  | “Waking up sick”                       | Seeking opioids to avoid the pain of withdrawal            |
|                                  | Lifestyle of “hustling”                | The act of obtaining money by dishonest and illegal means  |
| “It’s hard to have to wait”      | “Not accepting new patients”           | Long waits to initiate MAT                                 |
|                                  | “For the men, there’s no help”         | Gender differences in access buprenorphine                 |
|                                  | “I had to buy them on the street”      | Experiences with drug diversion                            |
| Suboxone is “better”             | Better than heroin                     | Suboxone is legal, prescribed, available, and safe         |
|                                  | Better than methadone                  | Suboxone has fewer side effects and won’t get you “high”   |
|                                  | “Still hooked” on a drug               | Opioid dependency and withdrawal still occur with Suboxone |
| Able to live a “normal life”     | “New normal”                           | Life without heroin use                                    |
|                                  | “Learning how to live again”           | Living a functional, productive, and “normal” life         |
| “Staying clean”                  | “Eventually you just stop”             | Recovery takes time  |
|                                  | Having a doctor who “won’t give up”    | A compassionate, knowledgeable, and committed provider     |
|                                  | Building a “support system”            | Finding supportive resources in the community              |
| “No matter what, you’re labeled” | “An addict, that’s how they view you”  | Once labeled, community perceptions do not change          |
|                                  | “Just another drug to get addicted to” | Misconception that Suboxone is just “another drug”         |
|                                  | They don’t understand                  | Limited knowledge and acceptance                           |

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