ORIGINAL ARTICLE



Systemic Issues in the Opioid Epidemic: Supporting the Individual, Family, and Community

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Abstract

The opioid epidemic is a national issue in the USA (The White House's Office of Press Secretary 2016). Researchers interviewed 16 participants focusing on the strengths, weaknesses, opportunities, and threats they personally experienced while either recovering from an opioid addiction or experiencing the loss of a loved one due to opioid usage. This article focuses on the research study's multi-systemic impacts and discusses implications via a systems approach to prevention and intervention.

Keywords Addiction · Opioids · Systems · Family · Community

In the USA, 78 people die every day from an opioid overdose; 44 of those overdoses are attributed specifically to prescription painkillers (Centers for Disease Control and Prevention [CDC] 2016). Additionally, the National Institute on Drug Abuse ([NIDA] 2017b) reported that more than 64,000 drug overdose deaths were estimated in 2016 of which the sharpest increase was the 20,000 overdose deaths related to fentanyl and fentanyl analogs (synthetic opioids). The White House's Office of Press Secretary (2016) stated that due to the rampant abuse of both prescription and nonprescription drugs, this national issue is now considered an epidemic by the highest levels of government. Individuals and communities are experiencing greater consequences, especially as new drugs like fentanyl and carfentanil become available for use (Wilkerson et al. 2016). Reducing the opioid epidemic requires an eclectic team of individuals coming together to explore the pervasive impacts. Users, suppliers, medical and

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mental health treatment providers, researchers, supporters (e.g., advocates and family), law enforcement, policy makers, and any others with firsthand experience can help develop solutions (Burke 2016).

Researchers from two rural counties in north central Pennsylvania gained valuable insight from individuals who were intimately impacted by an opioid addiction. Participants drew from their experiences to answer the research question: What do you feel were your community's strengths, weaknesses, opportunities, and threats as you or an immediate family member experienced an opioid addiction? The purpose of this article is to (a) review the literature on the use of systems theory to address public health issues, especially as it pertains to the multisystemic impact of opioid use; (b) review the findings of the research; and (c) to discuss the implications and recommendations for communities on how to support people in recovery and their families.

Opioids

Opioids are natural, synthetic, or semi-synthetic chemicals derived from the seed pod of the opium poppy. The chemicals help to reduce the sensation of pain by binding to specific receptors in either the brain or the nervous system in the body (CDC 2016; National Institute on Drug Abuse [NIDA], 2017a, b; U.S. Department of Health and Human Services [HHS] 2015a). Opioid analgesics are often prescribed to aid with moderate-to-severe pain from surgeries, injuries, chronic ailments, or diseases (e.g., cancer) (CDC 2016; Frenk et al. 2015). There are four categories of opioids: (1) natural opioid analgesics and semisynthetic opioid analgesics, (2) methadone, (3) synthetic opioid analgesics (not including methadone), and (4) heroin (CDC 2016).

Many prescription opioids, including morphine, codeine, oxycodone, and hydrocodone, belong in the first category (i.e., natural opioid analgesics and semisynthetic opioid analgesics). They are most often found in a pill form, combined with either Tylenol or Aspirin (U.S. Department of Justice, Drug Enforcement Administration [DEA] 2015). These can be snorted, swallowed, and injected. Heroin, an illicit substance, is an opioid that has been synthesized from morphine, and can be sold in either a powder or tar-like form (CDC 2016; NIDA 2017a, b). Heroin can be injected, smoked, or snorted, and is increasingly being found mixed with fentanyl and/or carfentanil, both of which are extremely potent synthetic opioid analgesics (CDC 2015, 2016; U.S. Department of Justice, Drug Enforcement Administration [DEA] 2015, 2016; Rudd et al. 2016).

Multi-systemic Impacts

Impact on the Individual

Adverse impacts of opioid use are psychological, social, economic, and physical (Disley et al. 2013). The individual struggling with opioid dependence can face physical consequences such as fatal overdoses, infections, chronic disease (e.g., cirrhosis and heart disease), bacterial and viral infections (e.g., HIV, MRSA, and hepatitis C), and accidental injury or violence related to the acute effects of intoxication (CDC 2016; Darke 2014; Disley et al. 2013; NIDA 2017a, b;



HHS 2015b; Zibbell et al. 2015). Opioid abuse can also contribute to the deterioration of the brain's white matter, influencing behavior, decision-making capabilities, and stress response (NIDA 2017a, b). Combined with an increased risk of suicidal behavior, these consequences result in an increased mortality rate for those who abuse nonmedical and medical opioids (13.2× and 3.5×, respectively; Cottler et al. 2016). Almost half of all opioid users will die before reaching the age of 50 (Cottler et al. 2016; Disley et al. 2013; NIDA 2017a, b). Such consequences directly impact the family, as well as the individual.

Impact on the Family

Higher mortality rates mean that family members are more prone to the consequences of grief and bereavement, which often result in decreased productivity and increased health problems (Disley et al. 2013). Family members are impacted in other ways, as well. Physical, sexual, and psychological aggression toward both children and significant others is correlated with substance abuse (Moore et al. 2011; Lander et al. 2013). Often, children's health and development are compromised, putting them at risk for long-term and potentially intergenerational effects (Disley et al. 2013; Lander et al. 2013). Infants of mothers who regularly use opioids may be born with low birth weight, be physically dependent on the substance, and suffer from neonatal abstinence syndrome (NAS), requiring extensive hospitalization (NIDA 2017a, b; HHS 2015b). Children of parents who abuse substances are also more likely to have adverse emotional and cognitive developmental outcomes, including psychopathology. These may result in negative emotional, cognitive, social, academic, and behavioral problems (Ashrafioun et al. 2011; Disley et al. 2013; Lander et al. 2013). Parental substance abuse is also linked to a much higher rate of child abuse or neglect, internalized child psychopathology, poverty, and the development of a substance use disorder later in life (Ashrafioun et al. 2011; Disley et al. 2013; Lander et al. 2013).

Impact on the Community

Families and communities are all directly impacted by elevated crime rates associated with substance abuse (Disley et al. 2013). Economic repercussions are directly due to the increased costs demanded by police, probation, parole, and prisons, as well as indirectly influenced by the perpetual under- or unemployment rates experienced by those struggling with opioid abuse. Family members' employment is also often affected, especially for those who are caretakers (Disley et al. 2013; Lander et al. 2013).

The economic burden is further increased by the overutilization of medical services, including emergency department, inpatient, and outpatient care, when compared to non-abusers (Meyer et al. 2014). Collection of this data may be burdensome and strain community programs and providers as new systems are put in place in order to gather data on the issue. For example, hospitals are now asked to track opioid-related emergency room visits to calculate the number of visits that are due to nonmedical use of prescription opioids (Substance Abuse and Mental Health Services Administration [SAMHSA] 2016), which unfortunately these visits to emergency rooms are rising (SAMHSA 2013). Drug abuse may cost the U.S. government as much as \$300 billion annually (Meyer et al. 2014).



Using Systems Theory to Address the Opioid Epidemic

Systems theory may be used to understand the multi-faceted impacts of the opioid epidemic as well as develop solutions that address the systemic layers of this growing problem. Mabry et al. (2010) suggest that systems research should inform public health policies to develop a more accurate and complete idea of which resources are most beneficial, in addition to discovering where any gaps exist. Three relevant principles of systems theory are as follows: "1) any system is an organized whole, and elements within the system are necessarily interdependent; 2) patterns in a system are circular rather than linear; and 3) complex systems are composed of subsystems" (Minuchin 1985, p.111). The individual, the family, and the community will have bidirectional, circular influences. The ramifications of opioid abuse, therefore, reach far beyond the individual, affecting each member of the person's family, and the community that family lives in (Lander et al. 2013). Solutions, then, should address each subsystem, as well.

The researchers of this study suggest that the experience and insight of those directly affected by opioid abuse should be considered when developing recommendations for awareness and educational campaigns. Systems science and community-based participatory research has been used to assess public health disparities (Frerichs et al. 2016), research in chronic disease (Lounsbury et al. 2014), approaches to gang involvement (McNeil et al. 2013), and drug abuse prevention (Arthur and Blitz 2000), among others.

Methods

The current researchers completed a study that examined the lived experiences of eight individuals who were in recovery from an opioid addiction and eight individuals who were family members of a person who died due to an opioid-related overdose. All of the participants (N=16) were located in two rural counties in north-central Pennsylvania. Participants drew from their experiences to answer the research question: What do you feel were your community's strengths, weaknesses, opportunities, and threats as you or an immediate family member experienced an opioid addiction? Semi-structured interviews occurred with each individual participant. The structure of the interview asked specific questions as they relate to community strengths, weaknesses, opportunities for growth, and threats (see Appendix). Interviews were recorded for accuracy and later transcribed. The transcripts from the recorded interviews were then analyzed for themes using NVivo's word frequency and word cluster functions. These themes were further examined by the researchers for accuracy. Synonyms were grouped together to create more inclusive themes. For example, the terms "money," "cost," "afford," and "insurance" were used throughout the interviews; therefore, the researchers created a larger umbrella theme titled "Money" to encompass all of these words.

Research Results

Research results found that multiple themes were included in several areas of the SWOT (Strengths, Weaknesses, Opportunities, Threats) questions. For example, relationships, education, and resources were identified as themes in each section. An additional strength focused on the awareness and advocacy efforts already in place within these communities (e.g., a



community-based coalition and billboards addressing the opioid addiction). Additional weaknesses included (a) monetary funds (e.g., no money to attend treatment facilities or participants had a difficult time finding a job due to criminal backgrounds or drug use) and (b) the ease and accessibility to prescription and nonprescription drugs (e.g., drugs are cheap, easy to get, and there is medication-assisted therapy that continues a dependency on drugs). Opportunities focused on increasing leisure activities in rural areas as well as increasing the funding for people to access treatment for longer periods of time. Finally, threats noted that (a) money again was a challenge that impeded participants' ability to be drug-free due to criminal records and drug use, (b) there was a lack of leisure activities for people to participate in, and (c) it was very easy to access drugs. To see the full results from the previous study, see Tables 1, 2, 3, and 4 (Appendix).

Discussion

After analyzing the results of the study, there are some limitations to discuss. Even though the study has limitations, there are pivotal multi-systemic impacts of opioid use. By integrating a systems approach to prevention and intervention, there are various implications for (a) public

Table 1 Strengths across interviews

| Domain | Categories | Frequency |
|---------------------|-------------------------------------|-----------|
| Relationships | | |
| • | MH treatment providers | 1 |
| | Medical treatment providers | 2 |
| | Family | 2 |
| | The community | 3 |
| | Law enforcement | 4 |
| Programs/resources | | |
| | 12-step meetings | 8 |
| | Addiction treatment center | 7 |
| | Outpatient counseling | 4 |
| | Medication-assisted therapy | 2 |
| | Drug court program | 3 |
| Access to treatment | | |
| | Availability | 5 |
| | Different meeting times | 1 |
| | Levels of care | 3 |
| Awareness/advocacy | | |
| • | Community awareness/recognition | 5 |
| | Task Force/Project Bald Eagle | 2 |
| | Individuals speaking out | 1 |
| | News highlights | 1 |
| | Billboards | 1 |
| | Focus on heroin | 1 |
| Education | | |
| | Educating public | 2 |
| | Family education | 1 |
| | Drug Take Back | 1 |
| | Cop involvement/criminal punishment | 3 |
| | Memorials | 1 |
| | Treating it as a disease | 1 |
| | Not criminalizing the disease | 3 |



Table 2 Weaknesses across interviews

| Domain | Categories | Frequency |
|------------------------|--|-----------|
| Education | | |
| | MH treatment providers | 1 |
| | Medical treatment providers | 2 |
| | Family | 8 |
| | Friends | 1 |
| | The community | 7 |
| | Kids in school | 4 |
| | Law enforcement (treatment vs. | 4 |
| | punishment) | |
| Money | | |
| | Inability to pay for treatment | 2 |
| | No funding | 3 |
| | Lack of jobs | 3 |
| | Lack of jobs for those with | 4 |
| | criminal records | |
| Environment/ | | |
| accessibility of drugs | | |
| | Cultural values/social acceptability | 4 |
| | Drugs are cheap | 1 |
| | Drugs are easily accessible | 3 |
| | Medication-assisted therapy | 1 |
| | Medical providers not monitoring prescription medications | 3 |
| Limited services/ | | |
| resources | | |
| | Wait time for care | 6 |
| | Treatment programs/specialized services | 10 |
| | Levels of care | 2 |
| | Drug testing centers | 1 |
| | Treatment length | 3 |
| | Mentors/sponsors/advisors | 5 |
| | Treatment away | 2 |
| | Need for more treatment time offerings | 1 |
| | Coordination/organization among services | 3 |
| | Transportation | 1 |
| | Housing | 4 |
| | Recreational options | 2 |
| Relationships | | |
| | Medical treatment providers | 2 |
| | Family | 2 |
| | Friends | 3 |
| | The community | 3 |
| | Law enforcement | 3 |

policy, (b) treatment facilities, and (c) communities. When we can maintain and infuse this holistic approach, we can better serve the needs of all of the people impacted by this epidemic.

Limitations

One of the limitations of this research is that the participants all lived within the same two counties. While this can provide important information for these specific communities in addressing the opioid crisis, it may not be generalizable to more urban areas. Additionally,



Table 3 Opportunities across interviews

| Domain | Categories | Frequency |
|--------------------|--|-----------|
| Education | | |
| | Medical treatment providers | 1 |
| | Family | 5 |
| | The community | 5 |
| | Kids in school | 6 |
| | Law enforcement | 1 |
| Services/resources | | |
| | More treatment programs/specialized services | 7 |
| | More levels of care | 4 |
| | Treat family | 4 |
| | Drug testing centers | 2 |
| | Random drug testing | 1 |
| | Doctors monitoring prescription opioids | 1 |
| | Treatment length | 1 |
| | Mentors/sponsors/advisors | 1 |
| | Transportation | 2 |
| | Housing | 3 |
| | Drug courts | 1 |
| | Increase recreational options | 2 |
| | Funding for services | 4 |
| Awareness | • | |
| | Advocates | 2 |
| | Change culture | 2 |
| | (Values/social acceptability) | |
| | Advertising resources | 3 |
| Relationships | • | |
| * | The community | 1 |
| | Involvement of community leaders | 2 |

since we did not collect demographic information on the participants, the diversity of the participants may have been rather limited, further limiting the generalizability.

Another limitation focuses on the research methods. This research was a qualitative design, which means any cause-and-effect conclusions cannot be inferred. Future research may consider creating a survey based on the themes derived from the interviews. A survey design could focus on the barriers or threats identified in the interview and their correlation to opioid use. Furthermore, researchers could look at the potential moderating variable of social support to see how this may impact the relationship between the threat and opioid use.

Future researchers may also want to consider differentiating between people who are personally struggling with addiction and those who have loved ones to the disease. Although we combined the two populations when analyzing the data in order to expand on the phenomenon, it could be systemically important to individuate the two perspectives. Family members and people in recovery are two parts of the same system, each with distinct perspectives that are equally essential for policy recommendations and considerations. One major and important example of this is the discussion of the length of stay in treatment as a weakness. Five of the eight people in recovery whom we interviewed had mentioned that there needed to be longer stays in rehab because a month was insufficient. This perspective lends itself to the importance of understanding all individuals' experiences in the systemic issue of opioid use.



Table 4 Threats across interviews

| Domain | Categories | Frequency |
|--|---|-----------|
| Education | | |
| | Educating public/invoke awareness | 7 |
| | Medical treatment providers | 2 |
| | Family | 8 |
| | The community | 5 |
| | Kids in school | 3 |
| | Law enforcement | 4 |
| Advocacy | | |
| 11avocacy | Individuals speaking out | 2 |
| | Coordinating resources | 3 |
| | Better network of communication | 3 |
| | | 1 |
| | Town meetings | |
| | Resources not well advertised | 2 |
| | Recovery community left out | 3 |
| | Stigma | 6 |
| Limited services/resources | | |
| | Treatment programs/limited specialized services | 5 |
| | Levels of care available | 4 |
| | Treat family | 7 |
| | Doctors not monitoring prescription opioids | 2 |
| | Treatment length | 1 |
| | Mentors/sponsors/advisors | 2 |
| | Transportation | 2 |
| | Housing | 2 |
| | Healthcare | 1 |
| | | |
| | Treatment close to home | 4 |
| | Recreational options | 3 |
| | Health and wellness options | 1 |
| Money | Funding | 3 |
| | Unemployment | 5 |
| | Credit cards | 1 |
| | Profitable business selling | 4 |
| Mental health | č | |
| | Co-occurring disorders | 2 |
| | Using to cope/self-medicate | 4 |
| | Using to fit in | 1 |
| | Individual must want to be drug-free | 2 |
| | Feeling of hopelessness | 1 |
| Criminal record | recining of hopeicssness | 1 |
| Cililliai fecolu | I In amount or amount | 1 |
| | Unemployment | 1 |
| P : // | Trust of others | 1 |
| Environment/ accessibility of drugs | | |
| | Cultural values/social acceptability | 8 |
| | Drugs are cheap | 2 |
| | Drugs are easily accessible | 5 |
| | Medication-assisted therapy | 2 |
| | Identify at-risk areas | 1 |
| Relationships | in the money | 1 |
| retationships | Families not understanding/enabling | 7 |
| | | |
| | Friends | 5 |
| | The community | 3 |
| | Involvement of community leaders | 2 |



Implications for Public Policy

Since relationships, resources, and education were central themes throughout each category of the SWOT questionnaire, treatment facilities, policy makers, public education, and legislation may want to use this information to create change within the systems. One example of this change is in relation to criminal records. One participant stated that "A lot of people who do get clean are trying to better their lives, but they can't because of their criminal records." Pennsylvania has an expungement program called Pathway to Pardons. Although it gives those with drug convictions an opportunity to clear their records, the process itself can take up to 3 years, and often, people have to wait 5 years after their last conviction (Pennsylvania Board of Pardons 2017). The program does little to help the person in early recovery who is trying to find a job. Few places display lists of jobs or organizations who hire felons, despite other researchers' awareness of the connection between the criminal justice system and substance abuse treatment (Phillips 2010). Perhaps communities could develop a process similar to minor driving violations, which add points to your driver's license. Ultimately, though, as emphasized several times throughout this research, awareness and education are vital. If no one knows about the resources, their usefulness is severely limited.

The results of this research point to the importance of communication and coordination between emergency rooms, police officers, and treatment facilities. If an individual is admitted for emergency care due to an overdose, coordination for immediate entry into a treatment facility could occur as soon as the individual is well enough to leave the hospital. These results confirm Phillips' (2010) and Belenko's (2006) findings that supported the need for increased coordination and communication. Phillips (2010) found that recovery was aided by aftercare and the transition from the criminal justice system to a mental health treatment facility. Belenko (2006) discussed the importance of transition-planning and assessment for appropriate referrals. The Pennsylvania Department of Health and the Pennsylvania Department of Drug and Alcohol Programs (2017) further discussed the importance of "warm handoff's" specifically in emergency care settings. They recommended that drug and alcohol assessors are contacted to conduct assessments in the emergency care setting and provide the "warm handoff" directly to a specialty program.

Communities also are training people to get their certification as a certified recovery specialist (CRS). CRSs are trained to help individuals through the recovery journey and must have gone through the recovery process themselves to be qualified for this position. The peer support program is being implemented in mental health clinics, hospitals, and police departments to support warm-handoffs, provide advocacy measures, and smooth any transitions between facilities (The Council of Southeast Pennsylvania 2017). This best practice can be replicated across the nation to help support the coordinated care necessary to fight this epidemic.

Implications for Treatment Facilities

Other issues that were repeated throughout the interviews focused on relationships, resources, and treatment facilities. One participant stated, "...it's a people, places, and things, disease. You put them [those in recovery] back where they are with the same people, places and things...They go back to the same habits." Social supports can be beneficial, but they can also enable the individual to continue using opioids. Phillips (2010) found that social supports were an influential factor in the recovery for people who were either incarcerated and in a substance



abuse treatment program or transitioning back to society. Since social support can be an important factor, it needs to be balanced with its potential to be a threat. One interviewee, speaking about her daughter, stated that "It seems like every time she goes to rehab she meets another person that can take her almost to another level." The mother also suggested that treatment facilities "Somehow separate the newer addicts from the long history of addiction, and you know that kind of take them under their wing and then use them." The recommended separation in treatment facilities may be an opportunity for continued research into the effect on recidivism rates for first-time attendance both in treatment facilities, as well as in the criminal justice system.

Separation can continue into outpatient facilities. Researchers have long recognized that the recovery process consists of multiple stages, each with different needs that demand flexible approaches to treatment (Nixon 2012). However, our research seems to show that the development of treatment for people struggling to recover is rarely informed by those specific requirements. People are separated neither by longevity of active addiction nor by phase of recovery.

Education was another reoccurring theme. The most common educational recommendation focused on families who have a loved one with an addiction. Results from the study reinforce the issue that substance use impacts the family system (Ashrafioun et al. 2011; Disley et al. 2013; Lander et al. 2013). One parent who lost a child to an overdose said, "Families are very much in denial. And in denial they are enabling to their loved ones." Another parent with the same experience said, "... we are going to have to help people understand what it truly means to have tough love. Truly, you know. We just have to help people understand that tough love... has to be used at times. Otherwise the enabler does all of the doing. And the user doesn't do it. They just ride the boat. Ride the waves."

Tanner-Smith et al. (2013) completed a meta-analysis on outpatient treatment programs and substance use outcomes for adolescents. They found that family therapy had the strongest evidence for effectiveness. Two additional interviewees in the study stated the importance of "recognizing [addiction] as a family disorder" and that "it's generational." This research supports the idea of a family systems approach to helping people in recovery. By educating the family, creating more support groups for family members, and integrating them consistently into the treatment process, the success rate of long-term recovery for both the individual and the family may be increased. Additionally, the results from this study may indicate that the benefits of a warm handoff could extend to family therapy. If the individual is offered treatment immediately after emergency care, families could receive the same offer. Many studies evaluate the effectiveness of conjoint and concurrent family therapy on substance abuse, but there is little if any research on potential benefits from family therapy that begins in an emergency care setting (Baldwin et al. 2012; Matheson and Lukic 2011).

Participation in multisystemic therapy (MST), a family-oriented treatment, has been linked to "increased school attendance, decreased familial conflict, and reduced recidivism" (Spas et al. 2012, p.148) as well as improved relationships and a higher rate of long-term substance abstinence in adolescent populations, especially when used in conjunction with drug courts. Lewis et al. (2015) found emotional and behavioral improvements in family members participating in the Supporting Kids and Their Environment (SKATE) program, a model that treated children living with parental substance abuse with both psychoeducation and family-based techniques. One of the unique aspects of the program that is also relevant to the current study is its integration with the parent's substance abuse treatment as a collaborative attempt between child protection, substance abuse, and family services. Furthermore, SKATE



addressed resource gaps by connecting community agencies with local media in an attempt to promote and advocate for increased community awareness.

Implications for Communities

Education and awareness also need to happen at the community, state, and national levels. One participant stated that a strength in the north central Pennsylvania county was the "focus on heroin which is the main epidemic…because I don't think a lot of places are doing that." Even though the community is focusing on this issue, another interviewee stated, "I think a lot of times we want to sugarcoat the problem, whether it's at the press level… when we talk about early intervention, a lot of times people aren't going straight to heroin. It's going to start at some kind of prescription. We need stricter laws, ones that annihilate pharmacies and the doctors who are writing them. Because, I do believe that is where most start. I know that is where I did."

Community education can occur at all levels within the system. Churches and secular groups can become more involved with the community, bulletin boards and information on resources can be placed in high-risk areas, and teachers can educate students at a young age about the impacts of opioids. One interviewee recommended that parents who lost a loved one talk to students about the impacts of their loss. Education may also include helping the society to address misconceptions about people who use opioids. Common misconceptions may delay timely and effective treatment. Dr. Dan L. Longo (M.D.), Drs. Nora Volkow, M.D. (Director of the National Institute on Drug Abuse since 2003), George Koob, and A. Thomas McClelland, Ph.D. (Founder and Chair of the Board of Directors at the Treatment Research Institute), addressed erroneous misconceptions in the April 2016 article published in the New England Journal of Medicine (Longo et al. 2016). They identify myths such "addiction is nothing more than a set of bad choices," which supports the idea that people with substance abuse disorders are "morally weak" and they make a choice to become addicted. This misconception may hamper the family, community, and even the physician's trust in the individual struggling with addiction and in turn delay or even prevent the individual in accessing treatment. The Diagnostic and Statistical Manual of Mental Disorders (DSM)-5 (American Psychological Association [APA] 2013) identify features of addiction including a pronounced craving for the drug, obsessive thinking about the drug, erosion of inhibitory control over efforts to refrain from drug use, and compulsive drug taking. These behavioral changes are associated with structural and functional changes in reward, inhibitory, and emotional circuits of the brain (NIDA 2017a, b). Accurate and comprehensive education is critical in addressing the opioid epidemic in all sectors of the population and treatment community.

Conclusion

As one interviewee eloquently stated, "Addiction is not a social stigma; it is a mental stigma. It is a physical thing. It is an illness. It affects all genders. It affects all races. And it affects all socio-economic backgrounds. You have made bad decisions, but you are not a bad person. You just made bad decisions. And good people make bad decisions. That doesn't mean they are not a good person." As opioid use and drug overdoses continue to rise, we need to listen to those impacted personally by this epidemic. We need to develop a comprehensive, collaborative, multi-systemic approach to working with this population. By working together within and



across counties and state lines, we can educate and help reduce the use of overdose-related deaths, while increasing the potential for people to receive the help they need to successfully engage in long-term recovery.

Appendix

First, thank you very much for your willingness to be a participant in our research and taking time out of your busy schedule to speak with us. The purpose of this research is to focus on reducing overdose death rates, reduce the misuse and abuse of opioids, and increase the survival rates for those experiencing an opioid addiction. We want to empower our community and individuals to further facilitate community activation and strengthen coalitions in addressing the epidemic of drug abuse. Do you have any questions?

Initial question: Please share with us your experience with opioid misuse or overdose.

SWOT Questions

Thank you for sharing your experience. Now, we are going to ask you a series of questions concerning the prevention and intervention of opioid and heroin use and overdose.

STRENGTHS

- 1. What does your community do well?
- 2. What unique resources does your community have in place?
- 3. What resource was the most helpful for you, when you needed it the most?
- 4. What do you see as the strengths in your community?

WEAKNESSES

- 1. What could be improved in your community?
- 2. What resources are needed in your community to address this issue?
- 3. What do you see as the weaknesses?

OPPORTUNITIES/SERVICES (include educational & mental health opportunities)

- 1. What opportunities and or services (including educational & mental health) are available in your community?
- 2. What opportunities and or services (including educational & mental health) would you recommend be provided?

THREATS

- 1. What challenges may have contributed to you or your loved ones efforts in becoming drug-free?
- 2. What recommendations do you have to address the challenges within the community?

Debriefing Statement

Thank you for taking the time to volunteer and participate in this study. I sincerely appreciate your willingness to further the understanding of the drug use in your community. There will be no further contact from me regarding your participation in the research. If you



feel stressed or uncomfortable as a result of participating in the interview, we have a list of professional mental health counselors that are available in your community. Again, thank you for your time.

Hand out the MH referrals.

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