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The Dangers of Fentanyl and Naloxone Harm Reduction

Introduction and Context

The Opioid Epidemic, as it has been coined, is a pressing issue that has to be addressed sooner rather than later. The term epidemic “refers to a disease widely occurring in a community at a particular time” (Pré, 2020). In the past two to three decades, opioid use and abuse has continually risen and the death rates are devastating. According to the Centers for Disease Control and Prevention (n.d.-a), more than 932,000 total lethal overdoses have occurred since 1999 and opioids were involved in 74.8% of the 91,799 deaths that occurred within 2020. Opioid abuse results not only in death, but hundreds of thousands of emergency room visits and overwhelming numbers of court cases. Thus, the coining of the opioid issue as an epidemic is definitely appropriate.

There are a lot of potential reasons people may end up interacting with opioids, or increase their risk of opioid dependency, including prescriptions for pain or illness, peer or family usage, lack of education, and accidental or incidental intake, though it is important to note that none of this is necessarily causal to any kind of inherent issues (Degenhardt et al., 2019). Unfortunately though, the stigma around opioids and substance abuse still runs rampant. Much of this stigma surrounds the ideas that drug users are criminals or that a person’s addiction or abuse is always a choice. The notion that cannabis, or marijuana, is a ‘gateway’ drug is also a potential correlation, but caution must be applied when interpreting and applying anything specific about that correlation (Wilson et al., 2021).

All that said, what role does fentanyl play in this? Fentanyl is a major synthetic opioid player in the opioid epidemic and the usage is generally in reference to fentanyl itself and fentanyl analogs—a term for substances chemically similar to a particular drug. Fentanyl is an opioid that binds itself to the opioid receptors within the pain and emotional control area of the brain (National Institute on Drug Abuse, n.d.-a). Fentanyl can cause a series of different effects when taken, including but not limited to nausea, confusion, extreme happiness, constipation, and breathing issues. These breathing issues in particular can result in hypoxia, which is when there is a decrease in the amount of oxygen that gets to the brain. Hypoxia itself can lead to comas, brain damage, and death. This is the most common way people die from fentanyl

overdose and it means that fentanyl is almost always a definitive causal role in the deaths that it is found present in (O'Donnell, 2017).

Fentanyl is well known to be anywhere from 50 to 100 times more potent than morphine and similar drugs which makes it popular for stronger effects among recreational drug users and more likely for addiction among prescription users. Although the most common fatal route of fentanyl overdosing is injection, there are many cases, approximately one in five, that stem from alternative routes such as snorting, smoking, or ingesting. This is only possible because of the potency of fentanyl where even traces of it can be detrimental. According to the National Safety Council (n.d.), there were 53,480 preventable, fentanyl-related deaths in 2020 and an increase to 67,325 preventable, fentanyl-related deaths in 2021. It is clear that the sheer number of preventable deaths bodes for further effort and investigation into the issue.

Illegally (or illicitly) manufactured fentanyl, referred to from here on out as IMF, accounts for quite a substantial amount of the fentanyl death rates and varies in its supply around different areas of the United States. Some IMF appears in heroin and other powder forms while other IMF appears in its own individual forms, including in its own tablets. Heroin and powder forms are typically found more on the eastern side of the country and tablet forms are more common on the western side. IMF has been found in heroin, cocaine, and methamphetamine, both with and without a user's knowledge of the IMF's presence (O'Donnell, 2017). Drugs, particularly counterfeit prescription drugs, are commonly laced with fentanyl and fentanyl analogs. In addition, IMF has become increasingly less expensive; the price of 10mg to 100mg amounts falling over 50% from 2016 to 2021 (Kilmer et al., 2022). This makes fentanyl one of the strongest yet cheapest drugs for people to engage with.

Overall though, IMF involvement and presence in various drug markets has increased from nearly zero to approximately two-thirds of drug overdose over the course of about a decade from 2013 to 2021. A study looking at the reported opioid overdose deaths on death certificates across 38 of the states and the District of Columbia from January 1st, 2018 to December 31st, 2019 found that fentanyl was listed in 47,799 of the deaths (O'Donnell, 2021). Of that 47,799, IMF, probable and suspected, accounted for 42,665 of them due to conclusions drawn from evidence from the case itself including scene, witness, and toxicology evidence.

Harm reduction is one of the most popular frameworks for dealing with drug use and abuse and is particularly commonly applied to issues related to injected drugs (Inciardi, 1999). The theory focuses on reducing problems that arise from the issues at hand rather than complete abstinence since abstinence from an issue (e.g. drugs, unprotected sex, etc). This book by Inciardi (1999) discusses the history of harm reduction and fentanyl in Chapter 2 in

which the distribution of methadone treatment, a drug that helped control addiction to fentanyl, was the primary form of harm reduction for quite some time. Since the point in which this book was published, new harm reduction ideas and strategies have been developed.

When talking about fentanyl specifically, there are organizations that work to promote less harmful ways of using the drug, such as taking it slowly and in very small amounts as well as testing any drugs or alcohol supplies with fentanyl test strips (National Harm Reduction Coalition, n.d.). Perhaps the most important harm reduction development has been the push for using naloxone, including a nonprofit organization, End Overdose, dedicated to providing free naloxone for people to carry along with a training for proper usage (End Overdose, n.d.). Naloxone can return a person to a normal breathing pattern, recalling the aforementioned effect of hypoxia from overdosing on opioids, so it can essentially reverse an overdose (National Institute on Drug Abuse, n.d.-b). Both injection and nasal spray options are available for purchase and use.

The Audience

To start the details on the audience for this campaign, I want to look at the demographic elements. Initially the plan was to target college students with a precedent of partying, however, after a review of existing data from the National Safety Council (n.d.), I believe the target should actually be adults from the ages of 25 through 44. This age group doesn't necessarily exclude college students but the focus no longer implies the typical 17-24 age group. The age group 25-44 makes up 36,043 of a total 67,325 cases looked at within the data of preventable fentanyl deaths in 2021. This means that this is the group of the utmost concern at the moment and would potentially see the most benefit from the campaign being run. For my campaign purposes, I would like to focus on these guys but I will note that a parallel campaign focusing on the younger group would be great to create earlier harm reduction.

While I am not aiming to target one gender over the other, as of right now, the data shows that there are 9,725 female-identifying people within this age group to 26,318 male-identifying people. So, it would likely be in my best interest to at least keep that in mind when thinking about the ways I approach the campaign materials. This doesn't mean much more than perhaps looking into what responses are more common among men than among women and implementing that. Although I am also not targeting a particular family, income, or education level, I will also note that these are definitely factors that weigh into risk of opioid contact, as stated earlier. I also want to keep all materials to an early high school reading level that allows for those with limited health literacy to understand.

As far as geographic details go, I would like this campaign to be nationwide, however, a good focal point would be the eastern side of the United States. The states that I would look at the most would be West Virginia, Tennessee, Louisiana, and Kentucky. Even if the campaign material gets distributed to a wider audience, these 4 states are part of my focus because CDC data shows that these are the 4 states with the highest death rate (Centers for Disease Control and Prevention, n.d.-b). From the same data set, it would be worth it to also consider states that have high death counts including the states California, Florida, New York, and Pennsylvania. While these states aren't in the highest death rates, they have 10,901, 7,827, 5842, and 5449 deaths respectively. Overall, all the states in these top categories are on the eastern side of the US, with the exception of California, so it brings it back to targeting this geographical location as a whole.

Psychographic details are one of the most important factors to consider for my target audience. The people I am looking at for lifestyle are people who actively use drugs or are in an environment that predisposes them to potentially using drugs. I am also looking at people who are surrounded by people who may partake in active drug use, even if they don't themselves. This is the cornerstone of who will need to understand and connect with the campaign the most. If a person does not engage in a lifestyle that includes drug use, the campaign would not be completely useless by any means, however, they are not my primary audience.

As far as motives and values go, I am targeting people who are willing to help save lives and prevent overdosing. I don't necessarily need or want the audience to be heroes but rather to have values of empathy and compassion towards their fellow human beings along with general intrinsic motivation. With the number of deaths that occur related to fentanyl, there is also a chance that there are people who are directly or indirectly affected. This emotional connection could also be a potential motive I am looking for.

The preferred channels of my audience are likely to be a combination of print and social media work. I do not want to campaign to isolate people who may not be super engaged online. According to the most recent information I could find, Facebook and LinkedIn are the best bet for the age demographic I am looking at (Barnhart, 2023). The lower end of the age group uses Twitter, there is a high reach among YouTube viewers for most of the age group, and there is a decent audience using Pinterest. I would focus particularly on Facebook and LinkedIn with additional content on YouTube. Other social media platforms are definitely options but they would be secondary rather than a primary channel. The content types I think would work the best are infographics and video tutorials.

Challenges and SWOT

The challenges I will be dealing with in regard to fentanyl overdosing and my target audience start with the stigmas surrounding drug use. Briefly mentioned at the beginning of this paper, a lot of the stigmas around drug users are, at best, unsympathetic and, at worst, downright cruel. When a person overdoses it is often due to personal reasons that the average individual would not be privy to; this makes continuation of the stigmas quite easy. Other challenges are more logistical and systematic. As it is, there is a lack of education and lack of support for both drug users and non drug users.

The strengths for this campaign include that I have a good understanding of fentanyl and drug overdosing through familial history, that fentanyl is super specific and the campaign is focused on one particular opioid, and that there are tangible solutions available now. I have had multiple family members overdose from opioids and know the effects of having that happen to a loved one. I can build the campaign knowing that feeling and being conscious and sensitive about the way it may come across to those who have lost someone to an overdose.

The fact that my campaign is focused specifically on fentanyl and naloxone is a strength to me because it means that all of my information can be super specific. Vague campaigns have their pros and cons but for drug overdose, I think being specific works in the campaign's favor. Lastly, the availability of actual solutions regarding harm reduction for addiction and overdosing is a game changer for this campaign. It means that this campaign can give people something real to hold onto rather than a hypothetical.

The weaknesses are that drug overdosing is super nuanced and hard to cover in a simple campaign. There is a lot of potential for misunderstandings and lost information. Even though the campaign is focused on one particular overdose, there is not a lot of clarity on the difference between different opioids, different kinds of overdosing, and what naloxone actually does. This isn't information that can be covered in small infographics and relies on people having some level of prior knowledge which is a massive weakness for this campaign.

The opportunities for this campaign include collaborations with existing organizations as well as building and expanding on the campaign to more audiences. There are multiple organizations that exist that would be great collaborators to spread the campaign's message including, but certainly not limited to, End Overdose, Coops Advice, Harm Reduction Coalition, and Feed The Streets. Each of these organizations could provide an additional perspective for people to engage with. This brings me to the different audience point. In my description of the audience, I had mentioned numerous different demographic groups that could also use the knowledge and information from the campaign. If the campaign does well, it could expand to the

other age groups and regions that have high death rates.

The threat that comes to mind for this campaign is the financial investment people may have to attempt to shut it down. The IMF business is very profitable for a lot of different players in the business and this campaign would technically directly challenge them. The likelihood of high political power is low but not out of the realm of question. I just need to be wary of any attempts to strike the campaign down.

Goal and Objectives

Overall Goal: To have the target audience know when and how to administer naloxone in the case of a fentanyl overdose.

Objectives:

1. To increase adult awareness of the signs of an overdose by 80% in 8 months.
2. To increase adult awareness of how to administer naloxone by 60% in 8 months.
3. To increase the number of adults carrying naloxone (Narcan) by 20% in 1.5 years (18 months).

Tactics

1. Tactic 1: Create campaign advertisements.

To be more specific, these advertisements will be infographics that focus on providing quick and easy transference of information. This is helpful for achieving objectives 1 and 2 since they can be great ways of generating awareness and knowledge spread. Since infographics are relatively easy to push through different channels, creating varied versions that would succeed across different platforms and mediums (e.g social and print) would be great for moving towards the audience understanding more about fentanyl overdosing and naloxone. Advertisements could potentially also be altered into animated elements so they can be placed in online spaces that succeed more with videos rather than static images.

2. Tactic 2: Creating a partnership with End Overdose to distribute even more naloxone.

By partnering with End Overdose, it increases the reach of the campaign and improves the number of people who come into contact with the campaign material. It also directly addresses objective 3 and influences the number of people who can have access to the training and naloxone. I would be particularly interested in creating physical ways of implementing the training and distribution since there are likely people impacted who do not have access to consistent internet or perhaps do not have permanent addresses that can be shipped to. Ideally

we would get as many people as possible to be able to learn and have access to a small part of preventative healthcare. This partnership can be emphasized with the first tactic of advertisements.

Research Related to Goal/Objectives

My goal, as mentioned, is to have the target audience know when and how to administer naloxone in the case of a fentanyl overdose. I believe that my introduction to this campaign serves as a fantastic reasoning for why this is an important goal. The death toll from fentanyl overdose cases is ever-rising and has been a point of concern for the past decade. To restate an example of the issue, 74.8% of the 91,799 lethal overdoses in 2020 involved opioids and there were 53,480 preventable, fentanyl-related deaths that year (Centers for Disease Control and Prevention, n.d.-a; National Safety Council, n.d.). The key here is that they were *preventable*. The idea here is to reduce that number so that we are making a difference in preventable death. That is why I chose the objectives I did. I decided to exclude any objectives related to the dangers of fentanyl itself because I feel it would not address the goal in a tangible way. So, I will go through them one-by-one now and explain their importance in this issue and the existing literature.

1. To increase adult awareness of the signs of an overdose by 80% in 8 months.

Overdosing itself can be difficult to pinpoint if a person has never come across it before. The objective here is for someone to be able to indicate they understand when their naloxone knowledge would be needed—how will a person be able reverse an overdose if they do not know it is happening in the first place? Therefore, this objective will include well documented symptoms of a fentanyl overdose, much of which also apply as symptoms to other opioid overdoses.

The largest symptom to look out for is a person being unconscious. From there, a set of other symptoms can help determine if a person is unconscious for an overdose or non-overdose related reason. These symptoms consist of pupils that are small, constricted, and non-responsive upon a light being shone into them, slow or no breathing, discolored skin, especially under the nail and on the lips, and limbs that are cold, clammy, and limp (Centers for Disease Control and Prevention, n.d.-c).

2. To increase adult awareness of how to administer naloxone by 60% in 8 months.

Now, as the previous objective discussed, the person viewing this campaign should also

learn how to administer the naloxone. These 2 objectives work with each other as you cannot administer without knowing the symptoms but you also cannot do anything if you know those symptoms but cannot administer. The first step is understanding that there are two different forms of naloxone that are FDA approved: injectable naloxone and nasal spray naloxone (National Institute on Drug Abuse. n.d.-b). 'Take-home naloxone' as we understand these options to be has evolved so that a person can apply naloxone while awaiting an ambulance (Strang et al., 2019).

Next, generally speaking, when selecting the naloxone type, the nasal spray is the option more suitable for non-medical personnel. Although intranasal naloxone is less efficient than intramuscular naloxone when compared directly to one another, intranasal naloxone restored breathing in 80% of the participants within a comparison study at one dose of 1.4mg (Skulberg et al., 2022). Finally, this is also why understanding that calling an ambulance as soon as the first dose is administered is imperative. Naloxone works within the body for anywhere from 30 to 90 minutes so, in the remaining cases that don't resolve after one dose, multiple administrations of naloxone will be necessary. This is especially true if the potency or amount of opioids in the body is high. Knowing this will be dependent on whether or not the person's breathing returns back to normal. Once oxygen is circulating the brain again, the overdose is in the process of being reversed.

3. To increase the number of adults carrying naloxone (primarily Narcan) by 20% in 1.5 years (18 months).

This is the actionable objective of my campaign in which the previous 2 objectives ideally combine into a clear incentive to carry naloxone, as a knowledge base for overdosing and naloxone has been created at this point. Although emergency responders including officers, medical technicians, and others are all trained in naloxone administration, individuals should have a supply for themselves. Of course, access to naloxone is uneven among different communities and access issues pose a barrier to the spread of naloxone as part of the solution (Strang et al., 2019). The actual cost of naloxone will vary on type, how it is bought, and where it is bought (National Institute on Drug Abuse, n.d.-b). Whether or not a person can get their hands on some is a complete gamble. Fortunately, as I have mentioned earlier in this campaign paper, the nonprofit End Overdose provides free training and naloxone for those interested. I will be bringing special attention to their service within the objective here since being able to get ahold of naloxone is key to actually carrying it around.

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