

BEST PRACTICES FOR THE USE OF SOCIAL MEDIA IN OPIOID OVERDOSE PREVENTION:


LESSONS LEARNED FROM PREVIOUS PUBLIC HEALTH CAMPAIGNS

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ABSTRACT

Emerging research demonstrates the role of social media in disseminating information and potentially influencing people's attitudes toward public health campaigns. The literature describes using social media campaigns to counter the social modeling of risky behaviors (Dunn et al., 2018; Meng et al., 2017). This systematic review seeks to synthesize the current evidence concerning the potential role of social media in shaping attitudes and beliefs related to adolescent opioid use and to explore its potential for shaping public health interventions to address the issue of fentanyl poisoning among youth in America (Cascini et al., 2022; Hunt et al., 2022).



Best Practices for the Use of Social Media in Opioid Overdose Prevention: Lessons Learned From Previous Public Health Campaigns

Roughly more than 564,000 people died from overdoses involving any opioid, including prescription and illicit opioids, from 1999 to 2020. This rise in opioid overdose deaths has historically been outlined in three distinct waves (Wonder, 2022). The first wave began with increased prescribing of opioids in the 1990s, with overdose deaths involving prescription opioids (natural and semi-synthetic opioids and methadone) rising since at least 1999. The second wave began in 2010, with rapid increases in overdose deaths involving heroin, specifically black tar heroin, which was more potent and cheaper. The third wave began in 2013 with significant increases in overdose deaths involving synthetic opioids, particularly those involving illicitly manufactured fentanyl (Wonder, 2022).

The Fourth Wave

According to the Centers for Disease Control and Prevention (CDC), opioid-related deaths were 31 percent higher in 2020 than in 2019 (Hedegaard et al., 2021). The extreme outbreak of opioid toxicity is caused by fentanyl-adulterated tablets purchased on the street (Sutter et al., 2017). According to the CDC, about 85 percent of overdose deaths involve illicitly manufactured fentanyl, heroin, cocaine, or methamphetamine (CDC, 2022a). In 2020, about 56,000 overdose-related deaths involved synthetic opioids (CDC, 2022b). Its high potency makes fentanyl a powerful synthetic opioid that is highly dangerous and has become a significant health crisis affecting millions of adults and youth nationwide. Fentanyl has been reported to be up to 50 times stronger than heroin and 100 times more potent than morphine (CDC, 2022; Muller and Ceron, 2022). As with other illicit substances, the manufacturing of fentanyl and combination with other lethal substances makes the drug extremely lethal (CDC, 2022a).

Of significant concern is fentanyl consumption within the youth population. The fourth wave of the opioid crisis involves youth who are mistakenly ingesting fentanyl that has been mixed with other drugs (marijuana, THC edibles) or taking counterfeit prescription medications laced with fentanyl. The youth populations (aged 13–18 years) are particularly vulnerable in this new wave of the opioid crisis (Neeki et al., 2020). According to the National Center for Drug Abuse Statistics (N.D.), opioid deaths have increased by about 500 percent among those aged 15–24. Miranda (2022) and Knopf (2022) reported that between 2019 and 2020, there was a 94 percent increase in deaths due to fentanyl in youth (refer to Figure 1). Fentanyl's highly addictive properties and high potency, even in small doses, make it a dangerous opioid with a high probability of lethality. In addition, fentanyl can negatively affect adolescents' quality of life, health, academic performance, and legal issues. These issues necessitate the urgency to develop harm reduction strategies, treatment options, and the use of naloxone for youth groups (Miranda, 2022).

The Impact/Weight of Social Media on Young People

Social media users interact with others as they form new connections with people and stay in touch with friends and family daily. In addition, many youths connect with strangers online, contributing to what they see and interact with online. As a result, users experience a sense of community; they consume vast amounts of news, rumors, and trends yet share and like intriguing posts that spread awareness (Weinstein et al., 2021). Although social media plays an essential role in society by raising awareness for positive issues, e.g., assisting in job searches, building relationships, and providing information about current events (Record et al., 2021), unfortunately, it is also used as a pathway to negative experiences and constructs on the dark web. Youth are using social networking sites at an ever-increasing rate, refer to Table 1. Therefore, social media is persistently increasing the sophistication of its ecosystem, and outcomes affect youth positively and negatively. Thus, social media platforms have provided a new means for people

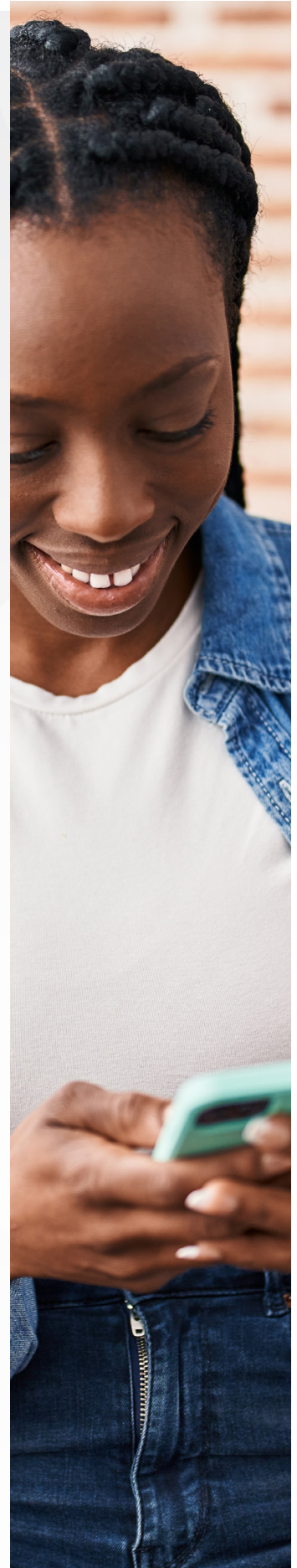
to obtain illegal drugs outside traditional street transactions. Because of the ease of accessing substances online, youth are particularly vulnerable to fentanyl poisoning. The most poignant question parents of teens and young adults, the U.S. public, and social media providers are asking year after year is the following: Are social media's drug prevention marketing campaigns evolving suitably to impact social media users aged 13 to 18? Although there are plenty of examples of affirmation, there are several massive issues suggesting a dearth of support. Accordingly, the discussion extends beyond a theoretical framework. It exposes youth to an underpinning social media crisis where youth's use of popular platforms needs to consider the increasing statistics, refer to Table 1.

Social media platforms know they need to evolve to curtail the dangers of illicit drugs and to create positive public health campaigns. Although online campaigns implement the traditional views of marketing, e.g., set objectives, identify consumer persona, present data, or improve customer loyalty, online campaigns must acknowledge that social media can be a much trickier environment where specific campaigns need to utilize the correct platform (Allara et al., 2015; Meng et al., 2017). Addressing the demographic breakdown of social media users, in particular, Snapchat reaching 90 percent of 13- to 18-year-olds in the United States, plenty of opportunity exists to convey effective fentanyl campaigns that significantly highlight the seriousness of the issue, refer to Table 1.

Marketing professionals typically place these marketing materials where their audience will likely see, hear, or interact with them. Traditional marketing includes radio and television commercials, billboards, and direct mail campaigns (Shah et al., 2022). However, an online example is the collective efforts of the social media giant's "One Pill Can Kill" initiative, where digital ads and public service announcements are meant to raise awareness of the fentanyl crisis. The campaign highlights the rise of fentanyl poisoning and the deaths of teens and young adults who often purchase drugs on social media platforms (Admin, 2021). It necessitates change that parents, the public, and government agencies should be aware of. For example, in traditional marketing campaigns, the audience is a single identifiable end user, or users, in proximity to others to form an ecosystem or like-minded group. Such is probably not valid in social media's new era. End users typically have both: (1) a choice of a social media platform and (2) an illicit drug to consume. Campaigns must move to a different model where not only the risk to teens and young adults is targeted, but parents, educators, etc., must be significantly educated. For example, in social media posts, combinations of emojis (Pei and Cheng, 2022; Tran et al., 2018) are used as sentences and allow kids to be involved in illicit drug activity without their parents being aware, refer to Figure 2. Since there is no one platform to post on, a typical social media identity is lacking. Consequently, roughly 85 percent of the American population has a smartphone ("The 2022 Social Media Demographics Guide," n.d.) and the internet has access to numerous networks in which fentanyl-adulterated pills are being marketed. To address the current fentanyl crisis, traditional marketing and social media platform techniques must be adjusted.

Marketing to the Public

To better serve the public, a new standard for changing the social media demographics while utilizing many traditional ones must be extended as these social media domains





express social media language on illicit drug use and its network, refer to Figure 3. In the end, both traditional and online methods of marketing offer advantages and disadvantages in addressing the current fentanyl crisis.

Opportunities to Address Opioids Using Social Media

Social media has continued to play a critical role in building awareness of the use of opioids. Allara et al. (2015) state that in focusing on substance use and prevention, advertisements on social media can shape how we view drug use and its interventions. Advertisements can contribute to awareness, general knowledge, and understanding of drug use (2015). Using social media as a drug prevention tool can create a wealth of information directed to the general public. On top of general awareness, it is the expectation that using social media for public health campaigns could significantly minimize opioid overdose, death, and opioid use disorders.

Frkovich et al. (2022) also urged moving beyond awareness campaigns to focus more on care providers, community leaders, and those with lived experience. These key stakeholders can aid in moving beyond “awareness campaigns” toward more effective evidence-based treatments, like medication. Lastly, they could also support the reduction of stigma toward opioid use, treatment, and recovery.

Review of Social Media Public Health Campaigns and Mistakes to Avoid

Understanding previous campaigns is critical to developing effective campaigns. In the worst-case scenario, media campaigns can be ineffective and harmful (Allara et al., 2015). Anti-drug media campaigns may be damaging, and their dissemination is ethically unacceptable without a prior assessment of their effects (Allara et al., 2015). There needs to be a grasp of what has and has not worked in the past to avoid ineffective and harmful campaigns. Allara et al. (2015) evaluated eight different interventions. They found that, to varying degrees, each campaign provided no evidence of a beneficial effect for the use or intention to use illicit drugs. Two specific campaigns showed apparent iatrogenic effects. Both campaigns studied showed clear evidence that the campaigns led to an increase in the use of marijuana and LSD for the respective campaigns. If not developed properly, social media campaigns can lead to effects with unintended consequences.

Connecting Youth to Substance Use Intervention and Treatment

To avoid potential harm caused by social media campaigns, it is helpful to understand how social media can connect youth directly to assistance and intervention. Previous public health campaigns often relied on scare tactics, such as showing overdose photos, which can backfire and have unintended consequences. They can undermine support for people who use substances because of increased stigma, thus creating barriers to access and treatment (Parent et al., 2021). However, instead of relying on scare tactics, Frkovich et al. (2022) suggest that we should move beyond the trend of just awareness-raising messaging. We should focus more on treatments and ways to reduce stigma. Thus, we can significantly minimize overdose deaths. Social media campaigns should consider tapping into local community leaders because they influence the public and

their knowledge and opinions, which can potentially reduce stigma, and is an essential facilitator of prevention and treatment (Frkovich et al., 2022).

Anti-Tobacco Prevention Campaigns

To aid in developing campaigns focusing on opioids, it can help to look toward tobacco and other substance prevention campaigns. Looking at previous tobacco prevention campaigns, Record et al. (2021) have shown that the campaigns are effective in increasing cessation-related information, outreach and dissemination effort, access for hard-to-reach populations, and increasing the perceived risk of smoking. Record et al. (2021) call out that some critical factors for successful campaigns are knowledge, attitude, and efficacy as fundamental in behavior change. Along with these vital factors, Xuan and Choi (2021) highlight components that can aid a successful campaign. One crucial component is the synergy in combining online social media efforts with other prevention methods, including local outreach and community leader involvement. Another component is that previous studies have shown that prevention campaigns are most effective with extra efforts from schools, community programs, and policy changes. (Xuan and Choi, 2021).

COVID-19 Vaccination Campaign

Throughout the COVID-19 pandemic, many lessons were learned from a fruitful campaign and successful outreach effort to get people vaccinated, i.e., social media. The emerging research demonstrates the role of social media in disseminating information and potentially influencing people's attitudes toward public health campaigns, such as the social isolation protocols initiated via executive orders put into place throughout the nation (e.g., California Executive Order No. N-33-20, 2020, March 4). The uniqueness of this campaign was that they had to adjust, pivot, and adapt their efforts to reach the masses in a more complex way to be effective. Recent social media campaigns to accelerate the administration of COVID-19 vaccinations provides promising lessons (Hunt et al., 2022) for overdose prevention campaigns.

Lessons Learned From Previous Campaigns

Based on the literature, three categories of activities are recommended for a successful opioid public health campaign using social media (use of images, safe places/reducing stigmatization, and online platforms).

Use of Images

Viewing images of people who use substances may have harmful consequences, and depicting overdoses in photographs may increase stigma (Parent et al., 2021). Findings suggest that viewing opioid overdose photographs negatively influenced the degree to which participants were willing to help people with substance use disorders. However, the literature did not find evidence that viewing these photographs affected stigma, desire for social distance, or support for drug-related social policies (Parent et al., 2021).

Safe Places/Reducing Stigmatization

Public health campaigns can significantly reduce opioid overdose deaths and opioid use disorder by moving beyond awareness-raising messaging about opioids (Frkovich et al., 2022). Public health campaigns should place a greater emphasis on driving demand among people with lived experience, providers, and community leaders for access to adequate, evidence-based treatments (like medications for opioid use disorder) and on reducing stigma related to treatment and recovery (Frkovich et al., 2022).

Online Platforms

Online platforms can be effective campaign channels for reaching target audiences. As for what messages to disseminate online, best practice calls for developing persuasive approaches that follow theoretical and evidence-

based guidelines. Campaign approaches must adapt to mediated communication platform trends (Record et al., 2021). Flexible campaign designs should continue to engage social media platforms to reach large target audiences effectively (Record et al., 2021).

Recommendations

Recommendations for future social media campaigns should adapt and pivot to the social environment they are trying to reach, keeping in mind the use of imagery and how not all images are compelling. Utilize experts and leaders in the field as well as individuals who have lived experiences to advocate for improving the effectiveness of treatment and how to reduce stigma to such interventions and recovery. Lastly, employing a social media presence can be effective if the approach is persuasive, flexible, and adapts to current trends similar to the COVID-19 campaigns. There is no “cookie cutter” way that any campaign can be effective for all communities. An opioid public health campaign using social media can be successful if it follows the “dos and don’ts” from all previous research and campaigns.

Conclusion

Addressing the fourth wave of the opioid crisis using social media will take a collaborative approach. As mentioned, there is no one-size-fits-all solution. Various delivery platforms, including digital platforms and policy initiatives, can potentially improve adolescent substance use outcomes; however, these require further research (Das et al., 2016). Unfortunately, based on their theoretical background and communication strategies, the literature does not provide specific evidence that would be considered core proof of whether the campaign was successful or unsuccessful (Allara et al., 2015). However, as successful as the COVID-19 campaign proved, we must remember that social media is not the only answer.

When working with the youth specifically, effective substance use prevention and school-based interventions based on social competence and social influence approaches have shown protective effects in reducing substance use (Das et al., 2016). Thus, evidence suggests that including actionable strategies, such as utilizing people with lived experiences, providers, and community leaders to help reduce stigma, will yield a more successful public health campaign encouraging healthy behavioral changes among the youth (Xuan and Choi, 2021). Lastly, social media campaigns should continue to reduce and remove the stigma from the youth seeking information and help regarding opioids because, as we learned, words matter. We must confront the fourth wave with an intentional shift in language and perspective; we must adapt, but we must stop calling these “deaths caused by fentanyl overdoses” and call them what they are: fentanyl poisonings.



TABLES



Table 1: Youth Use of Social Media by Platform

(Vogels, Gelles-Watnick, and Massarat, 2022, The 2022 Social Media Users Demographics Guid, Khoros, 2022).

Facebook	32 percent of teens aged 13–18 say they use Facebook
Instagram	62 percent of teens aged 13–18 say they use Instagram
YouTube	95 percent of teens aged 13–18 say they use YouTube
Snapchat	59 percent of teens aged 13–18 say they use Snapchat
TikTok	67 percent of teens aged 13–18 say they use TikTok
Facebook	86 percent of people aged 18–29 use Facebook
Instagram	67 percent of people aged 18–29 use Instagram
YouTube	81 percent of people aged 15–25 use YouTube
SnapChat	53 percent of people aged 15–25 use Snapchat
TikTok	27.37 percent of TikTok’s users are aged 13–17, and 39.91 percent of TikTok’s users are aged 18–24.

FIGURES

Figure 1: Opioid Overdose Trend Map for Ages 0–24 From 1999 to 2020

(Wonder, 2022)

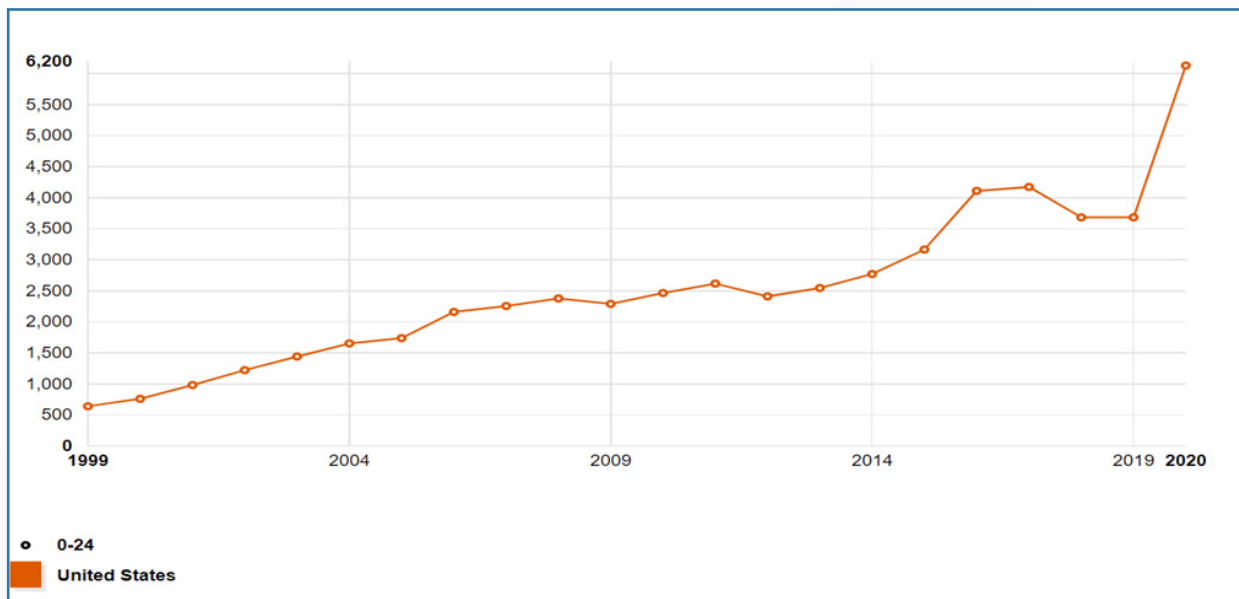




Figure 2: Drug Emoji Guide

(Alger, 2022)

Drug Emoji Guide

New emoji meanings emerge daily and become widely used in a very short time. As such, this list is not comprehensive, but an excellent resource to help parents spot danger.

Street Drugs

- Maple Leaf, Universal Emoji for All Drugs
- Broccoli, Herb, Maple Leaf, Evergreen Tree, Palm Tree, Leaf Fluttering, 4-Leaf Clover: **Marijuana**
- Snowflake, Snow Cloud, Snowman, B-Ball, Key, Blowfish, Coconut: **Cocaine**
- Brown Heart, Dragon, Springs, Bull's-eye, Horse Racing: **Heroin**
- Candy, Red X, Pill, Red Heart, Lighting Bolt: **Muñecas & MDMA**
- Crystal Ball, Blue Heart, Gem Stone, Test Tube, Ice Cream: **Meth & Crystal Meth**

Prescription & Over-the-Counter Drugs

- Pill, Parking Sign, Banana, Blue Circle, Honey Pot: **Percocet & Oxycodone**
- Pill, Chocolate Bar, Bus: **Xanax**
- Pill, A-Team: **Adderall**
- Baby Bottle, Purple Heart, Purple Grapes: **Cough Syrup**

Dealer & User Signs

- Flame: To be "blasted" or intoxicated
- Gas Pump: To be "gumped" or high
- Pen: **Vaping Pen (Tobacco or Marijuana)**
- Plug: **Drug Dealer**; Someone who "books you up"
- Pie, Cookie: **Large Batch of Drugs**
- Parachute, Package: **Drug Delivery**
- Rocket, Bomb, Bang: **High-Potency**
- Smoke Cloud, Exhaling Smoke, Face in Clouds: **Smoking, Vaping or Getting High**
- Dollar Bill, Money Mouth Face, Crown, Money Bag: **Drug Money**
- Rainbow = Candy, Rainbow Themed Colored Dots: **Skittle Party**

Figure 3: Network Recommendations by Industry

(The 2022 Social Media Users Demographics Guide, Khoros, 2022)

Network Recommendations by Industry

	f	ig	pin	tw	in	yt	sn
Retail	●	●	●	●	●	●	●
Media	●	●	●	●	●	●	●
Sports	●	●	●	●	●	●	●
CPG	●	●	●	●	●	●	●
Financial Services	●	●	●	●	●	●	●
Automotive	●	●	●	●	●	●	●
Health Care	●	●	●	●	●	●	●

Legend:
 ● Ideal For Industry
 ● Depends On Content Strategy
 ● Not Right For Industry

Best Place for Teens: Instagram, Snapchat
 Best Place for Millennials: Facebook, Instagram
 Best Place to Reach a Male Audience: YouTube

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