

fentanyl

13

PRACTICAL THEORIST

Fentanyl

Why Fentanyl / Why Now

This project is supported by the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$250,000 with 100% funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement by, CDC/HHS or the U.S. Government.





Fentanyl is one of the most dangerous substances circulating in communities across America. It is a synthetic opioid that is up to 50 times stronger than heroin and 100 times stronger than morphine (DEA Fentanyl Factsheet, 2020). As little as 2mg of fentanyl – the equivalent of a few grains of salt – can be lethal, particularly for youth, young adults, or others who have not previously used fentanyl or other opioids (EMCDDA, 2011).

Significant increases in overdose deaths involving synthetic opioids, particularly illicitly manufactured fentanyl, began in 2013 (Gladden, Martinez & Seth, 2016; O’Donnell, Gladden & Seth, 2016; O’Donnell, Halpin, Mattson, Goldberger & Gladden; 2017). From 2013 to 2019 the mortality rate from fentanyl and other synthetic opioids jumped from 1.0 to 11.4 per 100,000 people – a 1,040% increase (Mattson, C. L., Tanz, L. J., Quinn, K., et. al., 2021). And since 2020, provisional data from the National Vital Statistics System has continued to document an increasing trend of overdose deaths (Ahmad, 2022), largely driven by synthetic opioids, such as fentanyl. It is estimated that by 2029, over 1.2 million people will die from fentanyl and other opioids if no action is taken (Rao, IJ., Humphreys K., Brandeau ML., 2021).

Recent trends in overdose deaths among young people involving fentanyl as well as individual stories of tragedy are drawing more attention to this issue for youth (Ahmad, 2022; Hoffman J., 2022). There are a number of reasons youth are at risk including, among others, a marketplace where drugs containing fentanyl are more available and accessible – including in counterfeit pills commonly available to youth and young adults via social media platforms (DEA Press Release, 2021); a lack of prior exposure to opioids, making drugs with even small amounts of fentanyl more likely to be lethal; a lack of awareness about fentanyl and its presence in other substances (Fentanylawarenesday.org, 2022); and the heightened need to address youth connectedness, resilience, and other protective factors, given the negative impacts of the COVID-19 pandemic on youth mental health (Jones SE., 2022). These factors make the need for primary prevention efforts more important than ever.

Given the urgency and magnitude of the opioid crisis, which is currently being driven by increases in the availability of highly lethal illicitly manufactured fentanyl, it is critical to focus on primary prevention and to be informed on other work to save lives. Focusing on primary prevention strategies, such as increasing awareness and promoting protective factors in schools and communities can help to enhance broader strategies being used to reverse increases in overdose deaths such as collaborative partnerships with public health/public safety; safe prescribing practices; access to substance use treatment and recovery programs; and promotion of services such as naloxone distribution, fentanyl test strips, and syringe services programs.

This Practical Theorist is part of a series of publications designed to summarize field research on key drug use issues and to present it in a concise, practical format, with strategies for using the data to mobilize communities and support your coalition’s mission.

This practical theorist describes fentanyl and its emergence in the United States; its impact on communities, especially during the pandemic; populations and areas of greatest risk; and unique risks for youth. A focal point is specific actions communities can take to prevent exposure to and use of fentanyl among youth - utilizing CADCA's 7 strategies for community-level change and highlighting the important prevention work of Drug-Free Community (DFC) coalitions and other community partners. A final section contains links to tools and resources that can assist with these prevention efforts.

What is Fentanyl?

There are two types of fentanyl – pharmaceutical fentanyl and illicitly manufactured fentanyl. **Pharmaceutical fentanyl** has been used for decades for medicinal purposes. It is prescribed by healthcare providers to treat severe pain, particularly after surgery and for advanced-stage cancer (Stanley, T.H., 2014). **Illicitly manufactured fentanyl** (IMF) is produced in clandestine laboratories and distributed through illicit drug markets. IMF is easier and less costly to make, distribute, and sell than heroin and is often mixed or co-used with other drugs because of its extreme potency (Pardo, B. et al, 2019). Both pharmaceutical fentanyl and IMF are synthetic opioids meaning that they are man-made substances that are created to act on the same targets in the brain as natural opioids (e.g., morphine and codeine) to manage pain.

The Beginnings of Pharmaceutical Fentanyl - Intense Pain Treatment

Fentanyl was approved by the Food and Drug Administration (FDA) as an anesthetic in the United States in 1972 (Stanley, T.H., 2014). It was created in the 1960's with the promise of increased potency and safety in the medical use of opioids for patient care – to quickly address high levels of acute pain with fewer cardiovascular side effects (Stanley, T.H., 1992). This was in comparison to morphine, which resulted in disadvantages such as memory impairment or risk of hypertension among patients (Stanley, T.H., 1992). Fentanyl analogs are substances with chemical structures that closely mirror fentanyl. They can be just as or even more powerful than fentanyl itself. Fentanyl & fentanyl analogs – when taken in very precise dosages and administered and overseen by skilled and highly trained clinicians – work well in clinical circumstances. Used outside of these parameters can result in unintended consequences and death.

In the 1990s, fentanyl was introduced for clinical use as a pharmaceutical patch or lozenge to manage chronic pain associated with cancer and persistent and intense pain related to other conditions ((Stanley, T.H., 1992; Ahn, J.S., et al, 2017). The introduction of these new ways of

administering fentanyl offered additional avenues to deliver the medication but also alternative ways to misuse the drug (Rowbotham, D. J., Wyld, R., Peacock, J. E., et. al. 1989). This is because beyond pain relief, fentanyl – like other opioids – can produce euphoric effects, relaxation, and sedation, increasing the risk of misuse (NIDA, 2022). It can also have negative side effects such as confusion, drowsiness, dizziness, nausea, vomiting, and respiratory depression. The Drug Enforcement Agency has identified pharmaceutical fentanyl as a Schedule II narcotic, meaning that it has medical benefits but has a high risk of misuse and dependence (DEA, 2018) in addition to a risk for diversion (i.e., the illegal distribution of prescription drugs for illicit use).

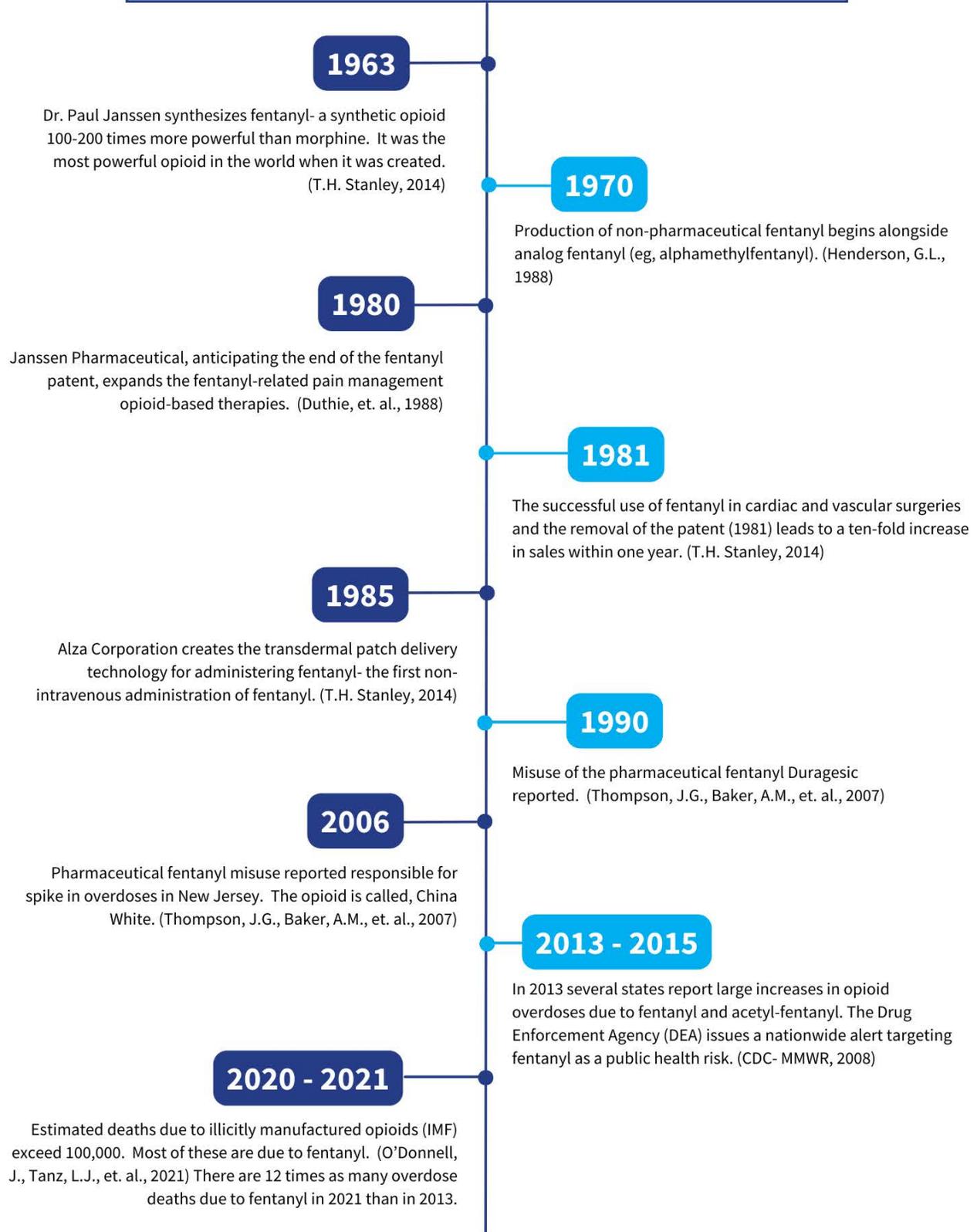
Fentanyl is part of a family of opioids that include sufentanil, alfentanil, and remifentanil to treat humans and carfentanil and thiofentanil to treat animals.

The Emergence of Illicitly Manufactured Fentanyl (IMF)

Over the next decade, IMF began to emerge – produced by trained chemists that were creating “synthetic heroin” for the illicit drug market (Suzuki & El-Haddad, 2017). The publication of a new method for synthesizing IMF occurred in the 1980's (Suzuki & El-Haddad, 2017). It entailed using a readily available precursor chemical – N-phenethyl-4-piperidone (NPP) – to facilitate mass manufacturing of IMF in labs that did not require sophisticated equipment and by people who did not know chemistry well (Suzuki & El-Haddad, 2017). It was also not tied to seasonal planting and harvesting schedules like poppy-plant derived opioids and could be manufactured easily in clandestine laboratories (Asad & Harris, 2019). The emergence of clandestine laboratories where IMF is manufactured has also been accompanied by the emergence of other non-pharmaceutical synthetic opioids, some of which are IMF analogs and others of which are structurally unrelated to fentanyl (e.g., acetyl fentanyl, carfentanil, acryl fentanyl, butyryl fentanyl, cyclopropyl fentanyl, and U-47700) but are also potent and lethal; all of these drugs are being

* For a full breakdown of other kinds of opioids, please see CADCA's *Practical Theorist 10: Opioids*.

A Brief History of Fentanyl



increasingly manufactured for distribution in the illicit drug market (Suzuki & El-Haddad, 2017).

IMF is often mixed with filler materials, such as lactose and sugars, and then mixed into other substances to increase product volume and provide people who sell drugs with larger profits. Fillers combined with IMF can also be pressed using pill presses into counterfeit oral opioids made to mirror the likeness of legal prescription drugs (Pergolizzi, Magnusson, LeQuang, and Breve, 2021). These mixtures are exceedingly dangerous, as the potency of illicit fentanyl is so great that even minuscule quantities can be fatal (Pergolizzi, Magnusson, LeQuang, and Breve, 2021).

The level of toxicity and the even distribution of fentanyl in mixtures pressed into counterfeit pills or other substances (e.g., cocaine, heroin, methamphetamine) cannot be guaranteed (DEA, 2022). The unequal distribution of fentanyl in a drug source has been described as the “chocolate chip” effect, where small amounts of fentanyl in a large supply of illicit drugs and fillers can “clump together” and create “pockets of risk”, resulting in variability in the concentrations of fentanyl even within the same batch of a particular substance (Green, T., 2022).

Clandestine laboratories that produce IMF have been identified primarily in China and Mexico (Pergolizzi, Magnusson, LeQuang, and Breve, 2021). The DEA has identified over 25 additional fentanyl analogs and other novel synthetic opioids and the list continues to expand (Armenian, P., Vo, K.T., Barr-Walker, J., et. al., 2018). These synthetic opioids have several things in common: the cost of manufacturing them is low, they can be mass produced year-round, and they are extremely potent, making them cheaper, more profitable, more powerful, and more dangerous than many other drugs available on the illicit market.

Some common names of illicitly manufactured fentanyl include:

“

China White	China Town	Jackpot
Tango & Cash	Great Bear	King Ivory
Crocket & Tubbs	Apache	Murder 8
China Girl	He-Man	Goodfella

”

(DEA, 2020)

Pharmaceutical Fentanyl	Illicit Fentanyl
Manufactured and Carefully Regulated	Made in Unknown and Unsafe Conditions
Ingredients are Carefully Distributed	Mixing and distribution of ingredients is unknown
Administration is planned and carefully monitored	Administration may be unsanitary, with little planning and, in many cases, taken unknowingly
Dosage is known	Dosage is unknown

Adapted from FentanylAwareness.org

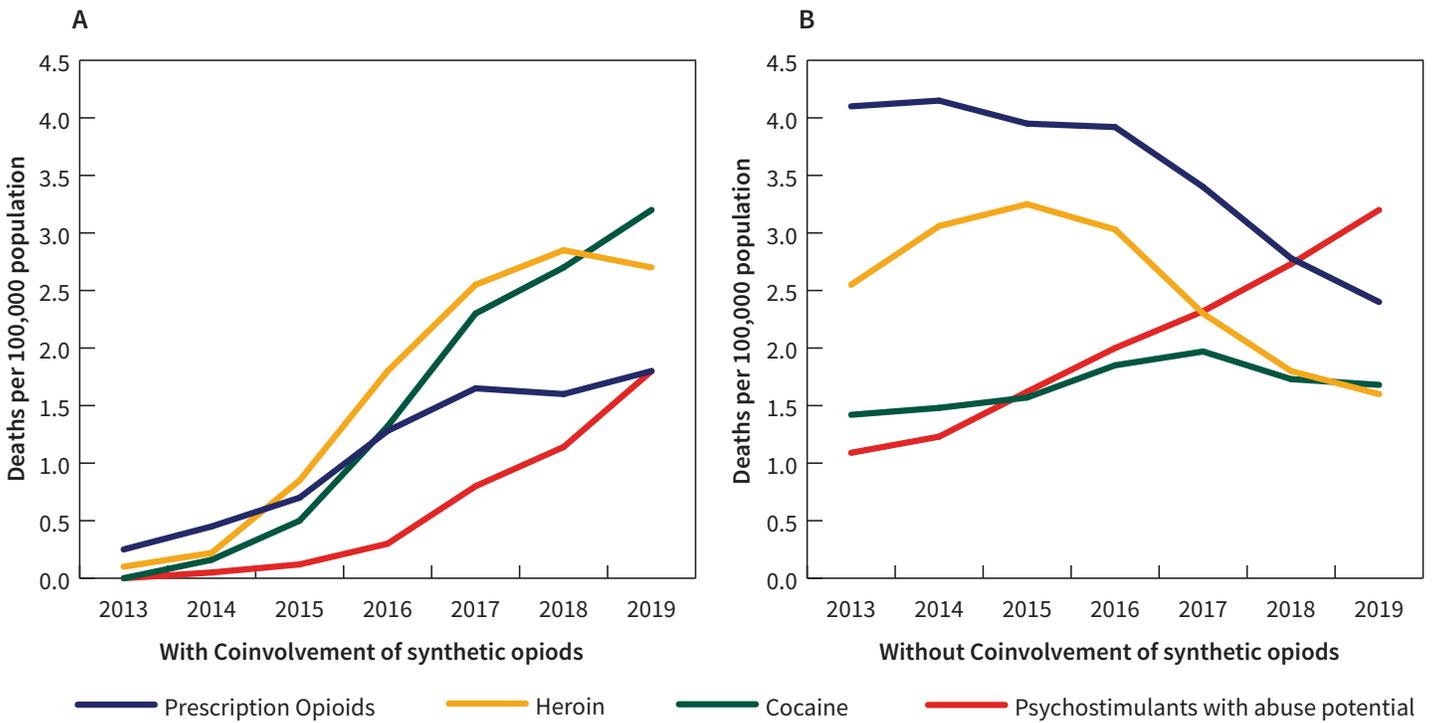
IMFs & Polysubstance Use

IMF is frequently mixed with other substances (e.g., heroin, methamphetamine, and cocaine) and people who use drugs may or may not know that they have been mixed with fentanyl and unaware of its potency (Pergolizzi, Magnusson, LeQuang, and Breve, 2021). This can certainly be the case for fentanyl mixed with cocaine or methamphetamine. This poses a greater risk of overdose among people who only use stimulants or use opioids infrequently and thus might experience overdose with a smaller amount (Tomassoni, Hawk, Jubanyik, et al., 2017; Kelly et al., 2021). The graphs on the next page demonstrate that the co-involvement of synthetic opioids in drug overdose deaths is increasing, whereas rates of drug overdose deaths involving solely prescription opioids, heroin, or cocaine decreased from 2013 – 2019, (Mattson et al., 2021).

Individuals may intentionally take multiple substances to increase or decrease the effects of a different drug or to experience the effects of the combination of two or more drugs. The use of more than one drug – known as **polysubstance use** – occurs when two or more drugs are taken together or within a short period of time, either intentionally or unintentionally. Unintentional polysubstance use occurs when an individual takes drugs that have been mixed with other substances, like fentanyl, without their knowledge. Both intentional and unintentional mixing of drugs is dangerous, as the effects from combining drugs may be stronger, more unpredictable, and more likely to result in unintentional injury or death than with one substance alone (CDC, Polysubstance Use, 2022).

Fentanyl in the Marketplace

Since 2016, the DEA has seen a marked increase



Source: National Vital Statistics System, Mortality File. <https://wonder.cdc.gov/>

* Rate per 100,000 population age-adjusted to the 2000 U.S. standard population using the vintage year population of the data year.

† Deaths were classified using the *International Classification of Diseases, Tenth Revision*. Drug overdoses are identified using underlying cause-of-death codes X40-X44 (unintentional), X60-X64 (suicide), X85 (homicide), and Y10-Y14 (undetermined).

§ Drug overdose deaths, as defined, that involve natural and semisynthetic opioids (T40.2) or methadone (T40.3)

¶ Drug overdose deaths, as defined, that involve heroin (T40.1)

** Drug overdose deaths, as defined, that involve cocaine (T40.5).

†† Drug overdose deaths, as defined, that involve psychostimulants with abuse potential (T43.6).

§§ Drug overdose deaths, as defined, that involve synthetic opioids other than methadone (T40.4).

¶¶ Because deaths might involve more than one drug, some deaths are included in more than one category. In 2019, 6.3% of drug overdose deaths did not include information on the specific type of drug(s) involved.

Counterfeit Pills Mirror the Look of Commonly Prescribed Medications



in IMFs in the illicit marketplace, stating that “...fentanyl is the most prevalent and the most significant synthetic opioid threat to the U.S. and will very likely remain the most prevalent synthetic opioid threat in the near term” (DEA, 2018). Toxicological testing and mortality data indicate that fentanyl is not only becoming more widely available in the illicit drug marketplace, but also contributing to more substance use and deaths every year (CDC, 2018; CDC, 2020; Wainwright, Mikre, Whitley, et al., 2020). In September 2021, the DEA released its first Public Safety Alert in six years to warn public safety officials and the American public of an alarming increase in the lethality and availability of counterfeit pills containing fentanyl and methamphetamine (DEA, 2021).

Counterfeit pills are illicitly manufactured and deceptively marketed in the illicit drug market and made to closely resemble authentic prescription pills such as oxycodone, hydrocodone, alprazolam, or stimulants such as Adderall® (DEA, Counterfeit Pills Factsheet, 2021). Such pills are widely available and are frequently sold and purchased via social media platforms and in bulk through e-commerce on the internet (DEA, Press Release, 2021).

Shipment and distribution of IMFs is facilitated by their compact size. Also, the ability to purchase it online makes it broadly available to be shipped to the U.S. from countries across the globe. Beyond traditional drug market pathways from clandestine laboratories run by Mexican drug cartels, the shipment of fentanyl expands and diversifies how fentanyl makes it into the market (DEA, Fentanyl Flow to U.S., 2020).

The pervasive availability of fentanyl in the marketplace, particularly through the Internet and social media platforms in the form of counterfeit pills, combined with the increasing lethality of these pills, specifically raise concern about its use among youth.

The Impact of Fentanyl on Overdose Deaths

Having claimed over 930,000 lives from 1999 through 2020, overdose is a leading cause of death in the United States (CDC, NCHS, 2022). Beginning as an epidemic tied primarily to prescription opioid overdoses in the late 1990s (CDC, 2011), the overdose epidemic has evolved substantially during these years, with heroin overdose deaths increasing beginning in 2010 (Rudd, Paulozzi, Bauer, et al., 2014), and deaths involving synthetic opioids such as fentanyl – primarily IMF – increasing dramatically beginning in 2013 (Gladden, Martinez & Seth, 2016; O’Donnell, Gladden & Seth, 2017; O’Donnell, Halpin, Mattson, Goldberger & Gladden, 2017).

Historically, the risk for overdose increased as the frequency of substance use increased. However, with



more drugs in the marketplace containing fentanyl, the risk of overdosing increases dramatically, even among individuals who have little to no history of substance use. Youth and young adults have been particularly impacted even though their drug use patterns have been relatively stable (Miech, et al. 2022). From 2019-2020, drug overdose deaths almost doubled among youth aged 15-19 and increased 1.5 fold among 20-24 year olds with synthetic opioids such as IMFs being the primary driver (CDC Wonder, 2022).

Who’s at Greatest Risk?

As with substance use and overdose patterns and trends associated with other drugs, certain populations may be impacted by fentanyl exposure and fentanyl-involved overdose more than others. Health inequities and social determinants of health (SDOH) – or the conditions in which people live, work, learn, and play – can contribute to increased risk for substance use and overdose, particularly among groups that have been marginalized historically (Kariisa M, et al. 2022).

Some population groups, such as those experiencing inequities related to social determinants of health or those experiencing certain social or physical health conditions or experiences, may be at increased risk for overdose deaths or other negative outcomes related to substance use, including those:

- From racial, ethnic, sexual, and/or gender minority groups;
- From non-English speaking populations, tribal populations, or rural communities and other geographically underserved areas;
- With reduced economic stability;
- Experiencing homelessness, mental health conditions, incarceration, or disabilities; and
- With limited educational attainment, health literacy, and access to healthcare and substance use treatment options.

Geographic Distribution of Fentanyl Overdoses

Historically, geographic areas most impacted by overdoses involving synthetic opioids included states in the East, which demonstrated large increases from 2015 to 2016. However, from 2018 to 2019, the greatest relative increase in synthetic opioid-involved overdose deaths took place in the West with a 68 percent increase (Mattson, C. L., Tanz, L. J., Quinn, K., et. al., 2021), marking the westward expansion of synthetic opioid deaths. Analysis of overdose mortality data during the COVID-19 pandemic highlighted the continued increase of IMF-involved overdoses in western states and across the U.S. (CDC, HAN, 2020).



The Economic Burden of the Overdose Epidemic

The economic burden of fatal opioid overdose and opioid use disorder in 2017 was estimated to be \$1.02 trillion at the national level (Florence, Luo, Rice, 2021). Although this estimate includes health care, criminal justice, and lost productivity costs, the majority of the economic burden is due to reduced quality of life associated with opioid use disorder and the value of life lost to fatal overdose, with the cost of opioid use disorder estimated to be \$471 billion and the cost of fatal overdose estimated at \$550 billion (Florence, Luo, Rice, 2021). Further, a state-level analysis suggests that the economic burden at the state level of opioid use disorder and fatal opioid overdose in 2017 ranged greatly from \$985 million in Wyoming to \$72.583 billion in Ohio (Luo F., Li M., Florence, C, 2021).

The highest per capita costs were demonstrated in the Ohio Valley and New England areas, suggesting concentrated areas of burden. There were more than 20,000 more overdose deaths in 2020 than in 2017, with the national rate of overdose increasing from 21.7 in 2017 to 28.3 in 2020. During this time, the number and rate of fatal overdoses specifically involving synthetic opioids increased by 98.5% and 97.8%, respectively, suggesting that the economic burden of overdose also likely increased substantially during this time.

The Impact of the COVID-19 Pandemic

The COVID-19 pandemic exacerbated known risk factors for substance use, including depression, anxiety, and loneliness (Jones SE, et al., 2022; Zolopa C, et al., 2022; Roberts A, et al., 2021; Panchal N., et al. 2021). Additionally, interruptions to the healthcare system, economic stressors created by the closure of businesses and increases in unemployment, and including school closures, also may have contributed to increases in health, financial, and family stressors related to substance use.

The COVID-19 pandemic impacted risk factors associated with increased risk for substance use among young people. According to a recent study, more than 1 in 3 high school students experienced poor mental health during the pandemic and nearly half of students felt persistently sad or hopeless (Jones SE, et al., 2022, Roberts A., 2021). During the pandemic female students and those who identified as lesbian, gay, bisexual, other or questioning (LGBQ) experienced disproportionate levels of poor mental health and suicide-related behaviors and more than one third of all U.S. high school students felt they had ever been treated badly or unfairly at school because

of their race or ethnicity. Data from this study also showed that the percentage of American Indian/Alaska Native students using substances was consistently high and there was a higher prevalence of substance use among gay, lesbian, or bisexual youths than among heterosexual youth (Brener N., et al., 2022).

Finally, reported interruptions in the supply of less potent opioids during the COVID-19 pandemic may have contributed to a vacuum filled by IMF. IMF use during COVID-19 was also reportedly driven by the uncertainty of availability, reductions in the purity of other substances available on the illicit market, and increases in cost of other drugs (UNDOC, 2020).

The Role of Primary Prevention

Primary prevention is critically important given the potency and ever-increasing availability of fentanyl in our communities. Clusters of fentanyl deaths can happen rapidly and unexpectedly (DEA, Polydrug Incidents, 2022), and rapidly sharing information about contamination with fentanyl or fentanyl analogs can help mitigate risk. Local policies can encourage information sharing between first responders and other sectors, such as schools. Focusing on gathering and sharing information can not only help identify the problem but help to increase awareness among a variety of populations and settings. And promoting upstream prevention strategies can reduce the impact on youth. This means paying attention to youth that may feel disconnected from larger groups, including those who may be struggling with their sexual identity, gender identities, or who may be members of families struggling with external factors such as job security, health concerns, or other issues.

Prevention is a distinct part of the continuum of care, which benefits from structure to be successful in the communities in which it is operationalized. Much of this structure can come from the training provided by CADCA at the outset of Drug Free Communities funding. The training is intended to empower communities to work toward community transformation. It is not programmatic. It works across sectors, populations, and settings, and represents the collective work of the coalition. This means it is open to innovation, coalition-lead, tied to the use of evaluation, and multi-sector.

Community-based coalitions can address the potential impacts of fentanyl in their communities by enhancing and supplementing prevention-of-overdose efforts with prevention-of-use efforts. Elements of a prevention strategy to address IMF can include collecting and disseminating local data to inform the delivery of prevention and intervention activities; increasing awareness of the dangers of fentanyl, as well as its availability and accessibility in the community; promoting protective factors to prevent youth substance use among families and in schools, health care, public safety, and other sectors; and ensuring access to and implementing life-saving strategies (naloxone administration*) in the event of exposure to fentanyl.

Collecting & Disseminating Local Data

The collection and dissemination of local data is critical to understanding the extent of this issue at the community level and informing how to tailor prevention and intervention efforts. While national and state-based surveys are carefully constructed to collect information on trends and new developments regarding substance use, there may be limited application for local jurisdictions. More localized data resources (e.g., emergency department visit data, attitudes and practices surveys) can provide timely and geographically-focused information on subpopulations and hotspots where fentanyl use may be emerging. Localities can also collect and share data related to non-fatal and fatal overdose deaths and what those data reflect regarding populations at increased risk of exposure or overdose. Partners can engage in data mapping and “hot-spotting” to identify geographical patterns of overdose and prioritize and focus interventions. This could include collecting data through OD Map (<https://odmap.hidta.org/>), which links first responders and records management systems to a mapping tool to track overdoses and catalyzes real-time awareness and response; engaging with public health and public safety teams that share data from first responders, law enforcement and health systems; and participating in other data-sharing efforts with state and regional partners.

It is also important for coalition leaders and prevention specialists to understand what types of drugs are circulating in the community. Drug control monitoring systems can be an important part of prevention-related activities. This could include screenings and surveys of persons who use drugs as well as testing drugs for fentanyl – such information can be gathered by social service agencies and law enforcement to shed light on how pervasive fentanyl is in the local drug supply and help target geographic areas and populations that may be at increased risk of exposure to fentanyl or overdose.

Understanding where young people are accessing fentanyl is an essential step in preventing fentanyl use. Collecting information from youth on perceptions and practices in addition to monitoring locally used social media platforms for indicators of substance distribution (e.g., the use of specific emojis commonly used to indicate dealer advertisement, substance potency, and specific substances) could be used to track behaviors, substance availability and dissemination at the local level. State and regional partners, such as those participating in the Overdose Response Strategy (<https://www.hidta.org/ors/>) can also help to identify ongoing and emerging threats.

Increasing Awareness

Health education on the dangers of fentanyl is an important and foundational activity for coalitions. Populations and sectors need to know that fentanyl is dangerous – even in very small amounts - and should be mindful about its potential presence in the community and recommended actions for prevention and response.

Communications campaigns can help communities raise awareness about the dangers of fentanyl, and they can be used to disseminate key prevention messages to specific populations at increased risk of exposure to or overdose from fentanyl. To increase public awareness, federal, state, and local partners joined forces with several companies and organizations to call attention to this issue during National Fentanyl Awareness Day (inaugural event held on May 10, 2022) and National Fentanyl Prevention and Awareness Day (held on August 21, 2022). These annual calls to action aimed to amplify efforts to increase awareness of fentanyl and decrease the demand. The DEA created a digital social media campaign called One Pill Can Kill to encourage the use of social media to help raise public awareness of a significant nationwide surge in counterfeit pills containing fentanyl. National partners have also created toolkits, such as Getting Candid, that can assist coalitions with framing overall substance use prevention messaging for youth.

Schools can also help increase awareness among youth. For example, coalitions can educate state level policy makers and/or local boards of education to put into place policies requiring student health education about alcohol, tobacco, and other drugs (ATOD), including fentanyl. The Monitoring the Future Study examined state level ATOD requirements from 1976-2010 and found that having these requirements significantly lower rates of alcohol and marijuana use by students (Carpenter C. et al., 2019). And coalitions can work with schools to review policies and procedures on effective ways to respond in the event of an overdose at school.



Promoting Protective Factors

The promotion of protective factors that focus on strengthening youth social-emotional learning skills and reducing risk factors have demonstrated success in reducing substance use, including methamphetamine and opioid use (Jones, C. M., Bekheet, F., Park, J. N., & Alexander, G. C., 2020). Such protective factors include active parent engagement; connectedness to school and peers; access to and participation in afterschool activities; and policies within schools and communities that allow for active youth engagement and reduce the availability and accessibility of substances (The Interagency on Youth Programs, 2022). Factors that can increase risk for youth substance use can include family and household challenges, such as lack of parent-child engagement and exposure to substances and other adverse experiences in the home; interpersonal relationships experienced at school and in neighborhoods that promote substance use; and a lack of laws or policies that address the availability and accessibility of substances in the community (Volkow et al., 2018; Richter, L. et al, 2021).

Primary prevention efforts could start with identifying risk factors, such as adverse childhood experiences and violence (CDC – Violence Prevention, 2022). Follow-up work can include promoting mental health; investing in training among parents and promoting evidence-based school strategies including increasing school connectedness, enhancing health education, and providing supports for youth at risk, offering and supporting activities outside of school that are supportive and substance-free; and educating about local laws and policies curb the accessibility and availability of substances among youth (Volkow et al., 2018; Richter, L. et al, 2021).

What does a lethal dose of fentanyl look like?



DFC Coalition in Connecticut (CT) Draws Attention to the Dangers of Counterfeit Pills

TPAUD collaborated with CT ORS & other state and local partners to develop the “You Think You Know” Counterfeit Pill Awareness Campaign. This multi-media campaign provided information on:

- How youth are getting pills and why they are using them
- Prevention resources and information for youth, parents, and educators
- Treatment resources and services available state and nationwide

Since the release, it’s received 2.8 million impressions from ad placements; hundreds of social media posts resulting in thousands of impressions, & magazine ads distributed to 100,000 households. It has also been adopted by the CT Department of Mental Health and Addiction Services as an approved ORS campaign.

Among people who use drugs, there are varied levels of awareness about the dangers of fentanyl, which can lead to unintentional exposures among individuals who believe they are using other substances (Jones, C. M., Bekheet, F., Park, J. N., & Alexander, G. C., 2020). People working in community drug use prevention, such as law enforcement and first responders, can benefit from information on recommended safety protocols to reduce risk. CDC’s National Institute for Occupational Safety and Health provides a toolkit that can be used to train first responders to minimize exposure, including safe operating procedures and safe handling practices.

Coalitions can use previously developed campaign resources, strategies, and tools such as those highlighted here to increase awareness among their local community and/or use community assessment and other local data to develop their own messages and communication campaigns.

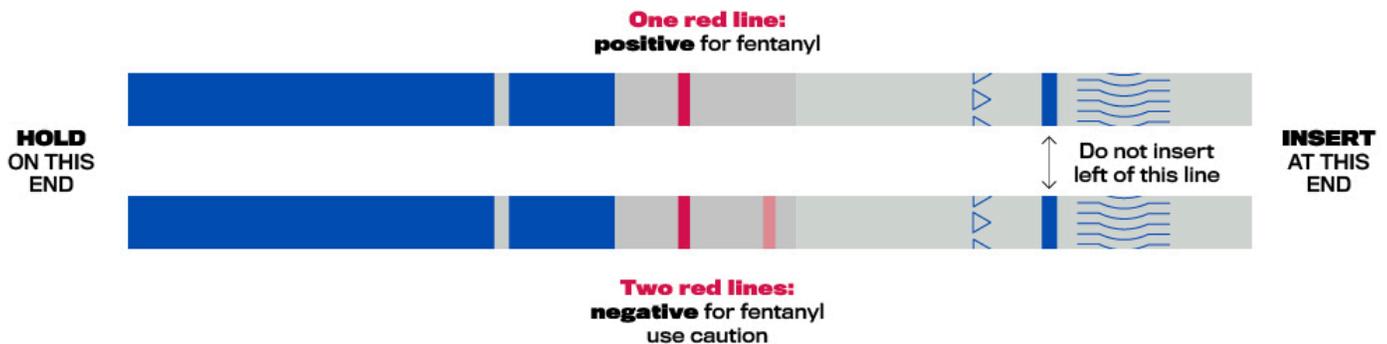
Engaging with New Partners

The circulation of fentanyl into the U.S. drug supply underscores the importance of new partnerships for coalitions. Participating in rapid, coordinated-response systems among emergency departments, poison control centers, public health departments, public safety, and first responders at the state and local level can assist in this effort. In addition, engaging people who use drugs in harm reduction organizations, through community outreach programs and other prevention programming, can serve as a pathway to encourage the use of substance-detection technologies such as fentanyl test strips (Krieger, M. S., Yedinak, J. L., Buxton, J. A., Lysyshyn, M., et. al., 2018). Fentanyl Test Strips (FTS) are mainly used by those who are using substances to determine the existence of fentanyl in the drug(s) they are taking. FTS are a harm reduction intervention, but the information on the presence of substances with fentanyl can be vital to prevention work. Partnerships with agencies using test strips and recording the incidence of fentanyl can be shared with other coalition partners to determine the existence of fentanyl-related substances emerging in their communities.

The interventions featured here address innovative ways to improve understanding, stay community-focused, and enhance partnership with other sectors across the continuum-of-care. While many initiatives have focused on preventing overdose deaths after the use of substances, primary prevention also has a role to play to address the emergence of fentanyl in the United States. This requires innovation to help inform and build evidence-based strategies for local communities; ensuring that strategies are informed by the local context where local coalitions feel ownership and engagement; expanding partnerships with entities engaged in harm reduction and treatment activities and ensuring that activities are tracked and evaluated.

In April 2021, CDC and SAMHSA announced that federal funding can be used to purchase rapid fentanyl test strips (FTS) in an effort to help curb the spikes in drug overdose deaths. This applies to CDC's Overdose Data to Action program and SAMHSA's State Opioid Response grants. Local organizations can partner with these state-wide efforts to utilize FTS as part of their community response.

FENTANYL TEST STRIPS



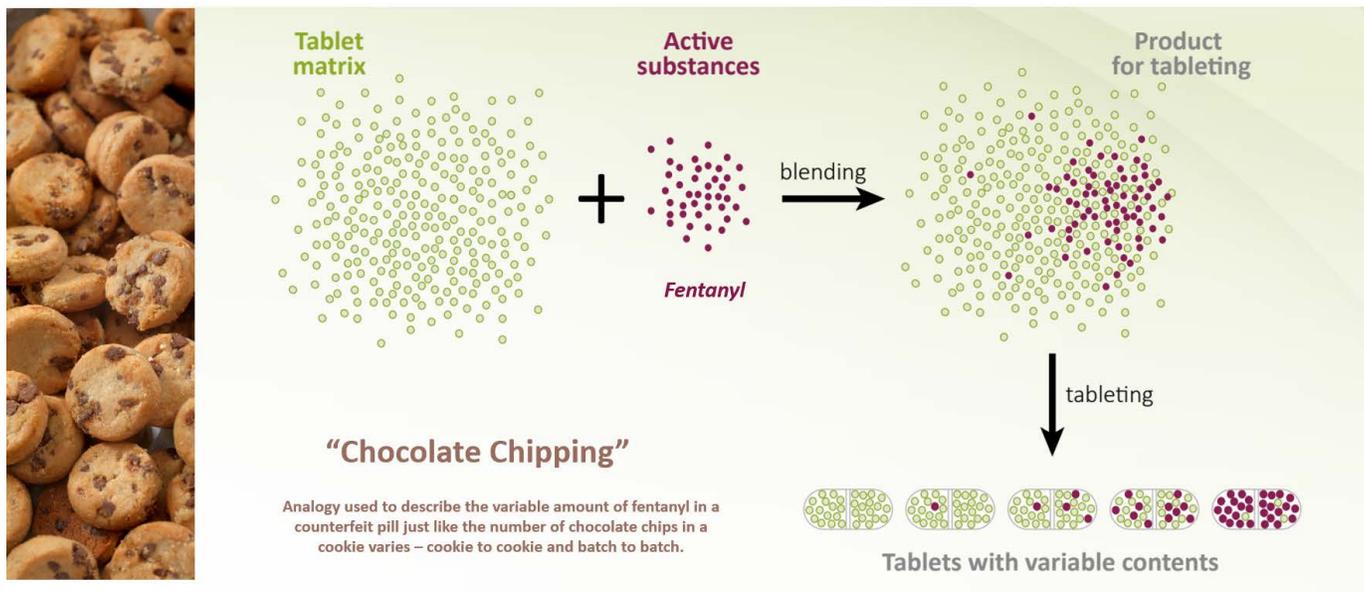
Preventing the Use of Fentanyl with the Seven Strategies for Community Change

The Seven Strategies for Community Change were created in 2005 by a partnership between CADCA and the University of Kansas. They are comprised of both individual (person(s)-focused) strategies and environmental strategies (e.g., strategies that work more broadly with the context of the community). Evaluation data shows that coalitions working across all seven strategies can demonstrate impact in reducing substance use. There are some objectives under each strategy. These are suggestions which build on the examples above- they should not be considered exhaustive.

STRATEGY CATEGORY	STRATEGY DESCRIPTION
Provide Information	<p>To increase awareness of the dangers of fentanyl, the importance of understanding its presence/availability within the community, and how communities can be prepared to intervene in case of exposure or overdose:</p> <ul style="list-style-type: none"> • Collaborate with partners to identify the origins and assess the availability of fentanyl in the community • Share local data on the prevalence of fentanyl in local fatal and nonfatal overdoses, especially with schools. • Develop and disseminate communication messages/media campaigns to raise awareness about the pervasiveness of fentanyl in the illicit drug market, the sources of fentanyl in the illicit market (e.g., through counterfeit pills), and the dangers of intentional and unintentional fentanyl use • Share information about the importance of having life-saving naloxone widely available.
Building Skills	<p>To increase the capacity of key sectors and youth to identify fentanyl and prevent use:</p> <ul style="list-style-type: none"> • Implement training programs that support building or reinforcing protective factors in schools and parental engagement with youth. • Provide healthcare/law enforcement/first responder training on the handling and storage of fentanyl and identification of “hot spots” within the community.
Providing Support	<p>To ensure supports are in place for families and youth:</p> <ul style="list-style-type: none"> • Address risk factors exacerbated during the COVID-19 pandemic such as anxiety, depression, and loneliness, by implementing programs that aim to improve coping and problem-solving skills, improve family dynamics and parent-child interactions, and increase school connectedness and connections to caring adults. • Reduce stigma related to drug use and overdose promote efforts (through partners) for treatment and recovery.
Enhancing Access and Reducing Barriers	<p>To increase access and availability of services, materials, and medications to prevent drug use and overdose:</p> <ul style="list-style-type: none"> • Encourage referrals to counseling and support services for youth at risk for substance use. Seek out agreements with unengaged sectors to ensure the spread of information related to the existence of fentanyl in the community. • Engage with partners to increase the availability of Fentanyl Test Strips and other materials that can test for fentanyl and ensure the safe handling of fentanyl if it’s encountered. • Distribute naloxone and disseminate training more widely in the community and through non-traditional partners (e.g. schools, restaurants/bars, public transit).
Changing Consequences/ Incentives	<p>To provide incentives and change consequences related to prevention and response:</p> <ul style="list-style-type: none"> • Support initiatives and incentives that ensure quick identification of fentanyl in the community. • Reinforcement of positive behavior to build resiliency and/or referral to counseling/ support programs for students caught with substances. • Promote programs such as where youth can anonymously share information about risky scenarios. • Implement Good Samaritan Laws that encourage bystanders to alert first responders in the event of an overdose without fear of arrest.

STRATEGY CATEGORY	STRATEGY DESCRIPTION
Changing the Physical Design of the Environment	To change the physical design that promotes inclusivity and addresses the supply and demand of IMF. <ul style="list-style-type: none"> • Train schools for enhanced classroom management & the development of safe spaces & policies for LGBTQ youth. • Identify places or <i>hot spots</i> where overdose deaths have occurred and link people to long term recovery and supports.
Policy	To educate on policies that can foster partnerships, referrals, and the sharing of key information. <ul style="list-style-type: none"> • Prescription drug monitoring support for prescription fentanyl and state systems to ensure detection, notification, and coordination in response to the presence of fentanyl. • Local education policies that incorporate updated health education curriculum, social, emotional learning, and standardized use Screening, Brief Intervention, and Referral to Treatment (SBIRT) in schools with school-based health centers to identify youth at risk for any kind of substance use. • Policies that support data sharing between first responders and other sectors- any entry of a fentanyl or fentanyl analog should be shared quickly and broadly.

Amount of Fentanyl in Counterfeit Pills Varies



Source: Adapted from UNODC – Global Smart Update – Volume 17 – Fentanyl and Its Analogs

Key Sectors for Partnership in Preventing Use of Fentanyl

Drug Free Communities coalitions are uniquely positioned to serve as conveners for community sectors that may not ordinarily interact. The potency and danger of fentanyl and the risk it poses to communities require the careful and coordinated response of several different community sectors. The following is a listing of some key sectors that will be important for coalitions as they work on prevention strategies:

- **Faith-Based Organizations-** Sharing information, building the community, and working in advocacy are essential components of prevention. Faith-based groups can be a key partner in all these efforts, including healing and recovery. Remember, the role of the coalition as convener means no limit to the types of faiths that can be brought into their prevention work.
- **Public Health-** Public health at the local, state, and federal level can help coalitions know how their communities are doing in a broader context. They can provide access to local data, health promotion and education strategies, and communication materials to contribute to prevention. They also serve as an important sector to foster partnerships between harm reduction and prevention.
- **Law Enforcement-** Law enforcement includes both first responders and community safety professionals who may have firsthand knowledge of fentanyl in the community. Some law enforcement offices are also tracking this information and would be willing to share it in the interest of prevention. Above all, coalitions will want to understand the importance of this sector in working in prevention. Law enforcement officials understand the limitations associated with criminal arrests and legal ramifications in response to the opioid crisis.
- **Emergency Medical Services (EMS) Professionals-** This sector represents another level of first response. They'll know about the presence of fentanyl in the community and may even be able to identify sources of fentanyl and hot spots present in a community. Above all, they know what it does and can share this information with coalition partners.
- **Health Care-** Prescription fentanyl is a small percentage of the powerful opioid being currently used illicitly, but the understanding of its dangers and how it works are invaluable to coalitions and their partners. Physicians, nurses, physician assistants, and others can recognize symptoms of substance use, provide expertise of physiological and psychological consequences to substance use, and link people who are illicitly using drugs such as fentanyl to substance use disorder treatment if needed.
- **Education-** The education infrastructure includes primary, secondary, and higher education. Skill-building and health education that can help support students and promote protective factors can be operationalized at the classroom, school, and district-level. Information sharing to raise awareness can be a part of the work of this sector. Additionally, coalitions can be vital partners in helping schools learn more about their work in preventing illicit fentanyl use.
- **Business Groups-** Business thrives in a safe and healthy community. Business partners are often one of the more robust sectors involved in coalition prevention work. Business groups can help coalitions frame the issue, the importance of the community, and good business of prevention in the face of increasing overdoses involving fentanyl.
- **Youth Groups-** Youth groups are actively engaged with coalition efforts. Youth engaged in substance use prevention may have experienced its impact firsthand. They may have lost loved ones or go to school with peers who have had negative impacts from substance use. As we've learned, a brief exposure to fentanyl can drastically change communities and its most vulnerable members. Young people can speak to their experiences directly and the value of prevention for their community. In addition, engaging youth in substance use prevention efforts can serve as an effective way to facilitate information sharing among at-risk populations, raise awareness about the dangers of fentanyl, and encourage positive behaviors among peers and foster resiliency and problem-solving skills.

Partner Resources on Fentanyl

CADCA partners with other agencies to ensure coalitions have the most up-to-date information. The following resources should be able to add to the information located in this publication:

Data

The CDC's Division of Overdose Prevention developed an interactive data visualization tool, the [SUDORS dashboard](#), which displays fatal overdose data from 2020. Combined, these sources offer valuable fatal overdose

data collected from death certificates and medical examiner/coroner reports (including scene findings, autopsy reports, and full postmortem toxicology findings). This resource offers valuable fatal overdose data about drugs involved in overdose deaths, demographic characteristics, circumstances surrounding overdose deaths, and potential opportunities for intervention.

The nonfatal drug overdose data on this dashboard come from CDC's Drug Overdose Surveillance and Epidemiology (DOSE) system, which captures electronic health record information in syndromic surveillance systems. This dashboard represents the most up-to-date data that the CDC's DOSE system has available and is updated shortly after new data are made available each month.

Communication Materials

Below are links to communication campaigns that coalitions can adapt for their use. There are also links to YouTube videos on how to protect yourself from the dangers of fentanyl and using lifesaving naloxone.

- [Stop Overdose Website](#)
- [Partner Toolbox - One Pill Can Kill - DEA](#)
- [Rx Awareness | CDC Injury Center](#)
- [Protect Yourself from the Dangers of Fentanyl](#)
- [Protect Friends and Family with Lifesaving Naloxone](#)

Toolkits & Guides

- **Technical Packages for Violence Prevention** CDC's Division of Violence Prevention developed a [series of technical packages](#) that lay out a select group of strategies based on the best available evidence to prevent or reduce public health problems like adverse childhood experiences, violence, and suicide. They can help improve the health and well-being of youth and communities.
- **Resources for Schools:** CDC's Division of Adolescent and School Health has developed [resources](#) to improve school connectedness among youth;

[strategies](#) to support safe and supportive school environments; and a new [webinar series](#) on how to increase the effectiveness of health education curricula in schools.

- **Getting Candid: Framing the Conversation around Youth Substance Use Prevention:** this [message guide and toolkit](#) equips youth-serving providers and organizations with the tools and resources necessary to support meaningful prevention messaging. This toolkit includes messaging on youth substance use prevention, tip sheets, social media graphics and shareables, videos, webinars, interactive worksheets, and an educational course.
- **The CDC Toolkit for First Responders** This online [toolkit](#) was developed by CDC's National Institute of Occupational Safety and Health (NIOSH). It details best practices for most first responders including specific kinds of personal protective equipment (PPE) used by first responders. The toolkit is completely online and includes video, postcards, and other items that can be integrated into coalitions' efforts.
- **Responding to an Overdose Spike** The Association of State and Territorial Health Officials published this [guide](#) in 2019 after convening several tabletop exercises that involved several state health agencies. It covers four phases, including Pre-Incident Planning, Immediate Phase (action within 12 hours), Intermediate Phase (through 48 hours), and Longer-Term Response (beyond 48 hours).
- **The Public Health and Safety Team (PHAST) toolkit** is a resource developed to help local jurisdictions reduce opioid overdose deaths by increasing collaboration and coordination among all sectors, with a particular focus on public health and public safety agencies.
- **Opioid Overdose Prevention Toolkit.** (2018). Substance Abuse and Mental Health Services. <https://store.samhsa.gov/sites/default/files/d7/priv/sma18-4742.pdf>
- **Real Deal on Fentanyl.** The Ad Council launched Youth Fentanyl Awareness campaign, Real Deal on Fentanyl, funded by leading technology companies Snap and YouTube. This first campaign aims to educate young Americans about the dangers and prevalence of fentanyl.



Data

The CDC's Division of Overdose Prevention developed an interactive data visualization tool, the [SUDORS dashboard](#), which displays fatal overdose data from 2020. Combined, these sources offer valuable fatal overdose data collected from death certificates and medical examiner/coroner reports (including scene findings, autopsy reports, and full postmortem toxicology findings). This resource offers valuable fatal overdose data about drugs involved in overdose deaths, demographic characteristics, circumstances surrounding overdose deaths, and potential opportunities for intervention.

The nonfatal drug overdose data on this dashboard come from CDC's Drug Overdose Surveillance and Epidemiology (DOSE) system, which captures electronic health record information in syndromic surveillance systems. This dashboard represents the most up-to-date data that the CDC's DOSE system has available and is updated shortly after new data are made available each month.

Communication Materials

Below are links to communication campaigns that coalitions can adapt for their use. There are also links to YouTube videos on how to protect yourself from the dangers of fentanyl and using lifesaving naloxone.

- [Stop Overdose Website](#)
- [Partner Toolbox - One Pill Can Kill - DEA](#)
- [Rx Awareness | CDC Injury Center](#)
- [Protect Yourself from the Dangers of Fentanyl](#)
- [Protect Friends and Family with Lifesaving Naloxone](#)

Toolkits & Guides

- **Technical Packages for Violence Prevention** CDC's Division of Violence Prevention developed a [series of technical packages](#) that lay out a select group of strategies based on the best available evidence to prevent or reduce public health problems like adverse childhood experiences, violence, and suicide. They can help improve the health and well-being of youth and communities.
- **Resources for Schools:** CDC's Division of Adolescent and School Health has developed [resources](#) to improve school connectedness among youth;

[strategies](#) to support safe and supportive school environments; and a new [webinar series](#) on how to increase the effectiveness of health education curricula in schools.

- **Getting Candid: Framing the Conversation around Youth Substance Use Prevention:** this [message guide and toolkit](#) equips youth-serving providers and organizations with the tools and resources necessary to support meaningful prevention messaging. This toolkit includes messaging on youth substance use prevention, tip sheets, social media graphics and shareables, videos, webinars, interactive worksheets, and an educational course.
- **The CDC Toolkit for First Responders** This online [toolkit](#) was developed by CDC's National Institute of Occupational Safety and Health (NIOSH). It details best practices for most first responders including specific kinds of personal protective equipment (PPE) used by first responders. The toolkit is completely online and includes video, postcards, and other items that can be integrated into coalitions' efforts.
- **Responding to an Overdose Spike** The Association of State and Territorial Health Officials published this [guide](#) in 2019 after convening several tabletop exercises that involved several state health agencies. It covers four phases, including Pre-Incident Planning, Immediate Phase (action within 12 hours), Intermediate Phase (through 48 hours), and Longer-Term Response (beyond 48 hours).
- **The Public Health and Safety Team (PHAST) toolkit** is a resource developed to help local jurisdictions reduce opioid overdose deaths by increasing collaboration and coordination among all sectors, with a particular focus on public health and public safety agencies.
- **Opioid Overdose Prevention Toolkit.** (2018). Substance Abuse and Mental Health Services. <https://store.samhsa.gov/sites/default/files/d7/priv/sma18-4742.pdf>

Reports

- ***The Report by the President's Commission*** This is the [full report](#) of the Commission on Combating Synthetic Opioid Trafficking which was established under Section 7221 of the National Defense Authorization Act for Fiscal Year 2020. The report is the work of support from seven executive branch departments and agencies. It includes several sitting members of Congress and several on-topic experts.
- ***Governors' Recommendations for Federal Action to End the Nation's Opioid Crisis*** The National Governor's Association developed this [report](#) that provides overview of the crisis and presents a strong state-level perspective on action related to synthetic opioids. Its strength is in looking at cross-sector support from the state perspective. Drug monitoring systems, coordination with federal agencies, and state policy considerations are also included.

Partners & Networks

- ***Song for Charlie*** [Song for Charlie](#) is a national family-run, nonprofit charity that encourages young people to choose healthy coping strategies over self-medication. Their goal is to empower students to learn and share knowledge by providing research tools and promoting peer-to-peer learning programs.
- ***Fentanyl Awareness*** This [website](#) provides social media content, facts about fentanyl, and opportunities to take action to draw attention to fentanyl overdose deaths among young people.

Additional references and citations for this document can be found at:

cadca.org/PT-Resources

