

# Practitioner Guide to Preventing Cocaine Use: Facts, Figures, and Strategies

Cocaine use in the United States has begun to rise in the past few years, and indicators suggest it will continue to rise, at greater levels, in the coming years (Carnevale Associates, 2016). Paralleling this recent increase in use is an increase in cocaine-involved overdose deaths: these deaths increased by over 122% (2.2 times) from 2011 to 2016. While many prevention practitioners are primarily focused on the ongoing opioid epidemic, it is important that stakeholders be prepared to address cocaine use as well to prevent rates from increasing further.

This issue brief is designed to help prevention practitioners better understand and prevent this growing problem. Specifically, it provides:

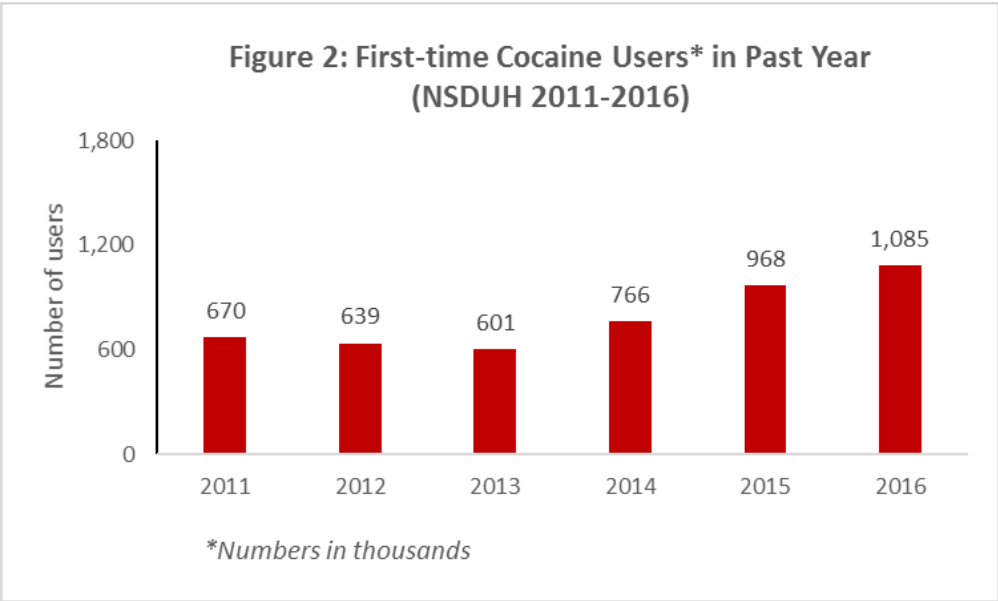
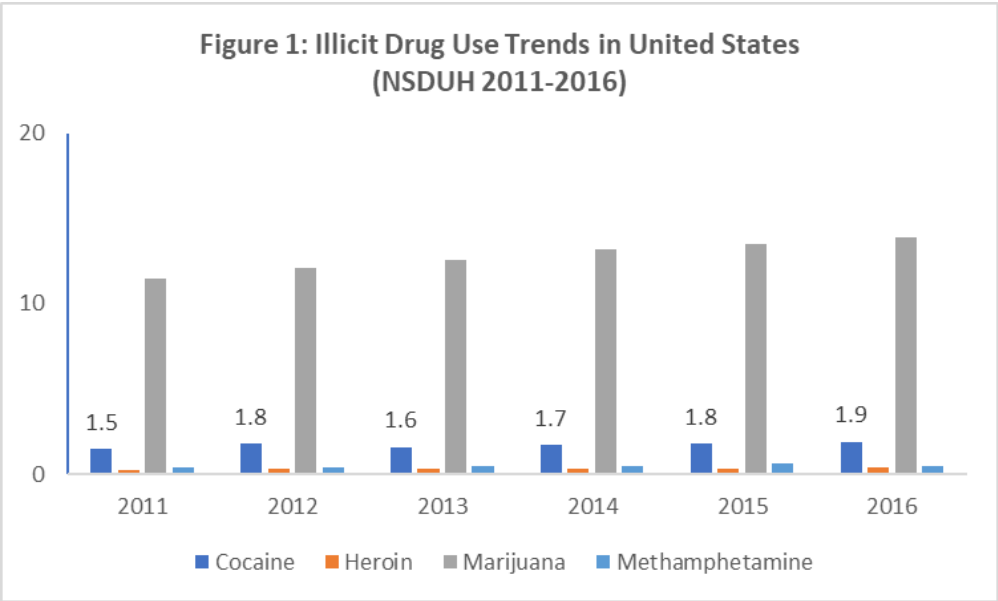
- An overview of recent trends in cocaine use and related consequences;
- Information on national, state, and local data sources for cocaine-related indicators;
- An inventory of research-based risk and protective factors associated with cocaine use and availability;
- Strategies for preventing cocaine incidence and prevalence; and
- Information on identifying and responding to cocaine overdoses.

## WHY SHOULD PREVENTION PRACTITIONERS BE CONCERNED ABOUT RISING RATES OF COCAINE USE?

Cocaine is an extremely addictive stimulant, almost exclusively used illicitly for recreational purposes that can cause overdose and death. Cocaine is most often found in a water-soluble powder form and can be consumed in a variety of ways—including nasally, orally, injected, or smoked. Cocaine use causes an immediate build-up of dopamine in the brain, which results in a short-term euphoric high; however it also results in a variety of potential short- and long-term negative effects, including nausea, nosebleeds, organ decay, and death (National Institute on Drug Abuse, 2016b). For more information on cocaine, visit the [National Institute on Drug Abuse](#).

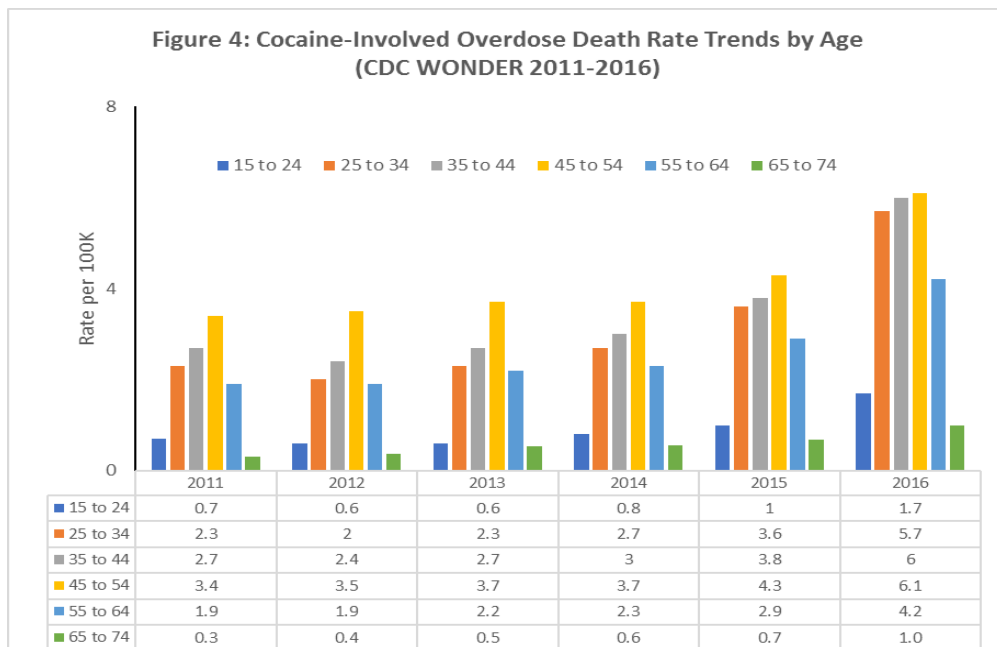
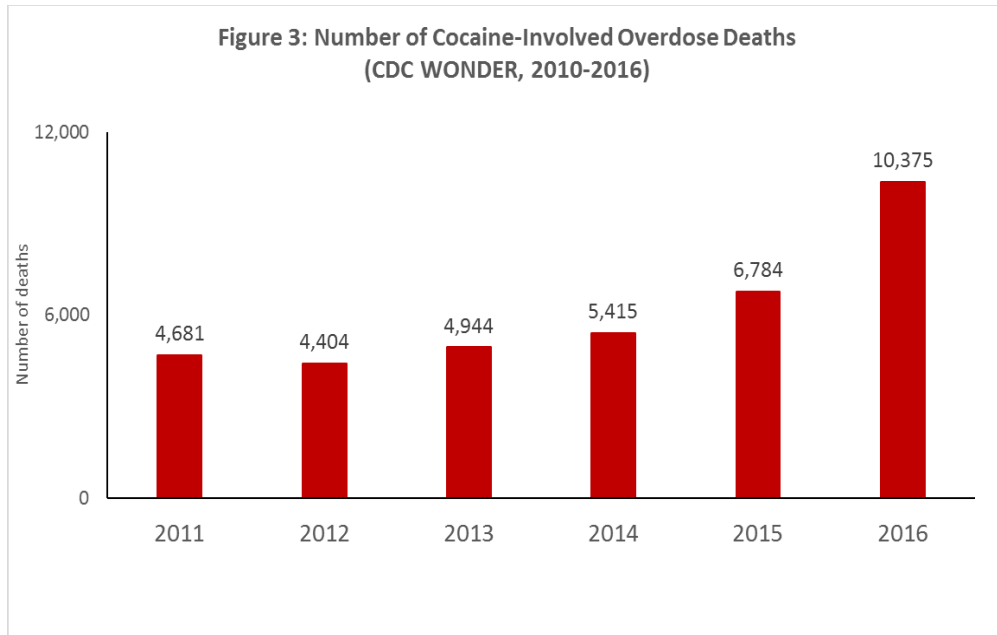
According to the National Survey of Drug Use and Health, recent trends in past-year use of cocaine among those aged 12 years and over were consistently higher than heroin use, though lower than marijuana use (Figure 1). However, the number of individuals age 12 years and older reporting cocaine initiation in the past year (first time use) increased significantly (1.62 times or 62% increase) from 2011 to 2016 (Figure 2); this suggests that regular use rates may further increase soon

(Ellickson, Hays, & Bell, 1992). Additionally, according to the Drug Enforcement Administration, illicit production and supply of cocaine has dramatically increased in recent years suggesting that foreign producers believe there will soon be greater U.S. demand as well. This increased supply has already had the expected results of lowering cocaine’s street price and raising the average purity at which it is sold (Drug Enforcement Administration, 2017).





Cocaine-involved overdose deaths have also dramatically increased in the past several years. According to the Centers for Disease Control and Prevention’s Wide-ranging Online Data for Epidemiological Research (CDC WONDER), the total number of cocaine-involved overdose deaths

jumped from 4,681 in 2011 to 10,375 in 2016, which is a 122% (or 2.2 times) increase (Figure 3). Comparing trends of cocaine-involved overdose death rates per 100,000 population by age (Figure 4), adults aged 45 to 54 years have higher rates than other age groups. Cocaine-involved overdose death rates for all age categories have increased significantly since 2011, with the highest increase among those aged 65 to 74 (up from 0.3 to 1, 228%) followed by 25 to 34 (up from 2.3 to 5.7, 148%), and 15 to 24 (up from 0.7 to 1.7, 143%).



These data show that rates of cocaine use and cocaine-involved overdose deaths are rising and are already significantly higher than they were in 2011. Addressing cocaine use and its consequences will require a variety of strategies directed toward youth, young adults, adults, and older adults. Furthermore, it will likely require strengthening existing prevention efforts, particularly those targeting opioid use. The number of opioid-involved fatal overdoses that also involve cocaine increased by almost 200 percent over the past four years (Centers for Disease Control and Prevention, 2018), which suggests that there may be meaningful interactions between this emerging cocaine trend and the ongoing opioid epidemic. Behavioral health professionals should examine this connection, and the potential for opportunities to align cocaine prevention efforts with existing opioid prevention efforts.

-  For more information on cocaine use, please refer to SAMHSA's National Survey on Drug Use and Health: <https://www.samhsa.gov/data/population-data-nsduh/>
-  For more information on fatal cocaine-involved overdoses, please refer to the Center for Disease Control and Prevention's WONDER system: <https://wonder.cdc.gov/>

## ACTION ITEMS

- Determine the level of concern your prevention partners and other stakeholders have about cocaine use and your capacity to address the issue.
- Prepare to find quantitative data on cocaine use in your catchment area.
- Prepare to analyze risk and protective factors on cocaine use.

## FINDING DATA ON COCAINE-RELATED INDICATORS

To conduct an in-depth needs assessment and planning process to address the rising cocaine problem, prevention practitioners must obtain available data on cocaine use and consumption patterns, consequences, and risk and protective factors. These data can be obtained from a variety of sources. Table 1 below presents a list of free, publicly available, national data sources; the cocaine-related indicators they provide; the level of reporting (e.g., national, state, regional, county); and where to go for more information. Data or data reports are typically released annually.

**Table 1: National Data Sources for Cocaine-Related Indicators**

DATA SOURCE	INDICATORS	LEVEL OF REPORTING	LINK
Wide-ranging Online Data for Epidemiologic Research (WONDER)	Cocaine-involved fatal overdoses	National, regional, state, county	<a href="https://wonder.cdc.gov/">https://wonder.cdc.gov/</a> Mortality data overview and download: <a href="https://www.cdc.gov/nchs/nvss/deaths.htm">https://www.cdc.gov/nchs/nvss/deaths.htm</a>
Healthcare Cost and Utilization Project (HCUP)	Cocaine-related inpatient and emergency room admissions	National, state	<a href="https://hcupnet.ahrq.gov/#setup">https://hcupnet.ahrq.gov/#setup</a>
Treatment Episode Data Set (TEDS)	Cocaine-related treatment admissions	National, state	<a href="https://datafiles.samhsa.gov/study-series/treatment-episode-data-set-admissions-teds-nid13518">https://datafiles.samhsa.gov/study-series/treatment-episode-data-set-admissions-teds-nid13518</a>
Uniform Crime Reporting (UCR)	Drug-related crimes, arrests	National, state, county	<a href="https://ucr.fbi.gov/ucr">https://ucr.fbi.gov/ucr</a>
National Drug Threat Assessment (Unclassified)	Cocaine availability, assessed threat, price, production, movement, seizures.	National, regional, state	<a href="https://www.dea.gov/docs/DIR-040-17_2017-NDTA.pdf">https://www.dea.gov/docs/DIR-040-17_2017-NDTA.pdf</a> (2017 edition)
Quest Diagnostics Drug Testing Index	Cocaine use (workplace drug use test results)	National	<a href="https://www.questdiagnostics.com/home/physicians/health-trends/drug-testing.html">https://www.questdiagnostics.com/home/physicians/health-trends/drug-testing.html</a>
National Survey on Drug Use and Health (NSDUH)	Cocaine use, initiation, perception of risk, certain risk behaviors	National, state	<a href="https://www.samhsa.gov/data/population-data-nsduh/">https://www.samhsa.gov/data/population-data-nsduh/</a> Online analyses portal: <a href="https://rdas.samhsa.gov/#/">https://rdas.samhsa.gov/#/</a>
Monitoring the Future (MTF)	Cocaine use, perception of harm, perception of availability (youth only)	National	<a href="http://www.monitoringthefuture.org/">http://www.monitoringthefuture.org/</a>

DATA SOURCE	INDICATORS	LEVEL OF REPORTING	LINK
Youth Risk Behavior Surveillance System	Cocaine use	National, state	<a href="https://www.cdc.gov/healthyouth/data/yrbs/index.htm">https://www.cdc.gov/healthyouth/data/yrbs/index.htm</a>
National Health and Nutrition Examination Survey (NHANES)	Cocaine use	National	<a href="https://www.cdc.gov/nchs/nhanes/index.htm">https://www.cdc.gov/nchs/nhanes/index.htm</a>

While these data sources can be helpful for prevention planning, note that many of these sources are primarily useful for obtaining national, regional, or state-level data; data availability at the local level (e.g., county, city) from these sources is often limited. Furthermore, many of these sources have an approximately two-year data lag—the time it takes to collect, clean, analyze, and report findings. To obtain more recent and localized data, practitioners may want to seek out their state and local agencies and stakeholders, such as:

- Substance abuse and mental/behavioral health agencies
- Departments of health/public health
- Substance use treatment providers
- Hospitals and hospital emergency departments
- Medical examiners or coroner’s offices
- Prescription drug monitoring programs
- Police departments
- Courts and drug courts

These state and local data sources have become ever more important due to the loss of national surveillance systems over the past two decades that were designed to detect emerging trends, such as the Drug Abuse Warning Network (DAWN) and Arrestee Drug Abuse Monitoring (ADAM). This loss of surveillance capacity may already be manifesting in the apparent gap between the dramatic increases in cocaine-involved fatal overdoses reported by CDC WONDER and the relatively smaller increases in cocaine use reported by NSDUH. As such, relying solely on available national data sources may jeopardize the ability of prevention practitioners to identify and intervene early in an epidemic.

Furthermore, while critical for assessment and planning purposes, all quantitative data sources have one or more limitations (e.g., data lag, lack of local data, limited sample sizes, difficult to obtain, complicated to analyze) that may hinder their use. As such, prevention practitioners should supplement and complement quantitative data with qualitative data, such as focus groups and key

informant interviews, that can help them contextualize and better understand substance use and associated risk and protective factors in their communities.

## ACTION ITEMS

- Examine available national data sources for relevant information.
- Determine available state and local data sources, and obtain and analyze relevant information.
- Examine existing data gaps and the feasibility of obtaining qualitative data.

## RISK AND PROTECTIVE FACTORS FOR COCAINE USE

There are numerous factors identified as increasing the risk that someone will engage in substance use, including cocaine use, such as depression, anxiety, family or peer substance use, inadequate parent/guardian supervision, parent/guardian mental health issues, suffering from abuse or neglect, community poverty or violence, and societal norms of substance use. There are also factors identified as protecting against the risk that someone will engage in substance use, such as increased family engagement, school engagement, and availability of social activities in the community (Center for the Application of Prevention Technologies, 2015).

Beyond these general substance use factors, research has identified a number of risk and protective factors directly linked to cocaine use, many of which are shown in Tables 2 and 3:

**Table 2: Risk Factors for Cocaine Use**

RISK FACTOR	CITATION
Depression	Conner, Pinquart, & Holbrook, 2008
Stress	Mantsch et al., 2014; McReynolds, Pena, Blacktop, & Mantsch, et al., 2012
Frequent exposure to substance users	Palamar, Kiang, & Halkitis, 2014
High youth income from employment	Palamar & Ompad, 2014

Recurrent stress	Post & Kalivas, 2013
Youth delinquent or criminal behavior	Windle & Windle, 2012
Truancy prior to age 15	Windle & Windle, 2012
Youth marijuana, cocaine, or tobacco initiation	Windle & Windle, 2012
Others-reliant coping mechanisms	Wong et al., 2013

**Table 3: Protective Factors Against Cocaine Use**

PROTECTIVE FACTOR	CITATION
High religiosity	Palamar et al., 2014
Increased parental education	Palamar & Ompad, 2014
Active coping mechanisms	Wong et al., 2013
Self-reliant coping mechanisms	Wong et al., 2013

As part of their community needs assessment, prevention practitioners will need to determine whether these or other risk and protective factors are occurring and among which populations. Knowing what factors are affecting cocaine use will help determine which strategies and policies may be most effective at addressing the problem.

## ACTION ITEMS

- Study available research on risk and protective factors and determine which are relevant to your target populations.
- Collect additional qualitative data if necessary to verify the presence of these factors in your community.



## PREVENTING COCAINE USE

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Substance use prevention strategies are most commonly categorized as focusing on supply reduction, demand reduction, or harm reduction (discussed in the next section). As nearly all cocaine is illicitly produced and sold, supply-reduction enforcement strategies are implemented by law enforcement and criminal justice agencies; to date, there are no available studies identifying a role for prevention practitioners in these efforts. It may be helpful to follow best practices from opioid prevention efforts—for example, by ensuring that local law enforcement are aware of cocaine use in a community; however, this strategy has not been studied in relation to cocaine.

As such, practitioners seeking to address cocaine use will likely focus on demand and harm reduction strategies. Within demand reduction, there are two main paths for practitioners seeking to address cocaine use, depending on their available resources and capacity, and the needs of their communities:

- The first is to implement health promotion and primary prevention strategies that address a range of illicit substance use, including cocaine.
- The second is to implement targeted strategies focused specifically on cocaine use.

Practitioners may find the first option most appropriate if data do not support cocaine use as an emerging trend in their community or if there are resource limitations; the second option may be most appropriate if cocaine use is a serious concern and/or there are significant available resources.

Health promotion strategies seek to improve overall health and wellness and “the ability of individuals to withstand challenges” (Substance Abuse and Mental Health Services Administration, 2017). Primary prevention strategies encompass a wide variety of education, communication, and environmental change strategies intended to reduce individuals’ risk of developing behavioral health problems. Education and communication strategies—whether focused specifically on cocaine risk and protective factors and use or more broadly encompassing illicit drug use—can take a number of forms, including (Center for the Application of Prevention Technologies, 2016):

- Public education to raise community awareness and understanding
- Social marketing to promote healthy behavioral change
- Media advocacy to frame public discussion and debate
- Media literacy to teach critical media-viewing skills

Meanwhile, environmental change strategies attempt to address risk and protective factors that can lead to substance misuse, and include strategies such as classroom strategies to improve life skills or emphasize norms, parental strategies to reinforce family involvement, and indicated strategies to treat underlying conditions. These strategies can also include physical, behavioral, or developmental health promotion interventions or efforts to address community or society-level factors.



For more information on how to categorize types of prevention strategies, please visit: <https://www.samhsa.gov/capt/sites/default/files/resources/mapping-interventions-different-level-risks.pdf>

## ACTION ITEMS

- Determine capacity and size of need to implement strategies addressing cocaine.
- Review strategies for “best fit” for your community (e.g. designed for your target population, addresses the risk and protective factors identified in your community, meets existing resource limitations, etc.).

## PREVENTING COCAINE OVERDOSES

Harm reduction strategies, policies, and programs are designed to reduce the negative consequences associated with drug misuse. Harm reduction focuses on the harms caused by drug use and identifies steps to reduce them (Logan & Marlatt, 2014). Prevention practitioners seeking to support cocaine harm reduction efforts may focus on trying to prevent cocaine overdoses. Cocaine overdoses are complex emergencies that can manifest in a variety of ways, including seizures, convulsions, irregular heart rhythm, rapid heartbeat, and increased body temperature. Left untreated they can result in death through heart attack/failure, respiratory failure, stroke, or cerebral bleeding, depending on which symptoms a victim suffers (National Institute on Drug Abuse, 2016b). As such, there is no single antidote that can be given to address an overdose, and the symptoms of an overdose can be difficult to detect due to the similarity of some to the normal side effects of cocaine use. Evidence shows a significantly increased risk for overdose after a cocaine binge (Santos et al., 2012). Cocaine use can also lead to long-term fatal conditions, such as renal failure.

Medical professionals can administer the anxiety medication benzodiazepine to treat some cocaine overdose symptoms; however, due to their chemical interaction with opioids, this may not be possible in overdose victims who used cocaine and opioids simultaneously. Although naloxone will not help reverse a cocaine overdose, there are studies showing no evidence of a negative interaction between cocaine and naloxone (Dougherty, Qiao, Wiggins, & Dafny, 1990; Smith et al., 2003), and it may still help reverse the opioid component of an overdose involving both cocaine and opioids. Other medical services may also be effective at treating an overdose, all of which require

medical professionals and, for many, hospital-level resources (Burnett, 2016). Therefore, the role of laypersons in preventing cocaine overdose is limited to recognizing the signs and symptoms of an overdose and contacting emergency medical personnel immediately. Laypersons may hesitate to call 9-1-1 due to fear of law enforcement and subsequent arrest for illegal drug possession; however, Good Samaritan' Laws provide some criminal, civil, or professional liability protections (National Alliance for Model State Drug Laws, 2016). These laws may protect individuals reporting an overdose, but may also protect individuals involved in the overdose response.

There are limited examples of prevention organizations providing cocaine overdose education (Project Know, n/d); however, organizations can use many of the same concepts from opioid overdose education when developing materials, such as creating clear, concise step-by-step checklists for laypersons to follow.



For information on the principles and strategies for opioid overdose education, refer to SAMHSA's [Opioid Overdose Prevention Toolkit](#)

## ACTION ITEMS

- Discuss with first responders and other medical professionals the gaps in existing cocaine overdose response efforts and how preventionists can support these efforts.

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