Wyoming Survey & Analysis Center
UNIVERSITY OF WYOMING

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# Telling the Story of Stimulant Use in Wyoming

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## ABOUT THIS REPORT

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# Executive Summary

The Wyoming State Epidemiological Outcomes Workgroup (SEOW) strives to provide public health stakeholders with data to inform decisions and policies. The SEOW is charged with monitoring trends in the areas of substance use and abuse, and changes in rates of mental health concerns and suicide. As has been done in past years for other topics, such as opioid use in Wyoming, the SEOW periodically creates reports and other data products that focus on rising concerns and needs for additional information. In 2019 and 2020, the SEOW membership expressed concerns that stimulant use, in particular amphetamine and methamphetamine use, was increasing within communities across the state. Based on these reported concerns, the SEOW chose to prioritize this topic and, to the extent possible, gather and report all available data and information about this topic for the state. This report investigates as many aspects of stimulant use in Wyoming as possible, using available information from surveys, administrative records, and other data sources. This information is presented to allow the Wyoming government, community coalitions, and other stakeholders to choose and implement targeted strategies and solutions for prevention and treatment. A condensed issue brief outlining the key findings of this report can be found at the following URL: https://bit.ly/short-wy-stim. For a one-page fact sheet highlighting key findings, go to the following URL: https://bit.ly/wy-stim-fact.

## *Stimulant Consumption*

- According to data from the National Survey of Drug Use and Health (NSDUH), Wyoming is below national estimates for cocaine use. From 2017 to 2018, 1.3% of people age 12 or older in Wyoming said they used cocaine sometime in the past year, while 2.1% indicated they did so in the United States.
- The 2017–2018 NSDUH estimated that 0.6% of the population in Wyoming used methamphetamines on one or more occasions during the past year for people who were age 12 or older, compared to 0.6% of the nation.
- The percentage of Wyoming high school and college students who report using methamphetamines remains low based on the Wyoming Prevention Needs Assessment (PNA) and the National College Health Assessment (NCHA) at the University of Wyoming (UW). In both studies, the percentages of students who reported using methamphetamines sometime in the past 30 days were approximately 1% or less.

### Definition of a Stimulant

Stimulants are a class of drugs that include illicit drugs, such as cocaine and methamphetamine, as well as legally available prescription stimulants, such as Adderall™ and Ritalin™.

- The NCHA at UW suggests that other types of stimulants may be used at higher rates than methamphetamine. Consistently 3-4% of the UW students reported using amphetamines other than methamphetamine sometime during the past 30 days.

## *Consequences of Stimulants*

- Based on the custodial arrest data from the Wyoming Association of Sheriffs and Chiefs of Police (WASCOP), the number of methamphetamine-related arrests in Wyoming increased from 823 in 2014 to 1,404 in 2018.
- Using mortality statistics from the Centers for Disease Control and Prevention (CDC), this study examined the age-adjusted stimulant-related fatal overdoses per 100,000 population across multiple years. In a moving average from 2008-2012, Wyoming went from a rate of 0.68 in those years to 3.04 in 2014-2018, considerably higher than the national rate of 2.55 for 2014–2018.

## *Risk Factors for Stimulant Use*

- Based on data collected by the United States Drug Enforcement Agency (DEA), the distribution of Schedule II drugs such as cocaine, methamphetamine, and methylphenidate to Wyoming is on par or higher than national averages, although Wyoming is below the national average for amphetamine distribution.

## *Conclusions and Data Gaps*

- Consumption of stimulants in Wyoming is low and has not generally changed over time. However, the consequences of stimulant misuse and abuse (e.g., deaths, arrests, and treatment admissions) have notably increased. A disconnect exists between these two trends, and filling data gaps may help explain these differences.
- More information concerning risk factors related to stimulant use would offer a better understanding of the differences between consumption and consequences. It would also help guide and direct prevention efforts in the state and communities.

# Introduction

From a national perspective, the NSDUH estimated 1.1 million people in the United States age 12 or older had a methamphetamine use disorder in 2018 (SAMHSA, 2019). Those with a substance abuse disorder, particularly involving stimulants such as methamphetamine, were substantially more likely to suffer from serious mental health issues, including depression and post-traumatic stress disorder (Torrens et al., 2011; Hellem et al., 2015). Furthermore, the CDC, reported that of the 70,237 people that died from drug overdoses in the United States in 2017, 19.8% involved cocaine, and 14.7% involved stimulants. In fact, stimulant-related overdose fatalities have increased in both urban and rural areas and across demographic characteristics within the United States (Kariisa et al., 2019).

Putting this into context (in terms of healthcare, productivity, and crime), methamphetamine use in the United States cost an estimated 23.4 billion dollars in 2005 alone (Nicosia et al., 2009). This figure is undoubtedly an outdated estimate, and given the rising trends in illicit stimulant use across the United States, associated costs have likely increased. This potentially has negative consequences, not just for the economic health of nation, but the physical and mental health of the population as a whole (Kariisa et al., 2019).

## *Purpose*

The WYSAC completed this project as part of a contractual agreement with the Wyoming Department of Health (WDH), Public Health Division. Given the gaps in Wyoming's knowledge of stimulant use and abuse, WDH Public Health Division sought an overview of what quality data currently exist and what data Wyoming should collect to evaluate accurately the status of stimulant drug use in the state. WYSAC and the WDH Public Health Division agreed on two goals for this report: 1) Highlighting the data we already have, and 2) Making the data more readily available to stakeholders.

The WDH, WYSAC, and other representatives from the SEOW met to define the scope of this study, including the definition of stimulant. Together we decided to define stimulant broadly to include amphetamines, methamphetamines, and cocaine. We inventoried what stimulant-related data were currently being collected in Wyoming and what data could be utilized. The SEOW inventoried all data sources for reliability and validity, and WYSAC conducted a broad literature review around the population level surveillance measures related to stimulant use. Throughout this process, WYSAC and the SEOW documented data gaps and recommended what data gaps should be filled and how to fill them.

This report organizes the identified data—categorizing each indicator as a consumption measure, a consequence measure, or a risk factor for stimulant use. Consumption measures include self-reported use of both illicit and licit stimulants from both national and state surveys administered to adults and youth. We also identify the prevalence of use in specific subgroups such as women who have recently been pregnant and children. The identified consequence measures consist of stimulant abuse treatment admissions and arrest data from the WASCOP. Additionally, consequences include positive drug tests from the Wyoming State Public Health Laboratory (State Lab), hospital admissions related to stimulant poisonings, and stimulant-related poisoning deaths. Finally, as a risk factor for stimulant abuse, we examined the amount of Schedule II stimulants dispensed/prescribed in the state as reported in the Automation of Reports and Consolidated Orders System (ARCOS).

# Indicator Results

This report summarizes the available data, including both licit and illicit stimulant use. Some of the data—such as poisoning death rates—include all stimulants and do not differentiate the different types of stimulants. Other data are about specific types of stimulants. For example, data from the PNA are about cocaine and methamphetamine.

Several stimulant data sources, currently available in Wyoming, assist with tracking stimulant misuse and abuse across the state. Researchers at WYSAC have presented the results of the data inventory throughout this report organized by stimulant-related indicators (e.g., arrest rates, overdose rates, and rates of consumption), with key findings and general notes about the data source. Additionally, descriptive information about and external links to each data source are catalogued in the appendices. When possible, state data are compared to national data.

Not all of the data presented in this report is specifically for illegal stimulants. Some of the data, such as hospital discharge data, includes all stimulants, both prescription and illicit. Some of the data only represents Schedule II controlled substances that the DEA classifies as having an accepted medical use, but also have an elevated potential for abuse and addiction (e.g., amphetamine, methylphenidate). Data from surveys ask about stimulant use and misuse more generally, which would include those obtained illegally and with a prescription.

## *Results Organization*

The report body is organized by data source and data indicators. Each section provides a brief description of the data source, along with identifying the stimulant-related information that is available. It then describes any data considerations, limitations, and notes that help put the results in context. It also explains key findings from the data, followed by data visualizations. Whenever practical, the graphs provide all the data values. However, to increase the data visualizations' clarity when there were longer trends or large numbers of subgroups we do not present all of the data values in some data visualizations. When that occurs, they are available in Appendices D[1] and E[2].

The appendices provide additional information about the data sources. Appendix A provides a list of definitions of key terms used in the report. Appendix B is a list of the data sources, including their abbreviations, brief descriptions of who and what is measured, and some of the data limitations. Where available, it also provides a web address to the data source. Appendix C gives information about data sources that the research team considered but did not include in the report.

[1] Appendix D provides estimates and confidence intervals when they are available for the data sources.

[2] Appendix E provides full data values when they are not all presented on the data visualizations.

# *Cocaine and Methamphetamine Use—Wyoming and National Estimates*

The NSDUH provides survey data on tobacco, alcohol, and drug use by the United States population aged 12 years or older for all 50 states and the District of Columbia. Conducted yearly by the Substance Abuse and Mental Health Services Administration (SAMHSA), as part of the United States Department of Health and Human Services, the NSDUH monitors substance use trends and informs health policy.

## NOTES

- The NSDUH is an in-home, in-person survey using computer-assisted survey software with automated skip patterns.
- Like all self-report surveys, a variety of factors (including memory effects and social desirability) may influence responses. Substances that are illegal or less socially accepted, such as methamphetamines and cocaine, may have greater underreporting.
- A survey revision in 2015 clarified that methamphetamine use was outside of legitimate prescription label use. Prevalence estimates for past year methamphetamine use are not available before this revision.

## KEY FINDINGS

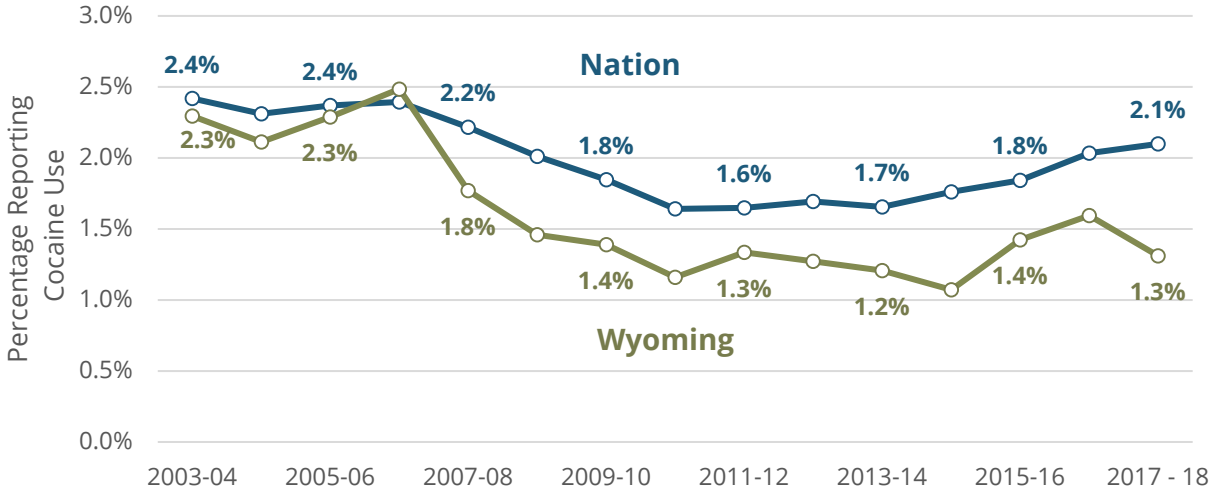
Cocaine use between the 2007-2008 and 2017-2018 estimates in Wyoming is generally less than the nation (Figure 1).

As seen in Figure 3, Wyoming is the same as the national estimate for cocaine use during the past year for teens ages 12 to 17 at 0.5%. Wyoming is below the national estimates for respondents who are age 18 to 25, in addition to age 26 and older, with percentages of 4.2% and 1.0%, respectively.

Methamphetamine use among Wyoming residents is about the same as the national average, both of which are low (Figures 2 and 4).

## Figure 1: Cocaine Use Over Time in Wyoming Is Below National Estimates

*Percentage of those 12 and older who reported using cocaine in the last year, from 2003 to 2018*




Note: Complete estimates and confidence intervals are found in Table 3 in Appendix D.

Source: NSDUH, 2003 – 2018

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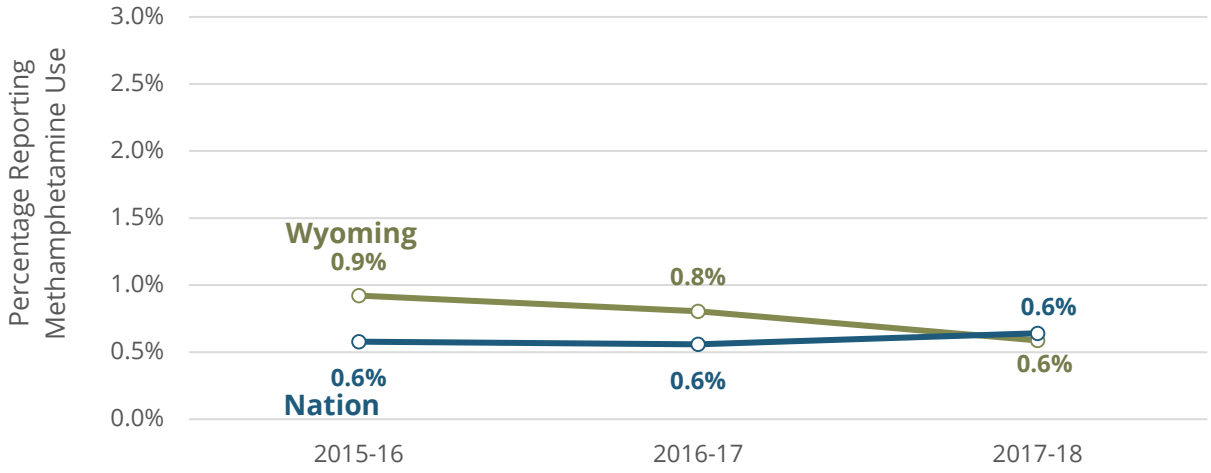
## Figure 2: Methamphetamine Use in Wyoming Is Infrequent

*Percentage of those ages 12 and older who reported using methamphetamine in the last year, from 2015 to 2018*




Note: Complete estimates and confidence intervals are found in Table 4 in Appendix D.

Source: NSDUH, 2015 – 2018

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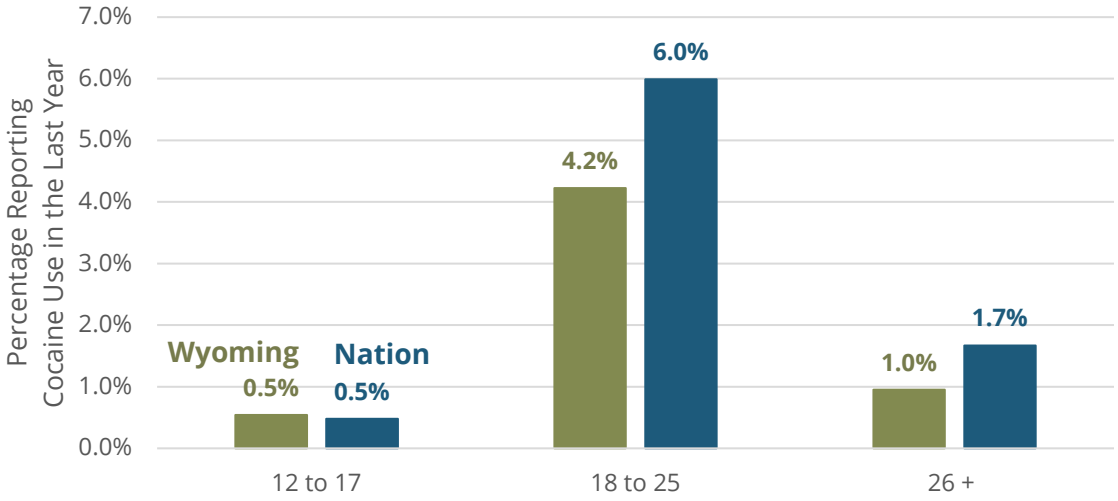
## Figure 3: Cocaine Use in Wyoming is Similar to National Estimates

*Percentage of people by age group who had used cocaine in the last year*




Note: Complete estimates and confidence intervals are found in Table 5 in Appendix D.

Source: NSDUH, 2017 – 2018

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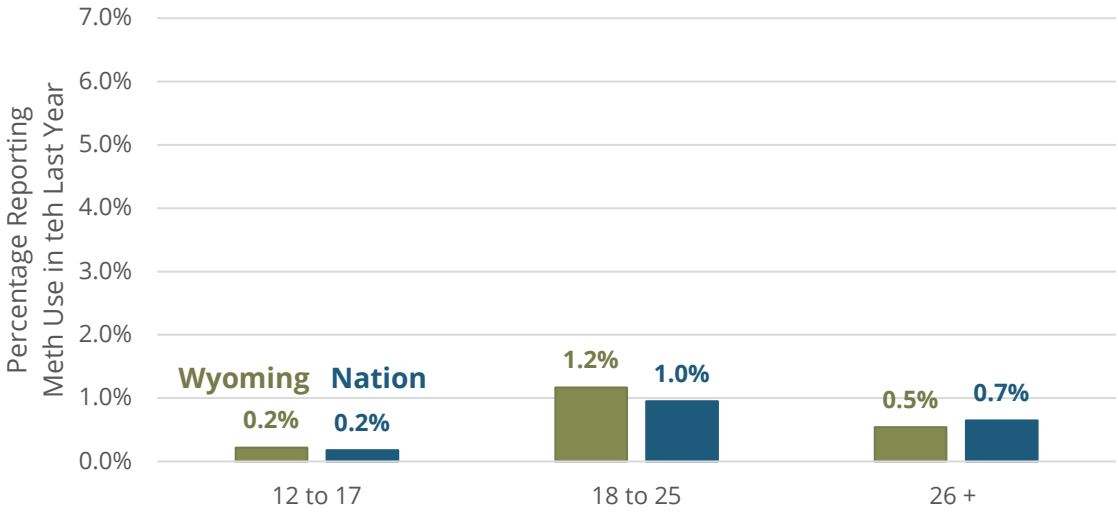
## Figure 4: Methamphetamine Use in Wyoming is Similar to National Estimates

*Percentage of people by age group who had used methamphetamine in the last year*




Note: Complete estimates and confidence intervals are found in Table 6: Estimates and Confidence Intervals for the Percentage of People by Age Group Who Used Methamphetamine in the Last Year in Appendix D.

Source: NSDUH, 2017 – 2018

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# *Cocaine and Methamphetamine Use among Wyoming High School Students*

The PNA surveys Wyoming middle and high school students biennially at both the state and county levels. The survey was an attempted census of all 6th, 8th, 10th, and 12th-grade students enrolled in Wyoming public schools. Data collected about health behaviors include self-reported use of methamphetamines and cocaine sometime in the past 30 days before the survey.

## NOTES

- Like all self-report surveys, a variety of factors (including memory effects and social desirability) may influence responses. Substances that are illegal or less socially accepted, such as methamphetamines and cocaine, may have greater underreporting.
- The PNA includes data cleaning routines that identify and remove cases when there are indications that the respondent may not have answered the survey honestly. These data cleaning routines tend to identify people who exaggerate their substance use, or who answer inconsistently often enough to warrant concern.
- The survey is only given in the public schools in Wyoming. It does not include students who are homeschooled or who attend private schools in Wyoming.

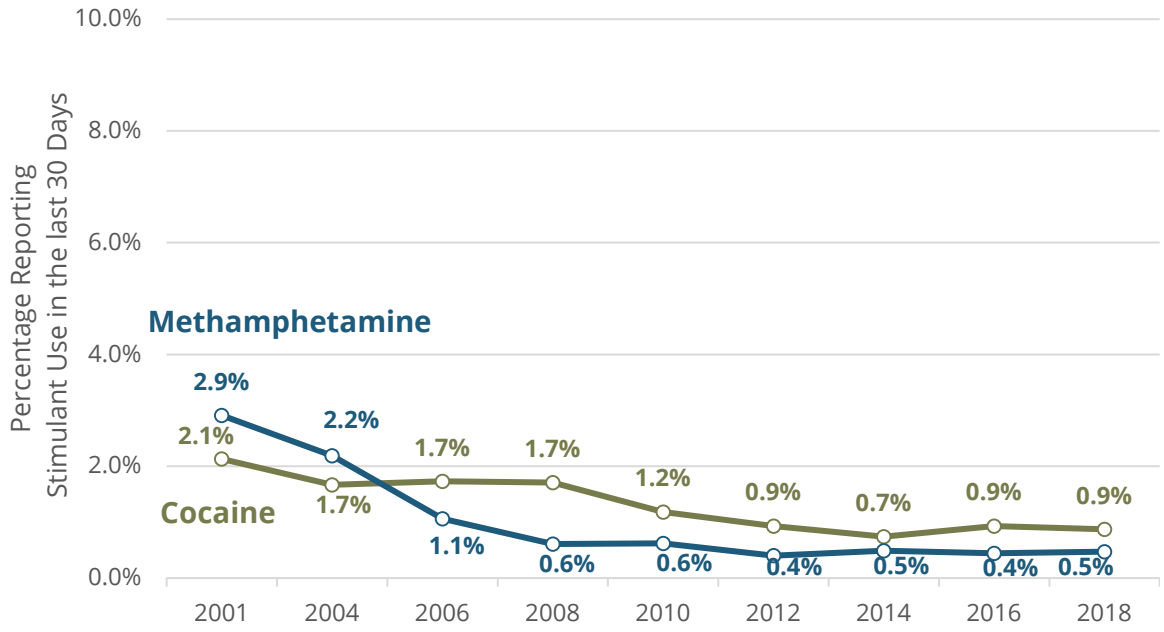
## KEY FINDINGS

As can be seen in Figure 5, methamphetamine use during the past 30 days among 10th and 12th grade students in Wyoming declined from 2001 to 2008, going from nearly 3% down to less than 1%. It has remained less than 1% since 2008.

Cocaine use by 10th and 12th-grade students during the 30 days before the survey varied a small amount, going from about 2% in 2001 to a little less than 1% in 2014; from that point, self-reported cocaine use has remained at about 1% (Figure 5).

## Figure 5: Illicit Stimulant Use by Wyoming High School Students Remains Low

*Percentage of 10th and 12th grade students that said they used cocaine or methamphetamine in the past 30 days from 2001 to 2018*




Source: PNA, 2001 – 2018

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# *Stimulant Use among UW Students*

The NCHA is a national survey of college students measuring the physical, mental, and sexual health of college students. Several survey questions measured methamphetamine, amphetamines, and other stimulant use during the last month and the last year.

## NOTES

- This self-report paper and web survey of UW students has been conducted every other year since 2009. UW did not participate in the 2013 NCHA survey.
- Local data results are available to participating institutions. However, the survey does not provide national results for comparisons.
- Like all self-report surveys, a variety of factors, including memory effects, and social desirability, may influence responses to the NCHA. In particular, the stigma of using drugs such as methamphetamines, amphetamines, and other stimulants may cause respondents to underreport their use.
- These data are not necessarily representative of young adults in Wyoming because data is only collected at UW. The survey is not administered to students at Wyoming community colleges.

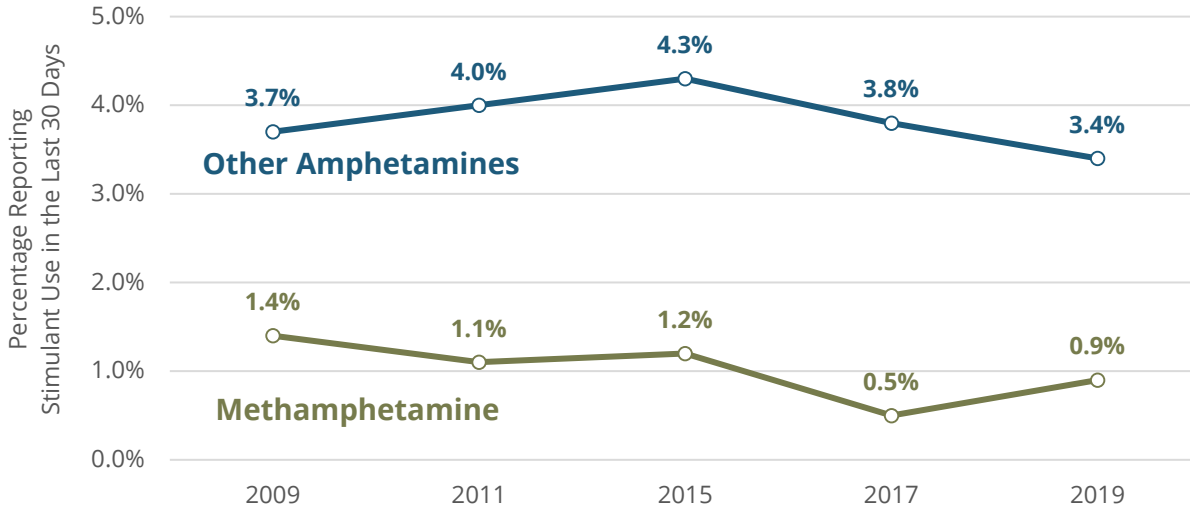
## KEY FINDINGS

As seen in Figure 6, there was no significant change in the percentage of students at UW that reported misusing either methamphetamine or amphetamines in the last 30 days. The highest reported percentage was 4.3%, or just under 1 in 20 students reporting other amphetamine use.

In Figure 7, prescription stimulant misuse increased among UW students from 2.7% in 2009 to 6.1% in 2017 but reverted to 4.8% in 2019.

## Figure 6: There Is No Significant Change in the Past Decade in Illicit Methamphetamine and Amphetamine Use Among UW Students

*Percentage of students who said they used methamphetamine or amphetamines in the past 30 days from 2009 to 2019*




Source: NCHA, 2009 – 2019

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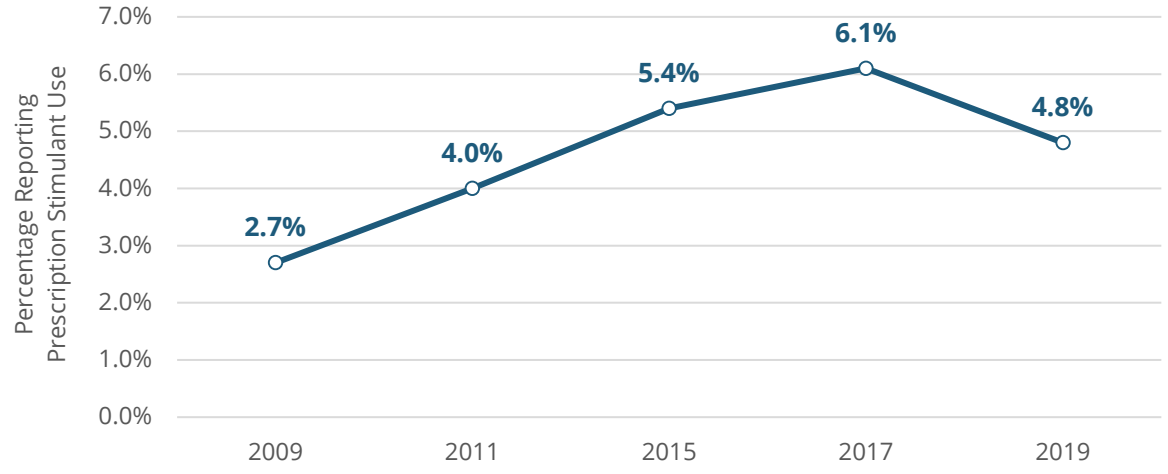
## Figure 7: Prescription Stimulant Use Has Increased Among UW Students from 2009 to 2017, but Decreased in 2019

*Percent of University of Wyoming students who reported using prescription stimulants that were not prescribed to them within the last 12 months from 2009 to 2019*




Source: NCHA, 2009 – 2019

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# *New Mothers Reporting Stimulant Use Prior to Becoming Pregnant*

The Wyoming Pregnancy Risk Assessment Monitoring System (PRAMS) is a mail and phone-based survey of new mothers. It is designed to identify and monitor their behaviors and experiences before, during, and after pregnancy. It covers such topics as prenatal care, breastfeeding, physical abuse, and infant health care. Also, the survey asks about substance use, including alcohol, tobacco, and other drugs. PRAMS currently covers 83% of all births in the United States. One question asks about the use of various substances in the month before pregnancy, which includes questions on both licit and illicit stimulants:

*During the month before you got pregnant, did you take or use any of the following drugs for any reason?*

- *Adderall™, Ritalin™, or another stimulants*
- *Amphetamines, also known as uppers, speed, crystal meth, crank, ice, or agua*
- *Cocaine, also known as crack, rock, coke, blow, snow, or nieve*

## NOTES

- PRAMS data are self-reported by new mothers and may be subject to potential sources of error. Mothers may not recall events before or during the early part of their pregnancies. Due to social desirability effects, they may be hesitant to report on behaviors perceived to be unhealthy for them or their child, which underestimates negative behaviors.
- The questions do not distinguish between use, misuse, or abuse of stimulants. When medically indicated, physicians may have prescribed stimulants to some women in the month prior to pregnancy.
- Results may not be generalizable, PRAMS only surveys women who delivered live births, and it does not represent women who had miscarriages or stillbirths.
- Due to a change in survey methodology and small numbers, trends are not available.
- No national comparison is available for this data source.

## KEY FINDINGS

Based on combined data from both 2016 and 2017, 1.5% of Wyoming new mothers reported they used Adderall™, Ritalin™, or other stimulants in the month prior to becoming pregnant. While 0.9% of new mothers reportedly used amphetamines in the month prior to becoming pregnant. There was insufficient data for self-reported use of cocaine in the month prior to pregnancy. Estimates and confidence intervals for these data can be found in Table 7.

# *Children Taking Medication for ADD/ADHD*

The National Survey of Children's Health (NSCH) provides a national web-based and mail-based parent and caregiver survey on the physical, mental, and social health and well-being of non-institutionalized children 0-17 years. The NSCH combines surveys from 2016 and 2017 to obtain state-level data.

Two questions relate to stimulants on this survey.

1. *Has a doctor or other health care provider ever told you that this child has Attention Deficit Disorder or Attention Deficit/Hyperactivity Disorder that is, ADD or ADHD? If yes, does this child currently have the condition?*[3]
2. *Is this child currently taking medication for ADD or ADHD?*

## NOTES

- These questions provide context on the proportion of children who may be using prescription stimulants to treat ADD or ADHD that have the potential for misuse (e.g., Adderall™, Ritalin™). However, the questions do not specify what type of medication is being taken or if the medication is being used as prescribed, misused, or abused.
- This is a parent/guardian self-reported survey and may not reflect an actual medical diagnosis.
- Due to changes in survey methodology, data before 2016 are not comparable, and therefore, trend data are not available. To obtain more robust state estimates, we combined data from 2016 and 2017.

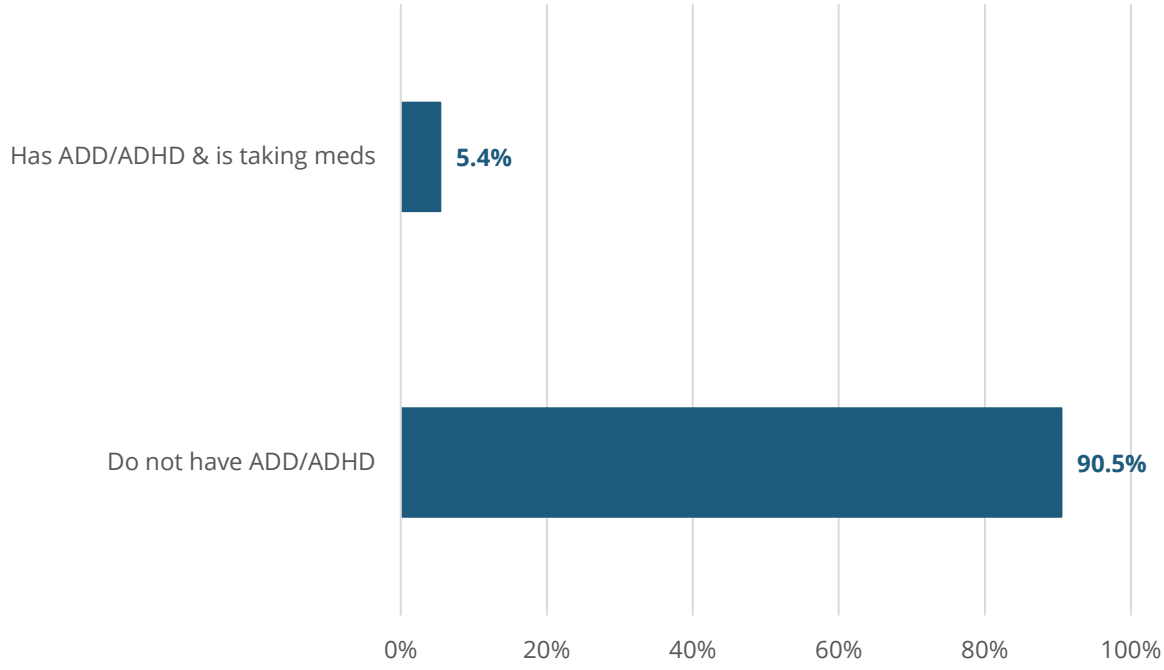
## KEY FINDINGS

Based on parent reports of diagnoses from health care providers, approximately 1 in 10 children in Wyoming have ADD/ADHD. About half of those children are taking some medication for the condition. Therefore, about 1 in 20 children in Wyoming have both ADD/ADHD and are taking medication (Figure 8). These are nearly the same as the national rates.

[3] This question estimates the proportion of children 3-17 in Wyoming who have been diagnosed with Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD).

## Figure 8: Approximately One in Twenty Children in Wyoming Are Taking Medication for ADD/ADHD

*Percentage of children taking medication for ADD/ADHD in 2016 and 2017*




Note: Complete estimates and confidence intervals are found in Table 8 in Appendix D.

Source: NSCH, 2016 – 2017

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# *Reported Stimulant Use by Those with a Communicable Disease*

The WDH Communicable Disease Unit investigates reports of sexually transmitted diseases including syphilis, gonorrhea, and Hepatitis B and C. The investigators ask the patients about factors that may have increased their risk of disease, including stimulant use. The data from this source provide information about the comorbidity of these communicable diseases and stimulant use. These data indicate that some sub-populations are at higher risk for stimulant use than the general population.

## NOTES

- These data include self-reported stimulant use among Wyoming residents with a verified reportable communicable disease during the year.
- Individuals may be hesitant to report on illegal behaviors or behaviors perceived to be unhealthy, which means negative behaviors may be underestimated.
- This question has only been standardized since 2017; therefore, trends are unavailable.

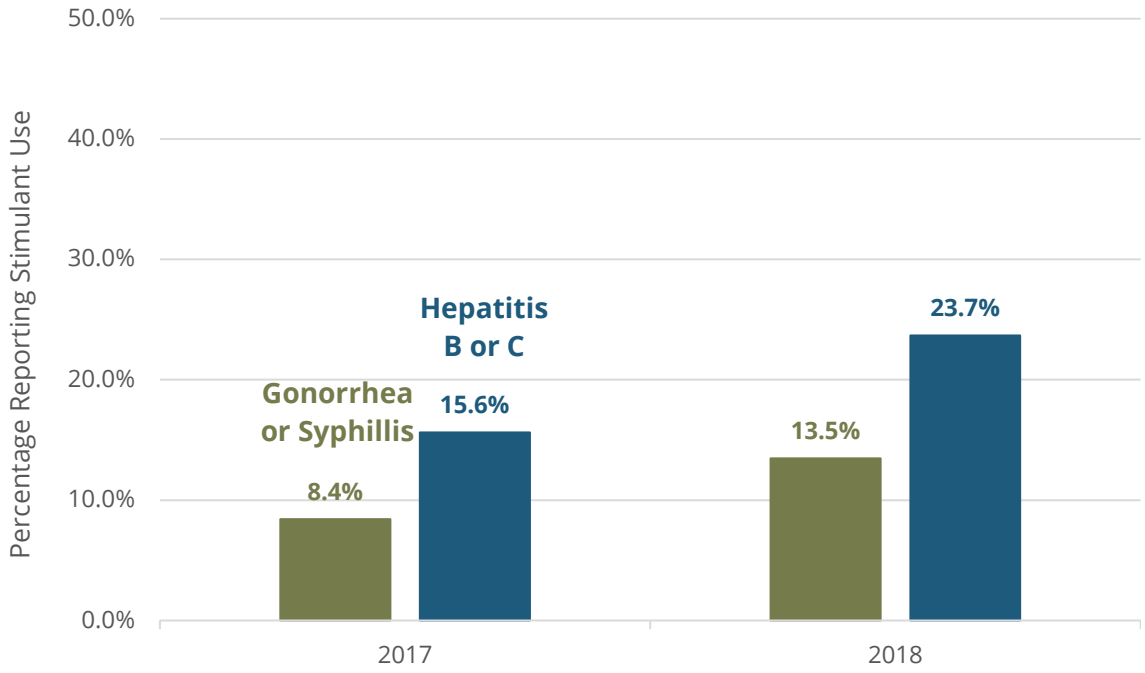
## KEY FINDINGS

From 2017 to 2018, there was a notable increase in the percentage of respondents diagnosed with a communicable disease who also reported stimulant use (Figure 9).

While percentages of cocaine use, or methamphetamine and cocaine use combined, were stable from 2017 to 2018, the percentage of respondents who reported using methamphetamine alone increased significantly (Figures 10 and 11).

## Figure 9: Wyoming Has Seen an Increase in Reported Stimulant Use by Those Diagnosed With a Communicable Disease from 2017 to 2018

*Percentage of those diagnosed with a reportable communicable disease who self-reported stimulant use from 2017 to 2018*




Note: Self-reports include use of methamphetamine alone or with other stimulants.

Source: Wyoming Communicable Disease Unit, 2017 – 2018

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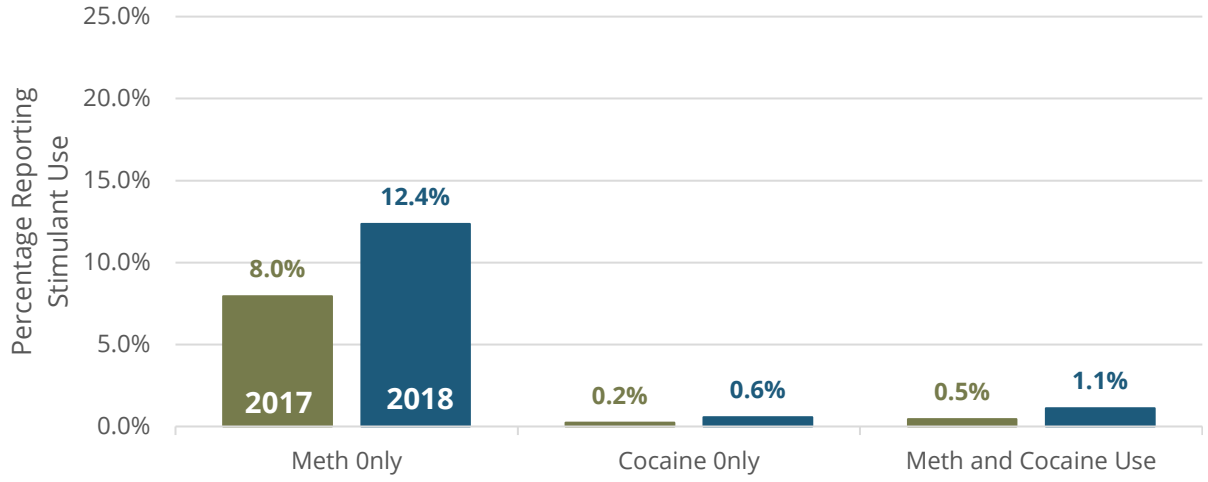
## Figure 10: Reported Methamphetamine Use by Those Diagnosed With Gonorrhea or Syphilis Increased Substantially From 2017 to 2018

*Percentage of those diagnosed with Gonorrhea or Syphilis who self-reported stimulant use from 2017 to 2018*




Source: Wyoming Communicable Disease Unit, 2017 – 2018

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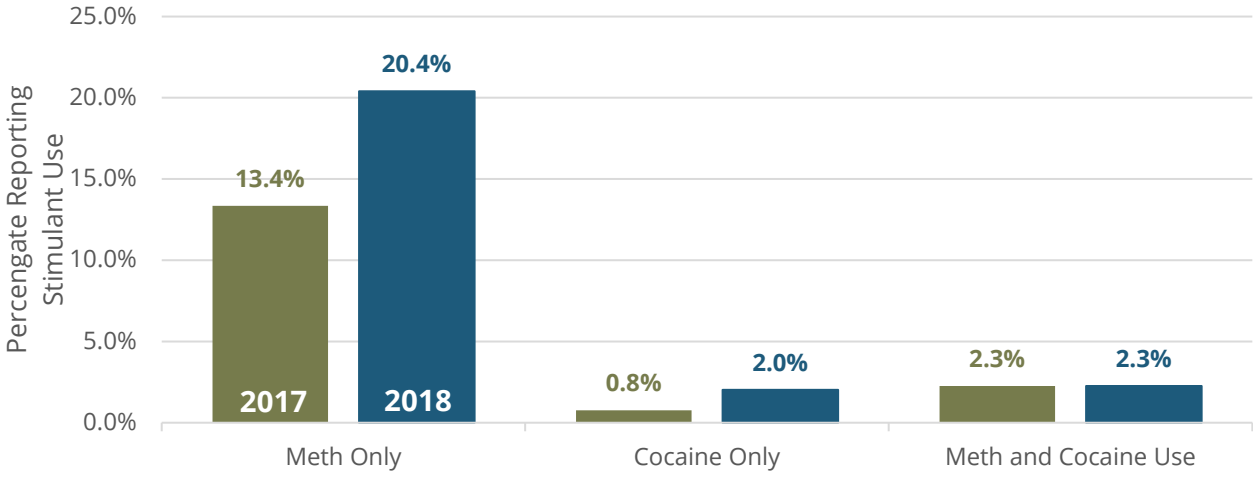
## Figure 11: More Respondents Diagnosed with Hepatitis B or C Reported Using Methamphetamine Alone Than Cocaine, or Methamphetamine and Cocaine Combined

*Percentage of those diagnosed with Hepatitis B or C who self-reported stimulant use from 2017 to 2018*




Source: Wyoming Communicable Disease Unit, 2017 – 2018

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# *Admissions to Substance Use Disorder Treatment Providers for Stimulant Use*

State-funded substance abuse disorder treatment providers report their treatment admissions and discharges to the Wyoming Client Information System (WCIS). As part of that reporting, each client is given a drug and alcohol use assessment, which identifies the substance they are seeking treatment to address. Data from WCIS is aggregated to identify the number of treatment admissions that are related to each substance.

## NOTES

- Private mental health care providers and substance-use-treatment programs that do not receive state funding do not report into the WCIS system. State funding includes money from Medicaid, Medicare, and the Federal Substance Abuse Treatment Block Grant. It does not include private health insurance or self-pay services at private treatment programs.
- Patients may seek treatment voluntarily or be court-ordered to receive treatment. Data are not reported by referral type.

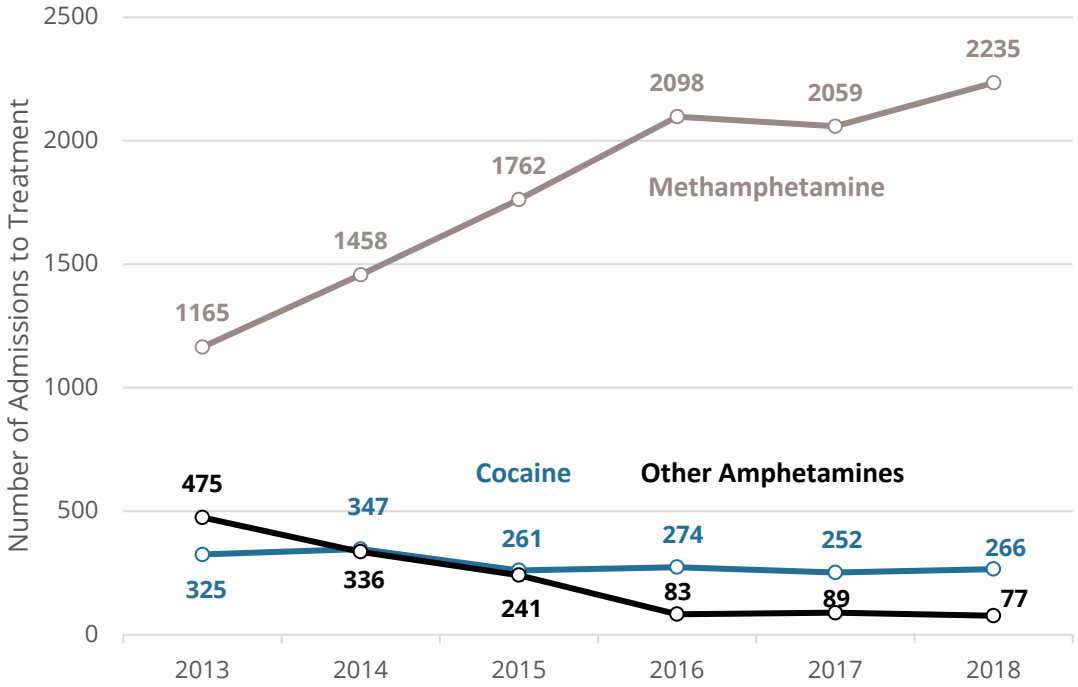
## KEY FINDINGS

From 2013 to 2018, the number of admissions for methamphetamine use to Wyoming state-funded substance-use-disorder-treatment providers increased by 92%. Admissions for other amphetamine use declined 84%, while admissions for cocaine use remained almost flat (Figure 12).

Except for teens 13-18 years, the number of admissions for methamphetamine increased for every age group. Those ages 30 to 39 and 40 to 50 had the most significant increases, 106%, and 120%, respectively (Figure 13).

## Figure 12: The Number of Admissions to Treatment for Methamphetamine Use Have Substantially Increased Since 2013

*Admissions to substance use disorder providers for stimulant use from 2013 to 2018.*




Note: Data table with all data values is provided in Table 12 in Appendix E.

Source: WCIS, 2013 – 2018

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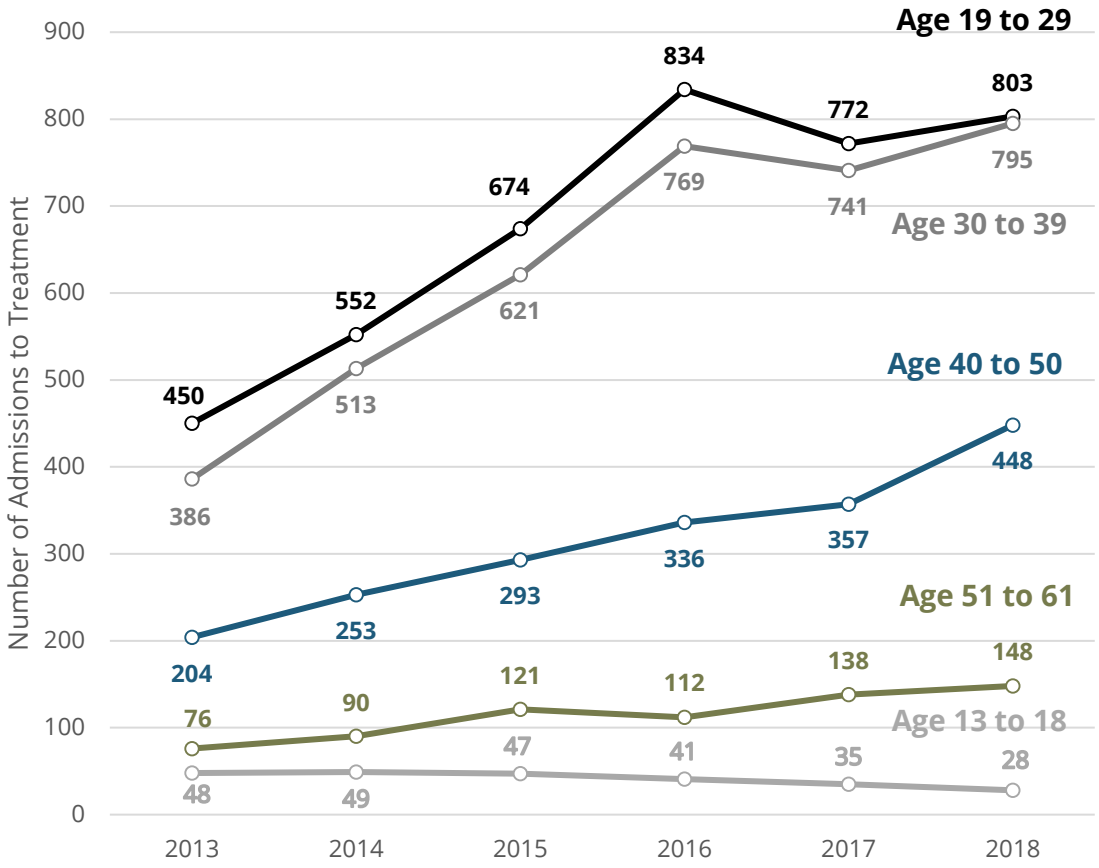
## Figure 13: The Number of Admissions to Treatment Providers for Methamphetamine Use Increased for Every Age Group but Teens Age 13 to 18 Since 2013

*Admissions to substance use disorder treatment providers for methamphetamine use by age group from 2013 to 2018*




Note: There was no data for ages 12 and under. Ages 61 to 72 were excluded because of limited data.

Source: WCIS, 2013 – 2018

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# *Participation in Court Supervised Treatment*

The Wyoming Court Supervised Treatment Program (CST Program or Drug Court) provides sentencing alternatives for substance abuse cases within the Wyoming judicial system. Participants are nonviolent adult or juvenile offenders, who typically are court-ordered to substance abuse treatment rather than serving time in prison. The WDH Behavioral Health Division maintains an administrative data collection system that tracks the status and progress of Drug Court participants in their programs. As part of that data collection system, the drug courts identify the substance for which the participants are receiving an alternative sentence and treatment. For this report, the WDH Behavioral Health Division provided the percentage of drug court referrals that involved stimulant use. These percentages were broken down by year and gender.

## NOTES

- In Wyoming, there are four categories of court-supervised treatment: Adult, Juvenile, Tribal, and DUI.
- A variety of factors influence whether an offender enters a Drug Court program. Wyoming has at least 16 different Drug Court Programs. Each has its own requirements and capacity limitations that affect findings. Not all counties and communities in Wyoming have a Drug Court program[4].
- It is unknown whether offenders who use methamphetamine are more or less likely to enter the Drug Court program or the jail/prison system.
- In Program Recidivism is calculated as the number of arrests for active participants over the total active participants for that year.
- Post Program Recidivism is calculated as the number of arrests for participants who have graduated but not had their episode closed over the total number of participants who graduated but not had their episode closed.
- Multiple arrest dates on the same day for the same participant is counted only once.

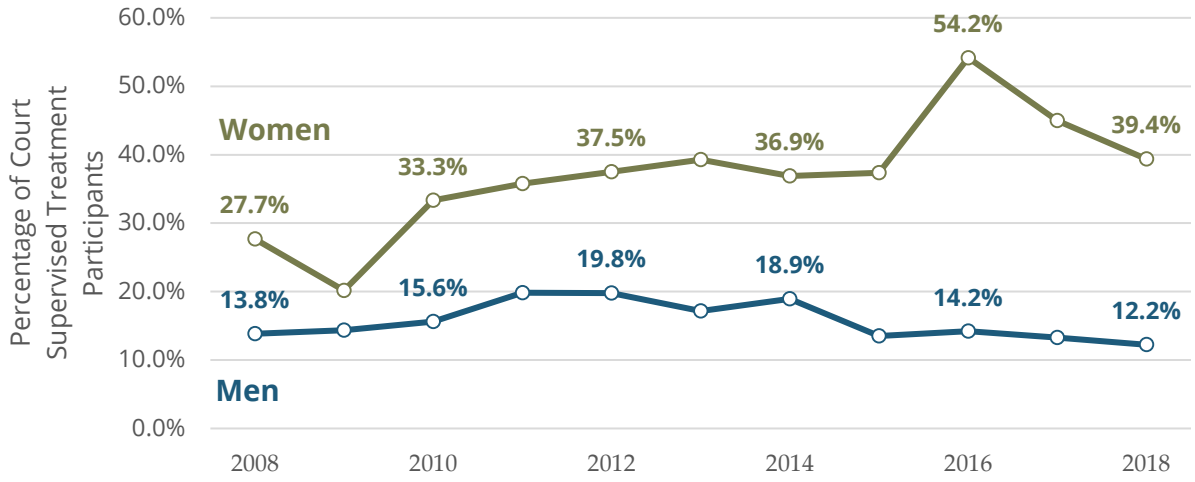
## KEY FINDINGS

There have been large year-to-year changes in the percentage of women in court-supervised treatment for methamphetamine-related arrests from 2008 to 2018; however, the overall trend in this subgroup are increases from 28% in 2008 to 40% in 2018. For men, there has been less variation, with a rise from 2008 (14%) to 2011 (20%) and then gradually decreasing to 12% in 2018 (Figure 14).

[4] Information about the drug court program is available from: https://health.wyo.gov/behavioralhealth/mhsa/cst/

## Figure 14: With Some Variation, the Percentage of Women Who Participated in Court Supervised Treatment for Methamphetamine Increased From 2008 to 2018

*Participation in court supervised treatment for methamphetamine by gender from 2008 to 2018*




Note: Data table with all data values is provided in Table 13 in Appendix E.

Source: Wyoming Court Supervised Treatment Program, 2008 to 2018

# *Methamphetamine-Involved Custodial Arrests*

WASCOP collects crime and law enforcement data across all twenty-three counties in Wyoming. For this data collection, police and sheriff officers complete a short questionnaire after each custodial arrest. The survey is separate from the official paperwork for each custodial arrest. Officers indicated on the survey if the arrest was influenced or related to substance use, regardless of the final charges given to the person. The survey asks the officers to identify if the arrest involved alcohol, methamphetamines, marijuana, or other drugs.

## NOTES

- A variety of factors may influence the number and types of custodial arrests. Some of these factors may include:
    - The prevalence of different offenses within the community,
    - Law enforcement agency and community prioritization of particular offenses,
    - The number of law enforcement officers available, and
    - The available additional resources, such as funding, directed toward specific problems.
- The officer does not explain on the survey what led them to decide if and how the arrest involved substance use, or what exactly lead them to determine if it involved the substances described above.

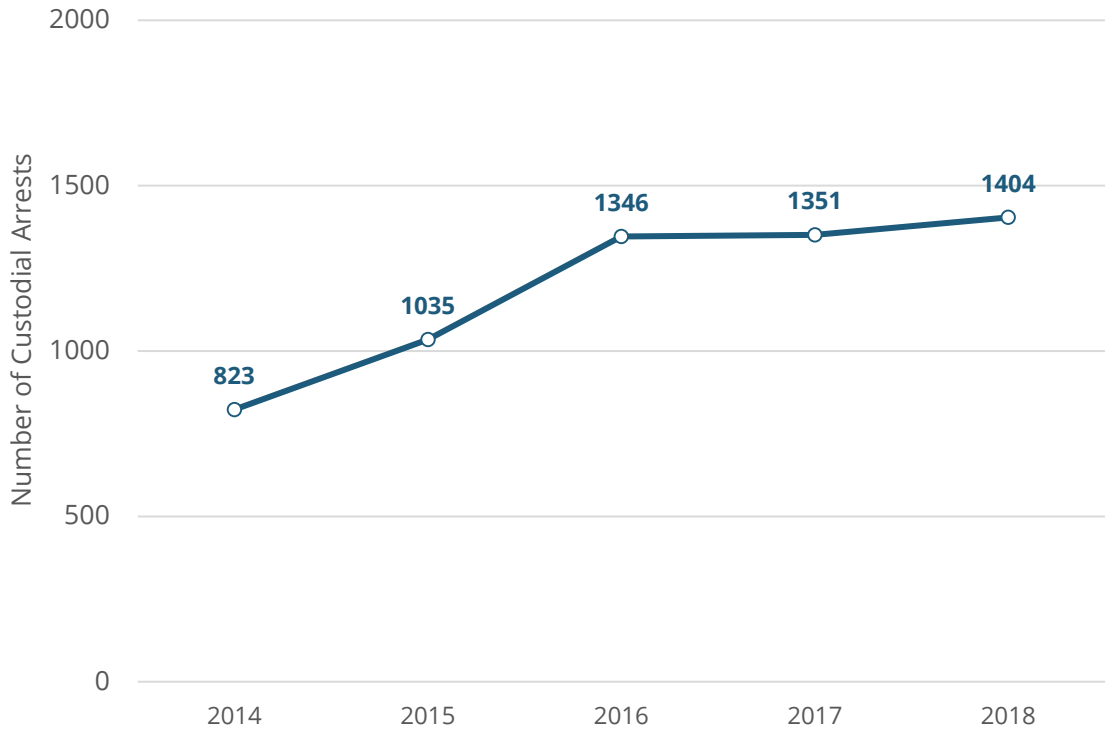
## KEY FINDINGS

The number of methamphetamine-related custodial arrests increased by 71% from 2014 to 2018, going from 823 methamphetamine-related arrests in 2014 to 1,404 in 2018 (Figure 15).

Each year from 2014-2018, the state averaged 205 methamphetamine-related arrests per 100,000 population. The rates across the 23 counties varied substantially. They were highest in Converse County at 410 methamphetamine-related arrests per 100,000 population and lowest in Teton County at 34 (Figure 16).

## Figure 15: Methamphetamine Arrests in Wyoming Have Increased 71% Since 2014

*The number of methamphetamine custodial arrests in Wyoming from 2014 to 2018*




Source: WASCOP, 2014 – 2018

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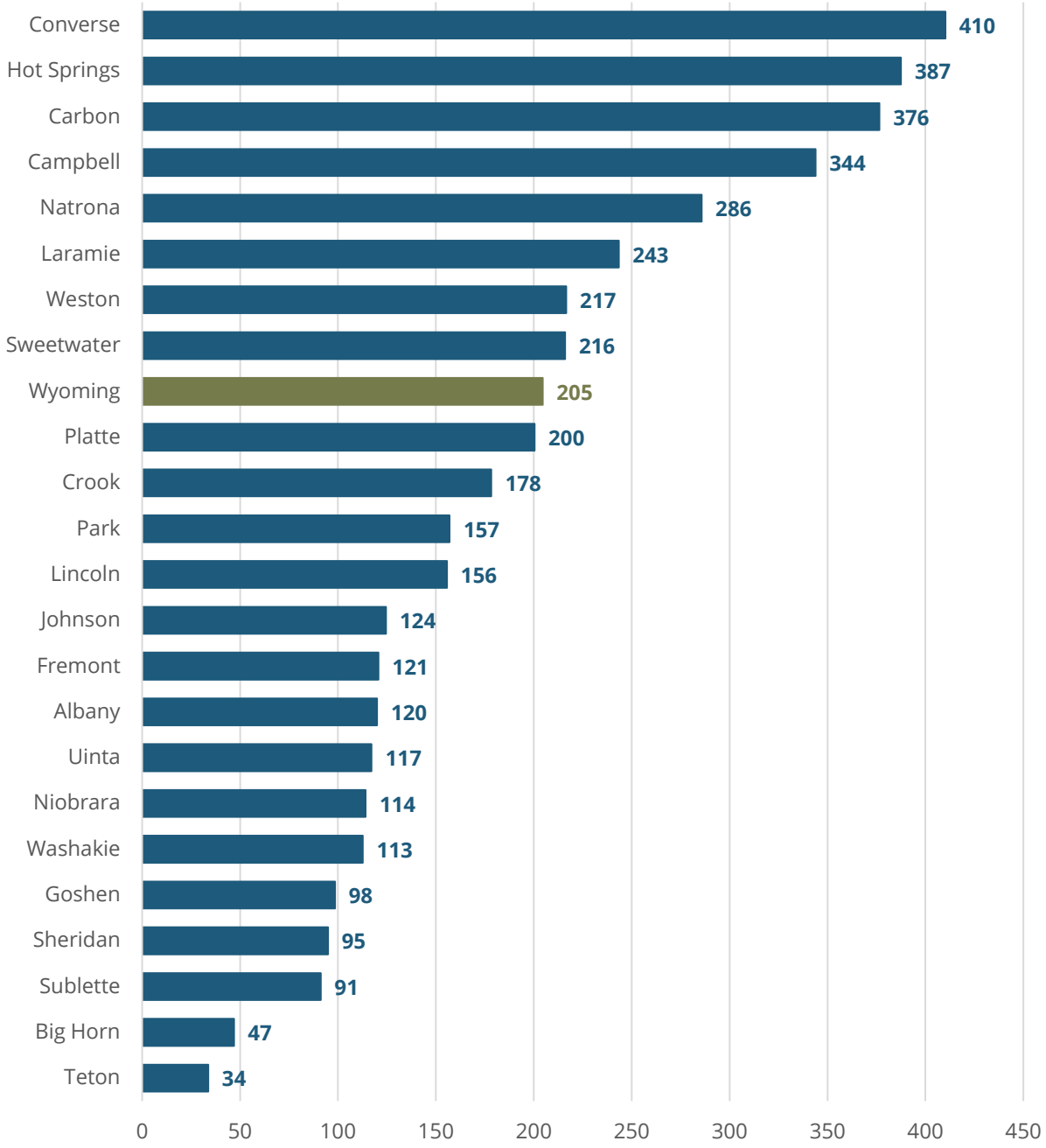
## Figure 16: Methamphetamine Arrest Rates Vary by County

*Average annual methamphetamine custodial arrests in Wyoming from 2014 to 2018 per 100,000 people*




Note: 2014 – 2018 US Census Bureau population estimates for Wyoming were used to calculate rates per 100,000.

Source: WASCOP, 2014 – 2018

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# *Positive Drug Tests*

The State Lab receives samples from various agencies across the state, including law enforcement, family services, and corrections, with requests to test for substance use. As part of those requests, the Wyoming Department of Corrections conducts drug testing on inmates suspected of substance abuse. The Wyoming Department of Family Services orders testing on people with whom they come into contact when the agency suspects drug abuse in children or adults. The State Lab also receives court-ordered samples from people who are on parole and probation.

Samples include blood and urine, and the lab tests them for the presence of drugs and alcohol. These tests include screening and confirmation for the stimulants cocaine and amphetamine. The lab classifies the samples as presumptive positive, which means they are positive by enzyme immunoassay. The presumptive positive samples then undergo gas chromatography-mass spectrometry (GC-MS) to confirm the enzyme immunoassay and better differentiate the substances. The lab considers samples that have GC-MS results consistent with stimulants to be confirmed positive samples. For the current report, the State Lab provided the total percentage of drug test samples that were presumptive positive for stimulants and the total percentage of samples that were confirmed positive.

## NOTES

- These data include only samples submitted to the State Lab for analysis and may not represent all samples collected by the referring agencies. Pre-screening at some collection facilities may bias the data.
- The State Lab tests the samples for stimulants in aggregate; therefore, specific drugs cannot be separated. For example, positive results could include cocaine, amphetamine, or a combination of both.
- The provided results from the State Lab for this report do not differentiate the agency that supplied the sample.
- Values provided do not represent unique individuals. Agencies can submit multiple samples from individuals, and it is common practice in the Department of Corrections as they monitor people on probation and parole.

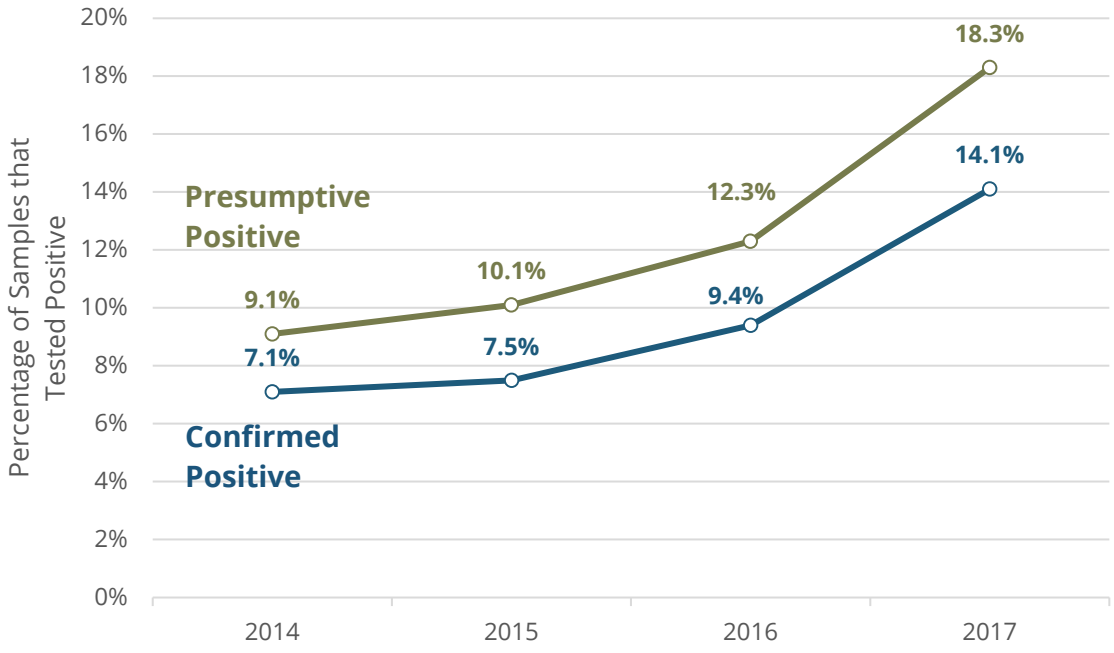
## KEY FINDINGS

In calendar years 2014-2017, on average, 11.6% of samples received per year were presumptive positive, while 8.9% were confirmed positive for cocaine and/or amphetamine[5].

The percentage of presumptive positive samples and the percentage of confirmed positive samples increased over time. In 2014, 9.1% of the samples were presumptively positive, and 7.1% were confirmed positive for stimulants. These percentages increased each year until 2018, 18.3%, and 14.1% were presumptive and confirmed positive for stimulants, respectively (Figure 17).

### Figure 17: The Percentage of Samples That Tested Positive for Stimulants Has Increased Since 2014

*Percentage of samples that tested positive for stimulants from the State Lab from 2014 to 2017*




Note: Data table with all data values is provided in Table 14 in Appendix E.

Source: Wyoming Public Health Laboratory, 2014 – 2017

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[5] These percentages are weighted based on the number of samples received each year from 2014 to 2017. Appendix E presents the annual number of samples.

# *Stimulant Overdose Related Deaths*

The CDC, National Center for Health Statistics (NCHS) receives information from all death certificates in the country. For Wyoming, the CDC receives this information from the WDH Vital Statistics Service (VSS). These agencies standardize the information from the causes of death listed on the death certificate and classifies them into ICD-10 diagnostic codes. This information is available to query and explore, in the detailed mortality tables of the CDC WONDER system, which provides age-adjusted mortality rates per 100,000 population. This report examined the poisoning deaths due to all stimulants in Wyoming and the nation using CDC WONDER.

## NOTES

- The information on the cause of death is dependent on the reporting parties and may not be recorded consistently. Also, the total contribution of a given cause of death may not be reflected in the underlying cause of death fields on the death certificate.
- Psychostimulants could include drugs of abuse, such as methamphetamine, as well as therapeutic drugs such as mixed amphetamine salts (Adderall™) and methylphenidate (Ritalin™). Information on which types of psychostimulants are contributing the most to stimulant overdose deaths is generally not available.
- Diagnostic specialists at the WDH VSS and CDC standardize the underlying cause of death information from the death certificates using the ICD-10 diagnostic coding system. The ICD-10 diagnostic codes used in this report to determine stimulant related deaths are X40-X44, X60-X64, X85, Y10-Y14, and a contributing cause of death of T43.6. The contributing cause code T43.6 includes overdose by psychostimulants with abuse potential but excludes cocaine.
- The ICD-10 coding does not differentiate between deaths due to prescription stimulants and deaths because of illicit stimulants
- To account for changes in population and uneven age distributions, the CDC calculated age-adjusted rates per 100,000 population. This report presented five-year moving averages smooth year-to-year variations.

## KEY FINDINGS

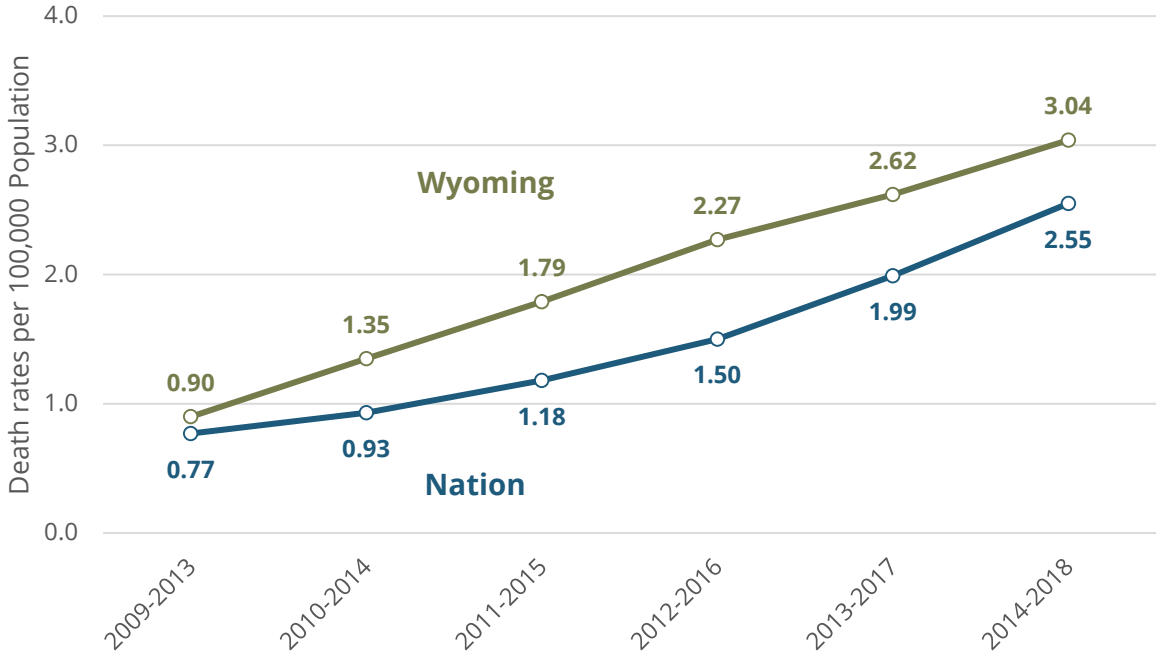
As seen in Figure 18, there has been a relatively steady increase in the rate of stimulant-related overdose deaths from 2008 to 2018. Wyoming's rates for stimulant related deaths have gone from 0.7 deaths per 100,000 population (2008-2012) to 3.0 in the most recent years (2014-2018), representing a 350% increase in Wyoming's rates.

The nation has seen increases going from 0.6 per 100,000 population for the 2008-2012 measurements to 2.6 for the 2014-2018. Generally, Wyoming has seen a notably higher increase in stimulant related overdose death rates than the nation as a whole.

When the Wyoming rates are examined by age categories in Figure 19, the highest number of deaths was between the ages of 35 and 44, at 6.7 deaths per 100,000 population, followed by 5.5 in the 45 to 54 age group. Wyoming's death rates are higher than the nation for three of the four age groups.

## Figure 18: Stimulant-Overdose-Related Death Rates per 100,000 Have Increased for Both Wyoming and the Nation

*Age-adjusted death rates per 100,000 population for stimulant overdoses from 2009 to 2018 based on 5-year moving averages.*




Note: Rates exclude cocaine use overdoses. Mortality rates from the following ICD-10 diagnostic codes, X40-X44, X60-X64, X85, Y10-Y14, and T43.6. Complete estimates and confidence intervals for this data are found in Table 9 in Appendix D.

Source: CDC WONDER – Detailed Mortality Tables, 2009 – 2018

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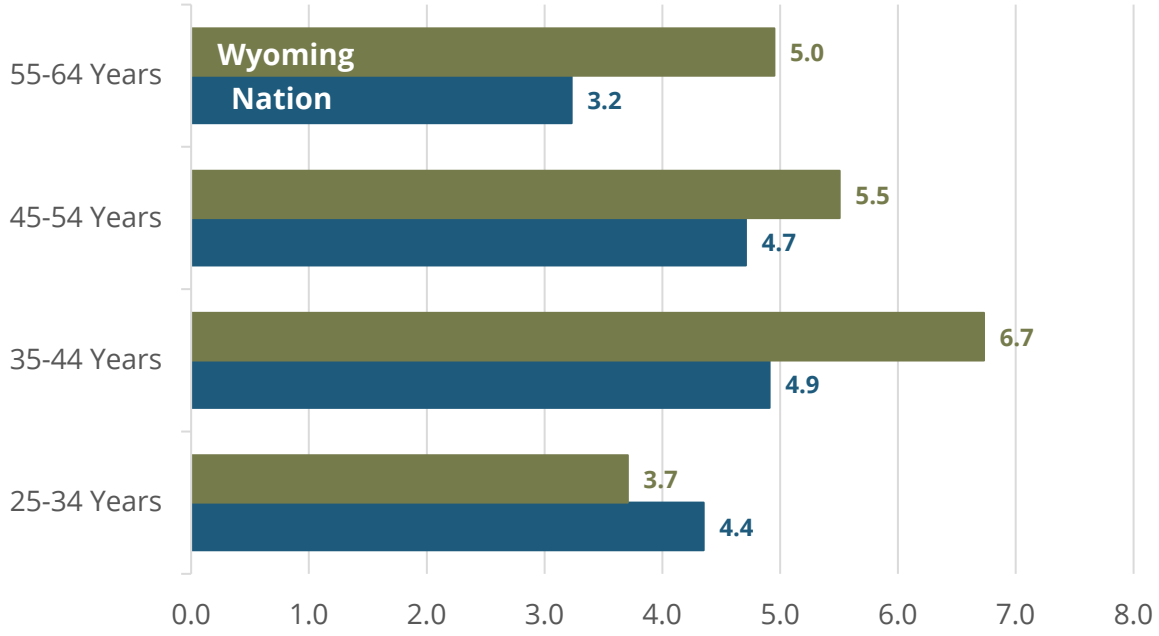
## Figure 19: In Three of Four Age Categories, Wyoming's Stimulant-Overdose-Related Death Rates Are Higher than the Nation's

*Death rates per 100,000 population for stimulant overdoses by age categories based on combined years data from 2014 to 2018*




Note: Stimulant related overdose death rates for ages under 25, and for ages 65 and older were suppressed due to small numbers of people with this diagnosis in Wyoming. Crude rates were used over age-adjusted rates. Rates exclude cocaine use overdoses. Mortality rates based on ICD-10 diagnostic codes, X40-X44, X60-X64, X85, Y10-Y14, and T43.6. Complete estimates and confidence intervals for this data are found in Table 10 in Appendix D.

Source: CDC WONDER – Detailed Mortality Tables, 2014 – 2018

# *Amphetamine-Related Hospitalizations*

Wyoming hospital discharge data includes inpatient hospitalizations and outpatient discharges from the Wyoming Hospital Association Discharge Dataset among participating facilities. For inpatient hospitalizations, it includes discharges that are identified by having amphetamine overdoses based on ICD-10-CM code in the primary diagnosis field. This excluded inpatient hospitalizations where amphetamine overdose was a contributing or secondary cause of the hospitalization. Outpatient ER data includes only non-fatal events.

## NOTES

- These data include discharges within Wyoming facilities only. It is estimated that 81% of licensed Wyoming facilities participate in this dataset. However, Teton, Niobrara, Sublette, and Crook counties do not have facilities located within the county that participate in the dataset.
- Facilities are restricted to nonfederal, acute care, or inpatient facilities. It excludes Veterans Affairs, rehabilitation centers, and psychiatric hospitals. Deaths, non-Wyoming residents, and hospitalizations of Wyoming residents in facilities outside of Wyoming are excluded. In addition, sequelae or subsequent discharges, and discharges related to adverse effects of under dosing are excluded.
- Wyoming Statute 26-18-126 Intoxicants and narcotics, commonly referred to as an "Alcohol Exclusion Law" may have an unknown impact on the diagnosing and reporting of specific drugs on Wyoming hospital discharge data.
- These data reflect discharges and not unique individuals. Individuals may appear in the data set multiple times, once for each unique hospital discharge.
- The transition to ICD-10-CM occurred in October 2015, and data prior to this transition is not comparable to the current diagnostic coding system.
- To account for changes in population and to make data comparable, hospital discharge counts were standardized as hospital discharges per 100,000 population.
- Differences in the intent of overdose between inpatient discharges and outpatient ER discharges may reflect the need for additional medical care or monitoring such as mental or behavioral health services.

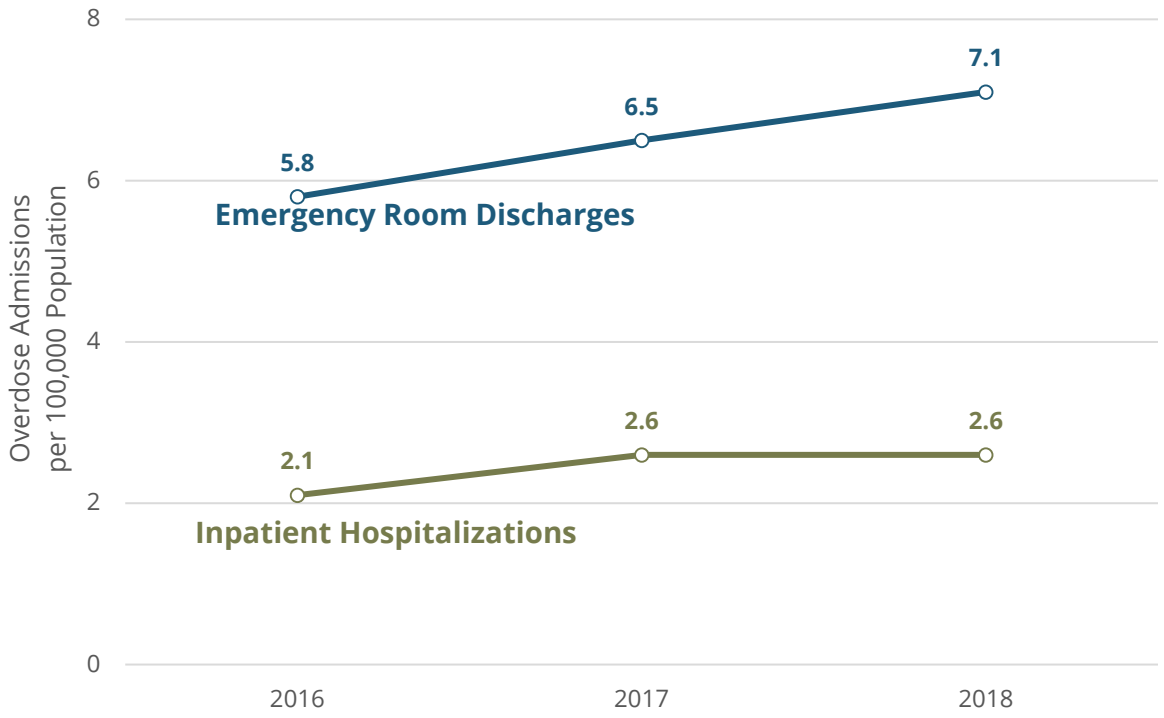
## KEY FINDINGS

Over three years, Wyoming has seen a small increase in ER discharges due to stimulant-related overdose—going from 5.8 ER discharges for stimulant overdoses per 100,000 population in 2016 to 7.1 by 2018. Inpatient hospital discharges for stimulants have remained relatively stable in those same years at an average of 2.4 discharges per 100,000 population (Figure 20).

When stimulant related overdoses are examined based on the intent of the harm (self-harm, unintentional harm, and undetermined intent), ER and inpatient discharges have different distributions. Specifically, 45.2% of inpatient discharges for stimulant-related overdoses involved self-harm, compared to 26.5% of ER discharges. In an inpatient setting, only 11.9% were identified as having an undetermined intent of harm; this category nearly doubled (20.4%) in the Emergency Room (Figure 21).

## Figure 20: ER Discharges Have Seen a Modest Increase in Amphetamine-Related Overdoses While Inpatient Hospitalizations Remain Stable

*Inpatient hospitalizations and ER outpatient discharges for amphetamine-related overdoses per 100,000 population from 2016 to 2018*




Note: Overdose-related data are identified by ICD-10 CM code T43.6 (0-4, 9). Complete estimates and confidence intervals are found in Table 11 in Appendix D.

Source: Wyoming Hospital Association Discharge Dataset, 2016 – 2018

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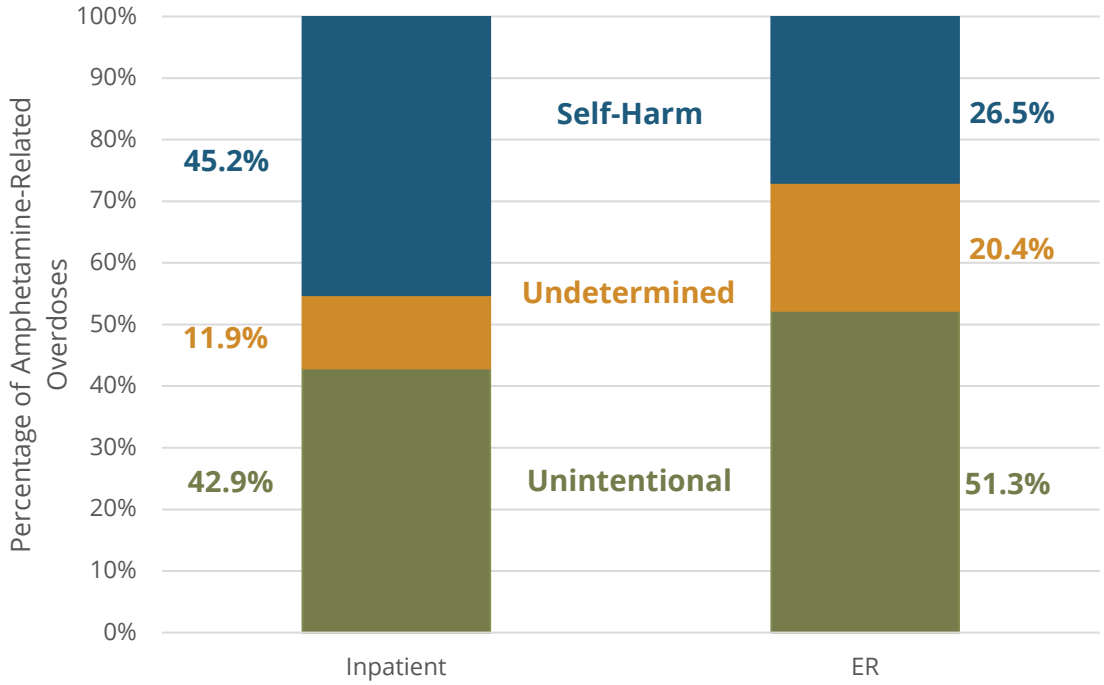
## Figure 21: Inpatient Hospital Discharges were more likely to be Intentional Self-Harm and Outpatient ER Discharges were more likely to be Unintentional Overdose.

*Inpatient hospitalizations and ER outpatient disrcharges for amphetamine related overdoses by intent from 2016 to 2018*




Note: Assaults were excluded because of limited data. Overdose-related data are identified by an ICD-10 CM code related to T43.62, poisoning by, adverse effect of and underdosing of amphetamines, and T43.6, poisoning by, adverse effect of and underdosing of psychostimulants. Differences in the intent of overdose between inpatient discharges and outpatient ER discharges may reflect the need for additional medical care or monitoring such as mental or behavioral health services.

Source: Wyoming Hospital Association Discharge Dataset, 2016 – 2018

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# *Ambulance-Related Incidents Where Stimulant Use Was Suspected*

The Wyoming Ambulance Trip Reporting System (WATRS) is the electronic medical records system patient care report used by emergency medical services (EMS) professionals to record information during prehospital care. This includes the services of transporting, non-transporting, and air ambulance assistance. Incidents reported in WATRS cover all types of service requested, including 911 scene response, interfacility transports, mutual aid requests, and medical transports. WATRS is available to all Wyoming EMS agencies at no charge.

As part of this data reporting, EMS professionals record their primary and impressions of any poisonings or overdoses. They also have the option of providing contributing cause codes using ICD-10-CM. The impressions and contributing cause codes can then be queried to count the number of incidents that EMS personnel suspected involved stimulant poisonings or overdoses.

## NOTES

- WATRS was fully implemented in 2016, so limited trend data are available.
- WATRS is a voluntary system, and the majority—but not all—of the state EMS agencies use it.
- There may be duplicates in the number of counts as both a non-transporting, and a transporting agency may have been on the scene and completed a report. In addition, counts represent incidents and do not represent unique individual patients.
- Data is based on primary and secondary impressions of Poison/OD – Stimulant related incidents. There were zero records in calendar years 2016-2018 using the ICD-10-CM code T43.6, or T43.62 which represent acute stimulant or acute methamphetamine overdose

## KEY FINDINGS

From 2016 to 2018, there was an average of 84.7 incidents per year where EMS personnel suspected stimulant use.

# *Distribution of Schedule II Drugs in Wyoming*

The ARCOS monitors the flow of the Drug Enforcement Act controlled substances from the manufacturer through distribution at the retail level (pharmacies, hospitals, and practitioners). ARCOS data in this report includes information about the following Schedule II stimulant drugs:

- Cocaine,
- Dextro-methamphetamine,
- Amphetamine (Brand name: Aderal™), and
- Methylphenidate (Brand name: Ritalin™).

## NOTES

- For comparison purposes, this report lists the total gram weight distributed per 100,000 population for each substance. These rates come from Report 3 of the ARCOS Retail Drug Summary Reports.
- Methamphetamine has two isomers: levo-methamphetamine (l-methamphetamine) and dextro-methamphetamine (d-methamphetamine). The latter is the potential drug of abuse. The graphs in this report only provide the distribution rates for d-methamphetamine. The ARCOS Drug Summary Reports do not have any data on distribution amounts for d-methamphetamine in Wyoming since 2016.

## KEY FINDINGS

The distribution rate of methamphetamine as a controlled substance, while generally the same or slightly higher than the nation, has been declining. It changed from a high in 2006 of 8.83 grams of methamphetamine per 100,000 population in Wyoming to 0.21 in 2014. In Wyoming, the last two years of available data in 2015 and 2016 had increased to 4.35 grams of methamphetamine per 100,000 population (Figure 22).

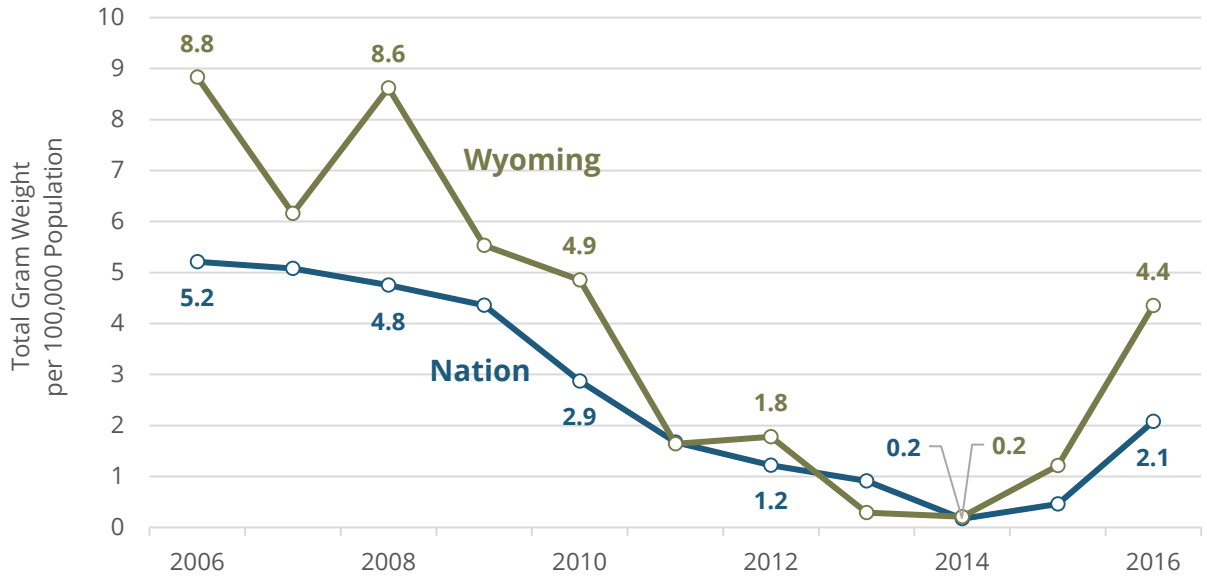
As shown in Figure 23, the amount of amphetamine distributed within Wyoming and the nation is increasing. However, the total gram weight distributed per 100,000 population is less in Wyoming than the nation. The difference in rates was most substantial in 2018, with Wyoming having a rate of 4,901 grams per 100,000 population and the nation registering 6,997.

The distribution rate of methylphenidate is approximately the same in Wyoming and the nation. In 2018, there were 5,780 grams of methylphenidate per 100,000 population in Wyoming and 5,853 in the nation (Figure 24).

In Wyoming, the distribution of cocaine as a controlled substance decreased over time. In 2006 there were 37.3 grams per 100,000 population distributed. By 2018 it was 12.3. This decrease was steeper in Wyoming than the nation (Figure 25).

## Figure 22: Wyoming's Distribution Rate for D-Methamphetamine as a Schedule II Drug Decreased From 2006 to 2014, but Increased in the Last Available Years

*Total gram weight of prescription dextro-methamphetamine distributed per 100,000 people from 2006 to 2016*




Note: This does not include dl-methamphetamine racemic base. ARCOS Drug Summary Reports only include d-methamphetamine data for Wyoming until 2016. Data table with all data values is in Table 15 in Appendix E.

Source: ARCOS, 2006 – 2016

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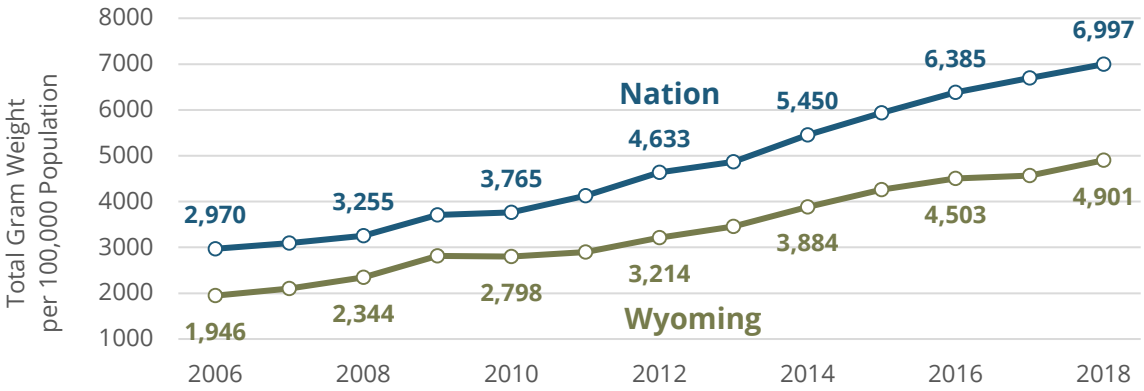
## Figure 23: Distribution of Amphetamine as a Schedule II Drug Is Lower Than the Nation, and Increased With Time

*Total gram weight of prescription amphetamine distributed per 100,000 population from 2006 to 2018*




Note: Data table with all data values is provided in Table 16 in Appendix E.

Source: ARCOS, 2006 – 2018

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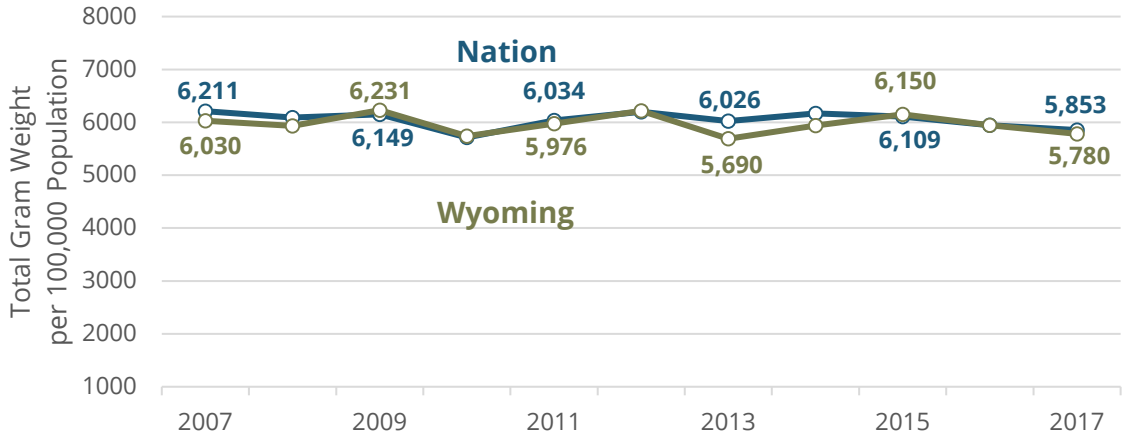
## Figure 24: Distribution Rate of Methylphenidate as a Schedule II Drug is Similar to the Nation

*Total gram weight of prescription methylphenidate distributed per 100,000 people from 2007 to 2017*




Note: Data table with all data values is provided in Table 17 in Appendix E.

Source: ARCOS, 2007 – 2017

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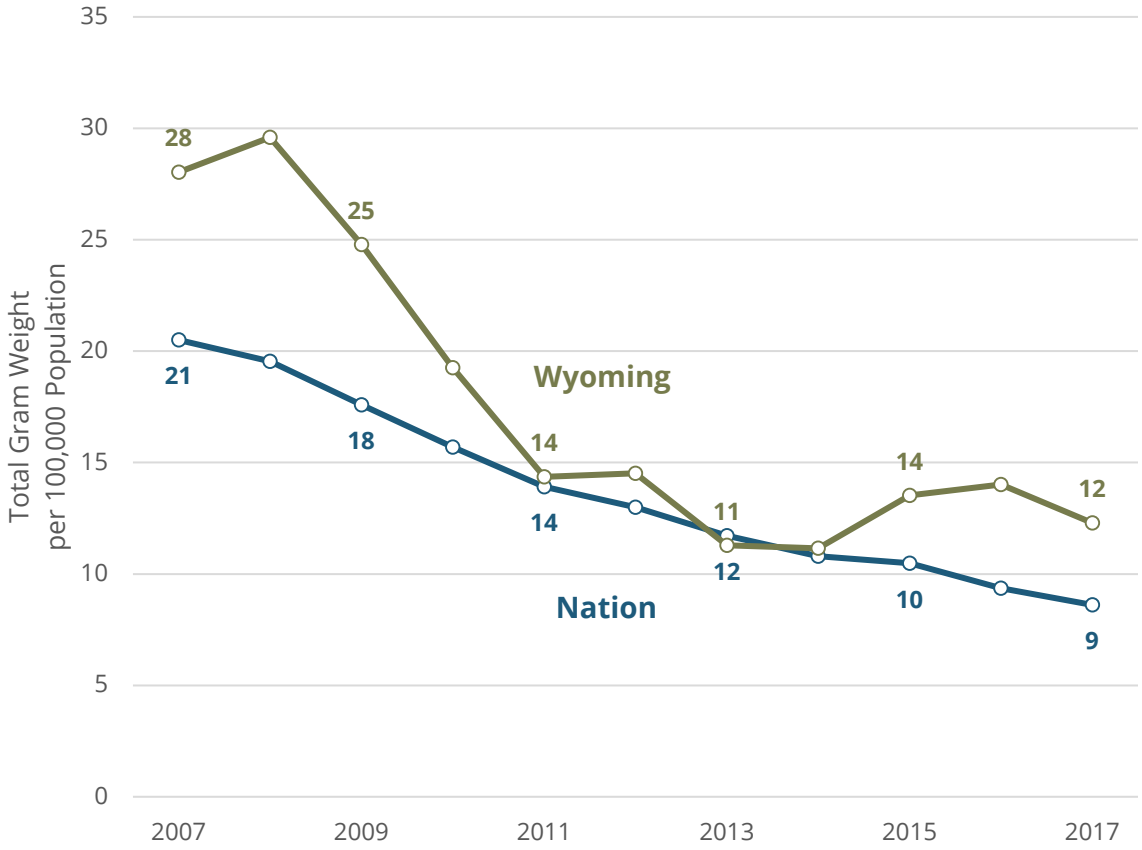
## Figure 25: Distribution Rate of Cocaine as a Schedule II Drug Has Been Decreasing with Time in both Wyoming and the Nation

*Total gram weight of prescription cocaine distributed per 100,000 population from 2007 to 2017*




Note: Data table with all data values is provided in Table 18 in Appendix E.

Source: ARCOS, 2007 – 2017

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# Conclusion

Wyoming has multiple data sources available regarding stimulant use and its related consequences. Based on surveys of youth and adults, only small proportions of these populations report having used stimulants in the past 30 days. Based on data from the NDSUH in Wyoming, less than 2% of people age 12 and older reported using cocaine in the past 30 days, and less than 1% have reported using methamphetamines. These low rates of reporting use have remained consistent over time.

High School, college-aged youth, and young adults reported low rates of stimulant use as well. Based on data from the PNA, less than 2% of 10th and 12th-grade students report using cocaine in the past 30 days, and less than 1% report using methamphetamines. Students from UW on the NCHA survey indicated that fewer than 2% of them used methamphetamines, and under 5% of them used other amphetamines during the 30 days before the survey. Among UW students, there has been a rise in students reporting using prescription stimulants without a prescription sometime in the past 12 months. In 2009 only 2.7% of students reported that type of use. It rose to 6.1% of students in 2017, before falling to 4.8% in 2019. This is one of the few areas where this study found increases in reported use of stimulants in Wyoming.

That is not to say there are not some at-risk populations for stimulant abuse. For instance, among people whom the Wyoming Communicable Disease Department investigated for Hepatitis B or C, nearly one in four of them indicated they used stimulants in 2018. This is a much higher rate than reported in other surveys. The problem is data concerning stimulant use by subpopulations generally remains unavailable. This lack of information may hinder the state and provider's ability to work with, intervene, and prevent the use of stimulants in these potentially higher-risk populations.

Overall coming from these self-report measures, there is little evidence that the proportion of people who use stimulants is increasing. However, that is not the case for some of the consequences of stimulant use. Based on WASCOP's data collection during custodial arrests, methamphetamine-related arrests have increased by 71% from 2014 to 2018 throughout Wyoming. Treatment providers, who report to the WCIS, have seen a 92% increase in the number of people being treated for methamphetamine use disorders. These increases in treatment numbers are being seen in most age groups, but the most common groups who are seeking treatment are between ages 20 and 39.

Additionally, Wyoming is experiencing increases in emergency room hospitalizations and death rates associated with stimulant use. The rate per 100,000 population for stimulant-related emergency room discharges went from 5.8 in 2016 to 7.1 in 2018. While the age-adjusted

stimulant-related overdose death rates went from 0.68 deaths per 100,000 population for the 2008-2012 moving average to 3.04 for the most recent moving average (2014-2018), this represents an increase of 350% in Wyoming's rates.

Based on treatment, law enforcement, and health data, methamphetamine seems to be a rising concern. These trends may warrant continued monitoring and potentially putting in place prevention efforts that target these issues.

The researchers were only able to identify results for one potential risk-factor with available data. This factor was the distribution amounts of stimulant medications to the retail level—pharmacies, physicians, and hospitals—as measured by ARCOS. Based on this data, we did see a notable increase over time for the amounts of amphetamine that have been distributed within Wyoming, increasing by 152% from 2006 to 2018. This contrasts with cocaine as a controlled substance, which has seen distribution rates decrease nationally and in Wyoming.

Overall, this report provides a view of stimulant use in Wyoming, which includes the reported consumption rates, adverse consequences of that use, and the single identified risk factor with available data. Additional data collection efforts could also help address the observed disparities between many of the negative consequences of stimulant use, which are increasing with time, and the low reported use rates, which have generally remained stable. Prevention efforts might benefit from additional data about the risk and protective factors, and other populations that might be at a higher risk. Such measures could help the prevention system address the factors driving both the consumption of stimulants and its consequences.

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# Appendix A. Key Terms

## Table 1: Key Terms Related to Stimulant Drug Use

*Stimulant drug use has many related terms and definitions that need to identified and clarified.*

| Term | Definition | Source |
|---|---|---|
| Intoxication | A condition that follows the administration or consumption of a psychoactive substance causing disturbances in the level of consciousness, cognition, perception, judgment, affect or behavior, or other psychophysiological functions and responses. | WHO |
| Poisoning | According to the WHO, poisoning is "a state of major disturbance of consciousness level, vital functions, and behavior following the administration in excessive dosage (deliberately or accidentally) of a psychoactive substance. In the field of toxicology, the term poisoning is used more broadly to denote a state resulting from the administration of excessive amounts of any pharmacological agent, psychoactive or not." See also: overdose; intoxication. | WHO |
| Misuse | SAMHSA defines prescription misuse as "intentional or unintentional use of medication without a prescription, in a way other than prescribed." | SAMHSA |
| Nonmedical Use of Prescription Drugs | Nonmedical use of prescription-type drugs is defined as use of these drugs without a prescription or use that occurs simply for the experience or feeling the drug causes; use of over-the-counter (OTC) drugs and legitimate use of prescription-type drugs are not included. | SAMHSA |
| Prescription Drug Abuse | The use of a medication without a prescription, in a way other than as prescribed, or for the experience or feelings elicited. | NIDA |
| Overdose | The use of any drug in such an amount that acute adverse physical or mental effects are produced. Deliberate overdose is a common means of suicide and attempted suicide. In absolute numbers, overdoses of licit drugs are usually more common than those of illicit drugs. Overdose may produce transient or lasting effects, or death. The lethal dose of a particular drug varies with the individual and with circumstances. | WHO |
| Substance Use Disorders | Substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home. According to the DSM-5, a diagnosis of substance use disorder is based on evidence of impaired control, social impairment, risky use, and pharmacological criteria. Substance use disorders are categorized as mild, moderate, or severe determined by the number of diagnostic criteria met by an individual. | NIDA |

# Appendix B. Data Sources

**Table 2: Key Acronyms for Stimulant-Related Datasets**

| Acronym | Full Name | Years Identified |
|---|---|---|
| ARCOS | Automation of Reports and Consolidated Orders System | 2006 - 2018 |
| CDC WONDER | Centers for Disease Control and Prevention—Wide Ranging Online Data for Epidemiologic Research | 2009 - 2018 |
| NCHA | National College Health Assessment | 2009 - 2019 |
| NSCH | National Survey of Children's Health | 2016 - 2017 |
| NSDUH | National Survey on Drug Use and Health | 2003 - 2018 |
| PNA | Prevention Needs Assessment | 2001 - 2018 |
| WATRS | Wyoming Ambulance Trip Reporting System | 2016 - 2018 |
| WASCOP | Wyoming Association of Sheriffs and Chiefs of Police | 2014 - 2018 |
| WCIS | Wyoming Client Information System | 2013 - 2018 |
| | Wyoming Court Supervised Treatment Program | 2008 - 2018 |
| | Wyoming Communicable Disease Unit | 2016 - 2017 |
| | Wyoming Hospital Association | 2016 - 2018 |
| PRAMS | Wyoming Pregnancy Risk Assessment Monitoring System | 2016 - 2017 |
| | Wyoming Public Health Laboratory | 2014 - 2017 |

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## *Automation of Reports and Consolidated Orders System (ARCOS), 2006 – 2018*

The DEA maintains ARCOS to monitors the flow of DEA controlled substances from their point of manufacture through commercial distribution channels to point-of-sale or distribution at the dispensing/retail level (hospitals, retail pharmacies, practitioners, mid-level practitioners, and teaching institutions). ARCOS tracks the gram weight of all Schedule II stimulants, which include Cocaine, Dextro-methamphetamine, Amphetamine, and Methylphenidate. ARCOS provides an annual report that includes state-level distribution amounts and rates per 100,000 population.

https://www.deadiversion.usdoj.gov/arcos/

## *CDC Wonder, 2009 – 2018*

CDC Wonder obtains public health data, including mortality data from United States death certificates, at the county level. The listed causes of death are systematically cleaned and categorized based on the ICD 10 diagnostic codes, which allows data queries of all deaths across the United States. This allows for an examination of poisoning deaths due to stimulant drug poisonings.

https://wonder.cdc.gov/

## *National College Health Assessment (NCHA), 2009 – 2019*

The NCHA implemented by the American College Health Association, provides national and state-level data on the use of tobacco, alcohol, illicit drugs, and mental health among college students in the United States. Data collected include self-reported use of illicit drugs. This report used survey results from Fall 2008 to Spring 2019.

https://www.acha.org/NCHA/About_ACHA_NCHA/Survey/NCHA/About/Survey.aspx

## *National Survey of Children's Health (NSCH), 2016 – 2017*

The NSCH provides a national web and mail-based parent/caregiver completed survey on the physical mental and social health and well-being of non-institutionalized children 0-17 years.

The survey had two questions related to stimulants. Neither question refers specifically to the use of stimulants. The first question, *"has a doctor or other health care provider EVER told you that this child has Attention Deficit Disorder or Attention Deficit/Hyperactivity Disorder that is, ADD or ADHD? If yes, does this child CURRENTLY have the condition?"* This question estimates the proportion of children 3-17 in Wyoming who have ADD or ADHD. The second question asks, "[Is] *this child…CURRENTLY taking medication for ADD or ADHD?"*

https://www.childhealthdata.org/

## *National Survey on Drug Use and Health (NSDUH), 2003 – 2018*

The NDSUH provides national and state-level data on the use of tobacco, alcohol, illicit drugs, and mental health among United States non-institutionalized civilians ages 12 and older. Data collected include self-reported use of illicit drugs.

https://nsduhweb.rti.org/respweb/homepage.cfm

## *Prevention Needs Assessment (PNA), 2001 – 2018*

The PNA surveys Wyoming middle and high school students biennially at both the state and county levels. The survey was an attempted census survey of all 6th, 8th, 10th, and 12th-grade students enrolled in Wyoming public schools. Data collected about health behaviors include self-reported drug use sometime in the past 30 days.

https://www.pnasurvey.org/

## *Wyoming Ambulance Trip Reporting System (WATRS), 2016 – 2018*

WATRS is an electronic system used by emergency medical services (EMS) professionals to record information during prehospital care. This includes the services of transporting, non-transporting, and air ambulance assistance. Incidents reported in WATRS cover all types of service requested, including 911 scene response, interfacility transports, mutual aid requests, and medical transports. The WATRS is available to all Wyoming EMS agencies at no charge. As part of this data reporting, EMS professionals record their primary and impressions of the incident. They also have the option of providing preliminary diagnoses based on ICD-10-CM classifications. The data in WATRS can be queried to count the number of incidents that EMS personnel suspected involved stimulant poisonings or overdoses.

https://health.wyo.gov/publichealth/ems/watrs/

## *Wyoming Association of Sheriffs and Chiefs of Police (WASCOP), 2014 – 2018*

WASCOP collects crime and law enforcement data across all twenty-three counties in Wyoming. Custodial arrest is defined as "an individual restrained by someone acting under authority in connection with a crime, accompanied by or followed by taking that individual into custody."

https://www.wascop.com/

## *Wyoming Client Information System (WCIS), 2013 – 2018*

WCIS is an administrative system used by the state-funded mental health and substance abuse treatment providers. The WDH and treatment providers use the WCIS for case tracking and treatment reimbursement from the state. The providers record their client's information at admission, discharge, and other points in treatment. In particular, the substance abuse treatment providers identify at admission the substances the patients are being treated for. Based on this data, the WDH, who administer the WCIS, counted the number of substance-abuse-treatment admissions involving different types of stimulants including, cocaine, methamphetamine, amphetamine, or some other stimulant.

https://health.wyo.gov/behavioralhealth/mhsa/wcis-login/

## *Wyoming Court Supervised Treatment Program, 2008 – 2018*

The CST Program (or Drug Court) provides sentencing alternatives for substance abuse cases within the Wyoming, state-level judicial system. Participants are non-violent adult or juvenile offenders. In Wyoming, there are four categories of court-supervised treatment: Adult, Juvenile, Tribal and DUI. Participants must be admitted to the program and must either enter an admission, or a guilty or nolo contendere plea or a guilty plea pursuant to Wyoming Statute 7-13-301; sign a consent decree under Title 14 of the Wyoming statutes; be on parole under the provisions of Wyoming Statute 7-13-401.

As part of the Drug Court Program, the WDH Behavioral Health Division maintains an administrative data collection system that tracks the status and progress of Drug Court

participants in their programs. As part of that system, the drug courts identify the substance for which the patients are receiving an alternative sentence and treatment. For this report, the WDH Behavioral Health Division provided the percentage of drug court referrals that involved stimulant use. These percentages were broken down by year and gender.

https://health.wyo.gov/behavioralhealth/mhsa/cst/

## *Wyoming Communicable Disease Unit, 2016 – 2017*

The WDH Communicable Disease Unit investigates reports of sexually transmitted diseases including syphilis, gonorrhea, Hepatitis B and C, and chlamydia. Through these investigations, patients are asked about risk factors that may have increased their risk of disease, including the use of drugs. During interviews conducted by WDH among those diagnosed with a reportable communicable disease, questions about past and current drug use are asked as part of a series of questions about risk factors.

https://health.wyo.gov/publichealth/communicable-disease-unit/

## *Wyoming Hospital Association, 2016 – 2018*

Wyoming hospital discharge data includes inpatient hospitalizations and outpatient discharges from the Wyoming Hospital Association Discharge Dataset among participating facilities. For inpatient hospitalizations, it includes amphetamine overdose hospitalizations that are identified by having an amphetamine overdose ICD-10-CM code in the primary diagnosis field. This excluded hospitalizations where amphetamine overdose was a contributing or secondary cause of the hospitalization. Outpatient ER data includes discharges with an overdose code in any diagnosis field.

http://www.wyohospitals.com/

## *Wyoming Pregnancy Risk Assessment Monitoring System (PRAMS): 2016 – 2017*

PRAMS is a mail- and phone-based survey of new mothers. It is designed to identify and monitor their behaviors and experiences before, during, and after pregnancy. It covers such topics as prenatal care, breastfeeding, physical abuse, and infant health care. Also, the survey asks about substance use, including alcohol, tobacco, and other drugs. PRAMS currently covers 83% of all births in the United States. In Wyoming, the current survey asks one question, which covers stimulant use in the month before becoming pregnant.

https://health.wyo.gov/publichealth/chronic-disease-and-maternal-child-health-epidemiology-unit/mch-epi/pregnancy-risk-assessment-monitoring-system-prams/

https://www.cdc.gov/prams/index.htm

## *Wyoming Public Health Laboratory, 2014 – 2017*

The State Lab receives samples from various agencies across the state including law enforcement, family services, and corrections. Samples include blood and urine and are tested for the presence of drugs and alcohol. These tests include screening and confirmation for the stimulants cocaine and amphetamine. The Department of Corrections conducts drug testing on inmates suspected of substance abuse, while the Department of Family Services orders testing when drug abuse is suspected in children or adults. They may also receive court ordered samples from subjects on parole. Samples are classified as presumptive positive, which means they are positive by enzyme immunoassay, and confirmed positive, which means they are positive by gas chromatography–mass spectrometry (GC-MS).

Wyoming Public Health Laboratory, Chemical Testing Program
https://health.wyo.gov/publichealth/lab/ctp/

# Appendix C. Excluded Data Sources

## *Wyoming Trauma Registry, Amphetamine-Related Overdose, 2016-2018*

The Wyoming Trauma Registry captures traumatic injuries that meet the Wyoming Trauma Program inclusion criteria that are admitted to a designated Trauma Center. This includes ICD-10-CM codes of: S000-s-99, T07, T14, T20-T28, T30-T32 and T71.161A-T71.164A. In Wyoming, all licensed hospitals participate in the trauma system at some capacity. It excludes patients who are admitted to the OR or ED and immediately discharged (not admitted as inpatient) and deaths. It also excludes patients who have one of the following diagnosis codes and have other traumatic injuries: superficial external injuries (S00, S01, S20, S30, S40, S50, S60, S70, S80, S90), poisonings, venomous bites, foreign bodies, and previous trauma being admitted for medical reasons.

### NOTES

- This data reflects only cases that meet the Wyoming Trauma Program inclusion criteria admitted to a designated Trauma Center who were tested for a substance (amphetamine and methamphetamine were included for this analysis).
- Patients who are diagnosed with poisoning without other traumatic injury are excluded from this dataset, which may include drug overdoses.
- It is unclear what impact Wyoming Statute 26-18-126 Intoxicants and narcotics, commonly referred to as an "Alcohol Exclusion Law" has in diagnosing and reporting of specific drugs on the Wyoming Trauma Registry data.
- Not all cases are tested for substances and there are no standardized protocols with the registry for substance testing, therefore only counts of positive screens are available as the denominator is unknown.
- These data reflect individual positive substance tests and do not reflect individual patients. Counts between substances are not mutually exclusive, one patient may have a positive test for more than one substance. In addition, these data are not de-duplicated by individual and one individual may appear in the dataset multiple times.

### REASON FOR EXCLUSION

Due to the limitations in this dataset, the WDH Public Health Division and WYSAC determined to exclude this source from the analysis.

## *Youth Risk Behavior Surveillance System (YRBSS), 2001-2015*

The YRBSS is a student survey of high school aged youth. It monitors six categories of health-related behaviors that contribute to the leading causes of death and disability among youth and adults. Regarding stimulant use, the survey asks two questions about lifetime use of cocaine and methamphetamine.

### NOTES

- Like all self-report surveys, a variety of factors (including memory effects and social desirability) may influence responses. Substances that are illegal or less socially accepted, such as methamphetamines and cocaine, may have greater underreporting.
- The survey is only given in the public schools. It does not include students who are homeschooled or who attend private schools.

### REASON FOR EXCLUSION

The YRBSS format has changed. Information regarding substance use among youth in Wyoming is now collected through the PNA, which was included in this report.

# Appendix D. Estimates and Confidence Intervals

### Table 3: Estimates and Confidence Intervals for the Percentage of People Ages 12 and Older Who Used Cocaine in the last Year

| Year | Wyoming | United States |
|---|---|---|
| 2003-04 | 2.30% (1.81%-2.91%) | 2.42% (2.29%-2.55%) |
| 2004-05 | 2.11% (1.65%-2.70%) | 2.31% (2.20%-2.43%) |
| 2005-06 | 2.29% (1.75%-2.99%) | 2.37% (2.25%-2.50%) |
| 2006-07 | 2.49% (1.91%-3.23%) | 2.39% (2.26%-2.53%) |
| 2007-08 | 1.77% (1.28%-2.44%) | 2.22% (2.09%-2.35%) |
| 2008-09 | 1.46% (1.02%-2.09%) | 2.01% (1.90%-2.13%) |
| 2009-10 | 1.39% (0.96%-2.01%) | 1.85% (1.74%-1.97%) |
| 2010-11 | 1.16% (0.77%-1.73%) | 1.64% (1.54%-1.74%) |
| 2011-12 | 1.34% (0.98%-1.81%) | 1.65% (1.55%-1.75%) |
| 2012-13 | 1.27% (0.90%-1.80%) | 1.69% (1.59%-1.81%) |
| 2013-14 | 1.21% (0.82%-1.78%) | 1.66% (1.56%-1.76%) |
| 2014-15 | 1.07% (0.72%-1.58%) | 1.76% (1.66%-1.86%) |
| 2015-16 | 1.42% (1.04%-1.94%) | 1.84% (1.75%-1.94%) |
| 2016-17 | 1.59% (1.18%-2.16%) | 2.03% (1.93%-2.14%) |
| 2017-18 | 1.31% (0.94%-1.83%) | 2.10% (2.00%-2.21%) |

Note: Estimate and the confidence interval within the parentheses. Figure 1 presents the estimates.

Source: NSDUH, 2003 – 2018

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### Table 4: Estimates and Confidence Intervals for the Percentage of People Ages 12 and Older Who Used Methamphetamine in the Last Year

| Year | Wyoming | United States |
|---|---|---|
| 2015-16 | 0.92% (0.57%-1.48%) | 0.58% (0.52%-0.64%) |
| 2016-17 | 0.81% (0.51%-1.28%) | 0.56% (0.51%-0.62%) |
| 2017-18 | 0.59% (0.34%-1.02%) | 0.64% (0.58%-0.70%) |

Note: Estimate and the confidence interval within the parentheses. Figure 2 presents the estimates.

Source: NSDUH, 2015 – 2018

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## Table 5: Estimates and Confidence Intervals for the Percentage of People by Age Group Who Used Cocaine in the Last Year

| Age Group | Year | Wyoming | United States |
|---|---|---|---|
| 12 to 17 | 2003-04 | 1.69% (1.13%-2.53%) | 1.69% (1.54%-1.86%) |
| | 2004-05 | 1.80% (1.24%-2.61%) | 1.65% (1.50%-1.81%) |
| | 2005-06 | 1.79% (1.31%-2.44%) | 1.64% (1.50%-1.81%) |
| | 2006-07 | 1.60% (1.11%-2.28%) | 1.57% (1.43%-1.73%) |
| | 2007-08 | 1.41% (0.97%-2.06%) | 1.38% (1.24%-1.53%) |
| | 2008-09 | 1.13% (0.77%-1.65%) | 1.11% (0.99%-1.24%) |
| | 2009-10 | 0.99% (0.67%-1.46%) | 0.98% (0.86%-1.12%) |
| | 2010-11 | 0.76% (0.48%-1.21%) | 0.95% (0.84%-1.07%) |
| | 2011-12 | 0.80% (0.50%-1.26%) | 0.82% (0.71%-0.94%) |
| | 2012-13 | 0.62% (0.35%-1.07%) | 0.63% (0.54%-0.73%) |
| | 2013-14 | 0.58% (0.32%-1.05%) | 0.60% (0.50%-0.72%) |
| | 2014-15 | 0.56% (0.33%-0.94%) | 0.64% (0.54%-0.77%) |
| | 2015-16 | 0.98% (0.62%-1.56%) | 0.58% (0.48%-0.69%) |
| | 2016-17 | 0.83% (0.51%-1.33%) | 0.53% (0.44%-0.63%) |
| | 2017-18 | 0.54% (0.30%-0.96%) | 0.48% (0.40%-0.58%) |
| 18 to 25 | 2003-04 | 8.03% (6.18%-10.38%) | 6.62% (6.30%-6.96%) |
| | 2004-05 | 6.76% (5.11%-8.90%) | 6.77% (6.45%-7.11%) |
| | 2005-06 | 7.52% (5.93%-9.48%) | 6.92% (6.59%-7.25%) |
| | 2006-07 | 8.16% (6.40%-10.36%) | 6.64% (6.32%-6.99%) |
| | 2007-08 | 6.20% (4.71%-8.12%) | 5.99% (5.68%-6.31%) |
| | 2008-09 | 5.25% (3.90%-7.03%) | 5.46% (5.17%-5.77%) |
| | 2009-10 | 4.50% (3.20%-6.31%) | 5.00% (4.73%-5.29%) |
| | 2010-11 | 3.55% (2.41%-5.21%) | 4.62% (4.34%-4.91%) |
| | 2011-12 | 4.35% (3.21%-5.88%) | 4.59% (4.31%-4.90%) |
| | 2012-13 | 3.88% (2.76%-5.41%) | 4.53% (4.23%-4.85%) |
| | 2013-14 | 3.88% (2.75%-5.46%) | 4.51% (4.22%-4.83%) |
| | 2014-15 | 3.74% (2.51%-5.52%) | 4.98% (4.65%-5.34%) |
| | 2015-16 | 4.81% (3.34%-6.90%) | 5.46% (5.09%-5.86%) |
| | 2016-17 | 4.83% (3.43%-6.76%) | 5.88% (5.51%-6.26%) |
| | 2017-18 | 4.23% (2.89%-6.13%) | 5.99% (5.63%-6.37%) |

| Age Group | Year | Wyoming | United States |
|---|---|---|---|
| 26 or Older | 2003-04 | 1.28% (0.87%-1.89%) | 1.78% (1.64%-1.94%) |
| | 2004-05 | 1.27% (0.85%-1.87%) | 1.62% (1.49%-1.76%) |
| | 2005-06 | 1.37% (0.87%-2.16%) | 1.68% (1.54%-1.82%) |
| | 2006-07 | 1.57% (1.04%-2.38%) | 1.77% (1.61%-1.94%) |
| | 2007-08 | 1.03% (0.59%-1.77%) | 1.68% (1.53%-1.84%) |
| | 2008-09 | 0.83% (0.44%-1.57%) | 1.53% (1.41%-1.67%) |
| | 2009-10 | 0.87% (0.47%-1.57%) | 1.41% (1.28%-1.55%) |
| | 2010-11 | 0.77% (0.42%-1.43%) | 1.21% (1.10%-1.33%) |
| | 2011-12 | 0.88% (0.55%-1.40%) | 1.24% (1.12%-1.37%) |
| | 2012-13 | 0.90% (0.54%-1.49%) | 1.34% (1.22%-1.47%) |
| | 2013-14 | 0.82% (0.47%-1.42%) | 1.30% (1.19%-1.42%) |
| | 2014-15 | 0.68% (0.40%-1.15%) | 1.35% (1.24%-1.47%) |
| | 2015-16 | 0.91% (0.62%-1.36%) | 1.39% (1.29%-1.50%) |
| | 2016-17 | 1.17% (0.79%-1.73%) | 1.59% (1.48%-1.70%) |
| | 2017-18 | 0.95% (0.63%-1.44%) | 1.67% (1.56%-1.79%) |

Note: Estimate and the confidence interval within the parentheses. Figure 3 presents the estimates.

Source: NSDUH, 2003 – 2018

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## Table 6: Estimates and Confidence Intervals for the Percentage of People by Age Group Who Used Methamphetamine in the Last Year

| Age Group | Year | Wyoming | United States |
|---|---|---|---|
| (Age: 12-17) | 2016-2017 | 0.23% (0.11%-0.49%) | 0.16% (0.12%-0.22%) |
| (Age: 18-25) | 2016-2017 | 1.58% (0.97%-2.55%) | 0.93% (0.80%-1.08%) |
| (Age: 26+) | 2016-2017 | 0.75% (0.43%-1.32%) | 0.55% (0.48%-0.61%) |
| (Age: 12-17) | 2017-2018 | 0.22% (0.12%-0.43%) | 0.18% (0.14%-0.24%) |
| (Age: 18-25) | 2017-2018 | 1.17% (0.63%-2.16%) | 0.95% (0.82%-1.09%) |
| (Age: 26+) | 2017-2018 | 0.54% (0.28%-1.03%) | 0.65% (0.58%-0.72%) |

Note: Estimate and the confidence interval within the parentheses. Figure 4 presents the estimates.

Source: NSDUH, 2016 – 2018

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## Table 7: Estimates and Confidence Intervals for the Percentage of New Mothers Who Used Stimulants in the Month Prior to Becoming Pregnant

| Category | Estimate and Confidence Interval |
|---|---|
| Stimulants | 1.5% (0.8 - 2.8) |
| Amphetamines | 0.9% (0.4 - 1.8) |

Note: Estimate and the confidence interval within the parentheses.

Source: PRAMS, 2016 – 2017

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## Table 8: Estimates and Confidence Intervals for the Percentage of Children Taking Medication for ADD/ADHD

| Category | Estimate and Confidence Interval |
|---|---|
| Does Not Have AD(H)D | 90.5% (88.0% - 92.6%) |
| Has AD(H)D | 8.7% (6.7% - 11.2%) |
| Has AD(H)D & is taking meds | 5.4% (3.8% - 7.5%) |
| Has AD(H)D & is not taking meds | 3.3% (2.2% - 5.0%) |

Note: Estimate and the confidence interval within the parentheses. Figure 8 presents the estimates.

Source: NSCH, 2016 – 2017

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## Table 9: Estimates and Confidence Intervals for Age-Adjusted Stimulant Overdose Death Rates per 100,000 Population

| Year | Wyoming | United States |
|---|---|---|
| 2009 - 13 | 0.90 (0.58 - 1.34) | 0.77 (0.75 - 0.78) |
| 2010 - 14 | 1.35 (0.95 - 1.86) | 0.93 (0.91 - 0.95) |
| 2011 - 15 | 1.79 (1.33 - 2.37) | 1.18 (1.16 - 1.20) |
| 2012 - 16 | 2.27 (1.73 - 2.91) | 1.50 (1.49 - 1.52) |
| 2013 - 17 | 2.62 (2.04 - 3.32) | 1.99 (1.97 - 2.01) |
| 2014 - 18 | 3.04 (2.41 - 3.78) | 2.55 (2.52 - 2.57) |

Note: Estimate and the confidence interval within the parentheses. Figure 18 presents the estimates.

Source: CDC-Wonder, 2009 – 2018

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## Table 10: Estimates and Confidence Intervals for Stimulant Overdose Death Rates per 100,000 Population by Age Group

| Ten-Year Age Groups | Nation | Wyoming |
|---|---|---|
| 25-34 Years | 4.35 (4.27 - 4.44) | 3.71 (2.07 - 6.11) |
| 35-44 Years | 4.91 (4.82 - 5.01) | 6.73 (4.31 - 10.02) |
| 45-54 Years | 4.71 (4.62 - 4.80) | 5.51 (3.32 - 8.60) |
| 55-64 Years | 3.23 (3.15 - 3.31) | 4.95 (3.02 - 7.64) |

Note: Crude rates were used over age-adjusted rates. Estimate and the confidence interval within the parentheses. Figure 19 presents the estimates.

Source: CDC-Wonder, 2014 – 2018

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## Table 11: Estimates and Confidence Intervals for the Rate of Amphetamine-Related Hospital Discharges per 100,000 Population

| Discharge Type | Year | Rate (CI) | Count |
|---|---|---|---|
| Inpatient | 2016 | 2.1 (0.8 – 3.2) | 12 |
| | 2017 | 2.6 (1.2 – 3.8) | 15 |
| | 2018 | 2.6 (1.2 – 3.9) | 15 |
| Emergency Room | 2016 | 5.8 (3.8 – 7.7) | 34 |
| | 2017 | 6.5 (4.4 – 8.5) | 38 |
| | 2018 | 7.1 (4.9 – 9.2) | 41 |

Note: Estimate and the confidence interval within the parentheses. Figure 20 presents the estimates.

Source: Wyoming Hospital Association Discharge Dataset, 2016 – 2018

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# Appendix E. Data Tables

## Table 12: Admission to Substance Use Disorder Providers

| Year | Cocaine/ Crack | Metham-phetamine | Other Amphetamines | Other Stimulants | Total |
|---|---|---|---|---|---|
| 2013 | 325 | 1,165 | 475 | 15 | 1,980 |
| 2014 | 347 | 1,458 | 336 | 7 | 2,148 |
| 2015 | 261 | 1,762 | 241 | 18 | 2,282 |
| 2016 | 274 | 2,098 | 83 | 29 | 2,484 |
| 2017 | 252 | 2,059 | 89 | 55 | 2,455 |
| 2018 | 266 | 2,235 | 77 | 47 | 2,625 |

Note: Complete estimates found in Figure 12.

Source: WCIS, 2013-2018

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## Table 13: Court Supervised Treatment by Gender

| | Female | | Male | |
|---|---|---|---|---|
| Year | Cocaine | Methamphetamine | Cocaine | Methamphetamine |
| 2008 | 9.50% | 22.91% | 12.04% | 14.74% |
| 2009 | 7.57% | 21.08% | 13.28% | 18.30% |
| 2010 | 19.70% | 28.79% | 16.24% | 19.80% |
| 2011 | 15.83% | 24.17% | 14.12% | 15.28% |
| 2012 | 19.14% | 32.10% | 18.65% | 21.41% |
| 2013 | 24.10% | 42.77% | 18.12% | 25.89% |
| 2014 | 19.05% | 34.92% | 21.60% | 27.20% |
| 2015 | 20.44% | 44.53% | 18.46% | 29.53% |
| 2016 | 22.06% | 54.41% | 15.88% | 28.52% |
| 2017 | 18.83% | 44.16% | 12.94% | 28.24% |
| 2018 | 13.04% | 40.76% | 14.49% | 30.37% |

Note: Complete estimates found in Figure 14.

Source: Wyoming Court Supervised Treatment Program, 2008 to 2018

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## Table 14: The Percentage of Samples that Tested Positive for Stimulants from the Wyoming State Public Health Laboratory

| Year | % Presumptive Positive | % Confirmed Positive | Total Number of Samples |
|---|---|---|---|
| 2014 | 9.1% | 7.1% | 28,245 |
| 2015 | 10.1% | 7.5% | 30,807 |
| 2016 | 12.3% | 9.4% | 22,381 |
| 2017 | 18.3% | 14.1% | 15,285 |

Note: Complete estimates found in Figure 17.

Source: Wyoming Public Health Laboratory, 2014 – 2017

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## Table 15: Total Gram Weight of Prescription Dextro-Methamphetamine Distributed per 100,000 Population

| Year | Nation | Wyoming |
|---|---|---|
| 2006 | 5.21 | 8.83 |
| 2007 | 5.08 | 6.16 |
| 2008 | 4.75 | 8.62 |
| 2009 | 4.36 | 5.53 |
| 2010 | 2.87 | 4.85 |
| 2011 | 1.67 | 1.64 |
| 2012 | 1.22 | 1.78 |
| 2013 | 0.91 | 0.29 |
| 2014 | 0.17 | 0.21 |
| 2015 | 0.46 | 1.21 |
| 2016 | 2.08 | 4.35 |

Note: Complete estimates found in Figure 22.

Source: ARCOS, 2007 – 2017

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## Table 16: Total Gram Weight of Prescription Amphetamines Distributed per 100,000 Population

| Year | Nation | Wyoming |
|---|---|---|
| 2006 | 2,969.76 | 1,946.28 |
| 2007 | 3,091.82 | 2,101.21 |
| 2008 | 3,254.76 | 2,344.45 |
| 2009 | 3,704.14 | 2,814.86 |
| 2010 | 3,764.82 | 2,797.61 |
| 2011 | 4,127.99 | 2,895.49 |
| 2012 | 4,632.79 | 3,214.27 |
| 2013 | 4,864.41 | 3,456.85 |
| 2014 | 5,450.42 | 3,883.75 |
| 2015 | 5,933.13 | 4,261.88 |
| 2016 | 6,384.61 | 4,502.99 |
| 2017 | 6,693.29 | 4,566.14 |
| 2018 | 6,997.06 | 4,900.89 |

Note: Complete estimates found in Figure 23.

Source: ARCOS, 2007 – 2017

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## Table 17: Total Gram Weight of Prescription Methylphenidate Distributed per 100,000 Population

| Year | Nation | Wyoming |
|---|---|---|
| 2006 | 5,763.59 | 5,956.03 |
| 2007 | 6,211.24 | 6,030.17 |
| 2008 | 6,088.07 | 5,936.32 |
| 2009 | 6,149.07 | 6,230.66 |
| 2010 | 5,714.02 | 5,739.12 |
| 2011 | 6,034.28 | 5,976.23 |
| 2012 | 6,197.64 | 6,219.59 |
| 2013 | 6,026.43 | 5,689.51 |
| 2014 | 6,172.01 | 5,936.85 |
| 2015 | 6,108.70 | 6,149.91 |
| 2016 | 5,945.77 | 5,945.77 |
| 2017 | 5,853.38 | 5,779.72 |

Note: Complete estimates found in Figure 24.

Source: ARCOS, 2007 – 2017

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## Table 18: Total Gram Weight of Prescription Cocaine Distributed per 100,000 Population

| Year | Nation | Wyoming |
|---|---|---|
| 2006 | 21.18 | 37.25 |
| 2007 | 20.5 | 28.03 |
| 2008 | 19.54 | 29.59 |
| 2009 | 17.59 | 24.79 |
| 2010 | 15.69 | 19.26 |
| 2011 | 13.91 | 14.36 |
| 2012 | 12.99 | 14.51 |
| 2013 | 11.71 | 11.28 |
| 2014 | 10.79 | 11.15 |
| 2015 | 10.48 | 13.53 |
| 2016 | 9.36 | 14.02 |
| 2017 | 8.61 | 12.29 |

Note: Complete estimates found in Figure 25.

Source: ARCOS, 2007 – 2017

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