

# Acute Consequences of Methamphetamine Use Among Participants of Syringe Service Programs

ADAI

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Drug overdose deaths involving methamphetamine have risen over 600% in the last decade, from 83 methamphetamine-related deaths in 2008 to 531 deaths in 2018. Gathering information on the prevalence of *nonfatal* overdoses involving methamphetamine is complicated because the clinical presentation of potentially fatal symptoms of a methamphetamine overdose is more complex and variable than in opioid overdoses.

The *2019 Washington State Syringe Exchange Health Survey*<sup>1</sup> documented self-reported, nonfatal, acute consequences of methamphetamine use among participants of syringe service programs (SSPs) who reported recent use of methamphetamine. This summary provides an initial look at the frequency of different adverse events and the characteristics of people who use methamphetamine and reported these adverse events.

## Methamphetamine use

Of the 1,269 SSP participants who responded to the survey, 88% (n=1,116) said they had used methamphetamine within the last three months. Of these 1,116 people who had recently used methamphetamine (PWUM), nearly half (48%, n=533) had used methamphetamine only by itself (i.e., not in combination with heroin). A similar proportion (47%, n=529) had used methamphetamine both by itself and also in combination with heroin. Only a small minority (5%, n=53) had used methamphetamine mixed with heroin (i.e., “goofball”) exclusively (Figure 1). Over half of PWUM (58%) reported they had used any methamphetamine on five to seven days during the past week.

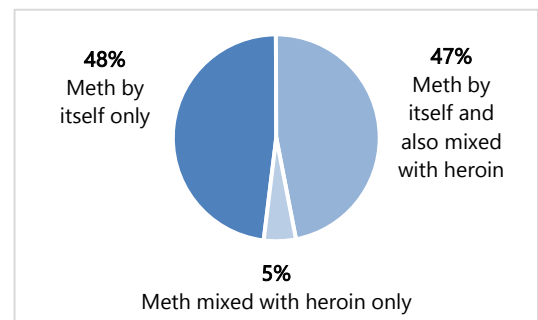


Figure 1. Patterns of methamphetamine use among those who used meth in the past 3 months, n=1,116

Nearly three quarters (73%) reported they had used methamphetamine in the last three months by injection. Most of these respondents reported also injecting an opioid, a predictably high percentage given the survey was administered at syringe service programs. An even higher proportion (79%) reported they had smoked methamphetamine; recent treatment admissions data in the state indicate that a majority of people presenting with methamphetamine as their main drug had reported smoking it.

## Acute consequences of methamphetamine use

Until recently, the term “overdose” has not been commonly used in drug-using communities in association with methamphetamine, perhaps reflecting a long-standing, popular belief that while a person could get “too high” or be “too high for too long” on methamphetamine, using too much methamphetamine did not usually trigger a potentially fatal event as could happen with heroin or other opioids. Many people who use methamphetamine indicate that they do not believe it is possible to die from taking too much methamphetamine. The term

<sup>1</sup> The *2019 Washington State Syringe Exchange Health Survey* was conducted by ADAI, Public Health – Seattle & King County and 21 syringe service providers. The final report can be found here: <https://adai.uw.edu/wa-state-syringe-exchange-health-survey-2019-results/>.

“overamping” has been more popularly used to describe an acute yet nonfatal consequence of methamphetamine use.

The WA State Syringe Exchange Health Survey first explored the topic of methamphetamine “overamping” in 2017, defined in that survey as an event that “usually looks like a heart attack, stroke, seizure, intense overheating or really extreme sudden psychosis.”<sup>2</sup> However, that definition proved confusing and imprecise for some respondents, so the 2019 survey refined this question (in collaboration with Public Health-Seattle & King County) to focus on specific symptoms:

- “In the last three months, have you ever felt like you were having a heart attack, stroke, or seizure while on meth?”
- “In the last three months, have you ever had a time when you felt like you were losing your mind, manic, or psychotic while on meth?”

In analysis, these categories of consequences were termed “physical” and “psychiatric” respectively. As seen in Figure 2, among people who had used methamphetamine by itself or mixed with heroin in the last three months (1,089 respondents with complete data):

- one quarter (25%, n=277) reported experiencing acute *psychiatric* consequences related to methamphetamine use in that time period.
- 15% (n=165) reported experiencing acute *physical* consequences.
- 9% (n=101) reported experiencing both types of consequences related to methamphetamine use.

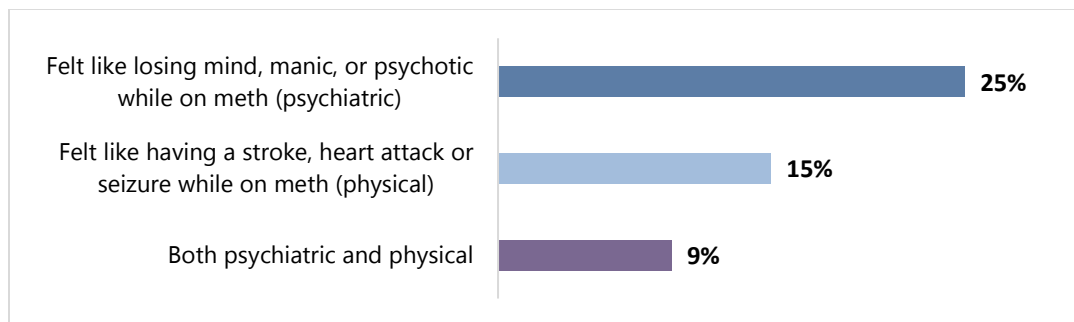


Figure 2. Acute consequences of methamphetamine use in past 3 months among those who used any meth n=1,089

## Characteristics of those who reported physical or psychiatric consequences

The following table describes the characteristics of people who reported physical or psychiatric consequences; those who reported both consequences are represented in both columns of data. The majority of those reporting acute consequences of methamphetamine use were male, white, and between the ages of 30-39 (Table 1). Almost half had been incarcerated in the last 12 months and over three quarters reported having unstable or no housing at all. Use of other substances in addition to methamphetamine was common; roughly half considered their “main drug” to actually be heroin.

The vast majority of these respondents reported feeling “somewhat” or “very” concerned about either depression or anxiety. Most had sought some type of medical care in the past 12 months in a number of health care settings, including emergency department/urgent care, doctor’s office, clinic, or medical hospital.

<sup>2</sup> <https://adai.uw.edu/pubs/pdf/2017syringeexchangehealthsurvey.pdf>.

Table 1. Individuals who reported acute physical or psychiatric consequences of methamphetamine use

	Physical consequences <i>n</i> =165		Psychiatric consequences <i>n</i> =277	
<b>Gender</b>				
Male	95	58%	171	62%
Female	66	40%	100	36%
Transgender/other	4	2%	6	2%
<b>Age</b>				
18-21	4	2%	6	2%
22-25	14	9%	28	10%
26-29	25	15%	44	16%
30-39	65	39%	107	39%
40-49	34	21%	67	24%
50-59	18	11%	22	8%
60+	5	3%	3	1%
<b>Race/ethnicity</b>				
White	135	82%	221	80%
American Indian/Alaskan Native	21	13%	36	13%
Latino/Hispanic	8	5%	17	6%
Asian/South Asian	7	4%	11	4%
Black/African American	4	2%	12	4%
Native Hawaiian/Pacific Islander	3	2%	3	1%
<b>Housing status</b>				
Homeless	81	49%	151	55%
Temporary/unstable	45	27%	73	26%
Permanent	39	24%	52	19%
<b>In jail or prison in the last 12 months</b>				
	76	46%	116	42%
<b>Substances used in the last 3 months</b>				
Methamphetamine by itself	159	96%	264	95%
Heroin by itself	130	79%	208	75%
Heroin/meth mixed together (goofball)	104	63%	169	61%
Alcohol	59	36%	107	39%
Methadone or buprenorphine/suboxone	56	34%	103	37%
Benzodiazepines	43	26%	72	26%
Fentanyl by itself or mixed in something	40	24%	63	23%
Opiate medications (e.g., OxyContin, Vicodin)	39	24%	54	20%
Powder cocaine	30	18%	47	17%
Crack cocaine	28	17%	46	17%
Cocaine/heroin mixed together (speedball)	18	11%	28	10%
<b>Main drug</b>				
Heroin by itself	86	52%	132	48%
Methamphetamine by itself	46	28%	91	33%
Heroin/meth mixed together (goofball)	20	12%	34	12%
Alcohol	6	4%	6	2%
<b>Concerned about depression</b>				
Very	71	43%	132	48%
Somewhat	54	33%	95	35%
Not at all	39	24%	48	17%
<b>Concerned about anxiety</b>				
Very	93	57%	165	60%
Somewhat	43	26%	77	28%
Not at all	28	17%	34	12%

Places where sought medical care in last 12 months				
Emergency room/urgent care	110	67%	192	69%
Doctors office/clinic/tribal clinic	71	43%	137	50%
Admitted to a medical hospital	57	35%	93	37%
Syringe exchange	36	22%	64	23%
Jail/prison	36	22%	56	20%
Did not get or need care	22	13%	19	7%

## Discussion

Some people who use methamphetamine report experiencing a range of acute physical and psychiatric consequences related to their use of methamphetamine including cardiovascular events, seizures, and episodes of paranoia and psychosis. It remains unclear to what degree, if any, these consequences are related to how often, how much, and for how long individuals use methamphetamine and this survey did not collect these data elements. While it is also difficult to determine which and when any of these consequences could become fatal, these are potentially serious symptoms. When they occur, people should seek medical aid and know how the WA State Good Samaritan Law provides legal protection for those experiencing or responding to a potential drug overdose (<https://stopoverdose.org/section/good-samaritan-law>).

Given the high prevalence of polysubstance use among PWUM and that roughly half considered their “main drug” to be heroin, education about how to recognize and respond to danger signs of methamphetamine overdose should be disseminated widely among people who use drugs, including those who may primarily use opioids. A key message should reinforce the potential lethality of using methamphetamine, on its own and concurrently with other substances, given the striking increase in overdose deaths recently (education and messages available at <https://stopoverdose.org/section/methamphetamine>).

A notable proportion of PWUM reported accessing medical care at a number of non-emergency settings and the vast majority reported concerns about depression or anxiety. These data point to important opportunities for healthcare providers to talk with individuals about their use of methamphetamine, assess their mental health concerns, and connect them with appropriate support services.

## Limitations

This survey describes adverse events that were not fatal. It is possible that different patterns and characteristics are associated with fatal versus nonfatal events, so these findings should only be interpreted in the context of nonfatal events. Because this survey was administered at syringe service programs which serve primarily (but not exclusively) people who inject drugs, the results may not be representative of a broader community of people who use drugs by other means (e.g., smoking, snorting) or who do not utilize or have access to syringe service programs.

**Citation:** Banta-Green, C et al. Acute Consequences of Methamphetamine Use Among Syringe Exchange Participants. Seattle, WA: Addictions, Drug & Alcohol Institute, University of Washington, February 2021. <https://adai.uw.edu/pubs/pdf/2021acuteconsequencesmeth.pdf>.