

Separating Fact from Fiction

Kirk Cumpston, DO

Medical Director of the Virginia Poison Center

1/24/20



Objectives

- Recognize how each substance behaves in the body
 - Fentanyl
 - Kratom
 - Methamphetamine
- Contrast facts versus fiction cases
- Recognize the difference between customary use of therapeutic fentanyl and misuse or abuse of the fentanyl
- Describe the trends of drug usage at Virginia Poison Center
- Describe the proposed indications for Kratom and the current landscape of use
- Recognize the potential risks for Kratom use

Fact or Fiction?

- The source of abused fentanyl is pharmaceutical grade.
- Fentanyl will NOT be detected on routine urine drug screen.
- Fentanyl comes in all shapes and sizes and can mimic other drugs.
- Fentanyl kills as many people heroin.
- Powdered synthetic fentanyl, like carfentinil, will NOT kill you if it is present in the room or touches your skin.
- You should wear protective equipment and decontaminate any fentanyl skin exposure.
- Kratom kills less people than heroin.
- Kratom will NOT cause life-threatening effects.
- Kratom can lead to addiction and withdrawal.
- Kratom has been tested to make sure it works and it is safe.
- Methamphetamines counteract the effect of opioids.
- The use of methamphetamines with opioids leads to more overdoses.
- If you live in the Eastern US don't worry about methamphetamine.

Fentanyl – What is it good for?



2019 VPC Fentanyl cases

- 9 cases
- 5 Police/EMS
- 7 Discharged
- 2 Admitted
- 1 Critical care



ONE NATION OVERDOSED

Prince died after taking fake Vicodin laced with fentanyl, prosecutor says

"In all likelihood, Prince had no idea he was taking a counterfeit pill that could kill him," the Minnesota prosecutor said.

by Daniella Silva / Apr.19.2018 / 1:21 PM ET / Updated Apr.19.2018 / 8:36 PM ET



How did that
get there?



Fentanyl

Despropionyl fentanyl

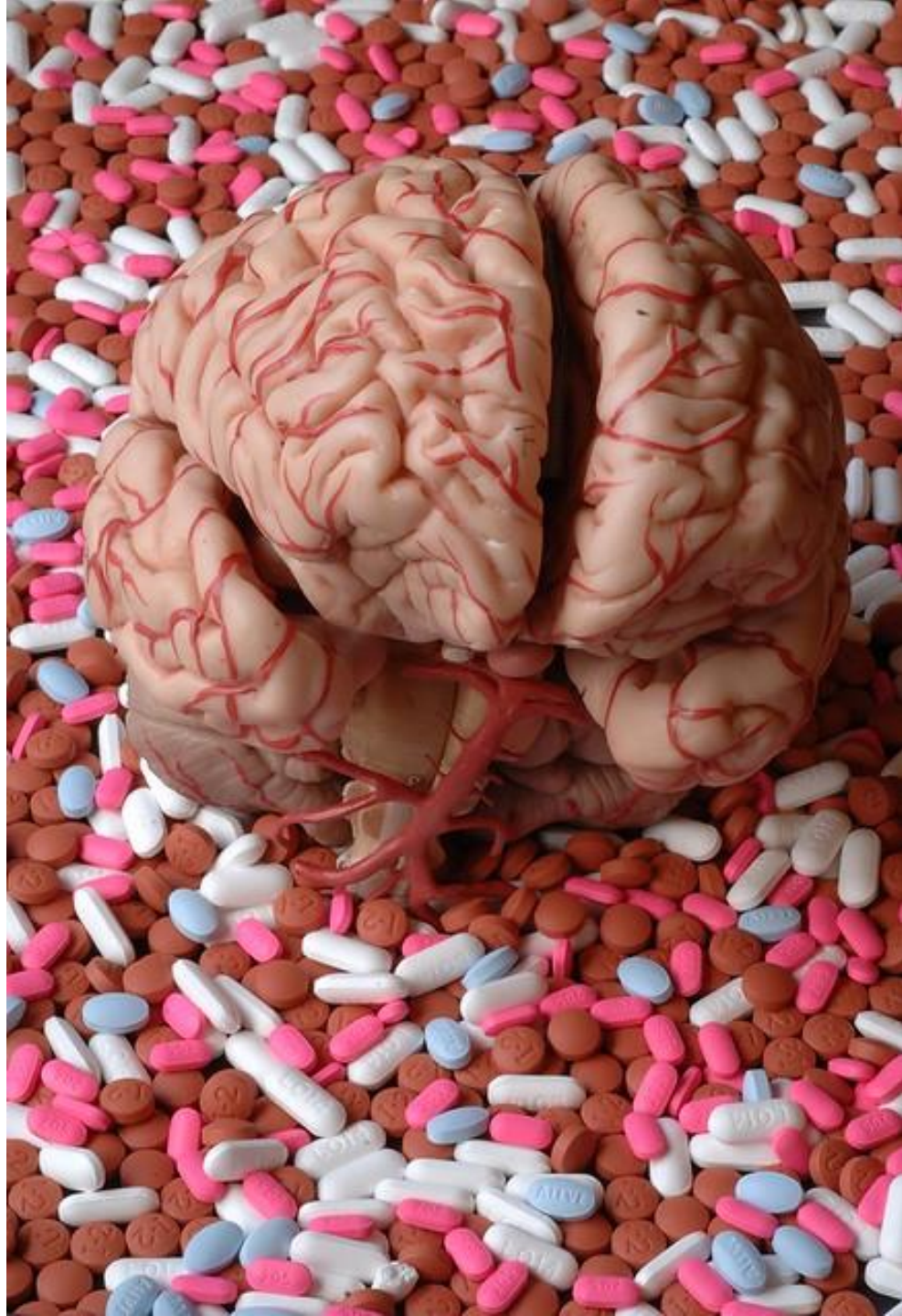
Acetyl fentanyl

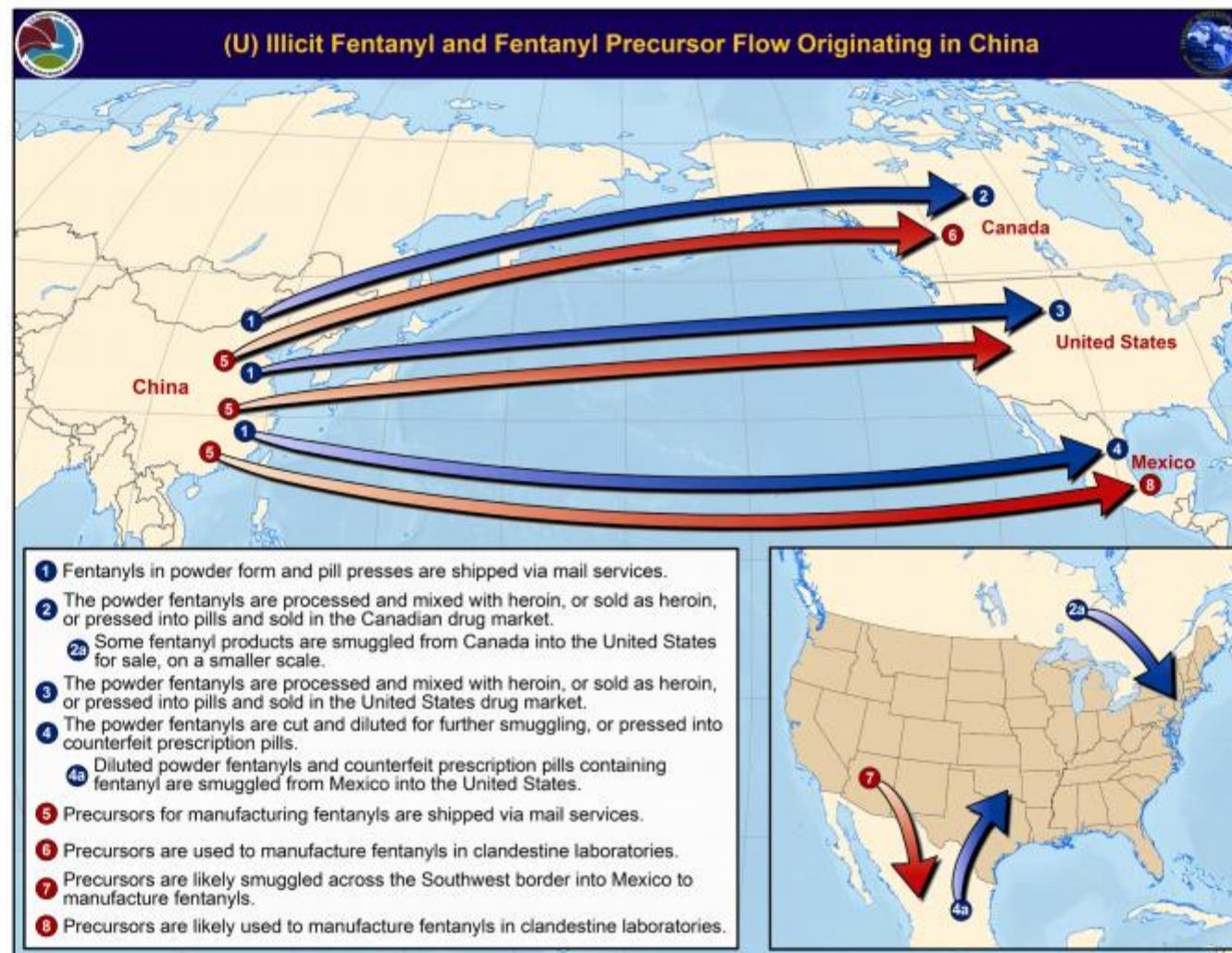
Oxycodone

Temazepam

Alprazolam

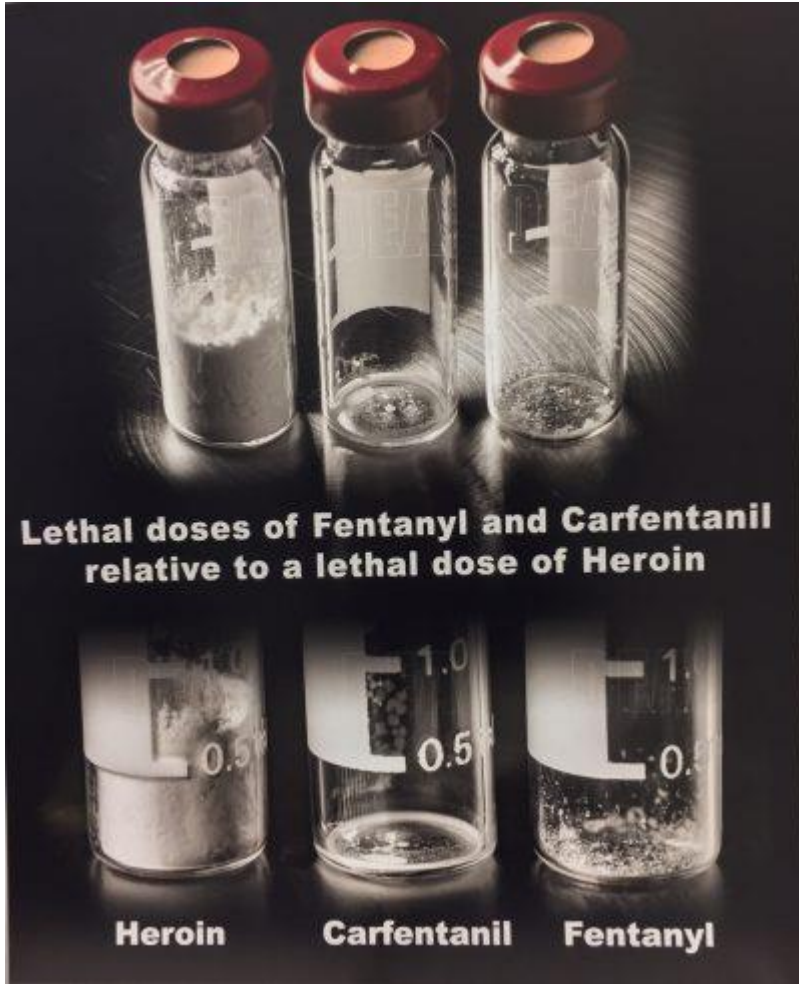
Citalopram



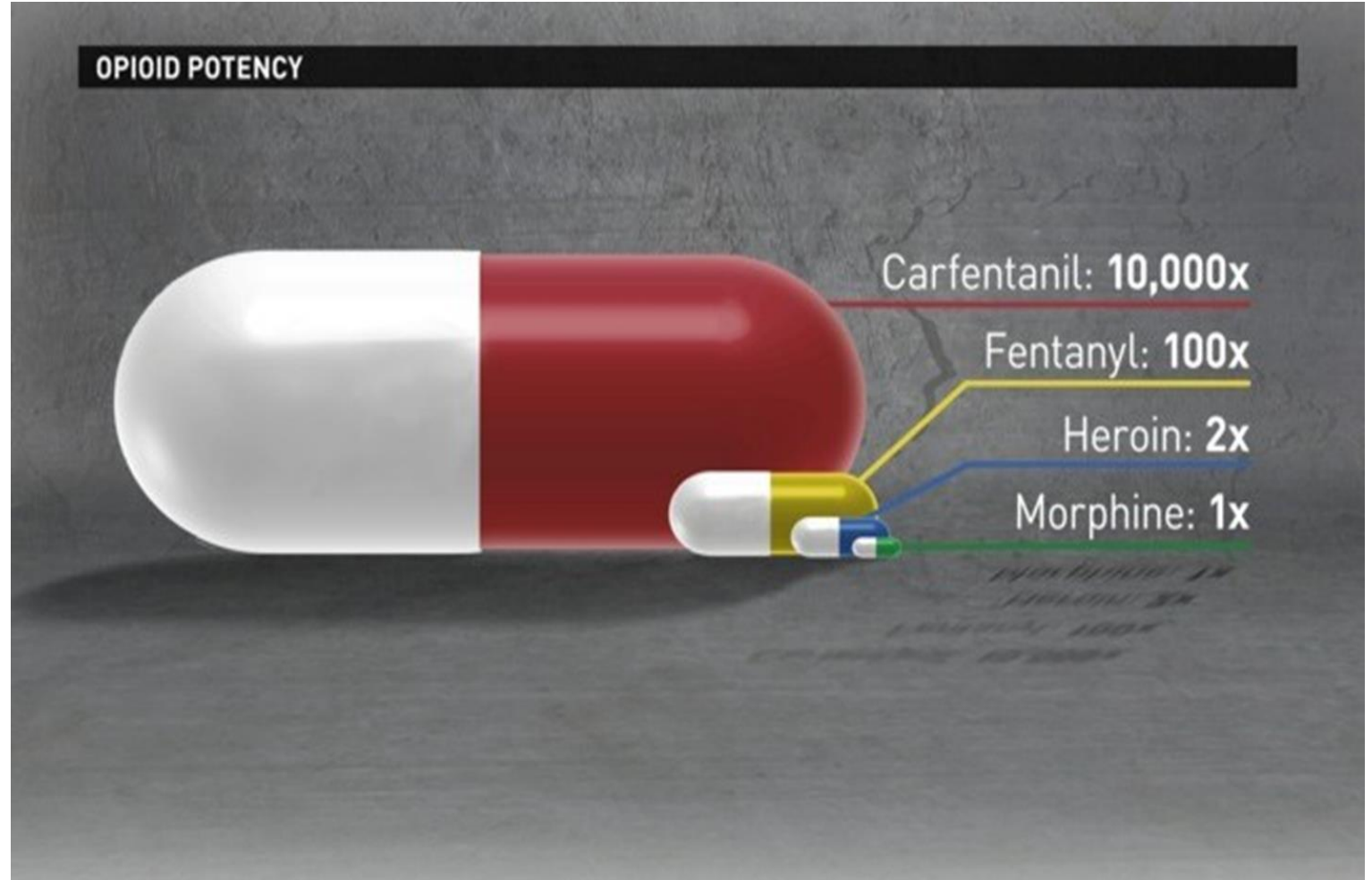


Source: DEA

*Arrows do not represent specific transportation routes.



Courtesy DEA



DRUG TEST

Personal information

Name _____ (first name) _____ (last name)

Phone number _____ Cell phone _____ @ _____

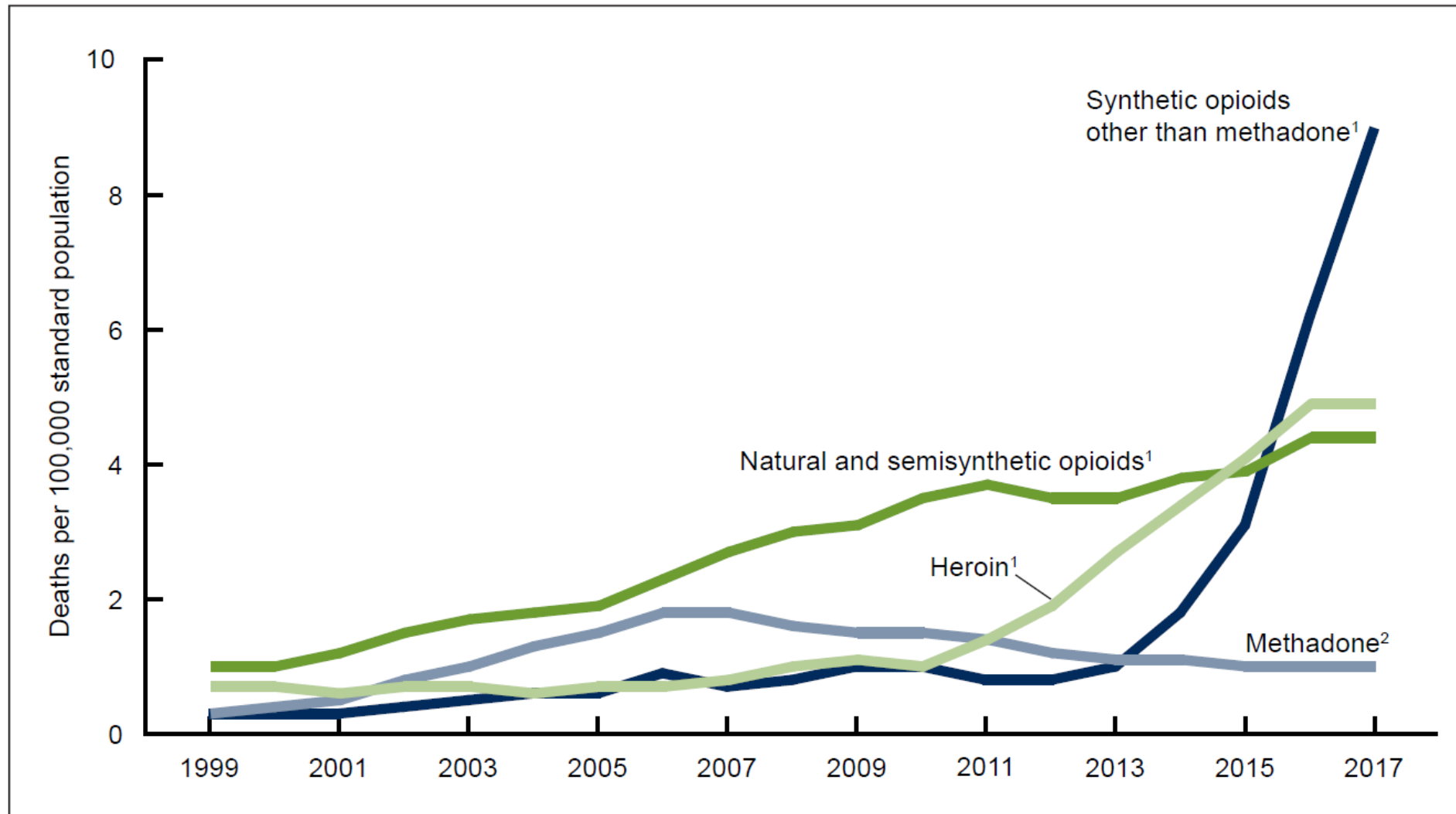
E-mail _____ Zip code _____

Address _____ State _____ Location Date _____

PASSED

A black pen lies diagonally across the top left of the form. A pair of orange-rimmed glasses is visible in the top right corner. The form is set against a dark background.

Figure 4. Age-adjusted drug overdose death rates, by opioid category: United States, 1999–2017



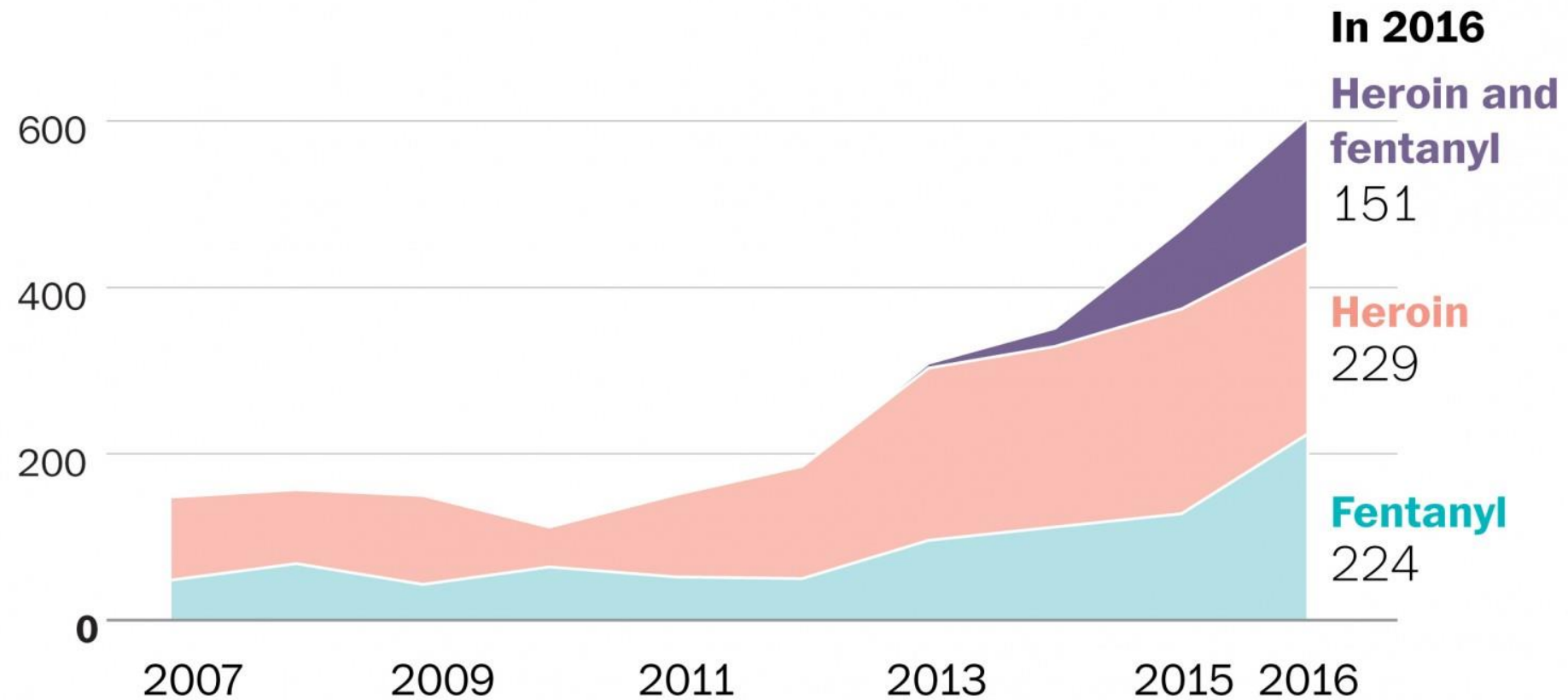
¹Significant increasing trend from 1999 through 2017 with different rates of change over time, $p < 0.05$.

²Significant increasing trend from 1999 through 2006, then decreasing trend from 2006 through 2017, $p < 0.05$.

NOTES: Deaths are classified using the *International Classification of Diseases, 10th Revision*. Drug-poisoning (overdose) deaths are identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural and semisynthetic opioid) are counted in both categories. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, with ranges of 75%–79% from 1999 through 2013 and 81%–88% from 2014 through 2017. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db329_tables-508.pdf#4.

SOURCE: NCHS, National Vital Statistics System, Mortality.

Fatal fentanyl and/or heroin overdoses in Virginia



Data for 2016 is a predicted total for the entire year

Source: Virginia Department of Health

THE WASHINGTON POST

“Gray Death”

- Combination
 - Heroin
 - Fentanyl
 - U-47700
 - \$10-20 on street





**7.5x
morphine.**

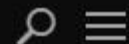




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Deadly fentanyl changes the rules for those who abuse opioids

By Martha Bebinger, WBUR

Updated 9:22 AM ET, Tue April 11, 2017



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**REAL
Roxicodone**



**COUNTERFEIT
pill**



REAL

FAKE



Source: SF Public Health

**Can you distinguish the
real from the fake?**



**Image of counterfeit and authentic
Norco tablets, side by side.**

Image courtesy of California Poison Control.



(U)//LES

June 26, 2017

IB 2017-0107

Police Information- Carfentanil in Tablets






CLINICAL RESEARCH



Self-identification of nonpharmaceutical fentanyl exposure following heroin overdose

Matthew K. Griswold^a, Peter R. Chai^b, Alex J. Krotulski^c, Melissa Friscia^c, Brittany Chapman^a, Edward W. Boyer^b, Barry K. Logan^{c,d} and Kavita M. Babu^a 

^aDivision of Medical Toxicology, Department of Emergency Medicine, University of Massachusetts Medical School, Worcester, MA, USA;

^bDivision of Medical Toxicology, Department of Emergency Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; ^cThe Center for Forensic Science Research and Education (CFSRE), Willow Grove, PA, USA; ^dNMS Labs, Willow Grove, PA, USA

Table 4. Self-identification of nonpharmaceutical fentanyl exposure versus urine drug testing results.

	Urine drug testing for fentanyl	
	Positive	Negative
Self-Report of Fentanyl Exposure		
Yes	16	0
No	13	1

Sensitivity 55%, Cohen's kappa index value 0.76.

Vancouver Testimonials

- “It tastes like vinegar.”
- “Always do test shots of small doses.”
- “With heroin you feel it coming, you feel the intensity.”
- “Fentanyl, you’re sitting there waiting for something and, the next thing you know, there is an ambulance attendant there. It hits you like a Mack truck.”
- Rigidity
- Multiple doses of naloxone



Contents lists available at [ScienceDirect](#)

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep



Characterizing fentanyl-related overdoses and implications for overdose response: Findings from a rapid ethnographic study in Vancouver, Canada

Samara Mayer^a, Jade Boyd^{a,b}, Alexandra Collins^{a,c}, Mary Clare Kennedy^{a,d}, Nadia Fairbairn^{a,b}, Ryan McNeil^{a,b,*}

^a British Columbia Centre on Substance Use, Level 4, 1045 Howe Street, Vancouver, BC, V6Z 2A9, Canada

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^d School of Population and Public Health, University of British Columbia, 2206 E Mall, Vancouver, BC V6T 1Z3 E Mall, Vancouver, BC, V6T 1Z3, Canada



Fentanyl-Contaminated Nonfatal OD

Park et al. *Harm Reduction Journal* (2018) 15:34
<https://doi.org/10.1186/s12954-018-0240-z>

Harm Reduction Journal

- 45-54 year olds
- Non-Hispanic Black
- 12 grade or GED
- Own or rent/homeless
- 53% perceived fentanyl
- 93% used heroin last 6 months
- 90% witnessed OD
- 44% used naloxone – 99% successful

RESEARCH

Open Access

Fentanyl-contaminated drugs and non-fatal overdose among people who inject drugs in Baltimore, MD



Ju Nyeong Park^{1,2*}, Brian W. Weir¹, Sean T. Allen¹, Patrick Chaulk^{3,4,5} and Susan G. Sherman^{1,2}

Elephant tranquilizer is the latest lethal addition to the heroin epidemic



Members of the Royal Canadian Mounted Police go through a decontamination procedure in Vancouver, British Columbia, in June 2016 after intercepting a package containing approximately one kilogram (2.2 pounds) of the opioid carfentanil imported from China. (Royal Canadian Mounted Police via AP/AP)



Hazmat called to home after man dies of fentanyl overdose

POSTED 11:20 AM, JANUARY 9, 2020, BY MATT MEYER, UPDATED AT 01:10PM, JANUARY 9, 2020

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SAN DIEGO — A Hazmat team was called and a firefighter was sent to the hospital after a man died of a fentanyl overdose at a northern San Diego home Thursday morning.

The 27-year-old man overdosed at the house in Rancho Bernardo, a few blocks north of Rancho Bernardo Road on Calenda Road, around 4 a.m.

When authorities found fentanyl, a synthetic opioid the DEA says is 80 to 100 times stronger than morphine, they called a Hazmat team.

Authorities were seen leading a woman out of the home in handcuffs, though police did not comment on whether she was suspected of a crime. While police spoke with the woman and officials wheeled the man's body out of the home, the Hazmat team worked to ensure no one else was exposed to the drug.



A police officer stands nearby as a Hazmat team makes sure it's safe to investigate a home where a man overdosed on fentanyl Thursday. (Photo: OnSceneTV)

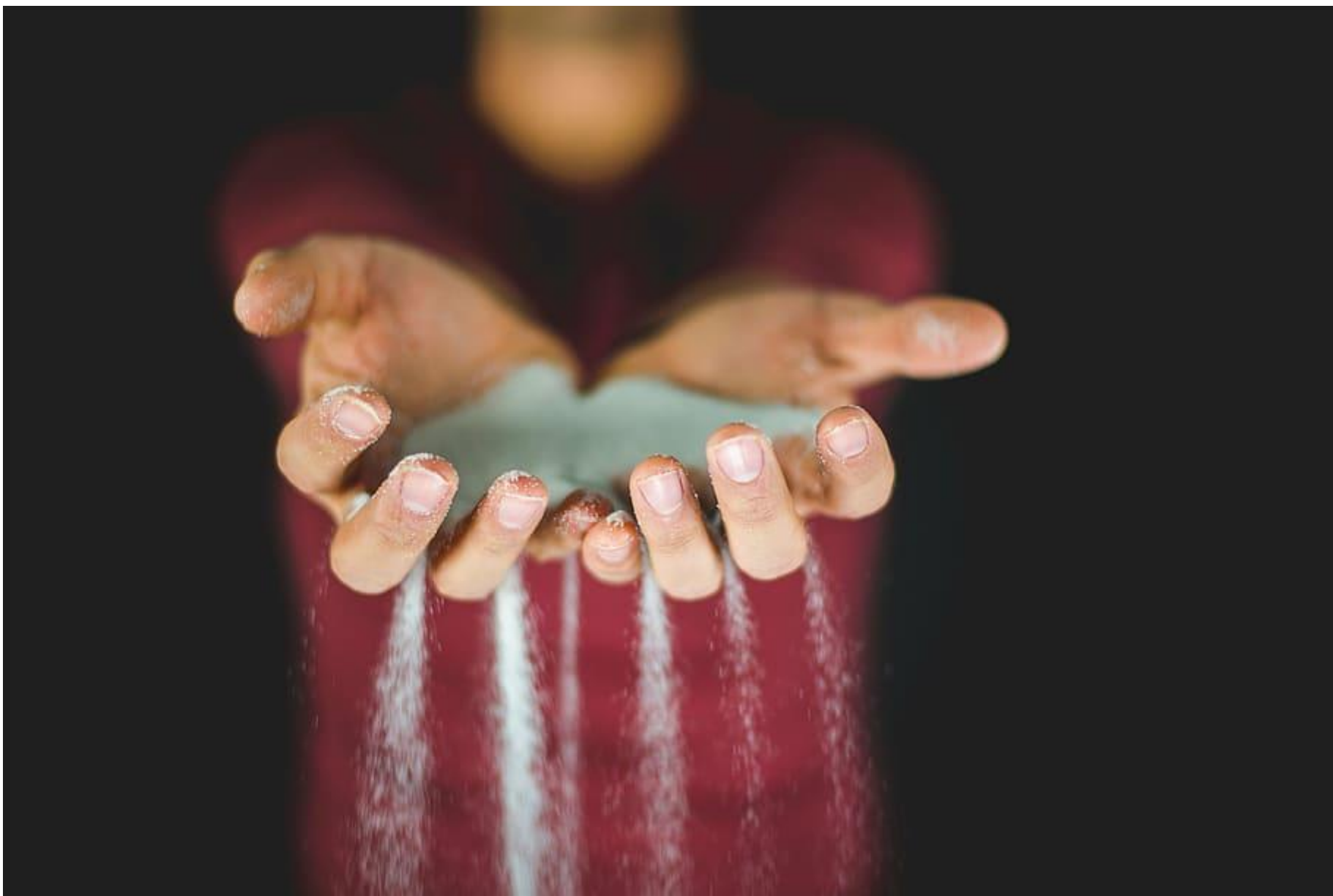
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Fentanyl case

- 34 year-old male deputy arrived about 1 hour ago following exposure to heroin and fentanyl.
- He pulled a vehicle over, found a powder substance in the car.
- Was wearing gloves, but as he was transferring powder to the test kit, apparently inhaled some.
- Powder tested positive for both heroin and fentanyl.
- Pt is complaining of dizziness, headache, and nausea.
- He has been decontaminated well.
- He is awake and alert.
- Vital signs are normal.

POSITION STATEMENT



ACMT and AACT position statement: preventing occupational fentanyl and fentanyl analog exposure to emergency responders

Michael J. Moss^a , Brandon J. Warrick^b, Lewis S. Nelson^c, Charles A. McKay^d, Pierre-André Dubé^e ,
Sophie Gosselin^f , Robert B. Palmer^g and Andrew I. Stolbach^h

^aEmergency Medicine, VCU Medical Center, Richmond, VA, USA; ^bEmergency Medicine, University of New Mexico, Albuquerque, NM, USA; ^cDepartment of Emergency Medicine, Rutgers New Jersey Medical School, Newark, NJ; ^dTraumatology & Emergency Medicine, Hartford Hospital, Hartford, CT, USA; ^eInstitut national de santé publique du Québec, Québec, Canada; ^fCentre Antipoison du Québec, Québec, Canada; ^gToxicology Associates, PLLC, Littleton, CO, USA; ^hJohns Hopkins University School of Medicine, Baltimore, MD, USA

PPE for Occupational Fentanyl Exposure



Occupational Fentanyl

Exposure: Decontamination/Treatment





2019 VPC Kratom Cases

- 20
- Polysubstance 2
- Critical care 3
- Admission 9
- Discharged 8
- Withdrawal 2
- Treating heroin addiction 1
- Naloxone 1
- Home 2 (2 year old)
- Death 1

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PUBLISHED MARCH 17, 2017

LAW

The DEA Changes Its Mind on Kratom

Gerald Gianutsos, PhD, JD

Associate Professor of Pharmacology
University of Connecticut School of Pharmacy
Storrs, Connecticut

US Pharm. 2017;41(3):7-9.

When the Drug Enforcement Administration (DEA) proposes to use its emergency scheduling authority to place a temporary ban on a “legal” drug due to concerns about abuse and safety, it is usually a fairly routine event. However, one recent decision by the DEA to ban a substance was anything but routine, resulting in a widespread public backlash that was sufficient to convince the DEA to reconsider its action.

The substance causing the controversy is the herbal opioid-like drug *kratom*. In August 2016, the DEA announced that it would temporarily reclassify kratom as a Schedule I drug.¹ This action brought about a strong reaction, including public demonstrations, petitions, and calls by Congress to overrule the decision. These events resulted in the DEA withdrawing its notice of intent to institute the emergency scheduling of the active ingredients of kratom in October 2016 and to solicit further public comment.²

What Is

Kratom (ceremon

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FDA and Kratom

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Public Health Focus

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The U.S. Food and Drug Administration is warning consumers not to use *Mitragyna speciosa*, commonly known as kratom, a plant which grows naturally in Thailand, Malaysia, Indonesia, and Papua New Guinea. FDA is concerned that kratom, which affects the same opioid brain receptors as morphine, appears to have properties that expose users to the risks of addiction, abuse, and dependence.

There are no FDA-approved uses for kratom, and the agency has received concerning reports about the safety of kratom. FDA is actively evaluating all available scientific information on this issue and continues to warn consumers not to use any products labeled as containing the botanical substance kratom or its psychoactive compounds, mitragynine and 7-hydroxymitragynine. FDA encourages more research to better understand kratom's safety profile, including the use of kratom combined with other drugs.

Since identifying kratom on an [import alert](#) for unapproved drugs in 2012 and on a second [import alert](#) in February 2014 regarding kratom-containing dietary supplements and bulk dietary ingredients, FDA has taken a number of additional actions, including:

- In September 2014, U.S. Marshals, at the FDA's request, [seized](#) [🔗](#) more than 25,000 pounds of raw kratom material worth more than \$5 million from Rosefield Management, Inc. in Van Nuys, California.
- In January 2016, U.S. Marshals, at the FDA's request, [seized](#) nearly 90,000 bottles of

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Kratom: Unsafe and ineffective

Users swear by kratom for mood enhancement and fatigue reduction, but safety issues and questions about its effectiveness abound.

If you read health news or visit vitamin stores, you may have heard about kratom, a supplement that is sold as an energy booster, mood enhancer, pain reliever and antidote for opioid withdrawal. However, the truth about kratom is more complicated, and the safety problems related to its use are concerning.

Kratom is an herbal extract that comes from the leaves of an evergreen tree (*Mitragyna speciosa*) grown in Southeast Asia. Kratom leaves can be chewed, and dry kratom can be swallowed or brewed. Kratom extract can be used to make a liquid product. The liquid form is often marketed as a treatment for muscle pain, or to suppress appetite and stop cramps and diarrhea. Kratom is also sold as a treatment for panic attacks.

Kratom is believed to act on opioid receptors. At low doses, kratom acts as a stimulant, making users feel more energetic. At higher doses, it reduces pain and may bring on euphoria. At very high doses, it acts as a sedative, making users quiet and perhaps

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Kratom News

DAYS THE FDA HAS IGNORED AKA'S MEETING REQUEST

518 : 20 : 29 : 14

DAYS HOURS MINUTES SECONDS

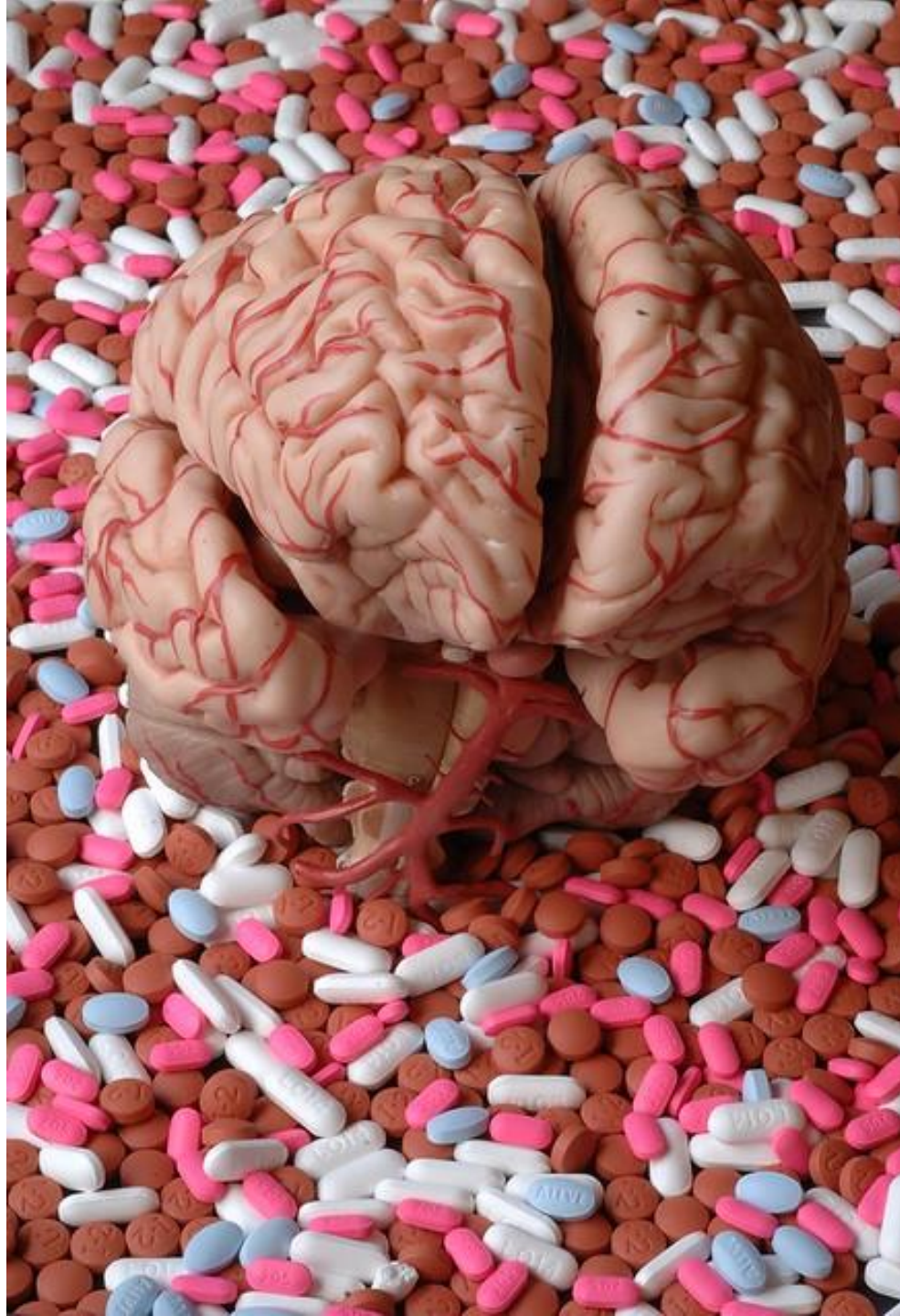
Thank you to NIDA Director Nora Volkow for recognizing and following the science on kratom.

The FDA should follow Dr. Volkow's lead: Meet with the AKA and follow the science.

Get Involved

Help us fight for a beautiful future





Kratom?

- What are you paying for?
- What is the best dose of kratom?
- Does kratom work?
- Can kratom harm you?
- Can you become addicted to kratom?



Why Kratom?

- Euphoria
- Pain
- Withdrawal
- Opioid abstinence
- Physical performance

Natural psychoactive substance-related exposures reported to United States poison control centers, 2000–2017

Connor O'Neill-Dee^{a,b}, Henry A. Spiller^{c,d} , Marcel J. Casavant^{a,c,d}, Sandhya Kistamgari^a, Thitphalak Chounthirath^a and Gary A. Smith^{a,c,e}

^aCenter for Injury Research and Policy, The Research Institute at Nationwide Children's Hospital, Columbus, OH, USA; ^bCreighton University School of Medicine, Omaha, NE, USA; ^cDepartment of Pediatrics, The Ohio State University College of Medicine, Columbus, OH, USA; ^dCentral Ohio Poison Center at Nationwide Children's Hospital, Columbus, OH, USA; ^eChild Injury Prevention Alliance, Columbus, OH, USA

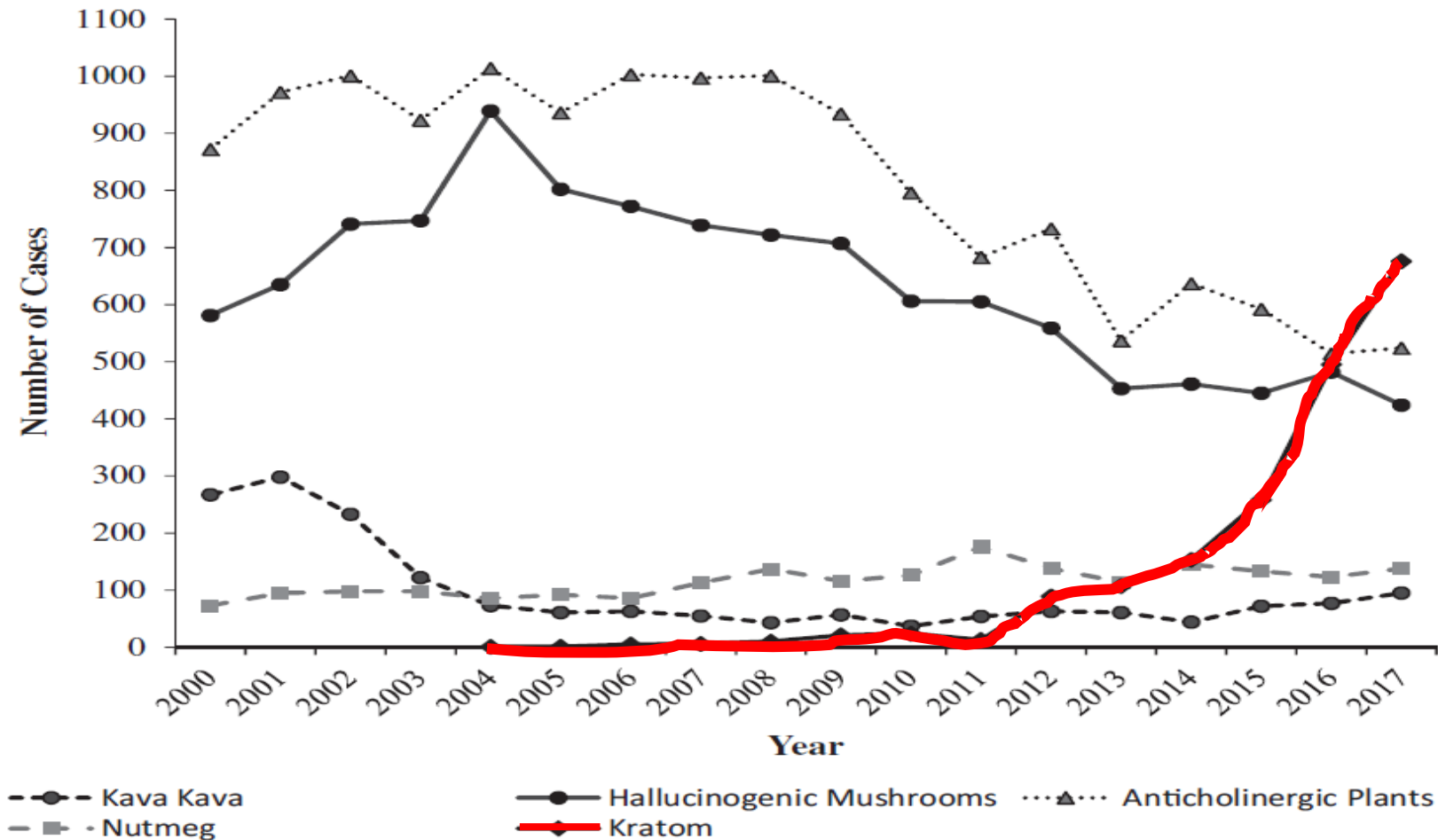


Figure 2. Annual number of exposures to selected natural psychoactive substances, NPDS 2000–2017.

*Notes from the Field*Unintentional Drug Overdose Deaths with
Kratom Detected — 27 States, July 2016–
December 2017Emily O'Malley Olsen, PhD¹; Julie O'Donnell, PhD¹; Christine L.
Mattson, PhD¹; Joshua G. Schier, MD¹; Nana Wilson, PhD¹**TABLE. Co-occurrence of substances and circumstances among
overdose decedents with kratom detected on postmortem
toxicology — State Unintentional Drug Overdose Reporting System,
27 states,* July 2016–December 2017**

Characteristic/Circumstance	Kratom detected on toxicology (n = 152) No. (%)	Kratom determined to be a cause of death (n = 91) No. (%)
Sex		
Male	116 (76.3)	69 (75.8)
Female	36 (23.7)	22 (24.2)
Race		
White [†]	119 (91.5)	81 (93.1)
Nonwhite	11 (8.5)	— [§]
Medically supervised pain treatment		
No evidence	138 (90.8)	80 (87.9)
Evidence	14 (9.2)	11 (12.1)
Previous overdose reported		
None	139 (91.5)	81 (89.0)
One or more	13 (8.5)	10 (11.0)
History of substance misuse reported (opioid and/or nonopioid)		
No evidence	29 (19.1)	20 (22.0)
Evidence	123 (80.9)	71 (78.0)
Co-occurring substances listed as a cause of death^{‡,**}		
Any fentanyl (including analogs)	99 (65.1)	51 (56.0)
Heroin ^{††}	50 (32.9)	23 (25.3)
Benzodiazepines	34 (22.4)	24 (26.4)
Prescription opioids ^{§§}	30 (19.7)	22 (24.2)
Cocaine	28 (18.4)	15 (16.5)
Alcohol	19 (12.5)	11 (12.1)
Methamphetamine	13 (8.6)	—

Kratom Use and Toxicities in the United States

William Eggleston^{1,2,*}  Robert Stoppacher,³ Kyle Suen,² Jeanna M. Marraffa,^{2,4} and Lewis S. Nelson⁵

¹School of Pharmacy and Pharmaceutical Sciences, Binghamton University, Binghamton, New York; ²Department of Emergency Medicine, SUNY Upstate Medical University, Syracuse, New York; ³Department of Pathology, SUNY Upstate Medical University, Syracuse, New York; ⁴Upstate New York Poison Center, Syracuse, New York; ⁵Department of Emergency Medicine, Rutgers New Jersey Medical School, Newark, New Jersey

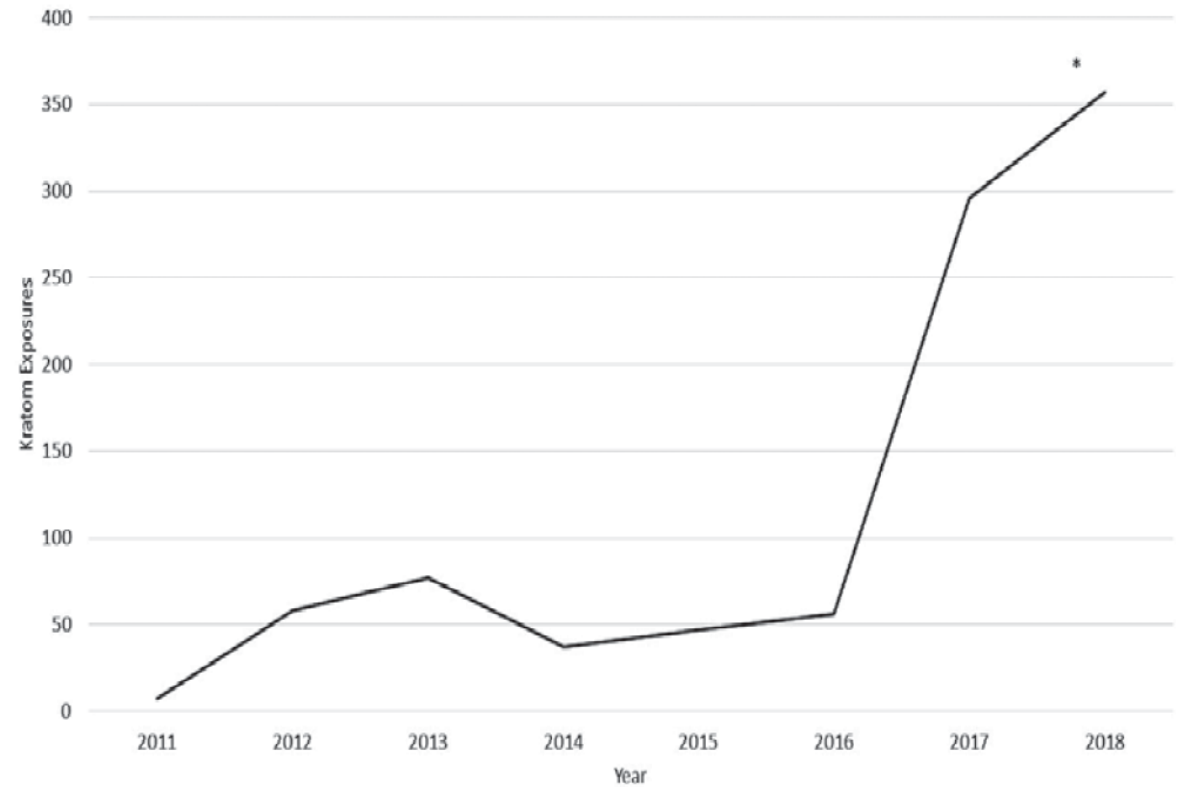


Figure 1. Kratom exposures reported to the National Poison Data System from January 1, 2011, to July 31, 2018. *Data for 2018 is partial and includes exposures from January 1, 2018, to July 31, 2018.

RESULTS A total of 2312 kratom exposures were reported, with 935 cases involving kratom as the only substance. Kratom most commonly caused agitation (18.6%), tachycardia (16.9%), drowsiness (13.6%), vomiting (11.2%), and confusion (8.1%). Serious effects of seizure (6.1%), withdrawal (6.1%), hallucinations (4.8%), respiratory depression (2.8%), coma (2.3%), and cardiac or respiratory arrest (0.6%) were also reported. Kratom was listed as a cause or contributing factor in the death of four decedents identified by the county medical examiner's office.

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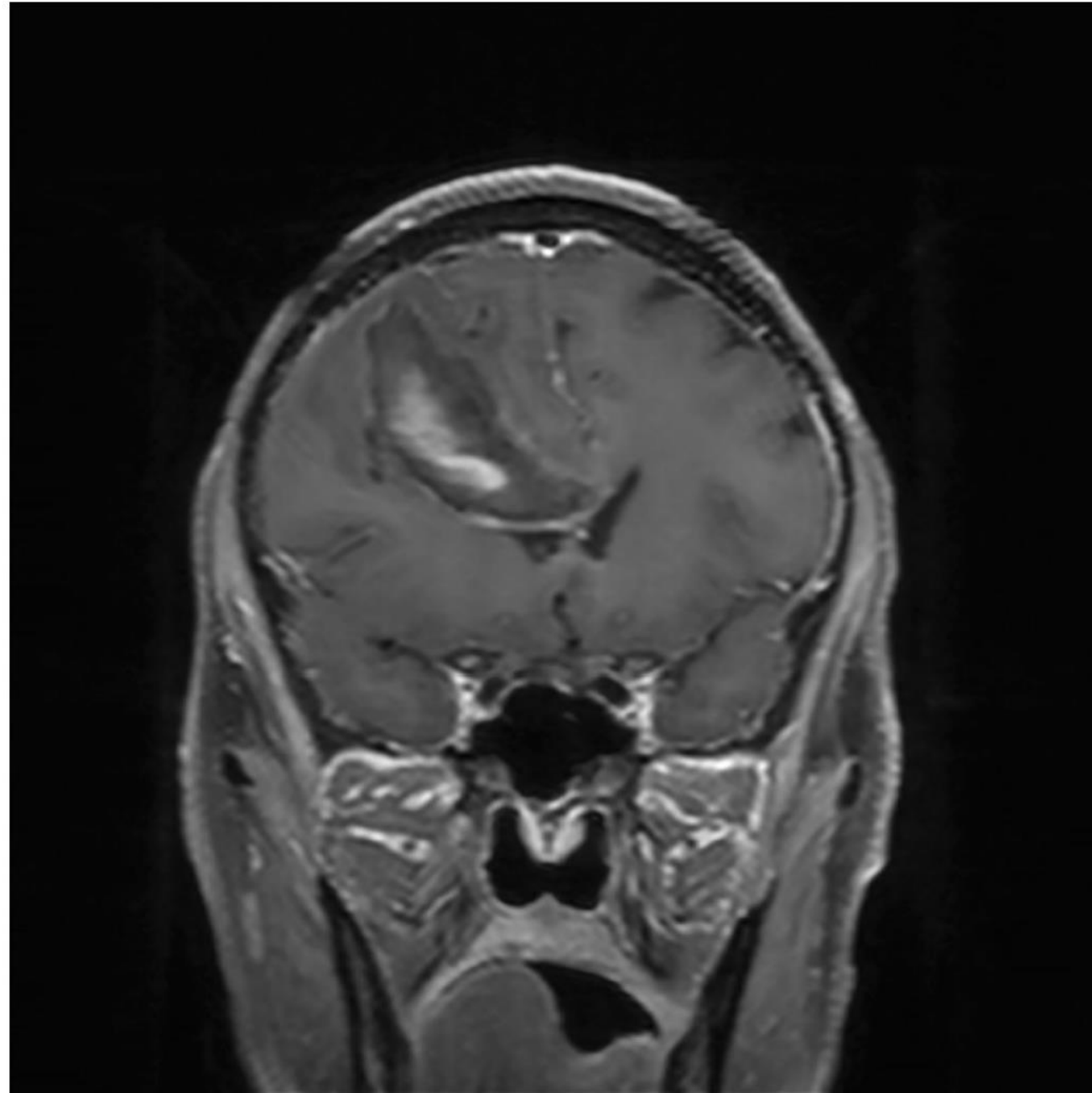


Fig. 1 CT angiogram of the head revealed intraparenchymal hemorrhage with intraventricular extension.

LETTER TO THE EDITOR



Evidence of a potential mechanism for Kratom-related cardiac arrest


2  H. WOLFER ET AL.



Figure 1. Commercially available kratom preparation purchased by the patient.

Other effects

- Salmonella
- Liver injury
- Addiction
- Withdrawal



2019 VPC Methamphetamine



More than a dozen meth dealers supplied by Mexican Cartel arrested in middle Tennessee

by Kaylin Jorge | Monday, January 13th 2020

AA



The Wayne County Grand Jury returned indictments for conspiracy to distribute over 300 grams of methamphetamine against Darrell Alonzo "Choppo" White, Raymond Charles Inman, Marilyn Skaggs, Michael Shane Risner, Michael Tilley, Shayna Nicole McDonald, Miranda Haggard, Lois Ritenour, Luke Freeman, Brian Keith Smith, Roy Dee Horton and April Rumbaugh, as well as Sandra Satterfield, who is still at large (PHOTO: Wayne County Sheriff's Office).



WAYNE COUNTY, Tenn. (WZTV) — UPDATE:

The Wayne County Sheriff's Office has released more information regarding a major methamphetamine bust in middle Tennessee.

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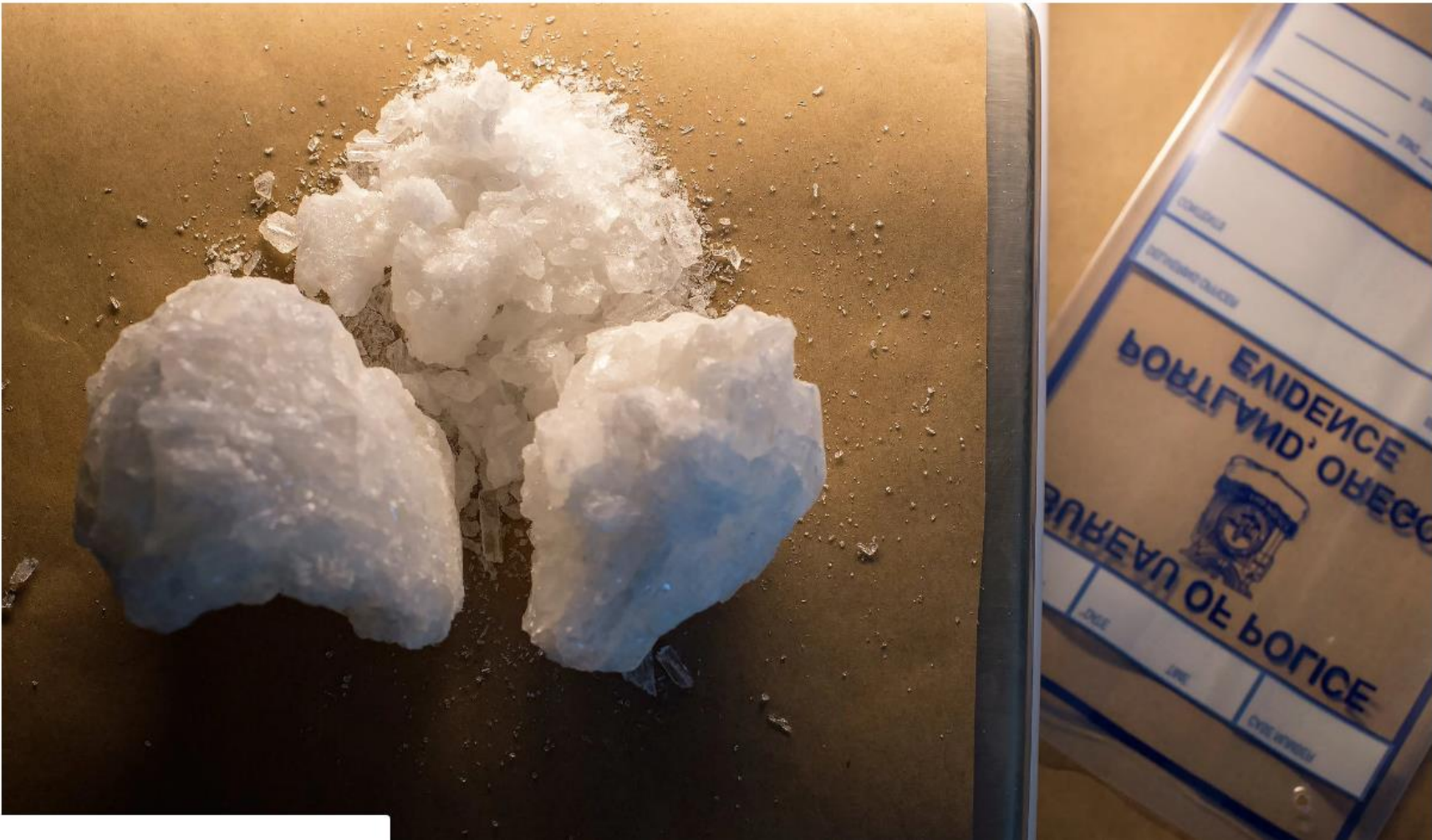
A New Drug Scourge: Deaths Involving Meth Are Rising Fast

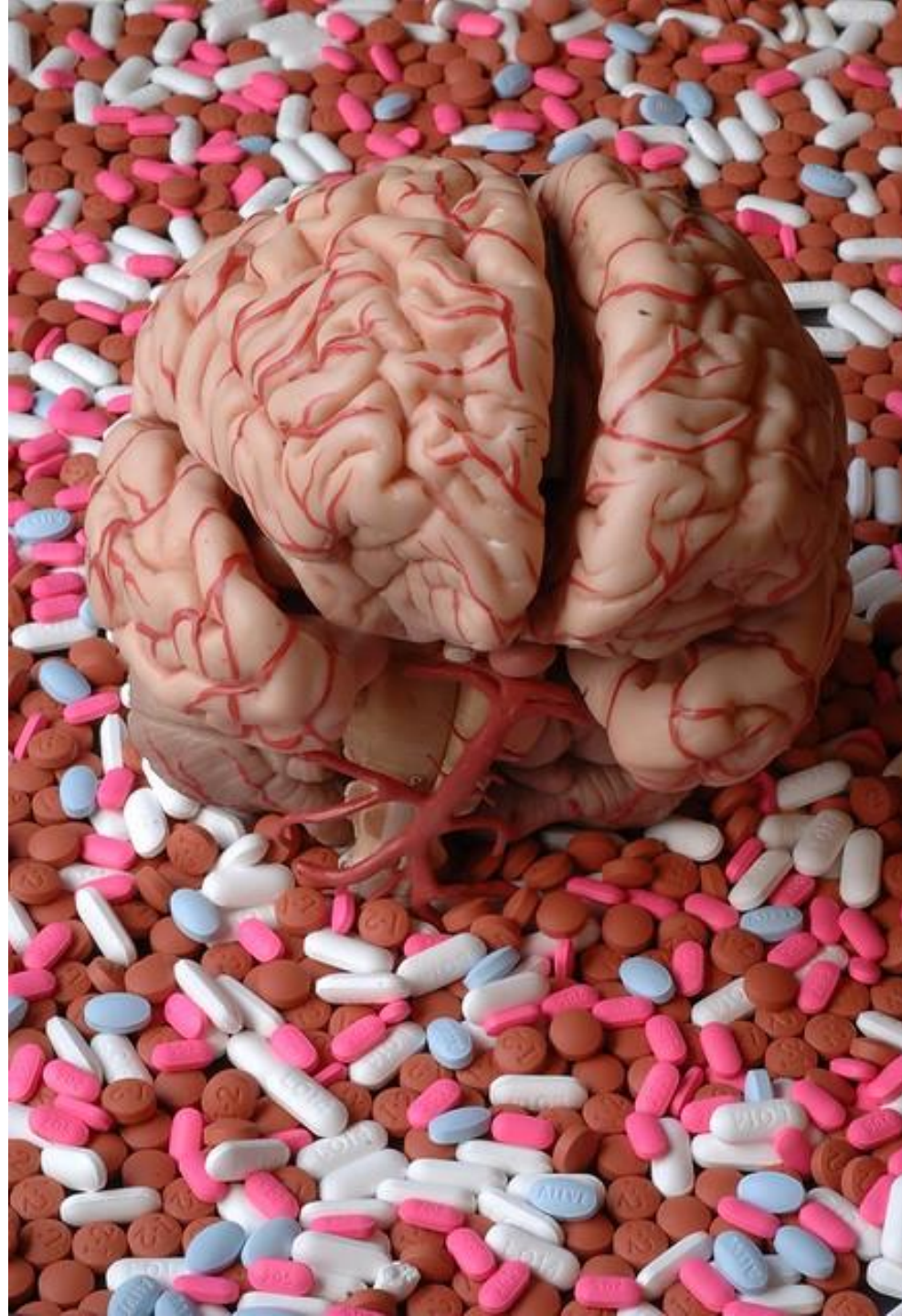
Today's meth is far more potent than earlier versions, but because it isn't an opioid, many federal addiction treatment funds can't be used to fight it.



Shayla Divelbiss used methamphetamine for six years, ignoring a thyroid condition and going days at a time without sleep. She waited two months for a bed at a treatment center. Frank Buckner for The New

Meth, the Forgotten Killer, Is Back. And It's Everywhere.









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PUBLIC HEALTH

Meth In The Morning, Heroin At Night: Inside The Seesaw Struggle of Dual Addiction

June 17, 2019 · 1:17 PM ET
Heard on [All Things Considered](#)

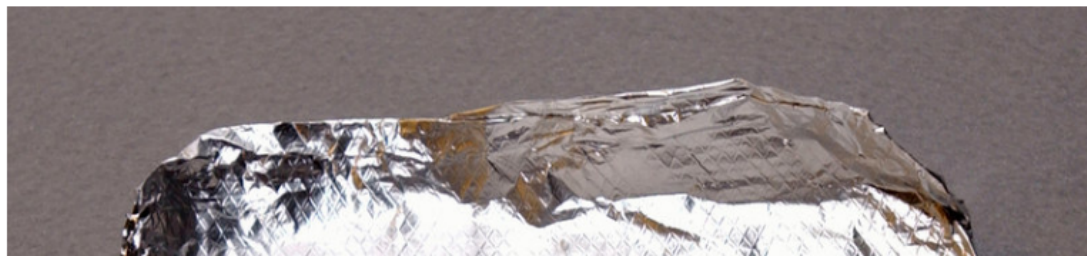
APRIL DEMBOSKY

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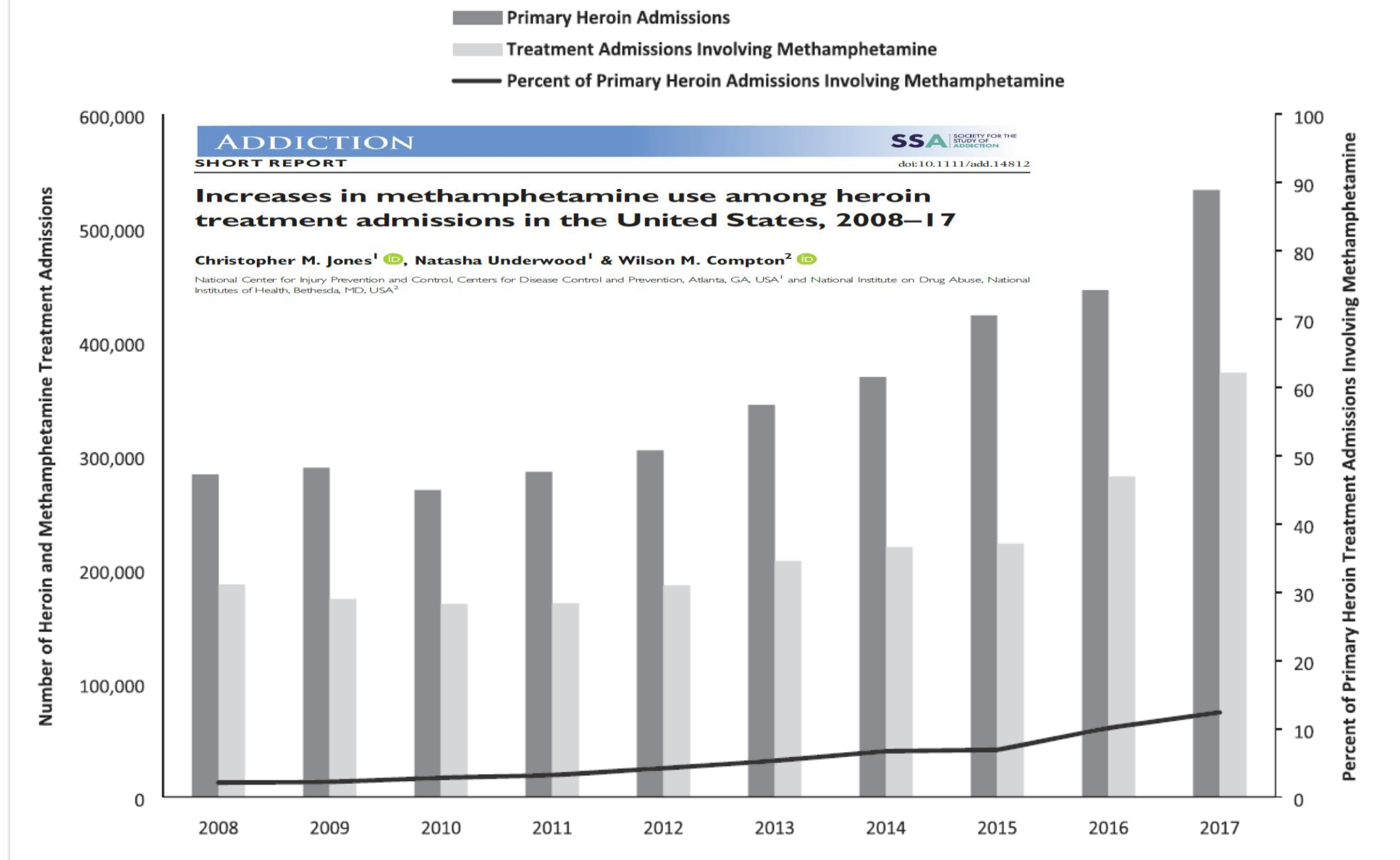


Figure 1 Primary heroin treatment admissions involving methamphetamine use among people 12 years or older, United States, 2008–17. *Data source:* 2008–17 Treatment Episode Data Set. Heroin treatment admissions were defined as admissions where heroin was the primary substance of use. Heroin treatment admissions involving methamphetamine were those where heroin was the primary substance of use and methamphetamine was listed as the secondary or tertiary substance of use



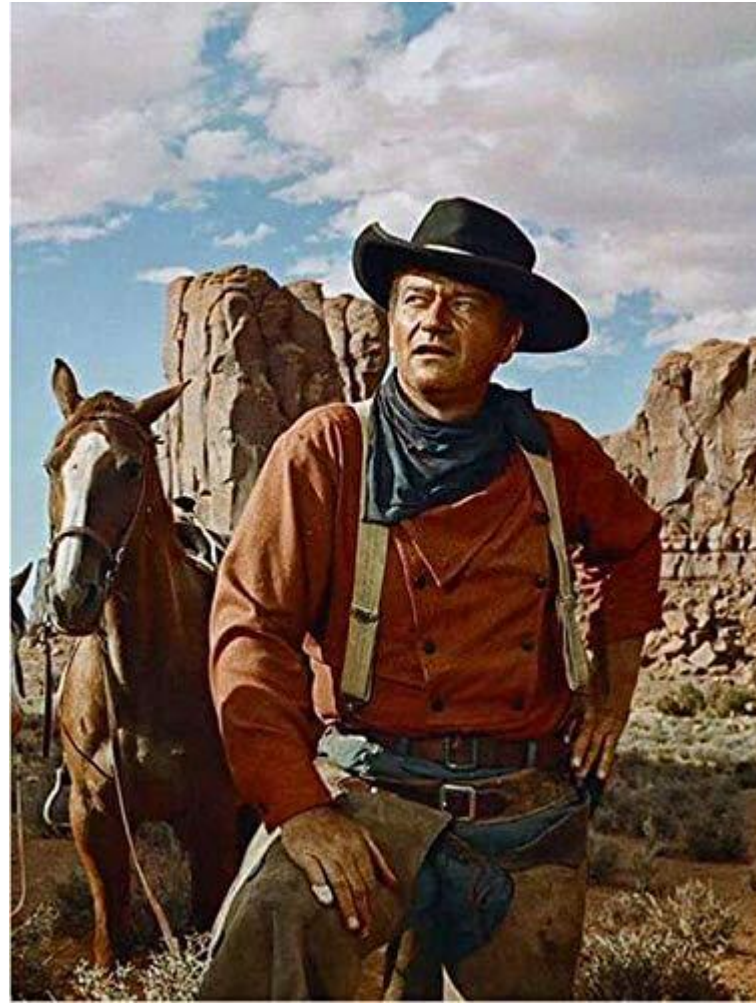
Full length article

Twin epidemics: The surging rise of methamphetamine use in chronic opioid users

Matthew S. Ellis*, Zachary A. Kasper, Theodore J. Cicero

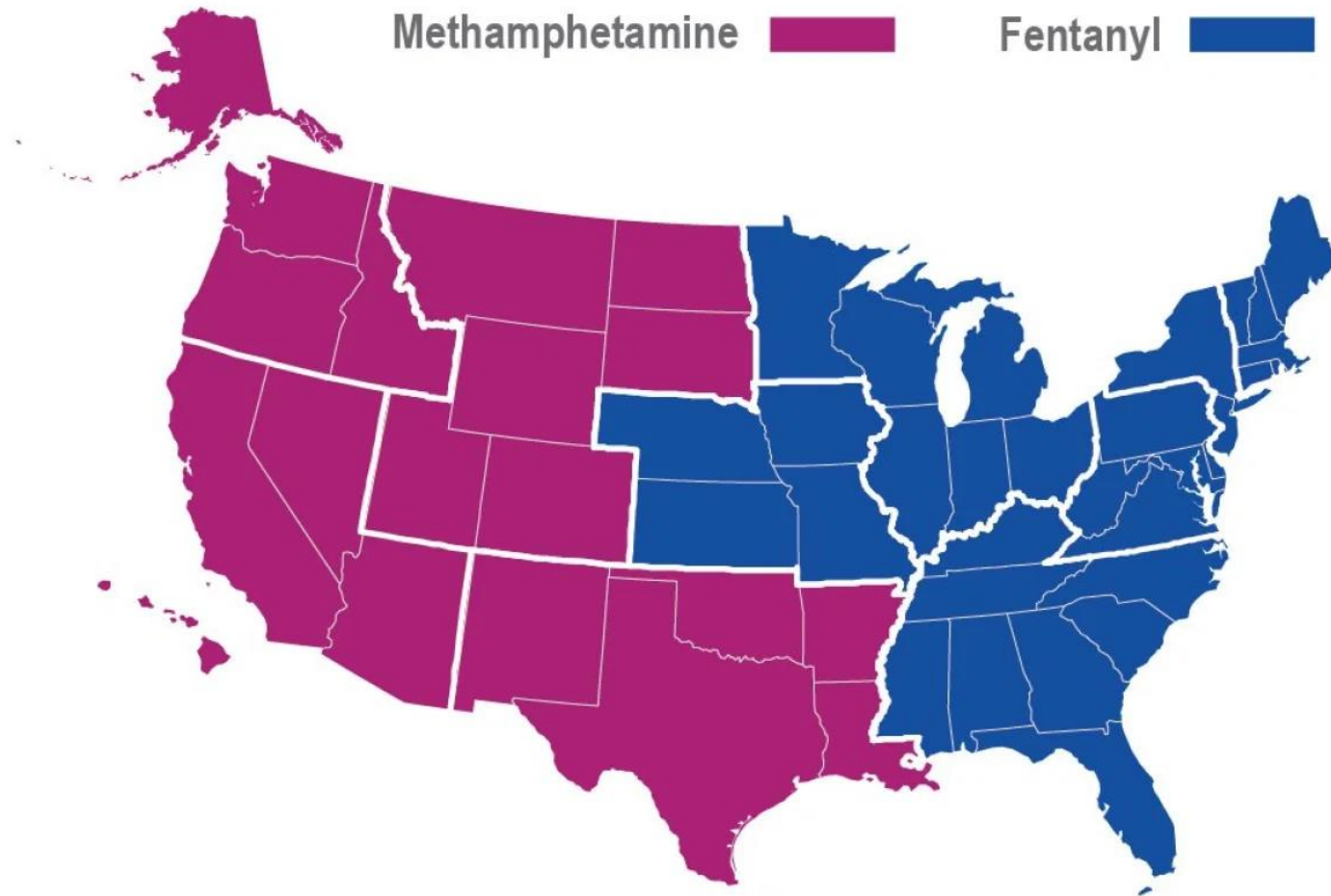
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- White
- Male
- Rural
- West



Drug overdose deaths by region

Methamphetamine was the top drug involved in overdose deaths in most of the western half of the U.S. while fentanyl pervaded the eastern half.



NOTE: Data from 2017. Deaths may include additional drugs.

SOURCE: NCHS National Vital Statistics System

Table 2
 Motivations for co-occurring use of methamphetamine and opioids (N = 145).

Coded responses	N (%)	Representative quotes
High-seeking	74 (51.0)	(1) <i>The high was like a roller coaster</i> (2) <i>I enjoyed the synergetic effect</i> (3) <i>I was told that it was a fabulous high, so I tried it and loved it</i>
Balance of effect	56 (38.6)	(1) <i>I could function on them together</i> (2) <i>I used meth to give me the rush & to have energy. I used heroin to numb myself or to get the high from the opioids. If i used too much meth id use heroin to calm down;</i> (3) <i>Cause I was trying to get allot of work done energy with no pain make you be able to get stuff done</i> (4) <i>Use meth sometimes to counter the drowsiness from opiods</i>
Availabile as Opioid Substitute	22 (15.2)	(1) <i>So when i couldn't use opioids because of money or availability, i used methamphetamine</i> (2) <i>I would use meth when I had ran out.</i> (3) <i>When I was really sick from the withdrawal and I couldn't find opioids, I would use methamphetamine</i>
Escape from life/ Numbness	14 (9.7)	(1) <i>Just feel numb n not worry about my problems</i> (2) <i>Because I hated to be fully aware and have to percieve my surroundings, situations and life. When I was high it was like walking around in a dream state. I was numbed</i> (3) <i>Escape from the reality of life</i>
Addiction	13 (9.0)	(1) <i>Because I'm a drug addict and would do anything I could to avoid being sober. I would use any excuse I could to justify use of different drugs</i> (2) <i>Because I'm a addict and it didn't matter how I got high just that I did.</i>
Social Setting	9 (6.2)	(1) <i>Initially it was just to party with socially then became addicted and had to use daily</i> (2) <i>The pupil dilation and other signs that would make it obvious that I was high would be less noticable as well. Made it a lot easily to hide from people around me.</i>

Table 4

Association between overdose and drug injection pattern in the past 12 months in a sample of persons who inject drugs.

	Overdosed at least once <i>n</i> (%)	Unadjusted prevalence ratio (95% CI)	Adjusted prevalence ratio* (95% CI)
Drug injection pattern			
Heroin only	20 (11.6)	1.0 (ref)	1.0 (ref)
Methamphetamine only	9 (7.4)	0.63 (0.30,1.35)	0.64 (0.29, 1.43)
Both heroin and methamphetamine	99 (33.6)	2.89 (1.85,4.49)	2.80 (1.72,4.53)

Source: National HIV Behavioral Surveillance (NHBS), Denver, Colorado, 2015.

*Adjusted for race/ethnicity, age, frequency of injection, incarceration, and homelessness.

Fact or Fiction?

- The source of abused fentanyl is pharmaceutical grade.
- Fentanyl will NOT be detected on routine urine drug screen.
- Fentanyl comes in all shapes and sizes and can mimic other drugs.
- Fentanyl kills as many people heroin.
- Powdered synthetic fentanyl, like carfentinil, will NOT kill you if it is present in the room or touches your skin.
- You should wear protective equipment and decontaminate any fentanyl skin exposure.
- Kratom kills less people than heroin.
- Kratom will NOT cause life-threatening effects.
- Kratom can lead to addiction and withdrawal.
- Kratom has been tested to make sure it works and it is safe.
- Methamphetamines counteract the effect of opioids.
- The use of methamphetamines with opioids leads to more overdoses.
- If you live in the Eastern US don't worry about methamphetamine.

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