ACCEPT

Addiction & Co-morbid Conditions: Enhancing Prevention & Therapeutics

Webex link to join from PC, Mac, iOS or Android:
https://uwmadison.webex.com/uwmadison/j.php?MTID=m9548d24d1f61e460d8e7627240e27b72
Meeting number: 2634 427 2183
Password: rwDs6iTcr95 (79376482 from phones)

Join by phone
+1-415-655-0001 US Toll
+1-312-535-8110 United States Toll (Chicago)

Access code: 263 442 72183
For attendance, purposes please text the following code: BOFMUW to 608-260-7097

Session Date: Friday, May 17, 2024

Didactic Topic and Presenter:
Overview of Xylazine – Appropriate Management

Evan S. Schwarz, MD, FACEP, FACMT, FASAM
Associate Professor of Emergency Medicine
Medical Toxicology Fellowship Director
UCLA Department of Emergency Medicine

Content Experts: Sheila Weix and Joe Galey

- 12:15 PM: Attendance text-in – Introductions
- 12:25 PM: Case Presentation
    - Presenter: Abby Bales, MD - *Associate Clinical Professor, Physician Site Lead for Junction Road Internal Medicine, Division of General Internal Medicine, Department of Medicine, School of Medicine and Public Health*
- 1 PM: Didactic Presentation and Discussion
    - Presenter: Evan S. Schwarz, MD, FACEP, FACMT, FASAM
- 1:15 PM End of Session

Funding for this service was made possible by 435200-G-18-11448-285932-880 from Wisconsin Department of Health Services. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government or the State of Wisconsin.

CONTINUING EDUCATION INFORMATION:

Accreditation Statement

In support of improving patient care, the University of Wisconsin–Madison ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Designation Statements

American Medical Association (AMA)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 *AMA PRA Category 1 Credit*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

American Nurses Credentialing Center (ANCC)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 ANCC contact hour.

Accreditation Council for Pharmacy Education (ACPE)

The University of Wisconsin–Madison ICEP designates this knowledge-based activity for a maximum of 1.0 hours or 0.1 CEUs of CPE credit. Credit can be earned by successfully completing the activity and the evaluation. Credit will be provided to NABP CPE Monitor within 60 days after the activity completion.

2024 Universal Activity Number (UAN): JA0000358-0000-24-009-L01-P; JA0000358-0000-24-009-L01-T

Continuing Education Units

The University of Wisconsin–Madison ICEP, as a member of the University Professional & Continuing Education Association (UPCEA), authorizes this program for 0.1 continuing education units (CEUs) or 1 hour.

Medication Access and Training Expansion Act (MATE)

This session is designed to meet the requirements outlined in the Medication Access and Training Expansion (MATE) Act. (Click here for more information.) Number of hours: 1

Interprofessional Continuing Education Partnership
UNIVERSITY OF WISCONSIN-MADISON
School of Medicine and Public Health
School of Nursing
School of Pharmacy

Project ECHO®
University of Wisconsin

ECHO ACCEPT
Addiction & Co-morbid Conditions: Enhancing Prevention & Therapeutics
2022-2024
Overview of Xylazine – Appropriate Management
5/17/24

Didactic Presenter: Evan S. Schwarz, MD, FACEP, FACMT, FASAM
Case Presenter: Abigail Bales,MD

Provided by the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP)

Intended Audience:

Nurses, Nurse Practitioners, Pharmacists, Physicians, Physician Assistants, Pharmacy Technicians, Psychologists, Social Workers, Patient/Caregivers, Students

Objectives:

As a result of this educational regularly scheduled series, learners as members of the healthcare team will be able to:

- Summarize what we know about xylazine.
- Describe the impact of xylazine on patients that use drugs
- Implement appropriate substance use prescribing and monitoring practices in an ethical fashion

Policy on Disclosure

It is the policy of the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP) to identify, mitigate and disclose all relevant financial relationships with ineligible companies* held by the speakers/presenters, authors, planners, and other persons who may influence content of this accredited continuing education (CE). In addition, speakers, presenters and authors must disclose any planned discussion of unlabeled/unapproved uses of drugs or devices during their presentation. For this accredited continuing education activity, all relevant financial relationships have been mitigated and detailed disclosures are listed below.

** **Ineligible companies** are those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. The ACCME does not consider providers of clinical service directly to patients to be ineligible companies.*

Name	Role	Financial Relationship Disclosures	Discussion of Unlabeled/Unapproved uses of drugs/devices in presentation?	COI completion date
Randall Brown	RSS Chair	Usona Institute (Grant / Contract), multi-disciplinary association for psychedelic studies (Grant / Contract)	Yes	1/29/2024
Nada Rashid	RSS Coordinator	No relevant financial relationships to disclose	No	2/5/2024
Kathleen Maher	RSS Coordinator	No relevant financial relationships to disclose	No	2/6/2024
Ritu Bhatnagar	Planner	No relevant financial relationships to disclose	Yes	2/8/2024
Paul Hutson	Planner	No relevant financial relationships to disclose	Yes	1/29/2024
Susan Mindock	Planner	No relevant financial relationships to disclose	No	1/29/2024
Sheila Weix	Planner	No relevant financial relationships to disclose	No	2/9/2024
Kellene Eagen	Planner	No relevant financial relationships to disclose	No	1/29/2024
Joseph Galey	Planner	No relevant financial relationships to disclose	No	2/13/2024
David Leinweber	Planner	No relevant financial relationships to disclose	Yes	1/20/2024
Abigail Bales	Presenter	No relevant financial relationships to disclose	No	5/9/2024

Evan Schwarz	Presenter	No relevant financial relationships to disclose	No	5/8/2024

Accreditation Statement

In support of improving patient care, the University of Wisconsin–Madison ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Designation Statements

American Medical Association (AMA)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 *AMA PRA Category 1 Credit*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

American Nurses Credentialing Center (ANCC)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 ANCC contact hour.

Accreditation Council for Pharmacy Education (ACPE)

The University of Wisconsin–Madison ICEP designates this knowledge-based activity for a maximum of 1.0 hours or 0.1 CEUs of CPE credit. Credit can be earned by successfully completing the activity and the evaluation. Credit will be provided to NABP CPE Monitor within 60 days after the activity completion.

2024 Universal Activity Number (UAN): JA0000358-0000-24-009-L01-P; JA0000358-0000-24-009-L01-T

Continuing Education Units

The University of Wisconsin–Madison ICEP, as a member of the University Professional & Continuing Education Association (UPCEA), authorizes this program for 0.1 continuing education units (CEUs) or 1 hour.

Medication Access and Training Expansion Act (MATE)

This session is designed to meet the requirements outlined in the Medication Access and Training Expansion (MATE) Act. (Click here for more information.) Number of hours: 1

Case Presentation

Abigail Bales, MD, FACP

UW Health—General Internal Medicine

Funding for this service was made possible by 435200-G-18-11448-285932-880 from Wisconsin Department of Health Services. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government or the State of Wisconsin.

Accreditation Statement:

In support of improving patient care, the University of Wisconsin–Madison ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Designation Statements

Accreditation Council for Pharmacy Education (ACPE)

The University of Wisconsin-Madison ICEP designates this live activity for a maximum of 1 hour of knowledge-based CE credit. Credit can be earned by successfully completing this live activity. Pharmacists and Pharmacy Technicians should claim only the credit commensurate with the extent of their participation in the activity. CE credit information, based on verification of live attendance, will be provided to NABP within 60 days after the activity completion.

Pharmacists and Pharmacy Technicians must enter their NABP number in their profile in order to receive credit.

2022 Universal Activity Number (UAN) : JA0000358-9999-22-002-L01-P

American Medical Association (AMA)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

American Nurses Credentialing Center (ANCC)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 ANCC contact hour.

UW Continuing Education Credits

The University of Wisconsin–Madison ICEP, as a member of the University Professional & Continuing Education Association (UPCEA), authorizes this program for 0.1 CEUs or 1.0 hour

POLICY ON FACULTY AND SPONSOR DISCLOSURE

It is the policy of the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP) to identify, mitigate and disclose all relevant financial relationships with ineligible companies* held by the speakers/presenters, authors, planners, and other persons who may influence content of this accredited continuing education (CE). In addition, speakers, presenters and authors must disclose any planned discussion of unlabeled/unapproved uses of drugs or devices during their presentation. For this accredited continuing education activity, all relevant financial relationships have been mitigated and detailed disclosures are listed below.

* Ineligible companies are those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests.

For this educational activity there are no reported conflicts of interest

Case Introduction

- 78 year old woman with a history of high dose prescription opiate use for chronic pain who had an unintentional overdose after taking illicitly obtained additional pills

- Primary question for discussion: What is the role of buprenorphine in patients at risk of overdose who do not acknowledge a substance use problem?

Her previous history:

- Started on opiates for back pain in about 2012
  - Non-opiate interventions like PT and injections not helpful
  - Previously informed of the risks of her regimen; unwilling/unable to taper or adjust
- Significant psychiatric history, history of trauma
  - Had followed with a psychiatrist until 2004, then managed in Primary Care when psychiatrist retired
  - History of alcoholism in remission for about 20 years
- Divorced, lives alone. Has 2 adult children who live out of state. Looks forward to visits with grandchildren every summer

My history with this patient

- My first visit with her was in August 2022 as transfer from prior PCP who left the practice
- At that time, she was prescribed: (total MME 280)
  - Morphine ER 60/60/60/40 mg
  - Oxycodone IR 10 mg QID
  - Alprazolam 1.75 mg QHS and 0.25 mg daily PRN (for panic)
  - Methylphenidate 10 mg QID (for depression)
  - Gabapentin (taking less than prescribed only at bedtime, makes her sleepy, doesn't help with pain)
  - Trazodone 200 mg QHS

Recent history

- July 2022—hospitalized x2 for aspiration pneumonia, respiratory failure, required BiPap
- Partners and clinic management aware of patient and multiple high risk medications, concerns raised for continuing this care plan

Initial plan

- Risks of opiates much greater than any benefits; I was not willing to continue to prescribe this regimen
- Tapered by 15 mg morphine every 2 weeks
- Patient reported increased pain, but on my assessment, she seemed more mentally alert and was still able to participate in daily activities
- One hospitalization in Nov 2022 due to COVID-19 infection; no further episodes of respiratory failure since

A pause

- March 2023—developed withdrawal as ER morphine was decreased from QID to TID
- Paused taper at this dose with hope to resume taper in the future
- MME 280→120
- She was working with Pain Clinic on other options like a spinal cord stimulator

New development

- January 2024—her psychiatrist is notified by Hospital that she had been found unresponsive, required intubation and hospitalization
- Initially reported as a “pill party” with at least one other person found unresponsive at the scene
- Psych stopped alprazolam; decreased dose of Methylphenidate and opiates

Follow up with me

- Video visit with me, patient, RNCC, and patient's 2 children
- Patient disputes the reported events
  - "She says she wanted to be free from pain, just for a while, just from one night. So she started drinking alcohol and got a pill from someone that she thought was oxycodone. It turned out to be fentanyl."
  - "She reports she was alone in the apartment, and a neighbor came to check on her and found her unresponsive and called 911. She acknowledges this was stupid and that she could have died."
  - Does not feel she has a substance use problem or that she is at risk for this happening again

What to do now?

- Prescribed 15 mg morphine ER TID only at discharge (down from 120 MME prior)
- Appears uncomfortable, agitated, upset
- I added back 7.5 mg IR morphine QID to alleviate withdrawal (not oxycodone due to greater euphoric potential)
- Asked her to schedule intake with Behavioral Health and Recovery
- What was I going to do in the long term?

- Clear violation of pain med agreement
- Normally I would stop all opiates
- What would she do if I did that?

- Discussed with Pain Clinic APP: have her see us to discuss butrans or suboxone
- Discussed with Dr Randy Brown, AODA on call
  - BHR unlikely to prescribe suboxone if she is not diagnosed with OUD
  - No options for supervised titration/inpatient management
  - Agreed suboxone would be a good option for her, gave me helpful resources to cross-taper

Cross taper

Buprenorphine/naloxone SL Tabs

- Day 1: 1 mg once (1 mg today)
- Day 2: 1 mg two times a day (2 mg total)
- Day 3: 2 mg two times a day (4 mg total)
- Day 4: 2 mg three times a day (6 mg total)
- Day 5: 4 mg two times a day (8 mg total)
- Day 6: 4 mg three times a day (12 mg total)
- Day 7: 4 mg four times a day (and then continue this dose ongoing) (16 mg total)

Morphine (15 Mg morphine ER three times a day and 7.5 mg morphine IR four times a day) for days 1-6; then taper:

- Day 7: 15 mg morphine ER two times a day; 7.5 mg morphine IR four times a day
- Day 8: 15 mg morphine ER at bedtime; 7.5 mg morphine IR four times a day
- Day 9: 7.5 mg morphine IR four times a day
- Day 10: 7.5 mg morphine IR 3 times a day
- Day 11: 7.5 mg morphine IR 2 times a day
- Day 12: 7.5 mg morphine IR at bedtime
- Day 13: stop morphine

Logistics

- Talked to pharmacy ahead of time to get meds in and make sure covered by insurance
- Unable to do quarter tabs
- Insurance limits to no more than 3 tabs per day
- Is Butrans better because it is FDA approved for pain?
- Wanted to increase dose to 24 mg per day ASAP
  - Then more sedation
  - Additive effects of increased gabapentin or trazodone

April 2024

- BHR not helpful— “Anyone can make one mistake”
- Tolerating 24 mg buprenorphine daily, wants to increase
- Sleep is better
- Seems to be at similar level of function as before

Discussion:

- Primary question: What is the role of buprenorphine in patients at risk of overdose who do not acknowledge a substance use problem?

DSM-5 Substance Use Disorder ("Addiction")

- Tolerance
- Withdrawal

} **Physical Dependence ≠ Use Disorder**

- Larger amts/longer periods than intended
- Persistent desire/failed attempts to quit/control use
- Much time obtaining/using/recovering
- Important activities sacrificed
- Continued use despite known adverse effects
- Failure to fulfill major obligations
- Recurrent hazardous use
- Craving
- Ongoing use despite interpersonal problems

2-3 = mild
4-5 = moderate
≥ 6 = severe

By initialing here _____ you have acknowledged that Project ECHO case consultations do not create or otherwise establish a provider-patient relationship between any ECHO clinician and any patient whose case is being presented in a teleECHO clinic.

Project ECHO®
University of Wisconsin

Evan S. Schwarz MD FACEP, FACMT, FASAM
Associate Professor of Emergency Medicine
UCLA Department of Emergency Medicine
ACMT Board of Directors

Disclosure

- ACMT
  - Member of Board Directors
  - Active member of ToxIC Registry

Funding for this service was made possible by 435200-G-18-11448-285932-880 from Wisconsin Department of Health Services. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government or the State of Wisconsin.

Accreditation Statement:

In support of improving patient care, the University of Wisconsin–Madison ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Designation Statements

Accreditation Council for Pharmacy Education (ACPE)

The University of Wisconsin-Madison ICEP designates this live activity for a maximum of 1 hour of knowledge-based CE credit. Credit can be earned by successfully completing this live activity. Pharmacists and Pharmacy Technicians should claim only the credit commensurate with the extent of their participation in the activity. CE credit information, based on verification of live attendance, will be provided to NABP within 60 days after the activity completion.

Pharmacists and Pharmacy Technicians must enter their NABP number in their profile in order to receive credit.

2022 Universal Activity Number (UAN) : JA0000358-9999-22-002-L01-P

American Medical Association (AMA)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

American Nurses Credentialing Center (ANCC)

The University of Wisconsin–Madison ICEP designates this live activity for a maximum of 1 ANCC contact hour.

UW Continuing Education Credits

The University of Wisconsin–Madison ICEP, as a member of the University Professional & Continuing Education Association (UPCEA), authorizes this program for 0.1 CEUs or 1.0 hour

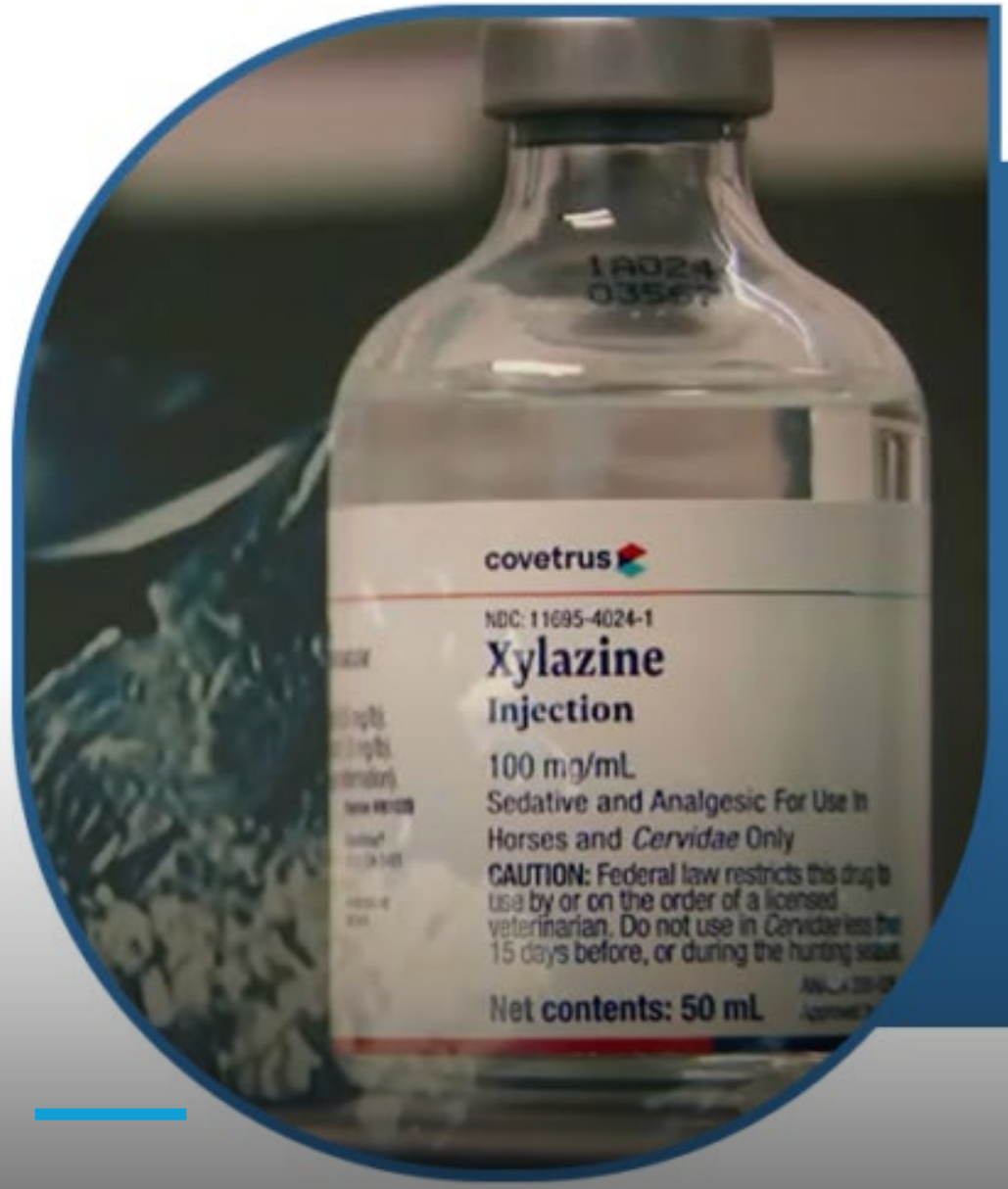
POLICY ON FACULTY AND SPONSOR DISCLOSURE

It is the policy of the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP) to identify, mitigate and disclose all relevant financial relationships with ineligible companies* held by the speakers/presenters, authors, planners, and other persons who may influence content of this accredited continuing education (CE). In addition, speakers, presenters and authors must disclose any planned discussion of unlabeled/unapproved uses of drugs or devices during their presentation. For this accredited continuing education activity, all relevant financial relationships have been mitigated and detailed disclosures are listed below.

* Ineligible companies are those whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests.

For this educational activity there are no reported conflicts of interest

So, Don’t Let Someone Tell You They Definitely Know a Lot about Xylazine!



In Arkansas, xylazine is being used as an additive to make opioids stronger.

Mixing xylazine and other drugs increase risk of overdose.

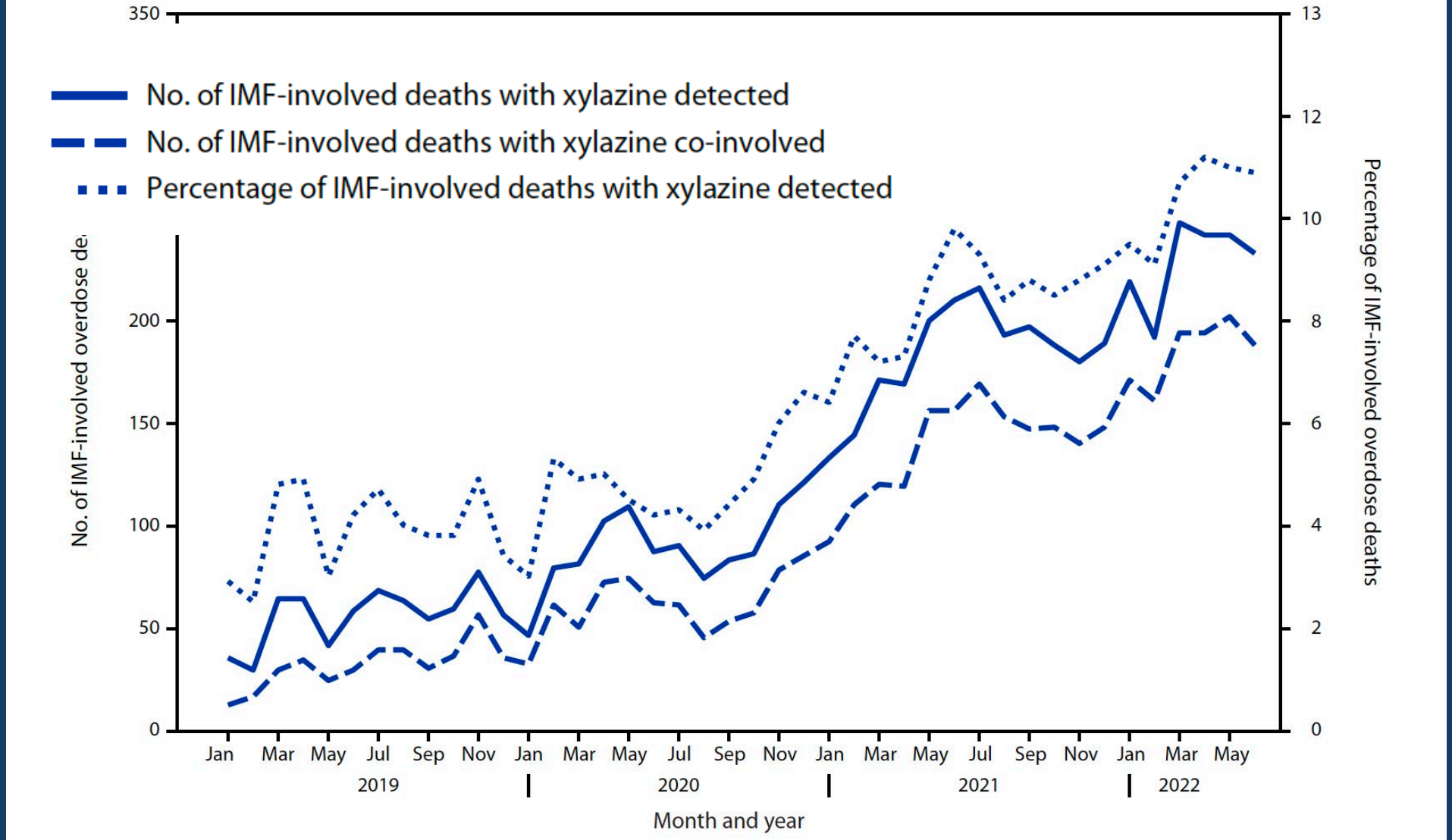

WASHINGTON
Olympia
Salem
OREGON
Boise
IDAHO
MONTANA
Helena
NORTH DAKOTA
Bismarck
MINNESOTA
St. Paul
SOUTH DAKOTA
Pierre
WYOMING
Cheyenne
NEBRASKA
Lincon
IOWA
Des Moines
WISCONSIN
Madison
MICHIGAN
Lansing
NEW HAMPSHIRE
VERMONT
MAINE
Augusta
Albany
NEW YORK
MASSACHUSET
RHODE ISLAND
Providence
CONNECTICUT
Hartford
PENNSYLVANIA
Harrisburg
NEW JERSEY
Trenton
DELAWARE
Dover
MARYLAND
Annapolis
Sacramento
Carson City
NEVADA
Salt Lake City
UTAH
Denver
COLORADO
Topeka
KANSAS
ILLINOIS
Springfield
INDIANA
Indianapolis
OHIO
Columbus
WEST VIRGINIA
Charleston
Frankfort
KENTUCKY
Richmond
VIRGINIA
WASHINGTON D.C
CALIFORNIA
Santa Fe
ARIZONA
Phoenix
NEW MEXICO
OKLAHOMA
Oklahoma City
ARKANSAS
Little Rock
Nashville
TENNESSEE
Raleigh
NORTH CAROLINA
Columbia
SOUTH CAROLINA
Atlanta
GEORGIA
Jackson
ALABAMA
Montgomery
ATLANTIC OCEAN

WHAT IS XYLAZINE?

WHY SHOULD I BE AWARE OF IT?

Torruella RA. Xylazine (verinary sedative) use in PR. Subst Abuse Treat Prev Policy 2011;6(1):7
D'Orazio et al. Xylazine adulteration of the heroin-fentanyly drug supply: a narrative review. Ann Intern Med 2023;176(10):1370-76.

FIGURE 1. Number and percentage of drug overdose deaths involving* illicitly manufactured fentanyls,† by month and xylazine detection or co-involvement — State Unintentional Drug Overdose Reporting System, 21 jurisdictions,§ January 2019–June 2022



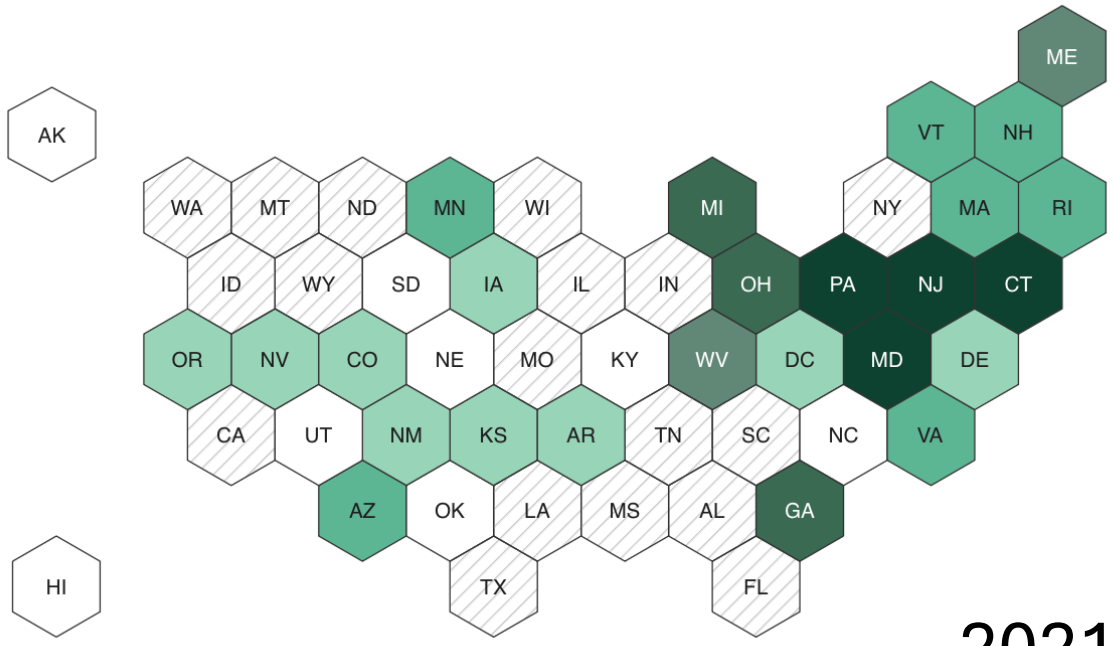
Kariisa M, et al. Illicitly manufactured fentanyl-involved overdose deaths with detected xylazine-US, January 2019-2022. MMWR 2023;72(26):721-7.

Where were select drugs of interest detected[12] in c overdose deaths, 2021, *Overall (33 jurisdictions)*

Xylazine

Metric: Count Percent

Overall (33 jurisdictions): 2,838 deaths



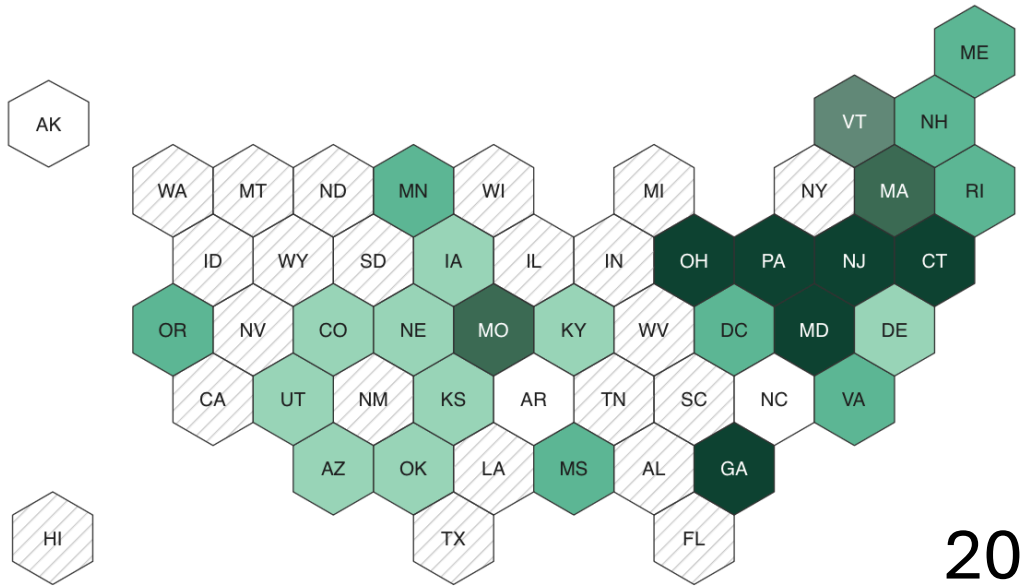
2021

Where were select drugs of interest c overdose deaths, 2022, *Overall (29 ju*

Xylazine

Metric: Count

Overall (29 jurisdictions): 2,950 deaths



2022

Color Legend

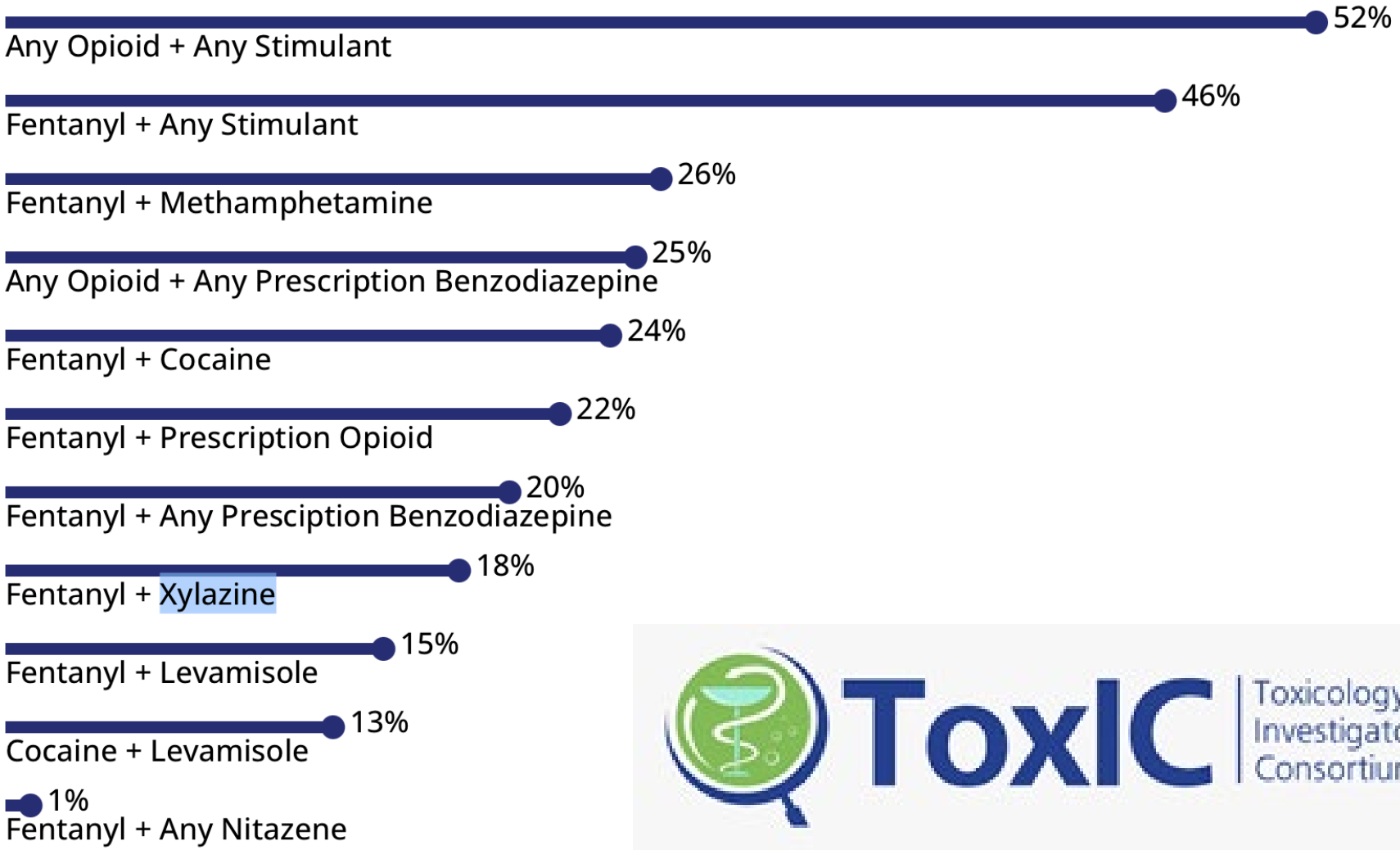
- ≥150 deaths
- 100–149 deaths
- 50–99 deaths
- 10–49 deaths
- 1–9 deaths
- 0 deaths
- Data not available

https://www.cdc.gov/drugoverdose/fatal/dashboard/index.html

Make a selection from the filters to change the visualization information.

Combination

Common Two-Substance Combinations



ToxIC Toxicology Investigators Consortium

https://www.cdc.gov/drugoverdose/nonfatal/fentalog/dashboard/index.html

Drug Checking — Quarterly Report

PHILADELPHIA, PENNSYLVANIA | DRUG CHECKING | Q1 & Q2 2023

PURPOSE: This report provides up-to-date information regarding the drug supply in Philadelphia, Pennsylvania, United States of America, including quantitative data on the purity of fentanyl, xylazine, cocaine, methamphetamine, and more in various sample types analyzed.

OVERVIEW: Traditional drugs (e.g., heroin, fentanyl, cocaine, methamphetamine) are commonly identified among drug samples in cities across the United States, albeit at varying purities and combinations. Novel psychoactive substances (NPS) continue to appear within the drug supply, masked as traditional drugs or added to traditional drug preparations. Nationally, the drug supply remains a dynamic and evolving environment, with respect to the active drug components, cutting agents, and/or adulterants added to drug preparations. The drug supply and drug use trends can be different from city to city or even within a given community, requiring specific regional or local assessments. Accurate understanding of drug materials and the drug supply in real-time is imperative for effective public health and safety preparedness and response.

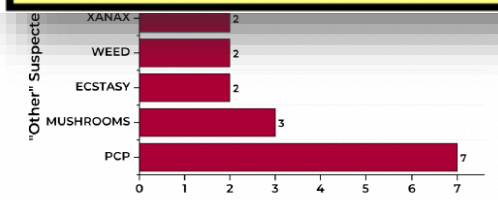
SUMMARY & RECENT NOTABLE FINDINGS

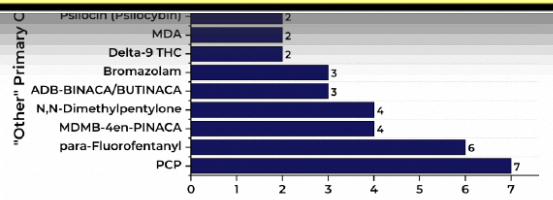
- 344 samples were analyzed between January 1, 2023, and June 30, 2023.
- ***N*-Desethyl Isotonitazene** (n=3) was detected in dope samples alongside fentanyl, xylazine, bromazolam, flubromazepam, and caffeine.
- **Bromazolam** (n=2) was detected without opioids in purported dope samples.
- Coke (n=6) & crack (n=4) samples contained fentanyl. One methamphetamine sample contained fentanyl; however, it was noted as known contamination.

SUMMARY & RECENT NOTABLE FINDINGS

- 344 samples were analyzed between January 1, 2023, and June 30, 2023.
- ***N*-Desethyl Isotonitazene** (n=3) was detected in dope samples alongside fentanyl, xylazine, bromazolam, flubromazepam, and caffeine.
- **Bromazolam** (n=2) was detected without opioids in purported dope samples.
- Coke (n=6) & crack (n=4) samples contained fentanyl. One methamphetamine sample contained fentanyl; however, it was noted as known contamination.

- Nearly all dope samples (99%) contained fentanyl and/or *para*-fluorofentanyl.
- Over the last 12 months, the average amount of fentanyl in dope samples remained mostly consistent while the average amount of xylazine increased 34%.





Note: "Suspected contents" (left) refers to the purported sample identity, not necessarily the "sold as" designation. "Primary component" (right) reflects the largest substance, by peak area, detectable during GC-MS analysis. (See Disclaimer on Page 3.)

Lidocaine	Dope	17	2.8%	0.8%	0.2%	19.0%
Cocaine	Dope	6	6.7%	5.4%	0.4%	16.8%
Methamphetamine	Meth	13	62.6%	52.9%	50.3%	85.7%
Cocaine	Meth	2	--	--	0.4%	0.5%
Fentanyl	Meth	1	--	--	1.2%	--
Xylazine	Meth	1	--	--	3.2%	--
para-Fluorofentanyl	Meth	1	--	--	0.6%	--

**Note: Drug amount (as referred to as "purity" or "concentration") is the proportion or percent of the sample that consists of a single detected drug or substance.*

cfsre | NPS DISCOVERY

Department of Public Health CITY OF PHILADELPHIA

ACKNOWLEDGEMENTS: This report was prepared by Joshua DeBord, Jen Shinefeld, Rachel Russell, Max Denn, Alexis Quinter, Barry K. Logan, Daniel Teixeira da Silva, and Alex J. Krotulski at the Center for Forensic Science Research and Education (CFSRE) at the Fredric Rieders Family Foundation. The authors acknowledge CFSRE and PDPH personnel for their contributions and involvements. This work is funded by the Centers for Disease Control and Prevention (CDC) through an Overdose Data to Action grant awarded to the City of Philadelphia. The opinions, findings, conclusions, and/or recommendations expressed in this publication are those of the authors and do not necessarily reflect those of the CDC or other federal, state, local, or private agencies. For more information about our drug checking programs and services, please contact CFSRE's NPS Discovery via email (npsdiscovery@cfsre.org) or visit our webpage (www.npsdiscovery.org).

https://www.cfsre.org/images/content/reports/drug_checking/2023_Q1_and_Q2_Drug_Checking_Quarterly_Report_CFSRE_NPS_Discovery.pdf

XYLAZINE WOUNDS

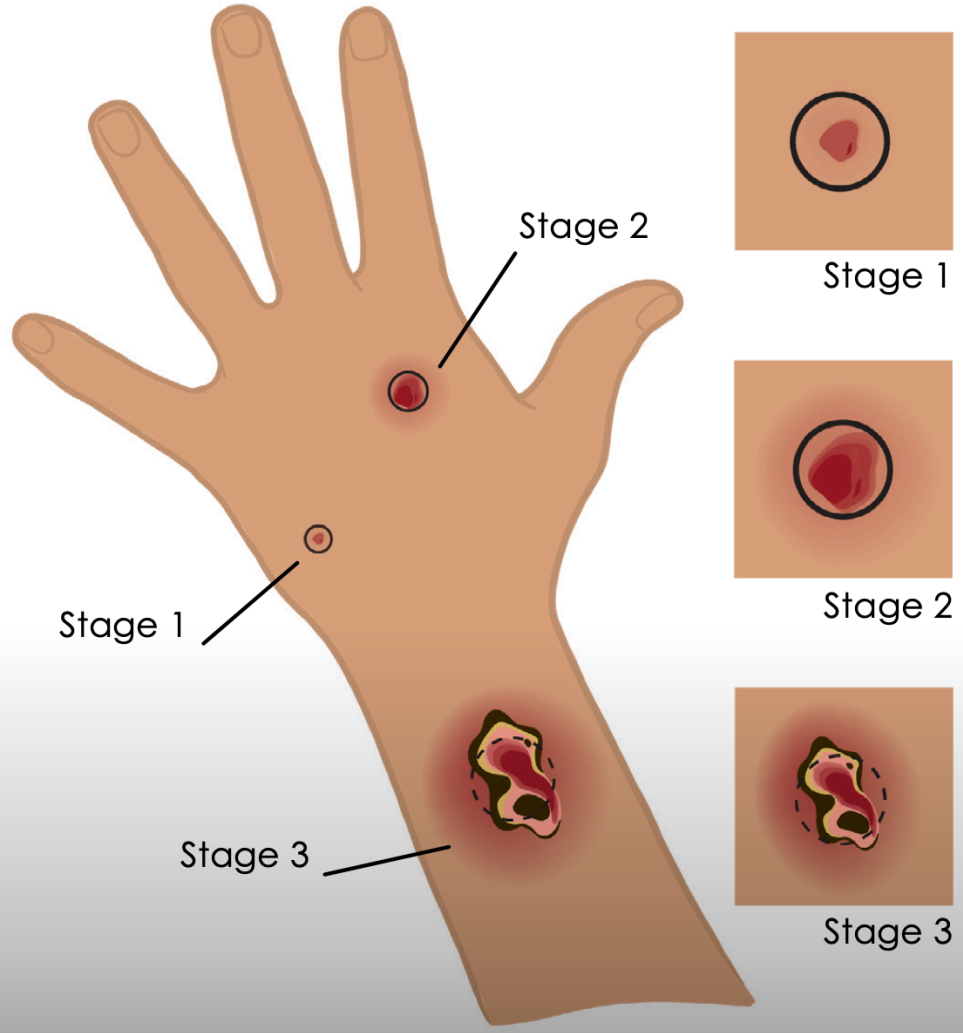
Wounds can appear whether you inject or not.

They can happen anywhere on the body, not just at an injection site.

Wounds can look like:

- **Blisters**
- **Small purple bruises or scabs**
- **“Pinpoint” holes in the skin**
- **Large open sores**
- **Dark or black pieces of dead skin**

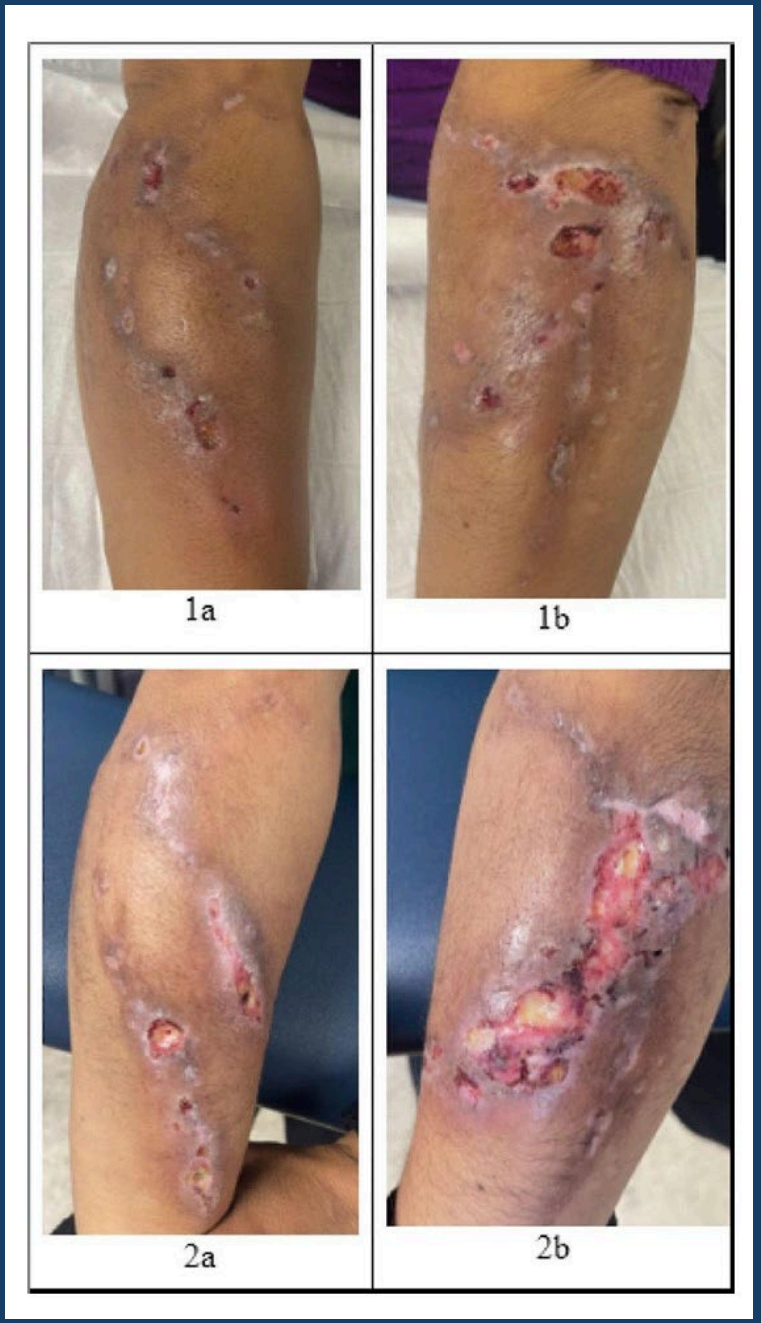
Seek intervention by stage 2 if wound continues to grow.



SEEK MEDICAL CARE AS SOON AS POSSIBLE IF YOU HAVE A WOUND AND:

Wounds

- 43 y/o with OUD
- Never had wounds like this before despite 6 years of injection drug use
- Eventually developed wounds on lower extremities
- Urine immunoassay + for xylazine



Warp et al. A confirmed case of xylazine-induced skin ulcers in a person who injects drugs in Miami, FL, USA. Harm Reduct J 2024;21(64).

Xylazine Wound Care Among PWUD Accessing

BOSTON UNIV

UPMC LIFE CHANGING MEDICINE

ty of burgh

1 Medical Wound Care Experiences

2 Wound Self-Treatment Practices

Figure 2. *Wound cleansers used by PWUD with xylazine wounds (N=148)*

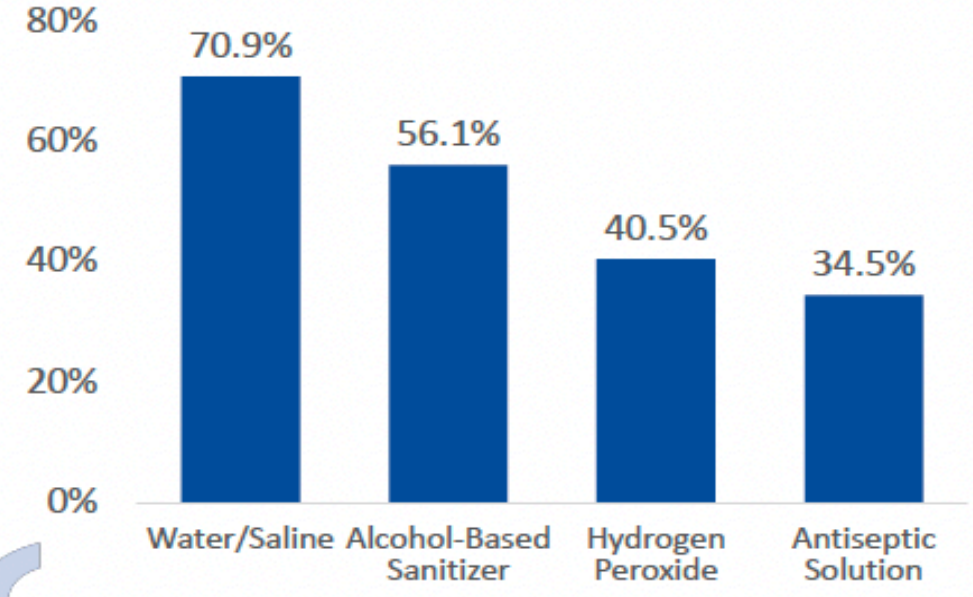
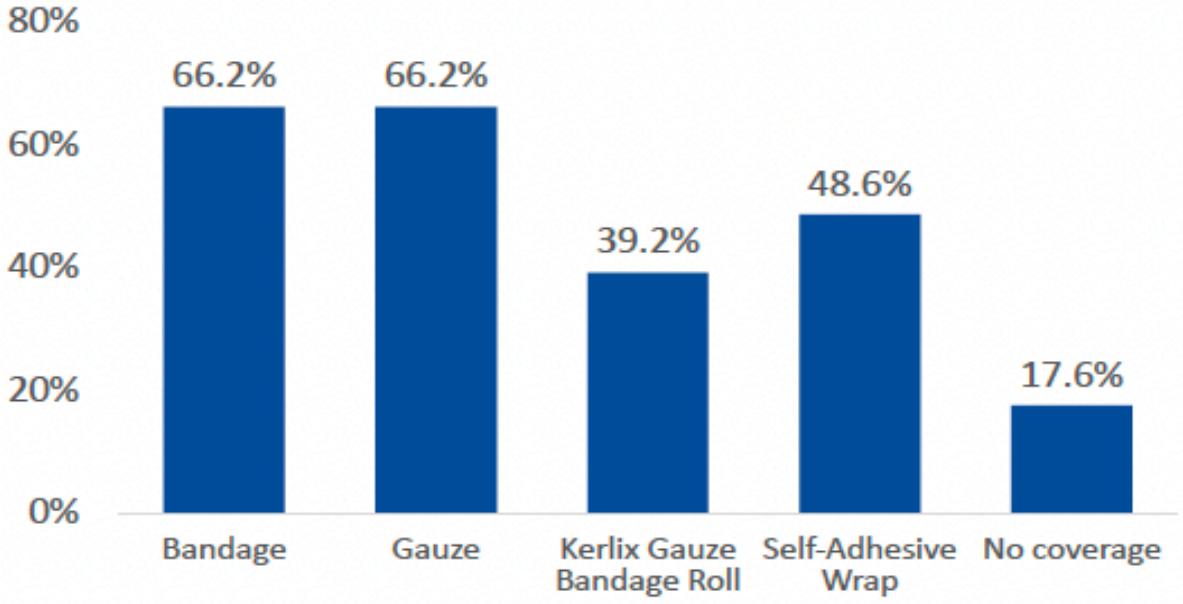


Figure 3. *Wound coverage techniques used by PWUD with xylazine wounds (N=148)*



"I cover my wound with whatever I have at work: toilet paper, duct tape, paper towels."

1. PWUD experiences receiving medical care for wounds
2. PWUD wound self-treatment practices

treatment

0% Water/Saline Alcohol-Based Sanitizer Hydrogen Peroxide Antiseptic Solution

0% Bandage Gauze Kerlix Gauze Bandage Roll Self-Adhesive Wrap No coverage

"I cover my wound with whatever I have at work: toilet paper, duct tape, paper towels."

Disclosures: None

Supported by: NIDA K12DA050607 (RJ, JML), 2023 Boston University School of Public Health Impact Grant (SI)

Acknowledgement: Our sincere gratitude to the persons who use drugs and front-line harm reduction organizations for their generosity in assisting with this research.

ELSEVIER

Forensic Science International

Volume 134, Issue 1, 24 June 2003, Pages 25-28

A reported case involving impaired driving following self-administration of xylazine

Matthew E Stillwell

Toxicology Unit, Oklahoma State Bureau of Investigation, 2132 NE, 36th Street, Oklahoma City, OK 73111, USA

Received 27 January 2003, Accepted 3 March 2003, Available online 22 April 2003.

- 23 y/o found passed out in his car
- Had injected himself with xylazine
- Blood positive for barbs, benzos, cannabis, cocaine, meth, opioids, and PCP
- Quant: xylazine 0.57 microg/ml

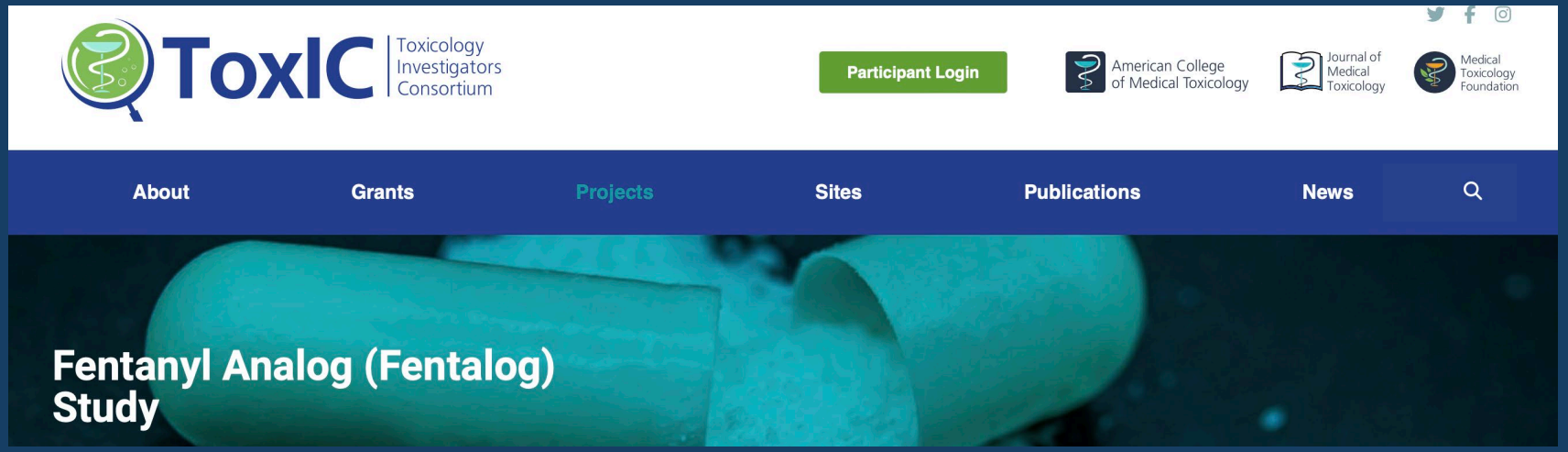
Published in final edited form as:

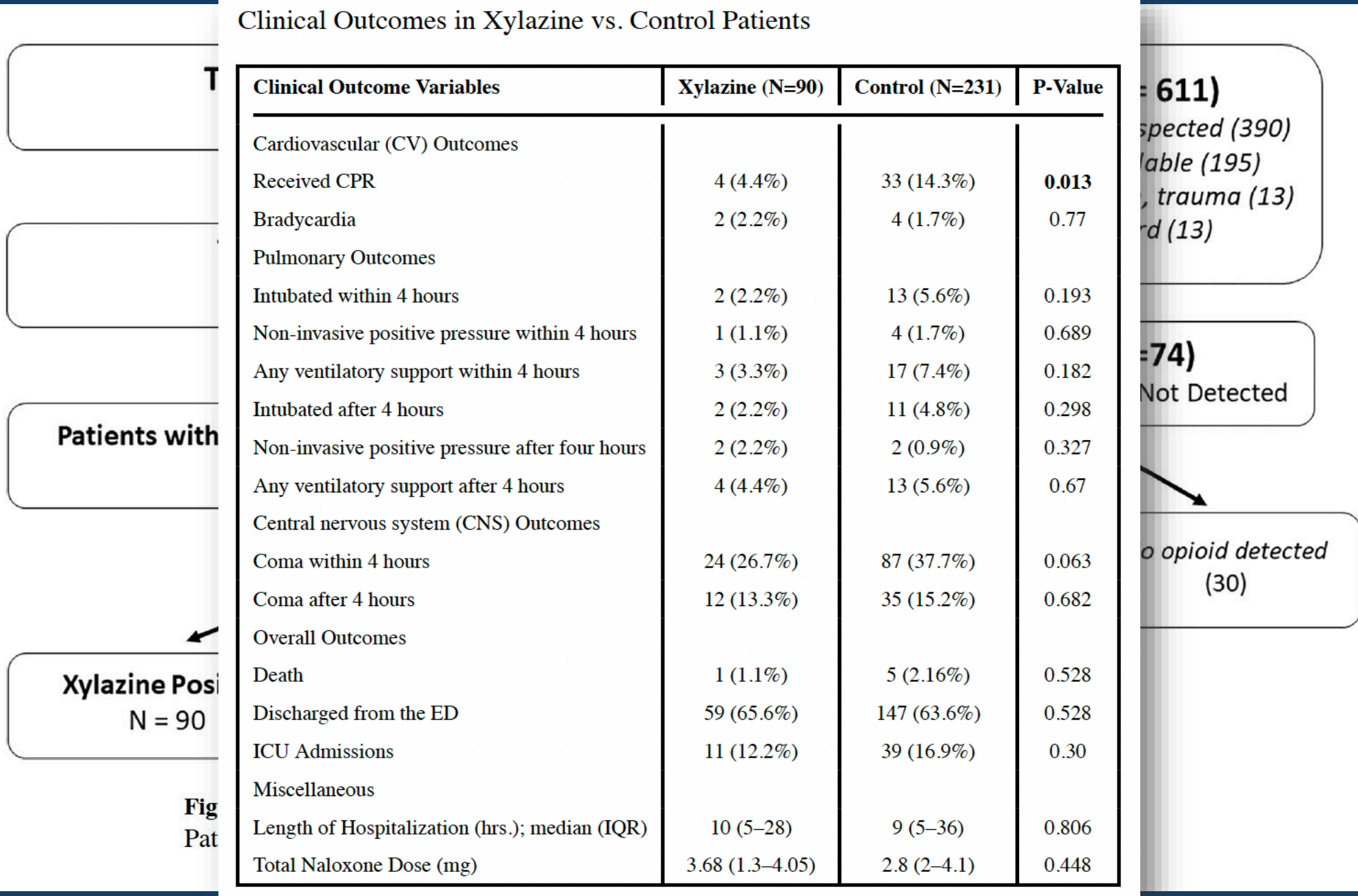
Clin Toxicol (Phila). 2023 March ; 61(3): 173–180. doi:10.1080/15563650.2022.2159427.

Opioid Overdoses Involving Xylazine in Emergency Department Patients: A Multicenter Study

Jennifer S. Love, MD,

Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, NY.





Clinical Outcomes in Xylazine vs. Control Patients

Clinical Outcome Variables	Xylazine (N=90)	Control (N=231)	P-Value
Cardiovascular (CV) Outcomes			
Received CPR	4 (4.4%)	33 (14.3%)	**0.013**
Bradycardia	2 (2.2%)	4 (1.7%)	0.77
Pulmonary Outcomes			
Intubated within 4 hours	2 (2.2%)	13 (5.6%)	0.193
Non-invasive positive pressure within 4 hours	1 (1.1%)	4 (1.7%)	0.689
Any ventilatory support within 4 hours	3 (3.3%)	17 (7.4%)	0.182
Intubated after 4 hours	2 (2.2%)	11 (4.8%)	0.298
Non-invasive positive pressure after four hours	2 (2.2%)	2 (0.9%)	0.327
Any ventilatory support after 4 hours	4 (4.4%)	13 (5.6%)	0.67
Central nervous system (CNS) Outcomes			
Coma within 4 hours	24 (26.7%)	87 (37.7%)	0.063
Coma after 4 hours	12 (13.3%)	35 (15.2%)	0.682
Overall Outcomes			
Death	1 (1.1%)	5 (2.16%)	0.528
Discharged from the ED	59 (65.6%)	147 (63.6%)	0.528
ICU Admissions	11 (12.2%)	39 (16.9%)	0.30
Miscellaneous			
Length of Hospitalization (hrs.); median (IQR)	10 (5–28)	9 (5–36)	0.806
Total Naloxone Dose (mg)	3.68 (1.3–4.05)	2.8 (2–4.1)	0.448

“Demon”

- Found near Delaware
- White powder with package stamped with “Demon”

https://www.narconon.org/blog/fentanyl-truly-the-devils-drug.html

“Demon”

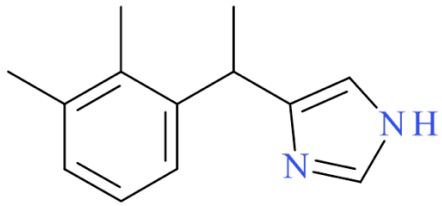
- Substances Identified:
  - Fentanyl and fentanyl analogues (opioid)
  - Bromazolam (illicit benzodiazepine)
  - Xylazine (veterinary sedative)
  - Quinine (antimalarial that is a historic contaminant in heroin)
  - Caffeine (stimulant)

Courtesy of ACMT

The New Xylazine?

Medetomidine

The following information was compiled in November 2023 and is subject to change as new research is conducted and as new information becomes available:



Description: Medetomidine is an alpha-2 agonist, similar to clonidine and xylazine, that is used clinically as a sedative and analgesic. Medetomidine is categorized herein as an NPS due to its novelty in use as an adulterant in the recreational opioid supply, and is classified under our miscellaneous category. Medetomidine recently emerged in the fentanyl supply in the United States. Due to its uses clinically in humans, the presence of medetomidine in toxicology samples is not necessarily indicative of fentanyl adulteration and recreational use; administration in hospital should be ruled out on a case-by-case basis.

Sample Source: American College of Medical Toxicology (ACMT) — Toxicology Investigators Consortium

Sample Appearance: Blood, serum/plasma, and other toxicology specimens

Pharmacology: The pharmacology of medetomidine is extensively published in the literature.[1]

Toxicology: Medetomidine has been detected in twelve toxicology cases at the CFSRE.

Drug Materials: Medetomidine has not been identified in drug materials to date at the CFSRE.

Demographics / Geographics: Toxicology specimens originated from the states of Missouri, Colorado, Pennsylvania, California, and Maryland. Medetomidine was commonly detected alongside fentanyl.

https://www.cfsre.org/nps-discovery/monographs/medetomidine

eschwarz@mednet.ucla.edu

Photo references

- Cover photo: https://ophelia.com/blog/what-you-need-to-know-about-xylazine-misuse
- What is xylazine: https://www.shastacounty.gov/health-human-services/page/what-xylazine
- Arkansas xylazine: https://arkansasrecovery.com/xylazine-in-arkansas-a-growing-concern/
- map: https://www.amazon.com/UNCLE-WU-Double-Learning-Laminated/dp/B07YF7SGWN
- Xylazine wounds: https://www.cdph.ca.gov/Programs/CCDPHP/sapb/CDPH%20Document%20Library/xylazine-wound-care-factsheet.pdf
- Questions: https://www.forbes.com/sites/jarretjackson/2020/08/12/as-a-leader-are-you-asking-the-right-questions/?sh=437f73b76e7d