



NC Department of Health and Human  
Services

# NC Opioid and Prescription Drug Abuse Advisory Committee (OPDAAC)

March 3, 2023

# Welcome to OPDAAC!

**Amy Patel**, Prevention Unit Manager, Injury and Violence Prevention Branch, Chronic Disease and Injury Section, Division of Public Health

## Housekeeping

- *Take breaks as needed*
- For questions during the meeting:
  - **Virtual attendees:** Please put your questions in the Q&A box, which will be monitored for the duration of the meeting. **Note:** you need to send to all panelists and attendees to ensure your question is addressed in a timely manner.
  - If you would like to ask a question to a specific presenter, please be sure to include their name in your question.
  - **In-person attendees:** Fill out index card given at registration with your questions and put in box at the back table.

# Panel: Introduction to Drug Checking in Overdose Prevention + Landscape in NC

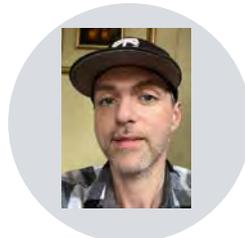
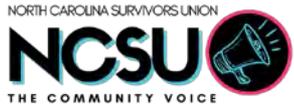
*Nabarun Dasgupta*

*Erin Tracy*

*Colin Miller*

*Maryalice Nocera*

# Our Team and Funders



Colin



Allison



Don



Louise



Brandie



Maryalice



Diane



Nabarun



Mary



Erin

Hand drawn  
by  
**BRITAIN  
PECK**

Funding:



# Outline

1. Public health context
2. Ethics and practice

## Two paradigms

3. Community-led drug checking
4. Drug checking by mail
5. Data
6. Health Communications

# Opioid Data Lab

OpioidData.org



## Theory



## Practice



## Lived Experience



## Foundational Studies

- Biostatistics
- Epidemiology methods
- Psychology of communication
- Systematic reviews

## Applied Research

- Pharmacy
- Medicine
- Public health surveillance
- Forensic toxicology

## Science in Service

- Drug checking
- Sociology (qualitative)
- Evidence-making interventions
- History of asylums

# Our Approach is Different

Science

in

Service

POLITICS

# The Fish On Your Plate May Not Be What You Ordered

A new investigation finds that one-fifth of U.S. seafood tested is mislabeled.

By Chris D'Angelo

Mar. 7, 2019, 05:52 AM EST



Seafood on display at a fish market in New York City. TUPUNGATO VIA GETTY IMAGES

If you eat [seafood](#), even occasionally, there's a good chance you've been served a fish species you didn't order.

A new monthslong investigation by ocean advocacy group [Oceana](#) finds widespread and persistent [fraud in the U.S. seafood industry](#). The organization tested 449 fish from more than 250 restaurants, seafood markets and grocery stores across the country and found that 21 percent of samples were mislabeled.

Sea Bass and Snapper Most Commonly Mislabeled

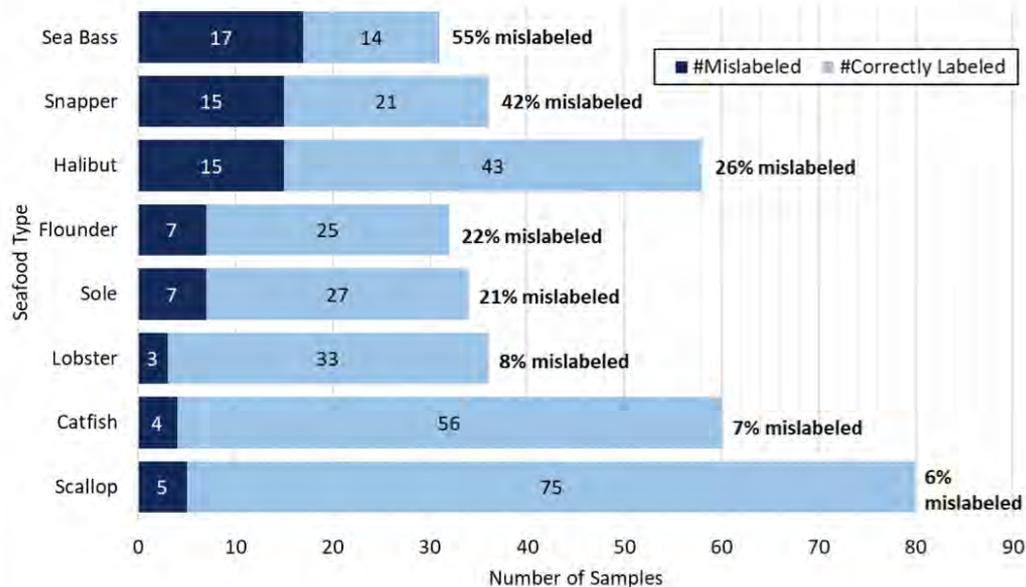


Figure 2. Mislabeling levels (%) among the most commonly sampled seafood types in our study.

[https://usa.oceana.org/wp-content/uploads/sites/4/march\\_2019\\_oceana\\_seafood\\_fraud\\_report\\_final.pdf](https://usa.oceana.org/wp-content/uploads/sites/4/march_2019_oceana_seafood_fraud_report_final.pdf)



**Christopher Moraff**

@moraffreports

Real Dava Pharma 2mg Alprazolam next to a presser I acquired yesterday. These are pumped out by the hundreds. Could you tell the difference?



3:42 PM · Feb 2, 2022 · Twitter for iPhone

11 Retweets 4 Quote Tweets 30 Likes

## Lead and Cadmium Could Be in Your Dark Chocolate

Consumer Reports found dangerous heavy metals in chocolate from Hershey's, Theo, Trader Joe's, and other popular brands. Here are the ones that had the most, and some that are safer.



Photo Illustration: Melissa Paterno Plonchak/Consumer Reports, Getty Images

December 15, 2022

By Kevin Loria

Data visualizations by Andy Bergmann

## High in Both Lead & Cadmium



**Theo**  
Organic Pure Dark  
70% Cocoa  
LEAD 120%  
CADMIUM 142%



**Trader Joe's**  
The Dark Chocolate  
Lover's Chocolate  
85% Cacao  
LEAD 127%  
CADMIUM 229%



**Theo**  
Organic Extra Dark  
Pure Dark  
Chocolate  
85% Cocoa  
LEAD 140%  
CADMIUM 189%



**Lily's**  
Extremely Dark  
Chocolate  
85% Cocoa  
LEAD 143%  
CADMIUM 101%



**Green & Black's**  
Organic Dark  
Chocolate  
70% Cacao  
LEAD 143%  
CADMIUM 181%





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**“What  
Fresh Hell  
Is This?”**

Understanding  
the illicit drug  
supply for  
better health

Quote from the International Network of Health and Hepatitis in Substance Users conference, October 2022, describing the ever-changing drug supply.

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# Festival Drug Checking



## Medical and Toxicological Aspects of the Watkins Glen Rock Concert

*Journal of Forensic Science*

**1975**

The outdoor rock concert has been well established as an important feature in the life of young people both in this country and abroad. The frequent use of psychoactive chemicals at these large gatherings is to be anticipated, as shown by evaluations of such events in the past [1-3]. This phenomenon is concurrent with prevailing permissive attitudes of youth toward drug usage in our society. The evolution of the use of psychoactive drugs, especially the psychedelics, has been associated with the popularity of rock music.

The misrepresentations and adulterations of street drugs and their variable dosage levels have been well documented, reaching proportions as high as 70% of samples analyzed from anonymous sources [4-6]. The problems of treating acute drug overdoses are compounded for the physician by this street deception, especially when adequate information from toxicology laboratories is absent or not easily available. This is apparent at large outdoor rock concerts, many of which are held in rural, isolated areas of the country. The physicians in the vicinity who may be asked to staff the medical facility at such events may not be familiar with urban patterns of drug consumption practiced by the majority of rock concert participants. This lack of knowledge may be coupled with a general disinterest in drug-taking youth.

Over the weekend of 26-29 July 1973, the Summer Jam Rock Festival was held in Watkins Glen, N.Y. A CBS news report at 7:55 p.m. on 28 July 1973 made the historic announcement: "The Watkins Glen Music Festival has surpassed Woodstock, which until today was the granddaddy of the music festivals. An estimated 600,000 people have jammed into Watkins Glen, New York, for Summer Jam. The crowd in general is well behaved, orderly and enjoying the music. . . ."

A medical facility was established to care for the people attending the concert. As part of this facility, a toxicology laboratory was established on the site to analyze drug samples and biological fluids for overdosed patients. To our knowledge, this was the first time a toxicology laboratory had been included as part of the medical facility at a rock festival.

### Preparation, Materials, and Methods

The basic plan taken for providing toxicological analysis to the medical facility was twofold. The first objective was to survey the solid dose forms of drugs circulating at the

Presented as "Emergency Toxicology in the Field" at the 26th Annual Meeting of the American Academy of Forensic Sciences, Dallas, Texas, 14 Feb. 1974. Received for publication 7 March 1974; revised manuscript received 28 June 1974; accepted for publication 29 June 1974.

<sup>1</sup>Toxicology Department, Wilson Memorial Hospital, Johnson City, N.Y. 13790.

<sup>2</sup>Assistant professor of psychiatry, University of Pennsylvania Medical School, Philadelphia, Pa. 19104.

		TRUE CONTENT													Total Samples		
		Amphetamine	LSD	MDA	Mescaline	Methaqualone	PCP	Psilocybin	Secobarbital	THC	Marijuana	Antihistamine	Ephedrine	DMA		Negative	
ALLEGED CONTENT	Amphetamine	2										1	1			4	
	LSD		10										1			11	
	MDA			2			1									3	
	Mescaline		12	1			1							9		23	
	Methaqualone					4										4	
	PCP						1									1	
	Psilocybin		2													2	
	Secobarbital								1							1	
	THC						14									14	
	Marijuana										1					1	
	Unknown		5			2	4								1	12	
	Totals		2	29	3		6	21		1		1	1	2	9	1	76

FIG. 1—Survey of drugs circulating at Watkins Glen rock concert (alleged versus true content).

# Drug Checking Chemistry



**DRUGSDATA.ORG**  
Erowid's anonymous drug analysis program  
Formerly called EcstasyData

SEARCH LAB RESULTS BY  
All : austin

Send in a sample for testing Support

Test Results Test Result Statistics About Tests & Data About Us Contact Us FAQ

51 ENTRIES TOTAL ENTRIES PER PAGE: 100 PAGE: 1 / 1 SEARCH ALL FOR AUSTIN Quick Filter...

Photo	Sample Name	Substance	Ratio / Amounts	Date	Location	Data Source
	White Powder Ecstasy Rock Code: RONMX Sold as: MDMA	• MDA	• 1	Feb 07, 2022	Austin, TX	DrugsData
	M30 Fake M30; M-Block; M-Box; Code: JB0501 Sold as: Fentanyl	• Fentanyl • 4-ANPP	• 5 • 1	May 29, 2021	Austin, TX	DrugsData
	b974 / 30 Code: PP313 Sold as: Adderall	• Caffeine • Methylsulfonylmethane • Methamphetamine	• 10 • 3 • 1	Apr 13, 2021	Austin, TX	DrugsData
	M-Block M-Box, M30 Code: WS112 Sold as: Oxy	• Fentanyl • 4-ANPP • 4-Fluoroisobutyrylfentanyl • Heroin • Methamphetamine • Phenethyl 4-ANPP	• 36 • 9 • 6 • 2 • 1.50 • 1	Sep 24, 2020	Austin, TX	DrugsData
	M30 Code: LB202 Sold as: Oxycodone	• Acetaminophen	• 1	Jun 19, 2020	Austin, TX	DrugsData
	MDMA Code: PA154 Sold as: MDMA	• MDMA	• 1	Jun 09, 2020	Austin, TX	DrugsData
	MDMA Code: BBNBF Sold as: MDMA	• MDMA • MDA • MDE	• 1 • trace • trace	Aug 28, 2019	Austin, TX	DrugsData
	White Powder Code: 78746 Sold as: Not Specified	• MDMA	• 1	Aug 12, 2019	Austin, TX	DrugsData
	Tan Powder Code: GCL2G Sold as: MDMA	• MDMA	• 1	Jul 20, 2019	Austin, TX	DrugsData
	Superbrick Code: AJBATX Sold as: Molly	• MDMA	• 1	May 16, 2019	Austin, TX	DrugsData
	Molly	• MDMA	• 1	Feb 06, 2019	Austin, TX	DrugsData

## M30 (Fake M30; M-Block; M-Box;) Sold as: Fentanyl ID: 10449

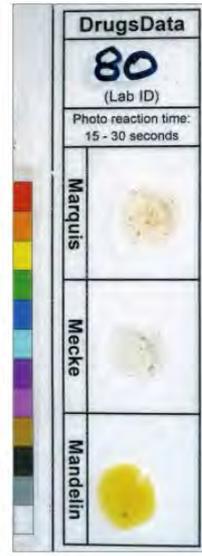


ID: 10449  
 Name: M30  
 Other Names: Fake M30; M-Block; M-Box;  
 UniqueCode: JB0501  
 Marquis: No Reaction (light brown?)  
 Mecke: No Reaction  
 Mandelin: No Reaction  
 GC/MS:  
 • Fentanyl : 5  
 • 4-ANPP : 1

Test Date: May 29, 2021  
 Pub. Date: May 29, 2021  
 Src Location: Austin, TX  
 Submitter: Austin, TX  
 Loc: United States  
 Color: Blue  
 Size: 106 mg, 6.00 x 3.41  
 Data Source: [DrugsData](#)  
 Tested by: [DDL](#)  
 Lab's ID: 21050080

Sold as: Fentanyl  
 Expected to be: Fentanyl

Description  
 Round light blue tablet with 'M' on one side, '30' and break line on the other.  
 Counterfeit oxycodone.



# Drug Checking Tech

Test strips



*anywhere*

Reagents



*tabletop*

FTIR



*program sites*

LC/GC-MS  
QTOF, PSMS



*lab*

**cost, time, complexity** →



# Public Health Drug Checking



# Principles and Practice



# What are the benefits of drug checking?

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FTIR and GCMS are necessary tools to **expand our knowledge** beyond what fentanyl test strips tell us.

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Studies have shown that drug checking encourages **safer drug use practices**.<sup>1,2</sup>

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People can adjust drug use behaviors including **throwing away drugs**. They can make informed decisions about their health and implement other harm reduction practices.



## Drug checking in practice

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- Leading through lived experience
- Aligning the science with community needs
- Incorporating new technologies and repurposing existing ones



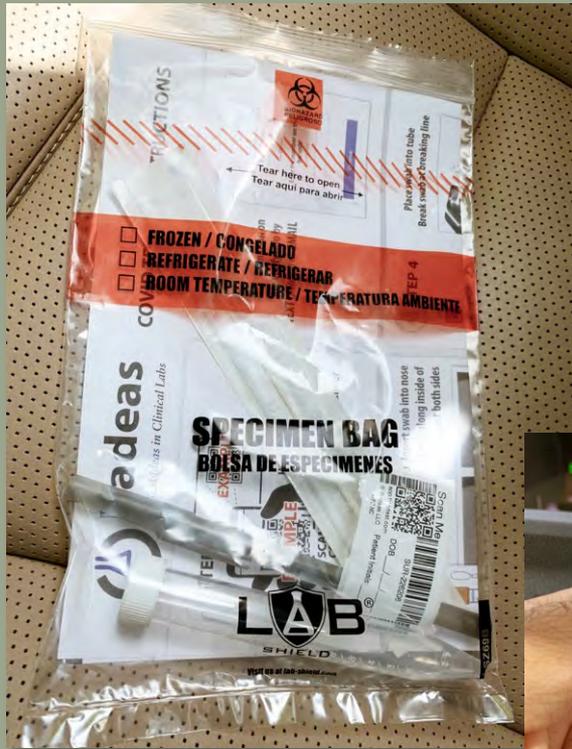
## Drug checking in practice

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- Emphasizing and promoting individual autonomy and anonymity
- Building connections
- Sharing information about drug checking technology and drug supply additives/cuts

# Mail-in Drug Checking Service





Drive-thru  
Self-administered  
COVID Test Kit



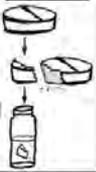
# UNC Drug Checking Kit



**1** Unfold paper cloth, lay out supplies.

**2** Unpeel wax tape to unscrew vial.

**3** Wear gloves to prevent contamination.

<b>Powder</b> Only a pinhead!  More isn't better	<b>OR</b>	<b>Baggie</b> Wet swab in vial  Run along inside 3x Stir into vial and discard swab	<b>OR</b>	<b>Pill</b> Break off sliver and drop in vial 	<b>OR</b>	<b>Cotton</b> Drop in used cotton 
--	-----------	--	-----------	---	-----------	---

**4** Close vial tightly. Seal using wax tape.

Hold tape in closed fist to warm up for 3 seconds.

Remove tape from white backing.



**5** Complete back of this card.  
Card and vial go back in bag.

**6** Give QR code to donor for results.

### Completely Anonymous

These questions help us figure out how to analyze your sample in our lab at UNC.

**circle one**

spatula	swab	pill	cotton
---------	------	------	--------



**today's date**

\_\_\_\_\_

month \_\_\_\_\_ date \_\_\_\_\_

**circle if sample involved in overdose**

yes    no    don't know

*discuss to your officer*

**describe color**

\_\_\_\_\_

**city or neighborhood**

\_\_\_\_\_

**circle expected drugs**

heroin	fentanyl	xylazine
cocaine	crack	meth
weed	Delta-8	CBD
benzo	other:	
MDMA		
unknown		

**circle & describe sensations**

normal	nice	weird
weaker	stronger	long
more up	unpleasant	
more down	hallucinations	

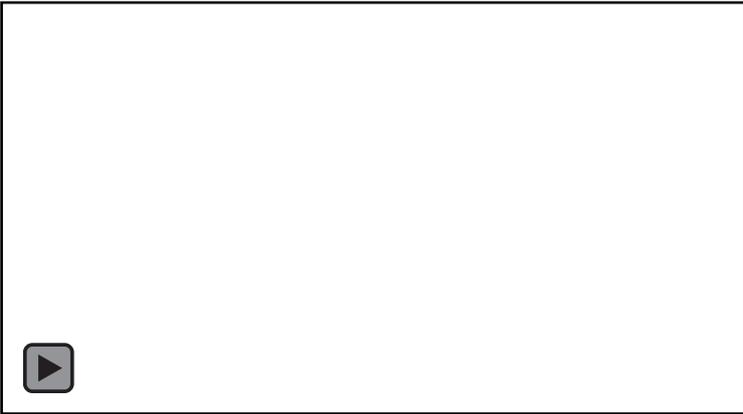
describe:

**circle any textures**

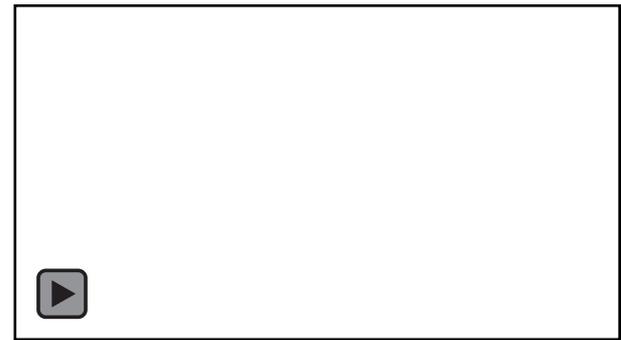
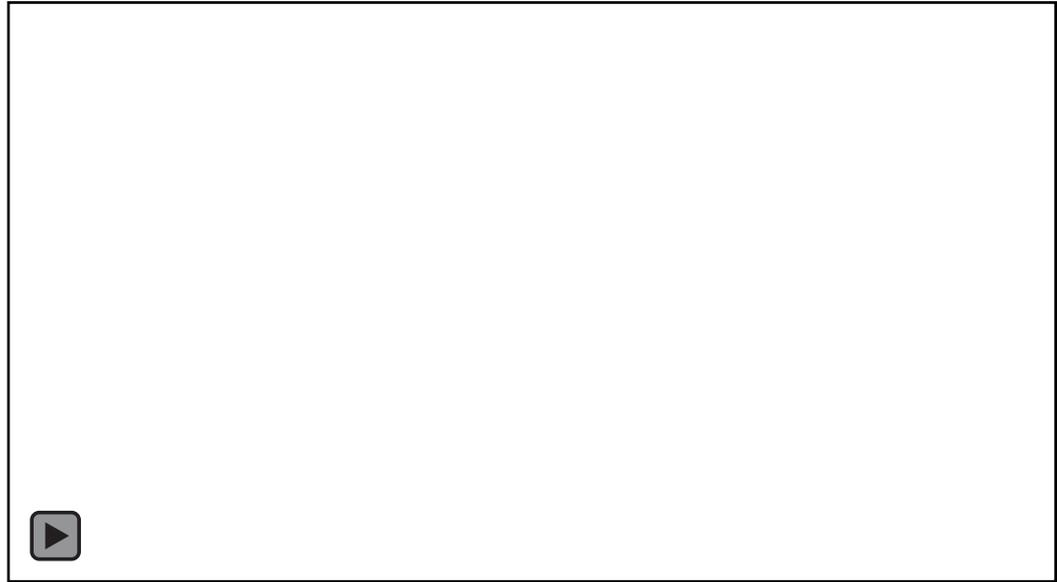
crystals	pill	fake pill
powder	edibles	oil/wax
↓	plant/leaf	
chunky	other:	
shiny		
fuzzy		
stiff		

**sample number**

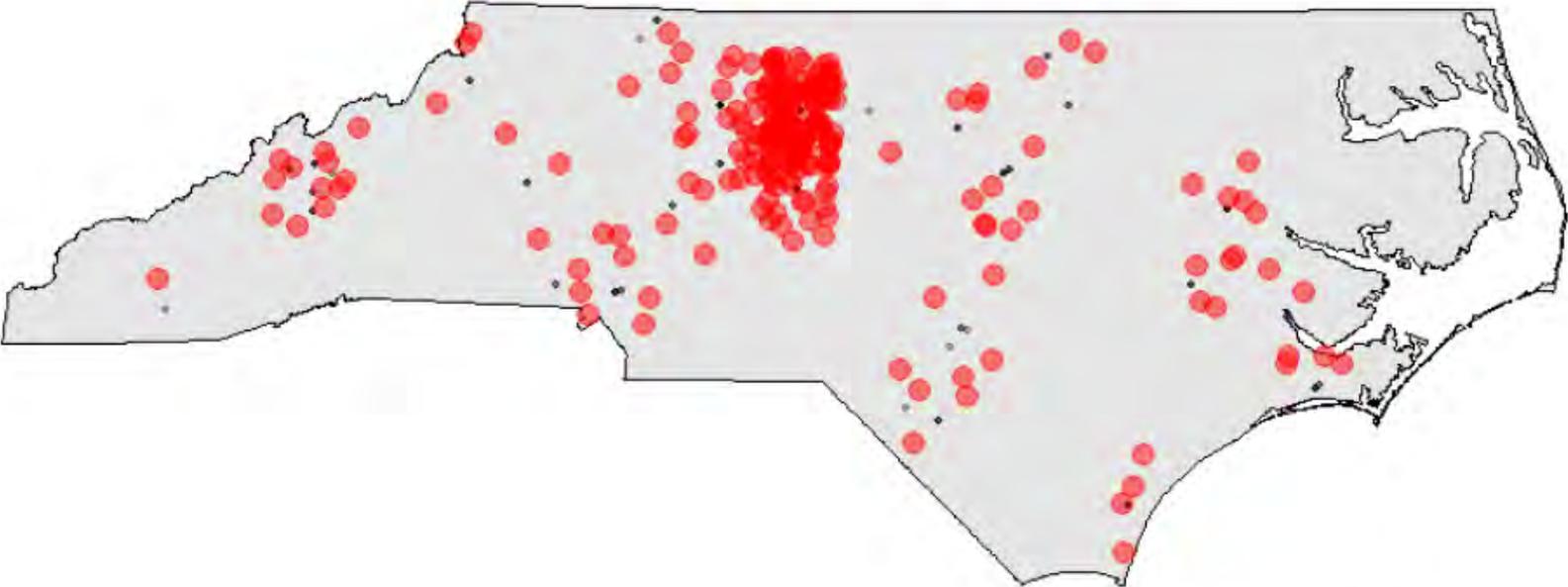
\_\_\_\_\_



- 21 states
- 67 public health programs
  - 20 in NC
- 1,764 kits sent
  - 623 to NC sites
- 839 samples received
  - 458 from NC programs
  - 29 NC counties



# Sample Source Locations thru Aug 2022



N = 234 geocoded to NC of 319 total records





# 300298

Location, date  
Sold as  
Physical description

From Winston-Salem, North Carolina on 6/18/2022  
Assumed to be fentanyl

Primary  
substances  
detected

This is a messy brew of 7 major substances:

- xylazine
- mannitol
- 4-ANPP
- p-fluorofentanyl
- non-specific sugars
- fentanyl
- heroin

Traces

And we also found traces of dimethyl sulfone (methylsulfonylmethane MSM) + acetylcodeine + 6-monoacetylmorphine (6-MAM). Trace substances in small quantities can sometimes be harmless, but other times can cause health problems. If you have unexpected sensations, it may be due to these.

Drug-specific  
health warnings  
with actionable  
overdose prevention  
advice

**Fentanyl** is potent and the amount changes by batch. If you weren't expecting it, consider getting test strips online or from a harm reduction program. **Carry naloxone (Narcan)** to reverse overdoses. **Don't use alone** so someone can help if you go out.

**Xylazine** causes serious skin problems. These can happen anywhere on the body and don't heal quickly. And, **xylazine** can come on stronger than traditional dope and knock you out, so **be mindful of your surroundings**. It's best to avoid dope with xylazine. You might need medical attention to prevent long-term damage.

There are a lot of different substances in this sample. We don't know the harms that some of these can cause. Be careful and be prepared for unexpected reactions.

New drugs

**Fluorofentanyl** is showing up recently. It's the result of different raw materials being used to make fentanyl. We don't know yet if it causes any specific problems.

Getting help locally

Looks = white powder, chunky

Need free supplies and advice to keep you safe? Find your nearest harm reduction program at [harmreduction.org](http://harmreduction.org)

Scientific  
accountability

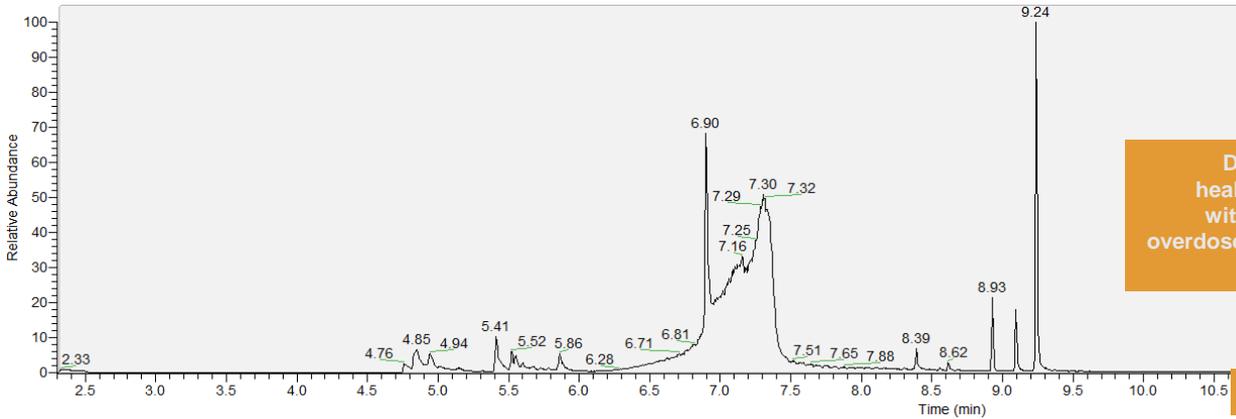
Major substances in graph:

- Peak 6.9 = xylazine
- Peak 7.3 = mannitol
- Peak 8.39 = 4-ANPP
- Peak 8.93 = heroin
- Peak 9.1 = p-fluorofentanyl
- Peak 9.24 = fentanyl

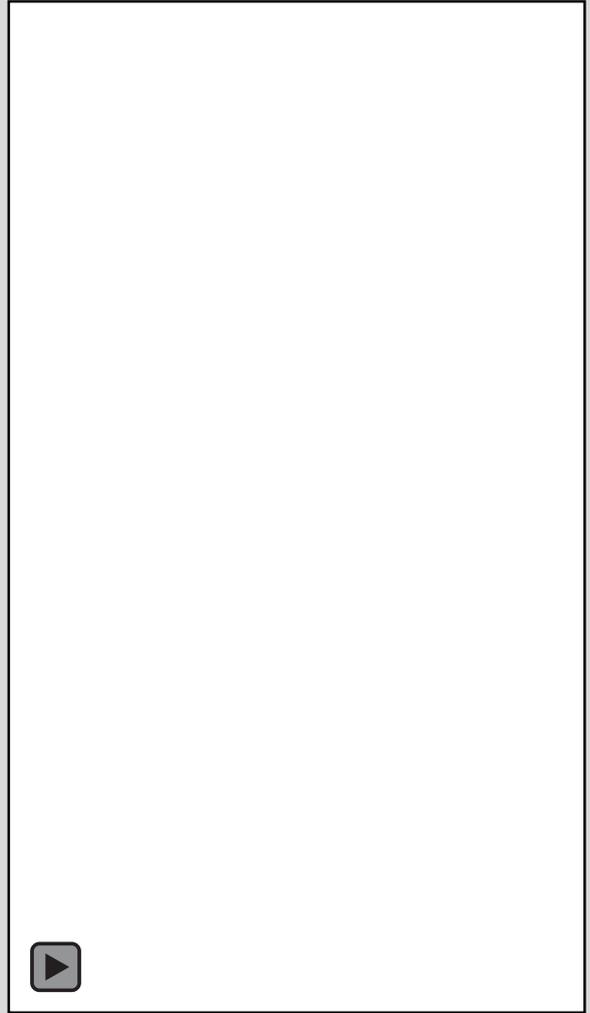
Method(s): GCMS + Derivatized GCMS

Peaks that don't appear on the graph were detected using other advanced methods. If a peak appears on the graph but isn't listed above, then we reviewed it and determined it's unimportant. Contact us if you want details.

NL:  
2.53E9  
TIC MS  
300298-a







# Analyzing Drug Checking Data





# What is “heroin” anymore?

Heroin  
Raleigh, NC  
October 11, 2021

- Xylazine
- Heroin
- Fentanyl
- Caffeine
- 4-ANPP
- Lidocaine
- Quinine
- Flurofentanyl
- 6-MAM
- Acetaminophen

Heroin  
High Point, NC  
September 11,  
2021

- Heroin
- 6-MAM
- Fentanyl
- ANPP
- Dimethylsulfone
- Tramadol
- Cocaine

Heroin  
High Point, NC  
September 17,  
2021

- Fentanyl
- ANPP

Fake blue Roxi 30  
Myrtle Beach, SC  
September 8, 2021

- Fentanyl
- 4-ANPP

IN THIS SECTION ▼

[← Recalls, Market Withdrawals, & Safety Alerts](#)

COMPANY ANNOUNCEMENT

**Johnson & Johnson Consumer Inc. Issues Voluntary Recall of Specific NEUTROGENA® and AVEENO® Aerosol Sunscreen Products Due to the Presence of Benzene**

When a company announces a recall, market withdrawal, or safety alert, the FDA posts the company's announcement as a public service. FDA does not endorse either the product or the company.

[Read Announcement](#)

[Share](#) [Tweet](#) [Email](#)

**Summary**

**Company Announcement Date:**

July 14, 2021

**FDA Publish Date:**

July 14, 2021

**Product Type:**

Drugs

**Reason for Announcement:**

Testing identified low levels of benzene

**Company Name:**

Johnson & Johnson

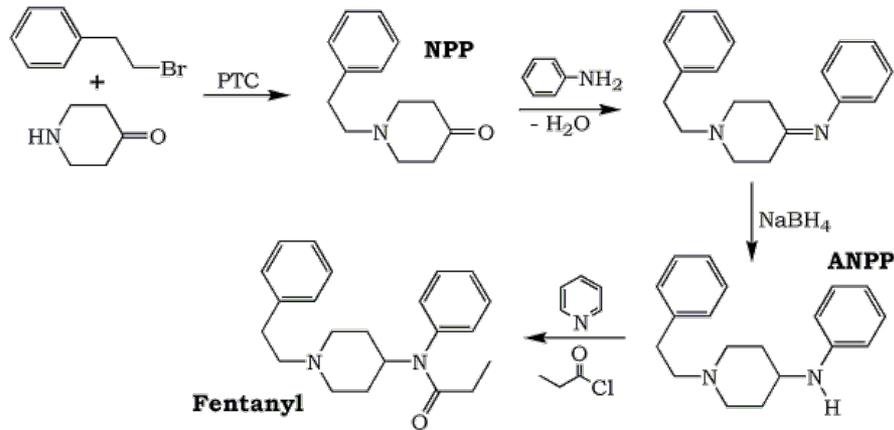
**Brand Name:**

Neutrogena, Aveeno

**Product Description:**

Sunscreen

# Fentanyl & 4-ANPP



94%

of fentanyl samples also contained 4-ANPP

# What percent of stimulants have fentanyl?

- Overdoses of methamphetamine + fentanyl have increased
- N=178 samples, from 31 programs in 14 states
- January 2022 to January 2023
  
- Methamphetamine: 12.1% contained fentanyl
- Cocaine/crack: 15.8% contained fentanyl
  
- Caveat: Not representative - programs may send us samples because they suspect contamination.



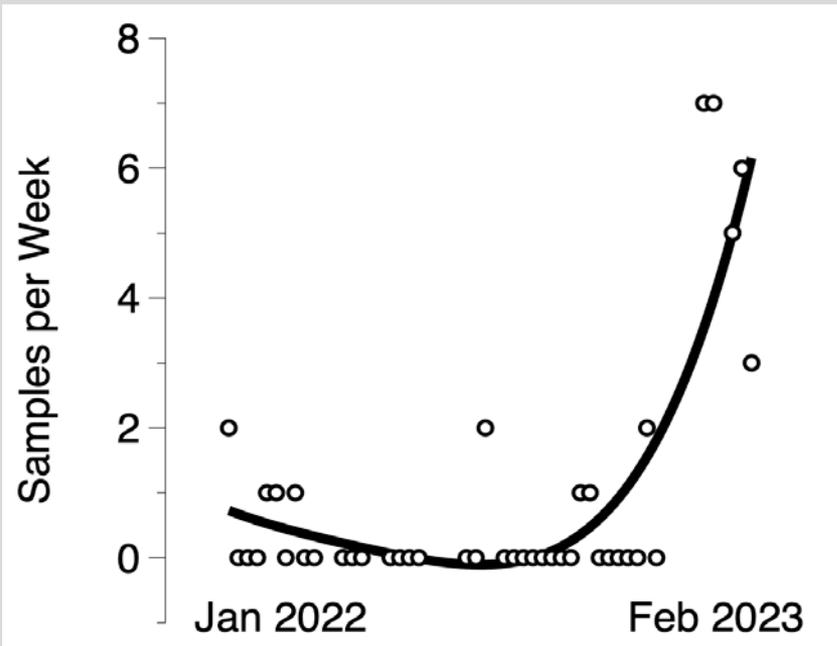
OPINION

# Why Are Ketamine Ads Following Me Around the Internet?

March 1, 2023



Eleanor Davis



NEWS

# Mini-bottles of Fireball Cinnamon don't actually contain whisky and it's led to a lawsuit

Surprise! Those mini-bottles of Fireball Cinnamon at gas stations don't actually have any whisky in them.



A mini bottle of Fireball Cinnamon which does not contain any whisky.  
TODAY illustration / Fireball



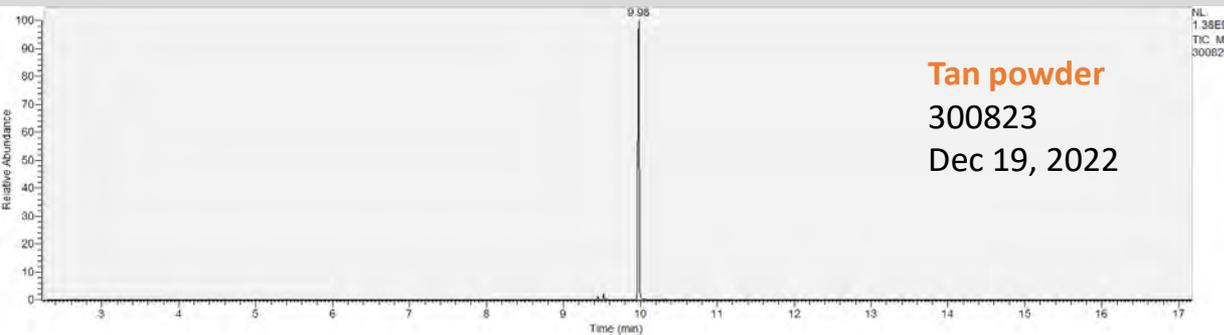
Jan. 24, 2023, 5:58 PM EST

By Joseph Lamour

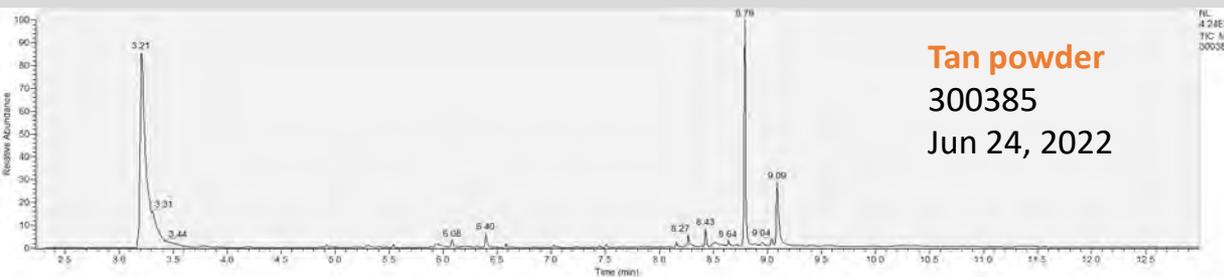
A class-action lawsuit has been filed in Cook County, Illinois against the makers of Fireball Cinnamon over



# Surry County



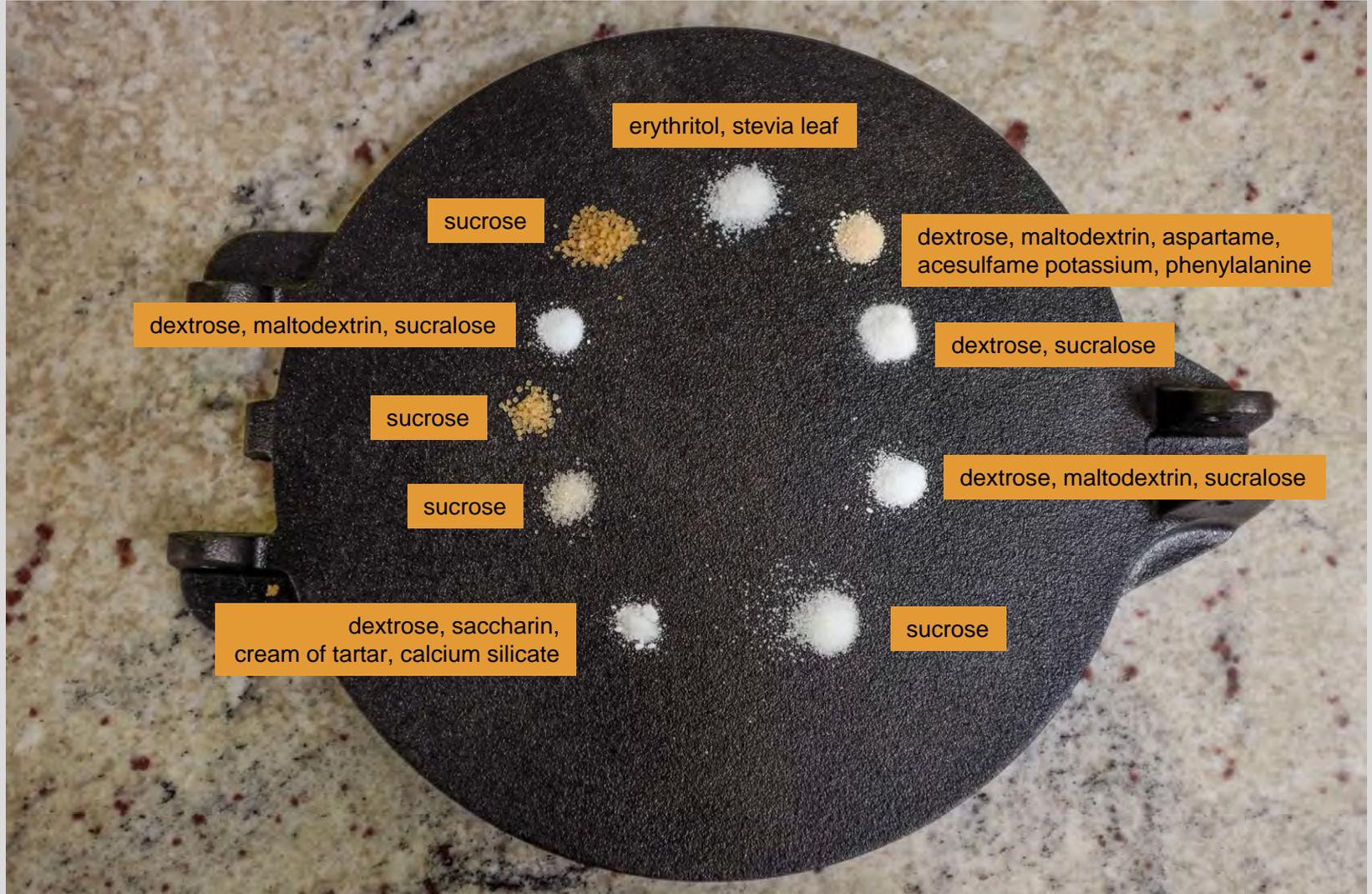
**Heroin**



**Fentanyl**  
**Methamphetamine**  
**Heroin**  
**Acetylcodeine**

# Communicating Drug Alerts





erythritol, stevia leaf

sucrose

dextrose, maltodextrin, aspartame, acesulfame potassium, phenylalanine

dextrose, maltodextrin, sucralose

dextrose, sucralose

sucrose

dextrose, maltodextrin, sucralose

sucrose

dextrose, saccharin, cream of tartar, calcium silicate

sucrose



# Drug alerts are issued every day. But how well do we communicate?



Health departments  
Law enforcement  
PSA  
News media  
Schools  
Clinics  
Harm reduction orgs  
Drug checking  
programs

**DRUG ALERT**

Date issued: **February 2, 2021**

Community/Region: **Castlegar**

Description of drug: **Light pink powder**

Sold as: **DOWN**

Tested at: **ANKORS with FTIR**

Result: **CONTAINS A HIGH CONCENTRATION OF FENTANYL + BENZODIAZEPINES**

**Risk: High risk of OVERDOSE with PROLONGED SEDATION - MAY NOT RESPOND TO NALOXONE - CONTINUE TO GIVE BREATHS AND SEEK MEDICAL ATTENTION.**

In effect until: **February 9, 2021**



**OVERDOSE SPIKE ALERT**

- **CARRY NALOXONE**
- **DON'T USE ALONE**
- **KNOW YOUR SUPPLY**

**AND REMEMBER:  
WE ARE HERE FOR YOU.**

Please visit us at 304 Hancock Street for supplies!

British  
Columbia

Maine



**Potent synthetic opioids implicated in increase in drug overdoses**

Date of issue:	18/08/2021	Reference no:	NatPSA/2021/007/PHE
This alert is for action by: Acute, mental health and community trusts, private and voluntary sector treatment services, ambulance and 999/111 service providers, general practice and community pharmacists.			
This is a safety critical and complex National Patient Safety Alert. Implementation should be co-ordinated by an executive lead (or equivalent role in organisations without executive boards).			

Explanation of identified safety issue:	Actions required
<p>In the past 10-14 days there have been an unprecedented number of overdoses (with some deaths) in people who use drugs, primarily heroin, in some parts of the country (5 London boroughs, Hampshire, Essex, West Sussex, Dorset, Thames Valley).</p> <p>Opioid drug deaths are, sadly, not uncommon (averaging 24 a week across England and Wales) but what has been seen in these areas is an unusual increase, with some common patterns and some limited evidence of a common cause.</p> <p>Testing in two areas (of 3 cases) so far found isotonitazene, a potent synthetic opioid. Isotonitazene has been identified previously in this country but its use has been more common in the USA. It was notified as a subject of concern in Europe in 2019. Its potency and toxicity are uncertain but perhaps similar to, or more than fentanyl, which is about 100x morphine</p> <p>The adulterated heroin used may be paler in colour than usual and may become darker than usual when dissolved for injection ("cooked up"). However, reports vary considerably</p> <p>There is good evidence from reports that naloxone, the 'antidote' to opioid overdoses, works in these cases. The treatment required for an overdose that may be related to isotonitazene is the same as for other opioid overdoses, but delivering it rapidly and completely is even more critical, as progression to respiratory arrest, and recurrence of respiratory arrest, are more likely.</p> <p>Those in contact with heroin users should be alert to the increased possibility of overdose arising from 'heroin' containing synthetic opioids, be able to recognise possible symptoms of overdose and respond appropriately.</p> <p>There is no evidence for absorption of isotonitazene through the skin but usual precautions, including masks, should be taken when handling unknown substances, especially if they have become airborne.</p>	<p><b>Actions to be completed as soon as possible and no later than 20 August 2021.</b></p> <ol style="list-style-type: none"> <li><b>All organisations where staff may encounter people who use drugs should ensure those staff are:</b> <ul style="list-style-type: none"> <li>made aware of the risk of severe toxicity resulting from adulteration of heroin with potent synthetic opioids such as isotonitazene</li> <li>made aware the potency and toxicity of isotonitazene is perhaps similar to, or more than, fentanyl, which is about 100x morphine</li> <li>alert to the symptoms of opioid overdose in known and suspected heroin users</li> <li>communicate these risks to heroin users during any contacts</li> <li>ensure people who use heroin and others who might encounter an opioid overdose have naloxone available (<a href="#">Viewing the availability of naloxone</a>)</li> </ul> </li> <li><b>All organisations that provide emergency care for opioid overdose should ensure staff are supported to:</b> <ul style="list-style-type: none"> <li>treat suspected cases as for any opioid overdose, using naloxone and appropriate supportive care</li> <li>recognise the duration of action of naloxone is shorter than that of many opioids and appropriate monitoring and further doses of naloxone may be required</li> </ul> <p>In the community this could include injectable or intranasal naloxone, administering a single dose and waiting for no response before administering more.</p> <p>In specialist medical settings only:</p> <ul style="list-style-type: none"> <li>treatment may involve the intravenous naloxone titration regimen recommended by the National Poisons Information Service (overleaf).</li> <li>intramuscular naloxone can be used as an alternative in the event that IV access is not possible or is delayed.</li> </ul> </li> </ol>

For further detail, resources and supporting materials see: [Enter overdose warnings entered by alert issuer](#)

For any enquiries about this alert contact: [NatPSA@phe.gov.uk](mailto:NatPSA@phe.gov.uk)

1/2

Failure to take the actions required under this National Patient Safety Alert may lead to CQC taking regulatory action

# NEW DANGEROUS DRUG ALERT

**METONITAZENE/ETONITAZENE, KNOWN COMMONLY AS "ISO", IS A DEADLY DRUG 20 TIMES MORE POTENT THAN FENTANYL.**

ISO CAN BE ABSORBED BY THE BODY BY SKIN CONTACT, INGESTION OR INHALATION.

ISO IS NOW TURNING UP IN OVERDOSES AND SUBSTANCE ABUSE CASES.

## SIGNS OF AN OVERDOSE:

- BLUE/PURPLE FINGERNAILS
  - BLUE/PURPLE LIPS
  - DIFFICULTY BREATHING
  - UNCONCIOUSNESS
  - CLAMMY SKIN
  - VOMITING
  - PINPOINT PUPILS
  - DROWSINESS
- ALL OF WHICH CAN OCCUR WITHIN MINUTES OF EXPOSURE.

**IF YOU BELIEVE SOMEONE IS OVERDOSING, CALL 911 IMMEDIATELY.**



# NSW DRUG ALERT



## Heroin mixed with Fentanyl

NSW health has released a warning about fentanyl/acetylfentanyl found in the heroin supply in Sydney (Jan 2021). Fentanyl has been circulating in Sydney & regional NSW since Nov/Dec 2020. It is reported that heroin containing fentanyl/acetylfentanyl sometimes is purple or turns purple when mixed with water.

### What is fentanyl?

Fentanyl is a highly potent opioid - up to **100x stronger than morphine** - meaning only a very small amount can cause a rapid and unexpected overdose.

### Symptoms of overdose

- Drowsiness
- Loss of consciousness
- Face is very pale or clammy
- Slow, shallow, and/or erratic breathing
- Vomiting
- Change in skin tone: bluish/purple for lighter skinned people, and greyish for darker skinned people



### What to do

- If you or someone you're with experiences these symptoms get medical help ASAP
- Call **Triple Zero (000)** and ask for an ambulance
- Administer naloxone if you have any

### Protect yourself

You can buy fentanyl testing strips and naloxone from NUAA's online shop, or call us for more information on 1800 6444 413

NSW Users and AIDS Association

Jan 2021

### NALOXONE

SAVE LIFE with Naloxone

- Opioid Reversal Agent
- Invented 1961 & in use 1972
- Non-selective & Competitive opioid receptor antagonist
- Works by reversing the depression of the central nervous system and respiratory system caused by opioids
- Multiple doses required as the action of most opioids are greater

- Naloxone's binding Affinity is highest for the  $\mu$ -opioid receptor then the  $\delta$ -opioid receptor, and lowest for the  $\kappa$ -opioid receptor
- It is Synthetic congener of Oxycodone
- Nasal Spray was approved in 2015
- Naloxone pre-filled syringes, vials, and auto-injectors are available

Stimulate Airway

Ventilate Evaluate

Evolve (Next Dose)

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#### Medical Use

**Opioid overdose**

- Useful in treating both Acute/Chronic opioid overdose and respiratory or mental depression due to opioids
- It is always prescribed when patient is on high dose of opioids
- Initial dose of 0.4mg-2mg administered IV, maximum 10 mg IV

**In people with Shock, including Septic, Cardiogenic, Hemorrhagic, or Spinal shock, those who received naloxone had improved blood flow**

- Naloxone also used as an antidote in overdose of Clonidine
- Also used to treat Opioid induced severe Pruritus and constipation

---

#### Pharmacokinetics & Pharmacodynamics

**Routes of Administration :**

- ✓ Intranasal, Endotracheal, IV, IM, Introsseous
- ✓ Bioavailability : 2 % Oral, 50 % Intranasal, 80 % IM, 100 % IV
- ✓ Metabolism : Liver
- ✓ Onset of action: IV-2 m, IM-5 m
- ✓ Elimination half-life : 1-1.5 h
- ✓ Duration of action : 30-60 min
- ✓ Excretion : Urine, bile
- ✓ Storage : At room temperature
- ✓ Molar Mass : 27,380 g.mol<sup>-1</sup>
- ✓ Formula : C<sub>17</sub>H<sub>17</sub>NO<sub>3</sub>

**Safe in Pregnancy & Lactation**

- ✓ Available as a sterile solution for IV, IM and S/C administration in three concentrations: 0.02 mg, 0.4 mg and 1 mg per mL
- ✓ It is repeated at two- to three-minute intervals
- ✓ Dose in children & Neonates is 0.01 mg/kg
- ✓ Careful in giving in Geriatric, Renal and Liver failure patients
- ✓ Maximum dose is 24 mg/24 hrs
- ✓ Always protect from light

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#### Side Effects

- Increased sweating, Nausea, Restlessness, Trembling, Vomiting, Flushing, Headache, Hypotension and Fibrillation
- In rare cases it causes Heart Rhythm Changes, Seizures, and Pulmonary Edema with Cardiac Arrest
- Excessive doses of naloxone in postoperative patients may result in significant reversal of analgesia and may cause agitation
- Shelf life is IV 2 years & Intranasal 1.5 years

#### Extra Shots

- It is available without prescription in most of the countries
- Naloxone kits are available

<https://twitter.com/majedahoriby/status/1470759434368466946?s=20&t=2H0ASU2tHh-4ZsJ5mJAr>

50

# Messaging and drug checking go hand in hand.



1. Messaging randomized trials
2. Custom illustration library
3. Structured, customizable templates
4. Collaboration with PWUD

# Optimized Alert Prototype

## WARNING:

### A dangerous new cut is showing up in our local drugs.

Xylazine is used to knock out elephants and cows for surgery. Seriously, this is no joke.

illustration  
TBD

If there is xylazine in your supply, this can...

#### **Cause severe anemia or really low iron in your blood.**

This makes you feel extremely tired and may require a blood transfusion.  
It could lead to death in a matter of weeks if untreated.

illustration  
TBD

#### **Make you incapacitated.**

You may be unable to think or move shortly after using.  
This inability to move or makes sense of the world is very unpleasant.

illustration  
TBD

#### **Cause major skin irritation (legions) beyond the injection site.**

You could see large craters or indents in your skin that last for a long time.

Be on the **lookout**, if you have purchased any supply...  
of **heroin**  
between **July 15- August 15, 2021**  
in **Greensboro, North Carolina**

Bring them in! If your supply might have xylazine or you have a new dealer,  
**get your drugs checked at your local syringe exchange.**

# Drug Checking – A Promising Public Health Response to a Tainted Drug Supply

**The 2022 NC Appropriations Act\* allocated \$6 million from the Opioid Abatement Reserve to LME/MCOs, among other things “to purchase equipment for local opioid use disorder treatment programs located in their respective catchment areas to enable rapid analysis of opioids and other drugs causing overdose outbreaks.” Drug checking is a timely allocation of state funds that could result in reduced healthcare costs and new information about where to target public health responses.**

# Thanks for Listening!

Order kits:

<https://streetsafe.supply>

[OpioidData.org](https://opioiddata.org)

[OpioidDataLab@unc.edu](mailto:OpioidDataLab@unc.edu)

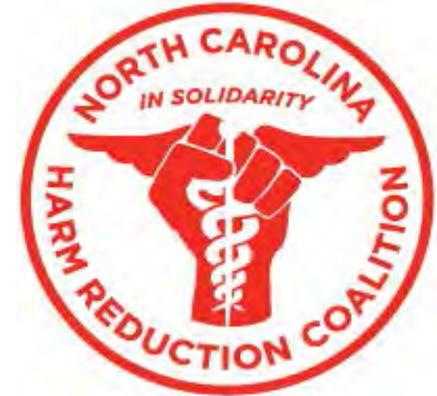
[@nabarund](https://twitter.com/nabarund)

# Xylazine Discussion

*Charlton Roberson*

# NORTH CAROLINA HARM REDUCTION COALITION

- The North Carolina Harm Reduction Coalition (NCHRC) is a statewide grassroots organization dedicated to the implementation of harm reduction interventions, public health strategies, drug policy transformation and justice reform in North Carolina.
- NCHRC engages in advocacy, resource/policy development, coalition building, and direct services for people impacted by drug use, incarceration, sex work, overdose, gender, HIV and hepatitis.
- Founded in 2004 by Thelma Wright and incorporated in 2006, NCHRC has grown over time from a syringe exchange-focused advocacy group to a nationally recognized non-profit providing comprehensive harm reduction services in multiple communities in NC.





## **SYRINGE SERVICE PROGRAMS (SSP)**

- In 2016, NCHRC led a coalition that successfully advocated for the legalization of syringe services programs (SSPs) in North Carolina (H972: Section IV enacted July 2016), which built on the success of two earlier bills that partially decriminalized syringes and drug residue and established pilot programs to collect biohazard (H850 in 2013 and H712 in 2015)
- Currently, NCHRC operates 7 SSPs, serving residents of 20 counties across NC, from the mountains to the coast
  - Our SSPs are based in New Hanover, Cumberland/Robeson, Wayne, Wake, Durham, Vance/Granville, Haywood
  - Our SSPs are based in roughly half urban, half rural areas
- These SSPs operate using a mixture of mobile and fixed site services, responsive to the needs of the communities they work within
- NCHRC also offers support and technical assistance to partner SSPs across the state



## OVERDOSE PREVENTION PROGRAM (OPP)

- In 2013, NCHRC led a coalition that successfully advocated for the passage of NC's 911 Good Samaritan/Naloxone Access law (NC S20 in 2013; amended/strengthened as NC S154 in 2015)
- In 2013, NCHRC launched the first statewide community-based naloxone distribution program for PWUD in the South
- NCHRC distributes naloxone directly to people who need it via:
  - Community distribution through peer networks
  - (After 2016) Syringe Services Programs
  - Mail-based distribution/partnership with NEXT Distro
- We prioritize: people who use drugs, people who sell drugs, people who do sex work, people who have recently come home from incarceration, people in recovery (incl. ppl on MOUD), people who are transgender/gender-nonconforming
- I.e., those who are at higher risk of experiencing or witnessing an OD and who are less likely to be able to access via traditional means (rx, health depts)



## LEAD & PORT

- In 2016, NCHRC implemented the first pre-arrest Law Enforcement Assisted Diversion (LEAD) program in the South, in Fayetteville NC
- LEAD partners with law enforcement to divert people with low level drug offenses from incarceration to services such as medication assisted treatment, housing, employment, and medical care
- Several of our program sites have also established partnerships with local first responders (law enforcement, EMS) to implement post-overdose response teams (PORT)
- PORT outreach workers connect with people who have recently survived an overdose to offer support and connections to health and social resources
- NCHRC also offers support and technical assistance to LEAD sites and PORTs across the state



**WRAPAROUND  
SERVICES**

- Between 2018-2022, NCHRC established or formalized several other direct service programs to scale up our comprehensive, wraparound harm reduction services
- Linkage to Care/Peer Support
  - Several of our sites now have dedicated linkage specialists who work together with outreach staff to connect participants to health and social services, as requested by the participant
- Harm Reduction Phlebotomy
  - NCHRC has a field phlebotomist who travels statewide to offer confirmatory HIV/HCV/HBV/STD testing at NCHRC and partner SSPs
- Jail-based Harm Reduction Outreach & Education
  - Several of our sites do outreach, education, and/or naloxone distribution upon release at local jails
- Drug User Health Hubs/Drop In Centers
  - In 2020, NCHRC launched an innovative health hub model at two of our SSPs in Raleigh and Wilmington, piloting the provision of wraparound services like access to buprenorphine and food/nutrition services onsite at these SSPs

## NCHRC SSP GROWTH STATEWIDE

	2016-17	2017-18	2018-19	2019-20	2020-21
Unique Participants	796	2,202	3,609	4,067	4,006
Total Participant Contacts	3,015	5,238	10,537	15,405	12,358
Syringes Distributed	169,860	393,955	972,308	1,402,204	2,022,649
Naloxone Kits Distributed	2,563	7,483	14,497	17,593	24,425
Overdose Reversals Reported	1,867	1,202	1,153	1,671	2,160

# NC Safe Prescribing Act

North Carolina Medical Board requirement:

Every physician who prescribes controlled substances, except those physicians holding a residency training license, shall complete at least 3 hours of CME from the required 60 hours of Category 1 CME designed specifically to address controlled substance prescribing practices.

The controlled substance prescribing CME shall include instruction on controlled substance prescribing practices and controlled substance prescribing for chronic pain management.

**CME that includes recognizing signs of the abuse or misuse of controlled substances, or non-opioid treatment options shall qualify for the purposes of this Rule.**

# Overview of Discussion

- Emerging evidence of public health risks (Wounds)
- Evidence of Xylazine in the local drug supply
- Risks associated with Xylazine
- Harm Reduction Strategies

# Evidence of Public Health Risk

- Over the last six months, participants of the FAY SSP have been arriving to the exchange with various skin infections.
- The wounds appear to be lesions, which progress to ulceration.
- These instances are becoming more frequent.
- The stages of ulceration are becoming more serious.
- There are approximately 100 participants that have been observed with these wounds.

# The following images may be graphic



# Wounds start as black lesions and then begin to form ulcerations.

- These wounds do not appear near the person's injection site.
- These wounds spread to other areas.
- Left untreated, these wounds progressively gets worse.
- The nature of these wounds invite disease.



# These wounds appear to spread

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**Even wounds  
that are cared  
for heal slowly**



**These wounds have potential to get worse and need care.**

# There are severe cases

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- These open sores are breeding grounds for all sorts of other bacteria and viruses.
  - These secondary infections could present an increased risk to the public.
  - The financial cost to treat these wounds at later stages, is significantly higher than treating them now.
- 



# Evidence of Xylazine in the Local Drug Supply



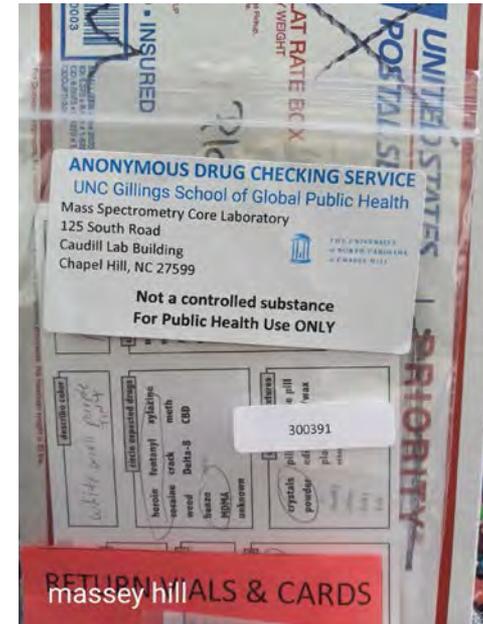
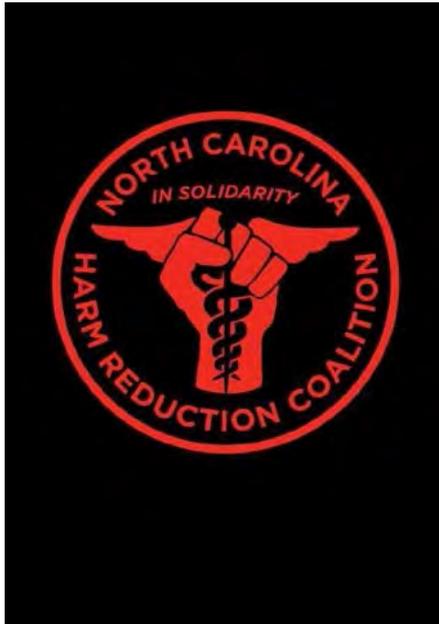
- The pattern of these wounds emerging away from the injection site fits with known patterns of Xylazine.
- Participants report a sedative effect when using.
- There are reports of OD reversals that require many doses of Narcan.
- The substance itself looks different.
- Testing has confirmed the presence of Xylazine in Fayetteville's drug supply.

[UNC Street Drug Analysis Lab \(streetsafe.supply\)](https://streetsafe.supply)

**Participant  
s agreed  
to provide  
samples  
for testing**



**NCHRC, DHHS, and the UNC Street Drug Analysis Lab collaborated to test Fayetteville's supply. Xylazine was present.**



## XYLAZINE



### XYLAZINE, A VETERINARY TRANQUILIZER, IS SHOWING UP IN HEROIN AND FENTANYL.



To keep our people safe, we got a machine that tells us what's in drug samples.

When people came to us with really bad symptoms, we used our drug checking machine and identified a substance called **xylazine**.



This substance has been showing up in the drug supply in other places, too. **In Philly, 1 out of every 3 people who fatally overdosed in 2020 had xylazine in their system.**

### WHAT WE KNOW

**Xylazine can be very dangerous.** If you think you have been using this drug, seeking medical attention can make the difference between life and death.

- Xylazine causes central nervous system depression. You may experience a low blood pressure, slowed breathing, and a slowed heart rate.

→ **Tip: Go slow. Use with a friend if you can.**



- Xylazine can cause painful skin ulcers.

→ **Tip: Keep wounds clean. Ask us for help if you're worried.**



- Naloxone works on opioids. It may work on xylazine, but the evidence is unclear.

→ **Tip: Always use naloxone in the event of an overdose.**



- Xylazine may make people out of breath and feel really tired.

→ **Tip: Come talk to us if you are experiencing either of these symptoms.**

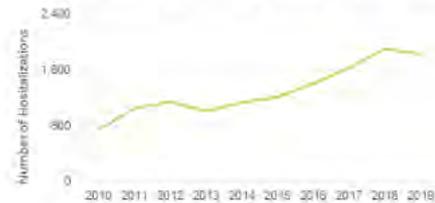


Please contact North Carolina Survivors Union if you believe you have drugs that are poisoned with xylazine. We will test them for you.

# Risk Associated with Xylazine.

## Wounds Associated with Xylazine Use

Number of hospitalizations for skin and soft tissue infections associated with drug use, Philadelphia, PA 2010-2019



Courtesy of: Jewell Johnson  
Data source: Pennsylvania Healthcare Cost Containment Council



Xylazine – not a controlled substance but can potentiate opioids increasing the risk of overdose and making resuscitation more difficult

What prescribers need to know: <https://www.acep.org/tactical/newsroom/oct-2021/xylazine-an-emerging-adulterant/>

### What are the symptoms of xylazine overdose?

- Xylazine overdose should be suspected in patients presenting like an opioid overdose (miosis, apnea, hypotension, bradycardia) *and who are poorly responsive to naloxone treatment* (4).
- Xylazine can be picked up in a comprehensive (gas chromatography-mass spectrometry) toxicology screen, however, rapid drug screens available in the emergency department will not routinely test for or detect xylazine.
- Xylazine has similar pharmacological effects to heroin in humans, resulting in bradycardia, hypotension, depression of central nervous system, and respiratory depression (4). The clinical presentation of xylazine overdose also resembles other  $\alpha_2$  agonists, such as clonidine, in causing: miosis, apnea, bradycardia, hypothermia, dry mouth, and coma.
- Although the effects of xylazine on animals lasted for up to 4 hours, there have been reported xylazine overdoses in humans that have lasted from 8 to 72 hours (7).

ACEP 2021

# DHHS Issues Health Alert for Cumberland County



Greg Berry | 910-221-2457 | gberry@nchrc.org

## Health Alert

Testing has found Xylazine present in samples of drugs from Cumberland County.

## What does this mean?

Xylazine is a central nervous system depressant used in veterinary medicine, which can cause respiratory depression, slowed heart rate, and hypotension. This drug also causes severe skin ulceration and increases risk of a fatal overdose.

## What can you do?

- Switch supplies.*
- Practice harm reduction.*
- Access Medicated Assisted Treatment.*
- Seek medical care for wounds.*
- Contact NCHRC for wound care supplies and health care referrals.*

## Do you have Strange wounds?



## Increased Risks

- **Narcan might not work on a Xylazine related overdose.**
- You might lose consciousness and not remember what happened while using Xylazine.
- You could become addicted to Xylazine.
- Open wounds can lead to dangerous infections.

## Problems



## What is in your fentanyl?

**300358**

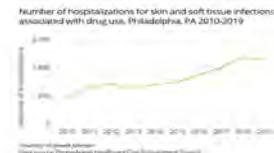
From Fayetteville, North Carolina on 6/15/2022  
Assumed to be heroin, fentanyl, xylazine, benzodiazepine and something else?

**3 major substances detected:**

- xylazine
- fentanyl
- N-APP

## Xylazine Increases Hospitalization

### Wounds Associated with Xylazine Use



- Hospitalization for wounds more than double in Philadelphia because of Xylazine.

## If you think you have used Xylazine

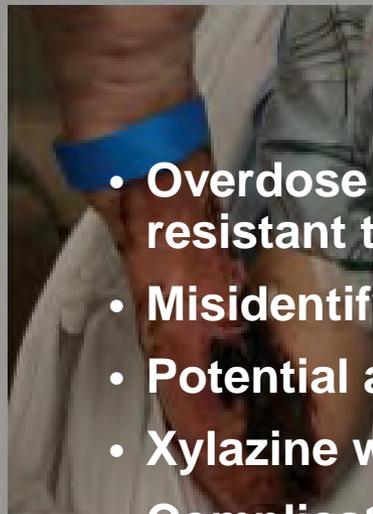
- You are not alone.
- Help is available.
- Contact us to get linked to care.

## Find out What is in your supply

<https://www.streetsafe.supply/>

# Other Risks

- Overdose events that are resistant to Narcan.
- Misidentifying Overdose.
- Potential addiction to Xylazine.
- Xylazine withdrawal.
- Complications with TX





## Xylazine Images from Rob Co.

# Xylazine Articles

They Call It ‘Tranq’ — And It’s Making Street Drugs Even More Dangerous

By [Martha Bebinger](#) August 11, 2022. [They Call It ‘Tranq’ — And It’s Making Street Drugs Even More Dangerous | Kaiser Health News \(khn.org\)](#)

Xylazine spreads across the US: A growing component of the increasingly synthetic and polysubstance overdose crisis. Friedman et al (2022). [Xylazine spreads across the US: A growing component of the increasingly synthetic and polysubstance overdose crisis - ScienceDirect](#)

# Harm Reduction Strategies

- Inform users of the presence of Xylazine
- Suggest switching supplies
- Offer testing and test results [UNC Street Drug Analysis Lab \(streetsafe.supply\)](https://streetsafe.supply)
- Increase access to wound care and reinforce clean using practices
- Connect users that are interested to substance misuse treatment
- Remember, it is not about abstinence, it's about keeping people alive; living a healthier and better life, regardless of their choice to take or not take substances.

# Contact us

**Greg Berry, Linkage to Care Coordinator**

**[gberry@nchrc.org](mailto:gberry@nchrc.org)**

**Charlton Roberson, Eastern Regional Coordinator**

**[charlton@nchrc.org](mailto:charlton@nchrc.org)**

**[www.nchrc.org](http://www.nchrc.org)**



# Panel: Programs Implementing Drug Checking

*Charlton Roberson*  
*Don Jackson*  
*Ainsley Bryce*

# Q & A

# Wrap up and THANK YOU!

**Amy Patel**, Injury and Violence Prevention Branch, Division of Public Health

The meeting recording, agenda and PowerPoint slides will be added to our NC DHHS Overdose/OPDAAC page within 7 days

– <https://www.ncdhhs.gov/about/departments-initiatives/overdose-epidemic/nc-opioid-and-prescription-drug-abuse-advisory-committee>

## Next OPDAAC Meetings:

- NC Summit on Reducing Overdose: June 7-8, 2023, Durham Convention Center (replacing our June OPDAAC meeting)
- September 2023; hybrid (in-person and virtual)
- December 2023 (virtual)