



Fast PHACTs

New Combatants in the War Against Opioid Overdoses: Diamond Shruumz and Rhino Tranq

Amy Nham, PharmD, MPH, BCPS

Sandra Martell, RN, DNP

Leslie Wise, PhD

Catherine Counard, MD, MPH

September 19, 2024



CME Accreditation Statement

The Illinois Department of Public Health, Medical Services Division is authorized to offer formal programs of Continuing Medical Education (CME) to Illinois physicians licensed under (225 ILCS 60/) the Medical Practice Act of 1987. The formal programs must comply with the criteria in subsection (c)(3) of 68 Illinois Administrative Code, Section 1285.110, and all other criteria in this Section.

Financial Disclosures

Name and Credentials	Role in Activity	Was there a relevant Financial Disclosure	List of Mitigated Disclosures
Arti Barnes, MD, MPH	Moderator/Facilitator	No	N/A
Amy Nham, PharmD, MPH, BCPS	Presenter	No	N/A
Leslie Wise, PhD	Presenter	No	N/A
Catherine Counard, MD, MPH	Presenter	No	N/A
David Hale-Arroyo	Staff	No	N/A
Michael Moore	Staff	No	N/A
Sandra Martell PhD, DNP	Presenter	No	N/A
Indira Giri	Panelist	No	N/A
Nicole Gastala MD	Panelist	No	N/A
Ase Nahmae	Panelist	No	N/A

Learning Objectives

Upon completion of the webinar, participants will be able to:

- Increase awareness of the statewide standing orders for opioid reversal agents.
- Enhance knowledge of product recalls like Diamond Shruumz, and public health's role.
- Discuss updated clinical guidance around agents like Xylazine and Medetomidine.

Opioid Reversal Agents and Standing Orders

Presented by:



Leslie Wise, PhD
Epidemiologist
IDPH Office of Health Promotion



Catherine Counard, MD, MPH
IDPH Preventive Medicine Medical Advisor



Opioid Overdose Reversal Agent Standardized Procedure and Standing Order

Catherine A. Counard, MD, MPH

FAST PHACT Webinar

Thursday, September 19, 2024

Opioid Overdose Reversal Agent

Standard Procedure

Effective 02/09/2024

- September 2015, Illinois Pharmacy Practice Act, 225 ILCS 85/19.1, modified to authorize trained personnel to (initially just Naloxone) dispense and/or administer opioid reversal agents.
- IDPH issued a standing procedure outlining how entities may become authorized to obtain and dispense opioid reversal agents to reverse an opioid overdose.
- May 2023, Nalmefene was approved by the Food and Drug Administration (FDA) as an opioid reversal agent, included in the latest update.
- January 2024, Illinois schools were added as a Naloxone entity due to the need to have emergency procedures in place should persons exhibit signs of opioid overdose while on school premises.

Naloxone Entities

- Licensed pharmacies and pharmacists:
 - Report Naloxone and Nalmefene dispensing to the Illinois Prescription Monitoring Program at <https://www.ilpmp.org/>.
- Opioid overdose education and Naloxone distribution (OEND) programs:
 - Law enforcement agencies, drug treatment programs, local health departments, hospitals, urgent care facilities, or other for-profit or non-profit community-based organizations.
 - Must be registered with Illinois Department of Human Services [Division of Substance Use Prevention and Recovery Drug Overdose Prevention Program \(DOPP\)](#).
- Schools registered with the Illinois State Board of Education (ISBE):
 - Schools are now required to maintain a supply of opioid antagonists
 - Submit a report to ISBE within three days of use.
 - <https://www.isbe.net/Documents/34-20A-opioid-rptg.pdf>
- ***May dispense either Naloxone or Nalmefene.***

Required Training

- Opioid overdose prevention and recognition.
- ***Need to quickly administer treatment to reduce the risk of severe injury or death.***
- Techniques for administering Naloxone and Nalmefene.
- Specifics of the product that they will be administering.
- ***Importance of calling 911*** for the care of the overdose victim.
- ***Goal is to restore normal breathing.***
- For schools, the training outlined in Section 22-30(h-5) of the Illinois School Code.

Signs and Symptoms of Opioid Overdose

- Slowed, irregular, or no breathing
 - Skin, nails turn blue
 - Extreme sleepiness
 - Unresponsive to sternal rub or when shaken
 - Pinpoint pupils
- *If an individual is suspected of overdosing, an opioid overdose reversal agent must be administered as quickly as possible, because an overdose may result in death.*

Naloxone Hydrochloride

- Deliver using an auto-injector, intranasally, or IM.
- *Safe to give to a child of any age or an adult with symptoms of opioid overdose, even if you are not sure if they overdosed on opioids.*
- *Monitor for recurrence of symptoms and administer additional doses of Naloxone if needed.*
- *There are no absolute contraindications to the use of Naloxone in an emergency.*

Adverse Reactions

Related to Precipitating Opioid Withdrawal

- Symptoms may appear within minutes of Naloxone administration and subside in approximately two hours.
 - Nausea, vomiting, rapid heart rate, hypertension, pain, fever, and dizziness.
 - Some individuals may also display temporary amnesia, physical discomfort, or aggression when an opioid overdose is treated.
- ***Adverse effects beyond opioid withdrawal are rare.***

Nalmafene Hydrochloride

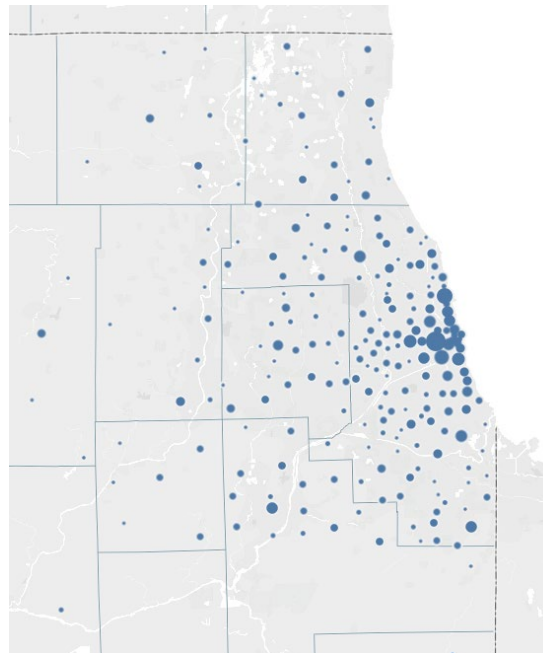
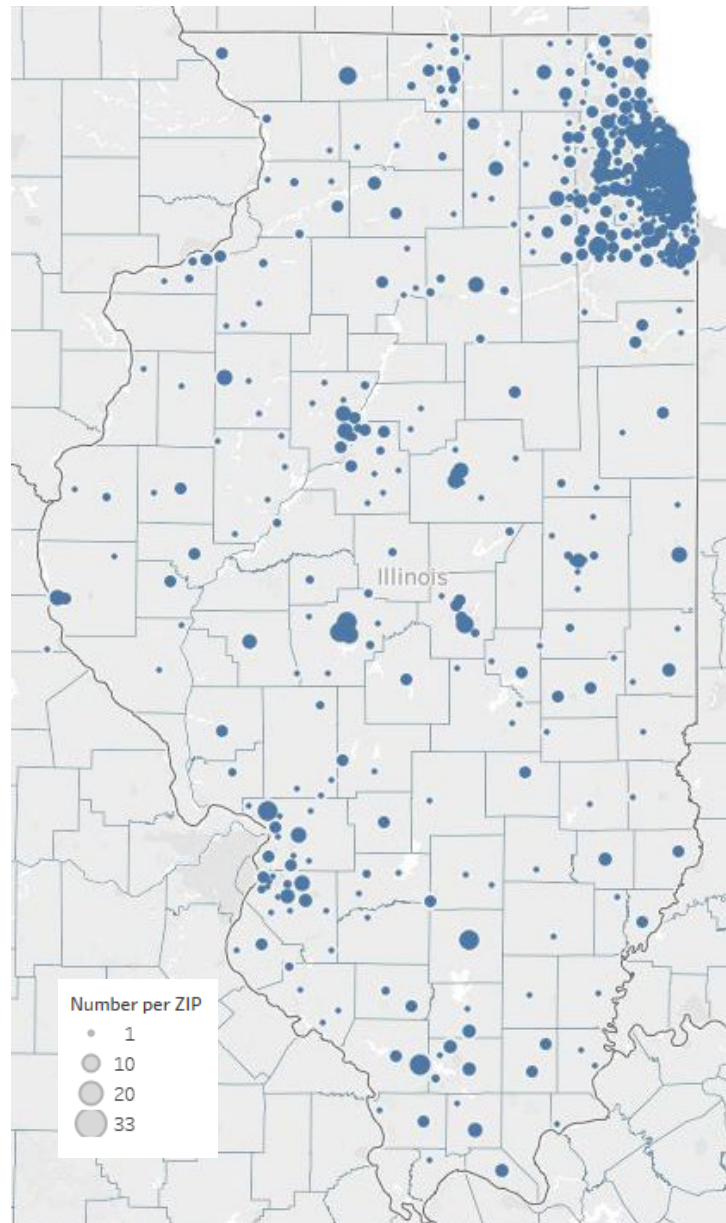
- Deliver intranasally.
- *It is safe to give this medication to adults and pediatric patients aged 12 years and older.*
- *Monitor for recurrence of symptoms and administer additional doses of Nalmafene if needed.*
- *There are no absolute contraindications to the use of Naloxone in an emergency.*
- *The safety and tolerability of Nalmefene is similar to Naloxone, however, it has a much longer duration of action.*

Resources

- [Opioid Overdose Reversal Agents \(illinois.gov\)](#)
- [Illinois Opioid Overdose Reversal Agents
Standardized Procedure](#)

Naloxone Standing Order Registry

- 90% of Illinois counties have at least one entity registered to use the standing order.
- With expansive coverage of the overdose education and Naloxone distribution centers, 100% of Illinois counties have Naloxone services available.
- 1,516 registered participants:
 - 62% overdose education and Naloxone distribution centers;
 - 36% pharmacies; and
 - 2% schools.



HelplineL.org

Get Help Now with MAR NOW (Medication Assisted Recovery) - immediate recovery assistance with opioids or alcohol use.



📞 Call 833-234-6343 or text "HELP" to 833234

[GET HELP](#) [HELP SOMEONE](#) [STAY SAFE](#) [STOP OVERDOSE](#) [ABOUT](#) [PROVIDERS](#)



Search for services

To find services near you, choose a substance (S) or service type (T) and your location.
Don't see what you need? [Take our assessment.](#)

I am looking for help with near



MAR NOW
Medication Assisted Recovery



Clinical Guidance Regarding Agents like Xylazine and Medetomidine Presented by:



***Amy Nham, PharmD, MPH, BCPS
U.S. Public Health Service
Epidemic Intelligence Service (EIS) Officer
Centers for Disease Control and Prevention
Chicago Department of Public Health***



Outbreak of Overdoses Involving Medetomidine Mixed With Opioids — Chicago, Illinois, May 2024

Amy Nham, PharmD, MPH

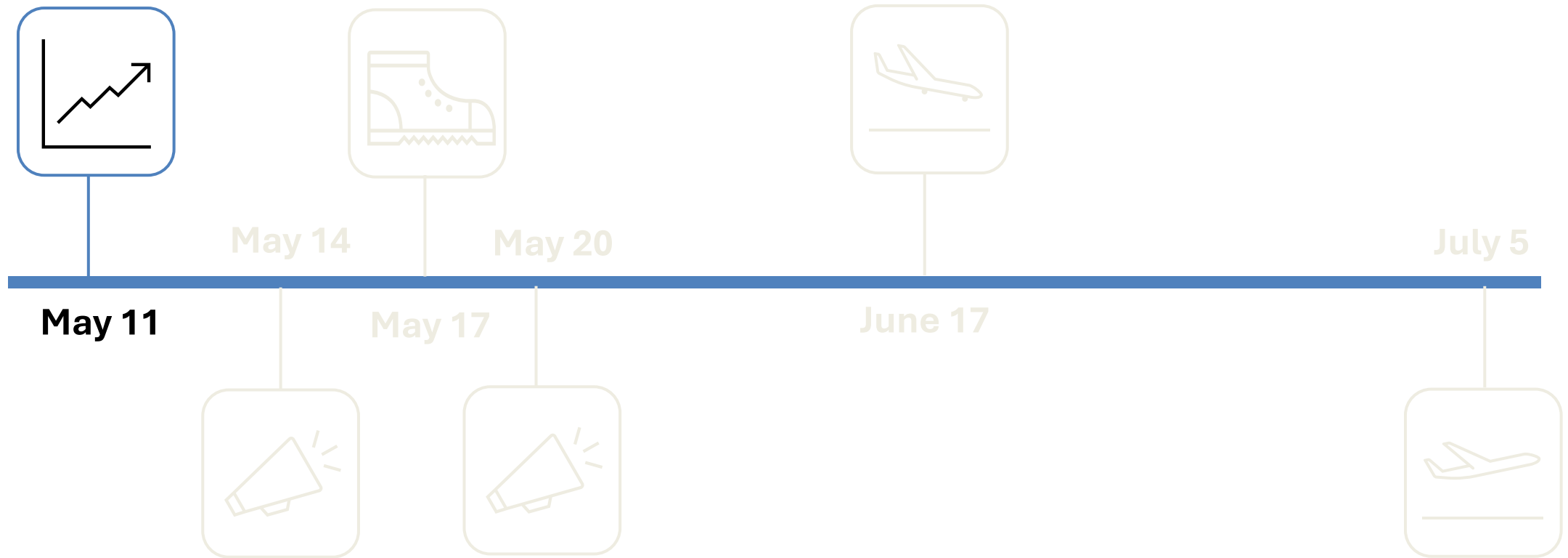
CDC Epidemic Intelligence Service (EIS) Officer

Chicago Department of Public Health

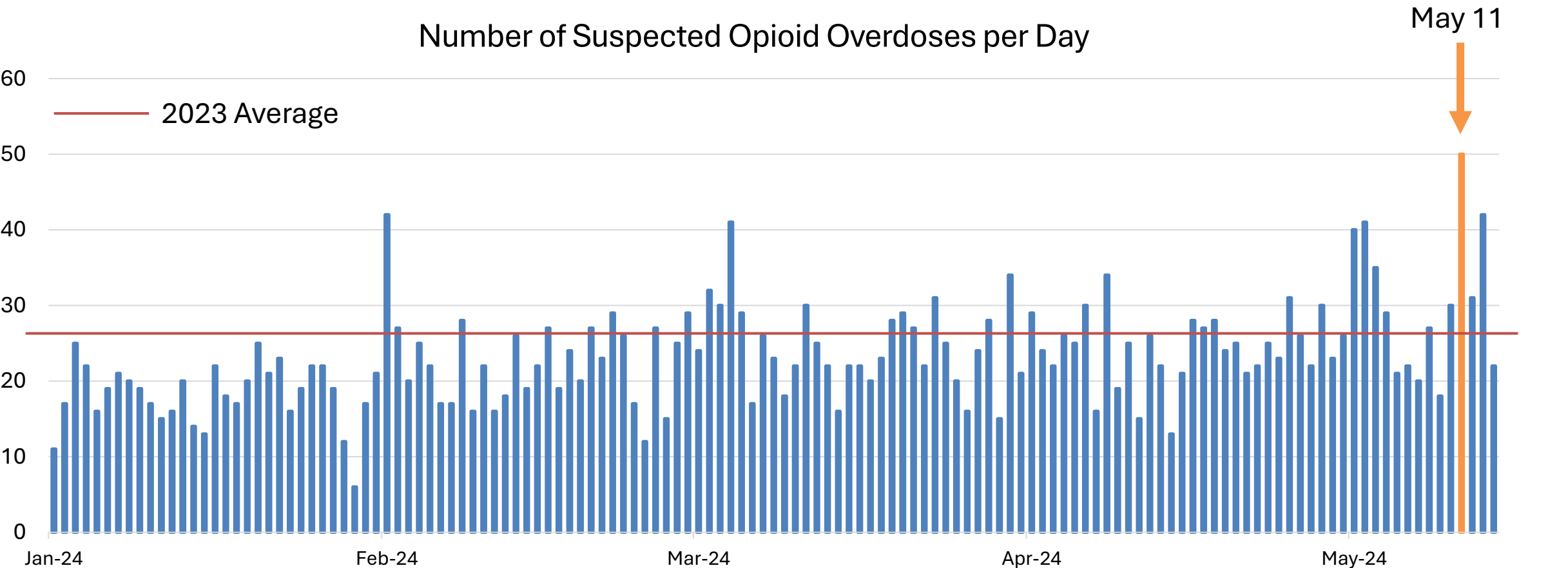
Public Health Allied Clinician Talk (PHACT)

September 19, 2024

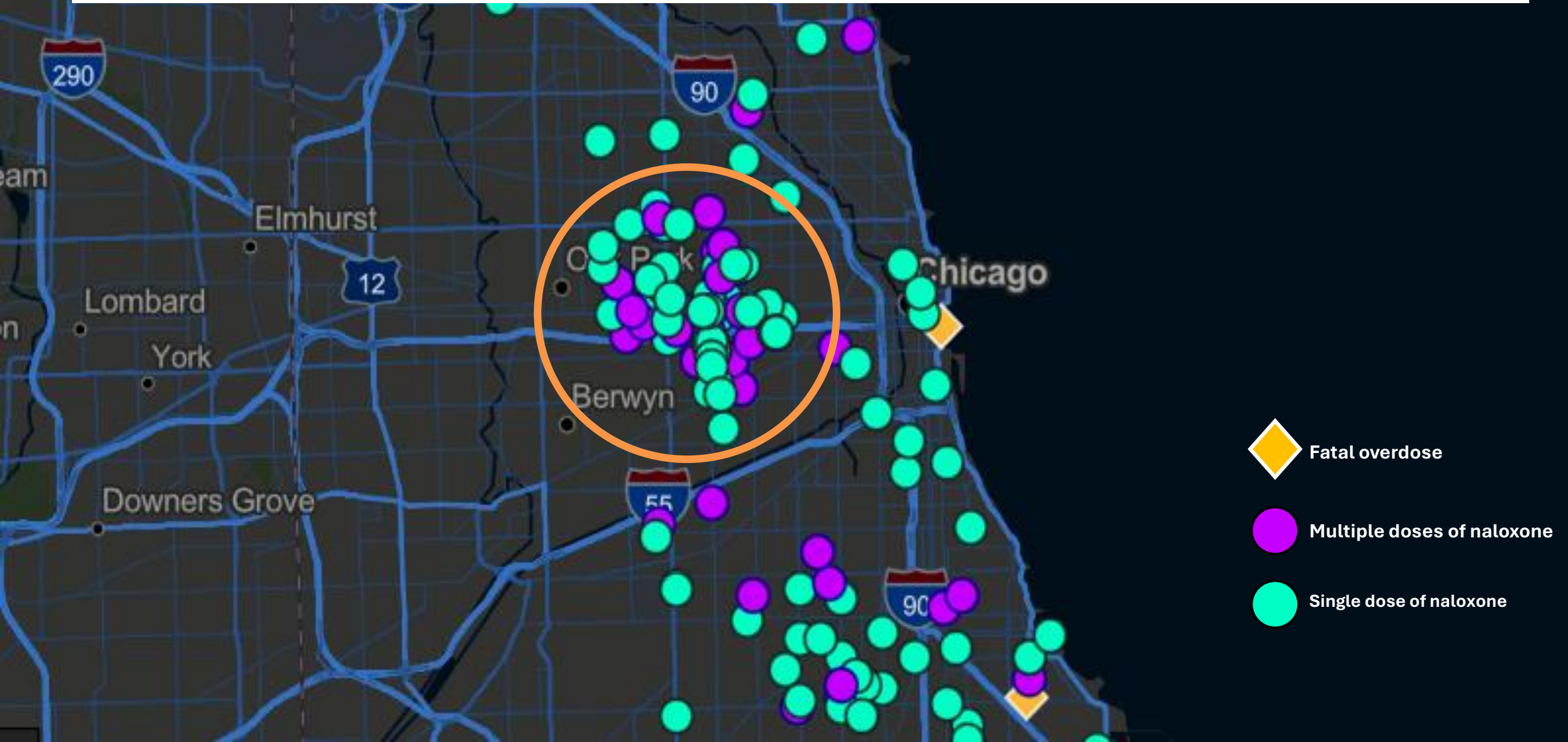
On May 11, an increase in EMS encounters for suspected opioid overdoses was detected in Chicago.



The spike on May 11 had several unique features.



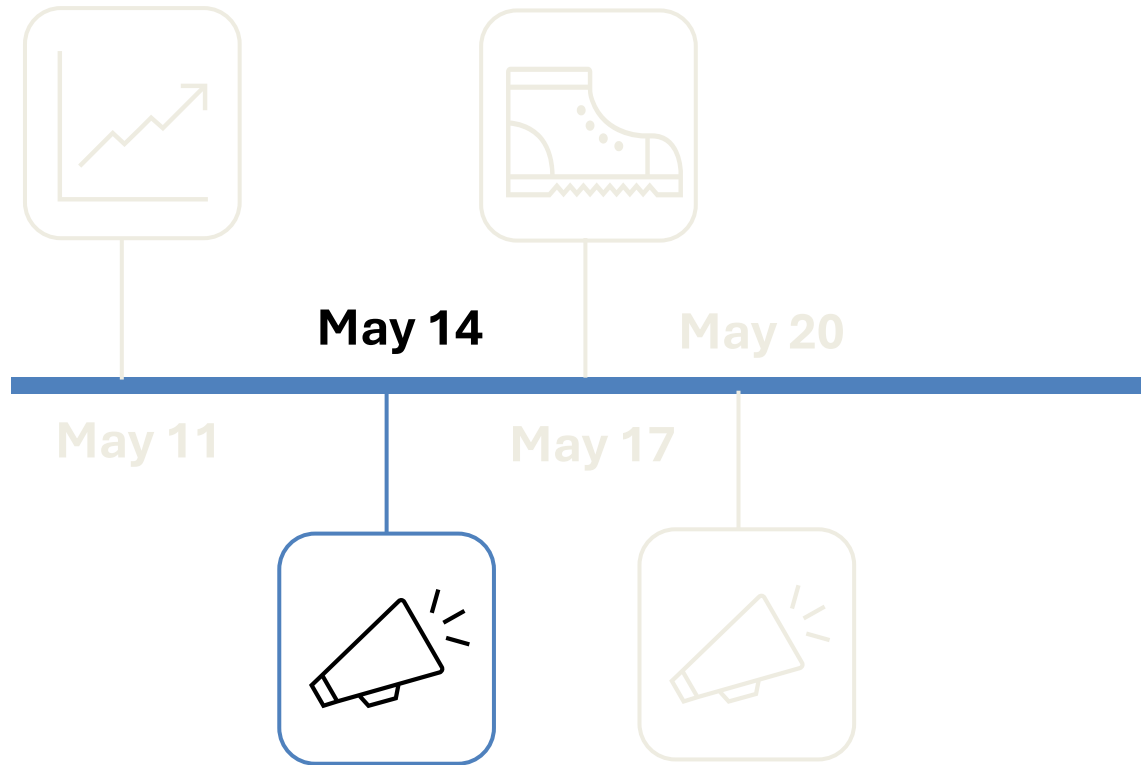
Cases were clustered on the west side of Chicago.



There was a unique toxidrome.

- Opioid overdose symptoms.
- Prolonged altered mental status, despite Naloxone.
- Bradycardia, hypertension, downward gaze.

On May 14, CDPH released the first HAN alert.



Increase in Opioid Overdoses May 14, 2024

Summary and Action Items

- An increased number of opioid overdoses occurred in the Chicago area beginning Saturday, May 11, 2024, and remained elevated on Monday, May 13, 2024.
- In addition to presenting with symptoms of opioid toxicity (respiratory depression and pinpoint pupils), some patients also presented with hypertension, bradycardia and downward gaze.
- Providers should increase the amount of naloxone available on hand and distribute widely.
- Counsel patients and clients that *any* drug could contain fentanyl.
- The use of fentanyl and xylazine test strips on drug samples prior to consumption may help minimize the risk of overdose.
- Consider immediate initiation of buprenorphine for persons whose opioid overdose was reversed with Naloxone. MAR NOW is Illinois' immediate opioid treatment helpline. Call 833-234-6343 or text "HELP" to 833234.
- Visit overcomeopiods.org and chicagohan.org/opioid for more information.

Increase in Opioid Overdoses

The Chicago Department of Public Health (CDPH) received confirmation from the Overdose Detection Mapping Application Program (ODMAP) that an increased number of opioid overdoses occurred in the Chicago area on Saturday, May 11, 2024, and remained elevated on Monday, May 13, 2024. The largest numbers of overdoses occurred in West Garfield Park, East Garfield Park, Austin, Humboldt Park, North Lawndale. CDPH is working to determine the specific substances associated with this increase in overdoses.

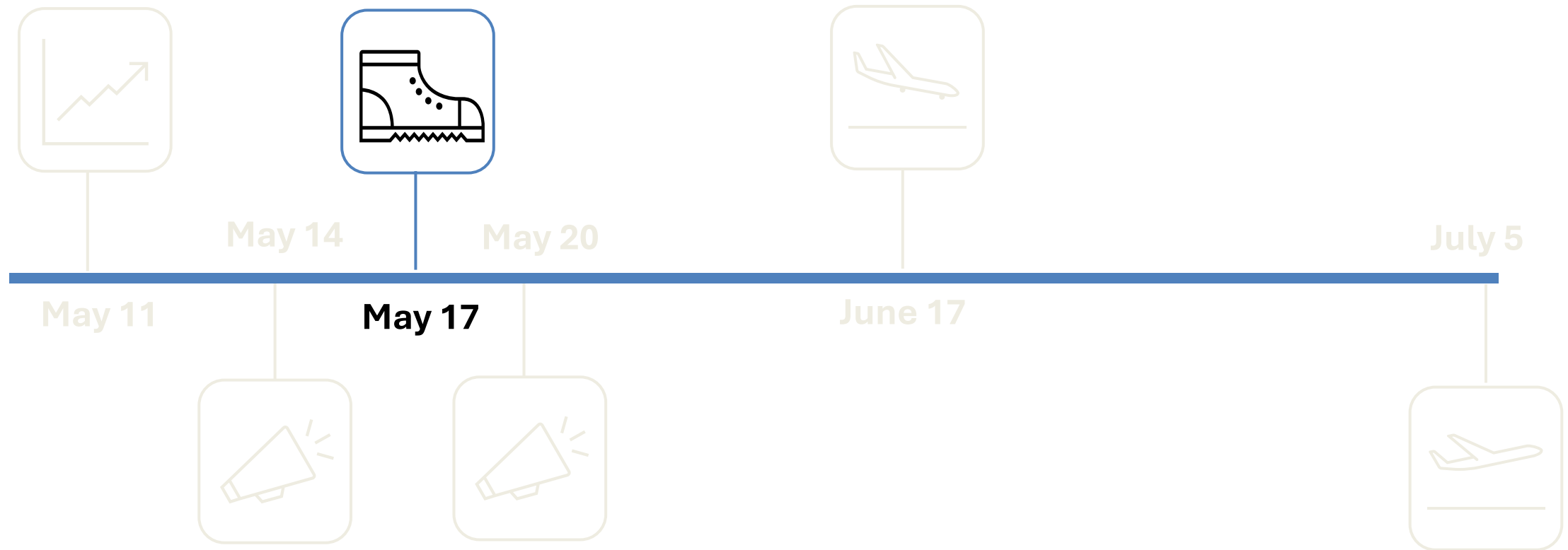
Clinical Relevance

Opioids are a class of drugs that include illicit substances like fentanyl or heroin as well as prescription pain medications including oxycodone and morphine. Overdoses can occur from taking a regular dose after tolerance has lowered, taking a stronger dose than the body is accustomed to, or combining opioids with other substances such as benzodiazepines. Fentanyl and synthetic opioids are extremely potent and have an increasing presence in the illicit opioid and stimulant drug supply in the Chicago area. Naloxone is a medication that acts as an opioid antagonist and is designed to rapidly reverse an opioid overdose. Given the possibility of adulteration with synthetic opioids, people who use other drugs such as cocaine, should also carry naloxone.

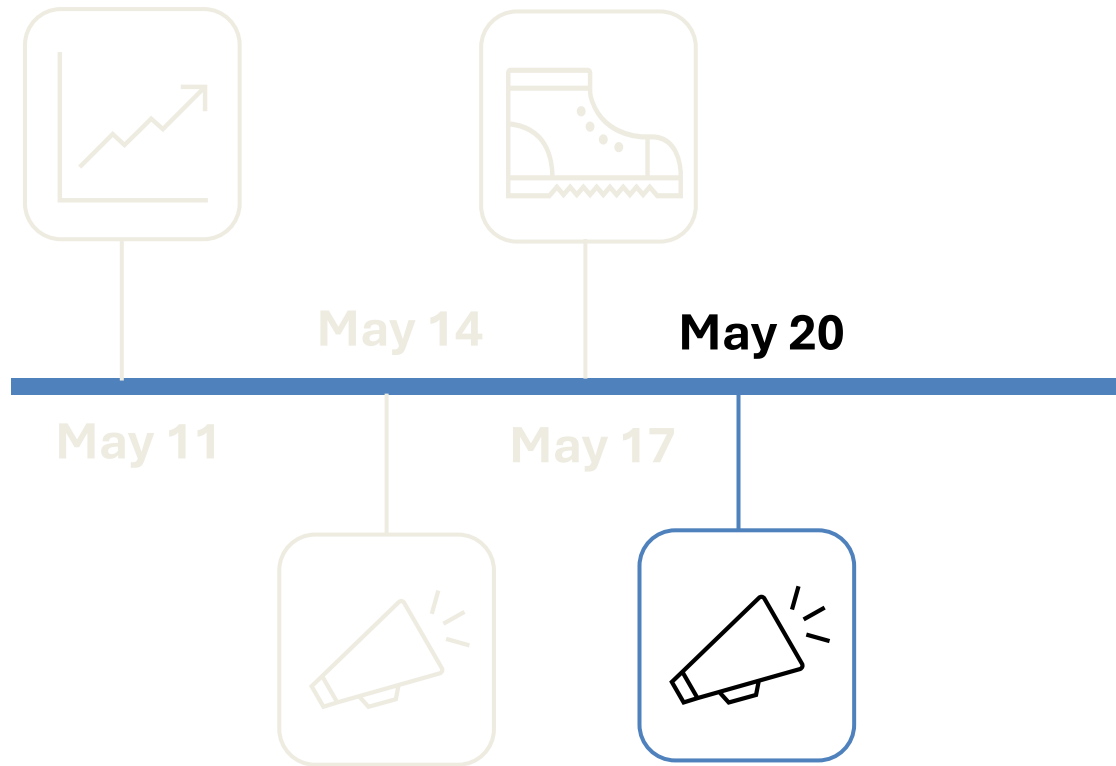
Actions to Take

- Increase the amount of naloxone and fentanyl and xylazine test strips available on hand and distribute widely to anyone at risk for an overdose.
- Counsel patients and clients that *any* drug could contain fentanyl.
- Healthcare providers should test specifically for fentanyl in patients presenting with symptoms of opioid overdose, because synthetic opioids, such as fentanyl, are not detected with routine toxicology testing.
- Consider immediate initiation of buprenorphine for persons whose opioid overdose was reversed with Naloxone. MAR NOW is Illinois' immediate opioid treatment helpline. Call 833-234-6343 or text "HELP" to 833234.

On May 17, CDPH and IDPH requested assistance from CDC to investigate the increase in drug overdoses.



On May 20, CDPH released the second HAN alert.



Sign up for the Chicago Health Alert!



Medetomidine in Chicago's Drug Supply May 20, 2024

Summary and Action Items

- Multiple drug samples collected from the West Side of Chicago on May 11, 2024 tested positive for elevated levels of medetomidine. In addition, fentanyl, heroin, xylazine, alprazolam and nitazenes have been detected in the same samples.
- Medetomidine is a new adulterant in Chicago's drug supply. It is a non-opioid sedative like xylazine but considered more potent. It has no approved use in humans.
- Like its dextro-isomer dexmedetomidine (sold as Precedex® or Dexdor®), medetomidine acts on alpha-2-adrenergic receptors to cause sedation, analgesia, bradycardia, prolonged hypotension following initial hypertension, and peripheral vasoconstriction. It can also cause respiratory depression, which can be greater when taken with other opioid and non-opioid sedatives.
- Report overdoses with atypical features to the Illinois Poison Center – 1-800-222-1222 to send specimen for testing.
- Initiate all patients whose overdose was reversed with naloxone on medication for opioid use disorder (MOUD) before discharge from ED or hospital. MAR NOW is Illinois' immediate opioid treatment helpline. Call 833-234-6343 or text "HELP" to 833234.

Medetomidine Detected in Chicago

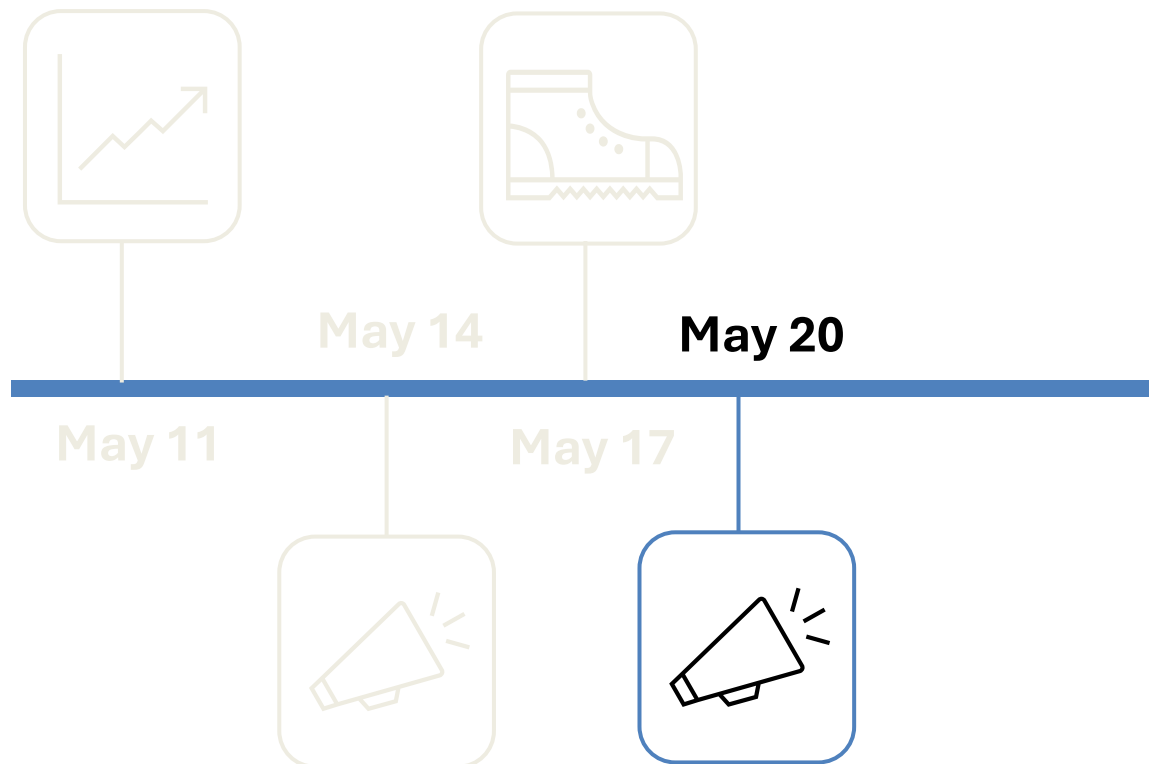
During May 11-14, 2024 there was an increase in drug overdoses in Chicago. Multiple associated drug samples from the West Side of Chicago tested positive for elevated levels of medetomidine. Medetomidine has not previously been detected in Chicago, although it has recently been detected in [Philadelphia](#). In Chicago, medetomidine has been detected in combination with fentanyl, heroin, xylazine, alprazolam and nitazenes.

Medetomidine Information

Medetomidine is a veterinary tranquilizer like xylazine but is considered more potent. It has no approved use in humans. Like its dextro-isomer dexmedetomidine (sold as Precedex® or Dexdor®), medetomidine is an alpha-2-adrenergic receptor agonist causing sedation, analgesia, bradycardia, prolonged hypotension following initial hypertension, and peripheral vasoconstriction. Other clinical indicators of medetomidine toxicity include dry mouth, mydriasis, hypothermia, and spontaneous muscle contractions (twitching). There are very few documented cases of medetomidine toxicity in humans.

Medetomidine can cause respiratory depression, which can be greater when taken with other opioid and non-opioid sedatives. Naloxone will not reverse the effects of medetomidine, a non-opioid substance. There are no recommended reversal agents for use in humans. Notably, naloxone should still be used for all suspected drug overdoses as fentanyl usually co-occurs with other substances. There are no immunoassay test strips available for detecting the presence of medetomidine in drug or urine samples.

On May 20, CFSRE also released a public alert.



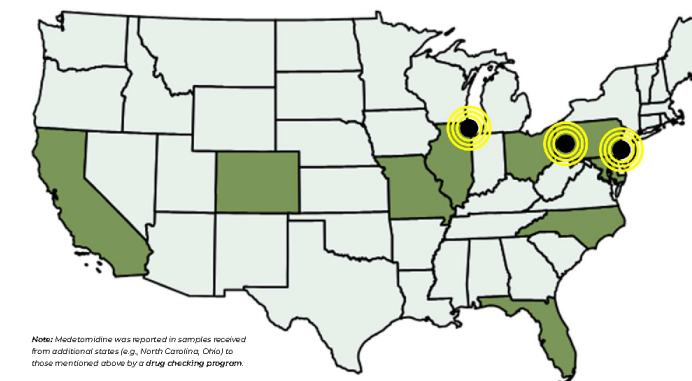
MEDETOMIDINE RAPIDLY PROLIFERATING ACROSS USA — IMPLICATED IN RECREATIONAL OPIOID DRUG SUPPLY & CAUSING OVERDOSE OUTBREAKS

PURPOSE: The objective of this announcement is to notify public health, harm reduction, first responders, clinicians, medical examiners and coroners, forensic and clinical laboratories, and all other related communities about new information surrounding the emergent adulterant **medetomidine** (also referred to as dexmedetomidine).

BACKGROUND: Medetomidine is an alpha-2 agonist, belonging to the same family of drugs as xylazine and clonidine. Medetomidine is synthetically manufactured and exists in two enantiomeric forms: **dexmedetomidine** and levomedetomidine, the former being active and potent. Dexmedetomidine is approved for use in humans and is administered in hospital, while differing forms of medetomidine are available for use in veterinary medicine. The effects of **medetomidine** can include sedation, analgesia, muscle relaxation, anxiolysis, bradycardia, hypotension, hyperglycemia, and hallucinations. Duration of action is noted to be longer for medetomidine relative to xylazine.

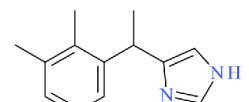
SUMMARY: Medetomidine is the latest CNS depressant to appear as an adulterant alongside fentanyl in the recreational drug supply. Recent mass overdose outbreaks in Philadelphia, Pittsburgh, and Chicago have all been associated with fentanyl or heroin drug products containing medetomidine, as well as xylazine and/or other substances. In cases where medetomidine ingestion is suspected or confirmed, severe adverse effects have been noted, including **heightened sedation and profound bradycardia**.

TIMEFRAME	DESCRIPTION OF MEDETOMIDINE IDENTIFICATIONS AND OVERDOSE EVENTS
Late 2022	Medetomidine begins appearing more regularly in the Maryland drug supply, following its first detection in July 2022. Medetomidine is commonly identified alongside fentanyl, xylazine, and other substances.
Mid-to-Late 2023	Medetomidine is sporadically identified in toxicology specimens collected from patients presenting to emergency departments after suspected opioid overdose (confirmed to not be administered). Overdose events originated from Missouri, Colorado, Pennsylvania, California, and Maryland . Medetomidine is commonly detected with fentanyl.
January 2024	An alert is issued out of Toronto, ON , about the emergence of medetomidine in the drug supply. This is followed by increased positivity in subsequent weeks and months, as medetomidine is found alongside fentanyl in suspected opioid products and commonly in combination with xylazine and other substances.
Early 2024	Medetomidine detections increase in drug materials and toxicology specimens originating from western Canada, including Vancouver, BC , commonly alongside fentanyl and other opioids.
Late April 2024	Medetomidine first appears in drug products in Philadelphia, PA , causing a large scale outbreak of overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine.
Early May 2024	Medetomidine first appears in drug products in Pittsburgh, PA , causing a large scale outbreak of overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine.
Early May 2024	Medetomidine first appears in drug products in Chicago, IL , causing a large scale outbreak of overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine, or alongside heroin without xylazine.



◀ GEOGRAPHICAL DISTRIBUTION OF MEDETOMIDINE EMERGENCE

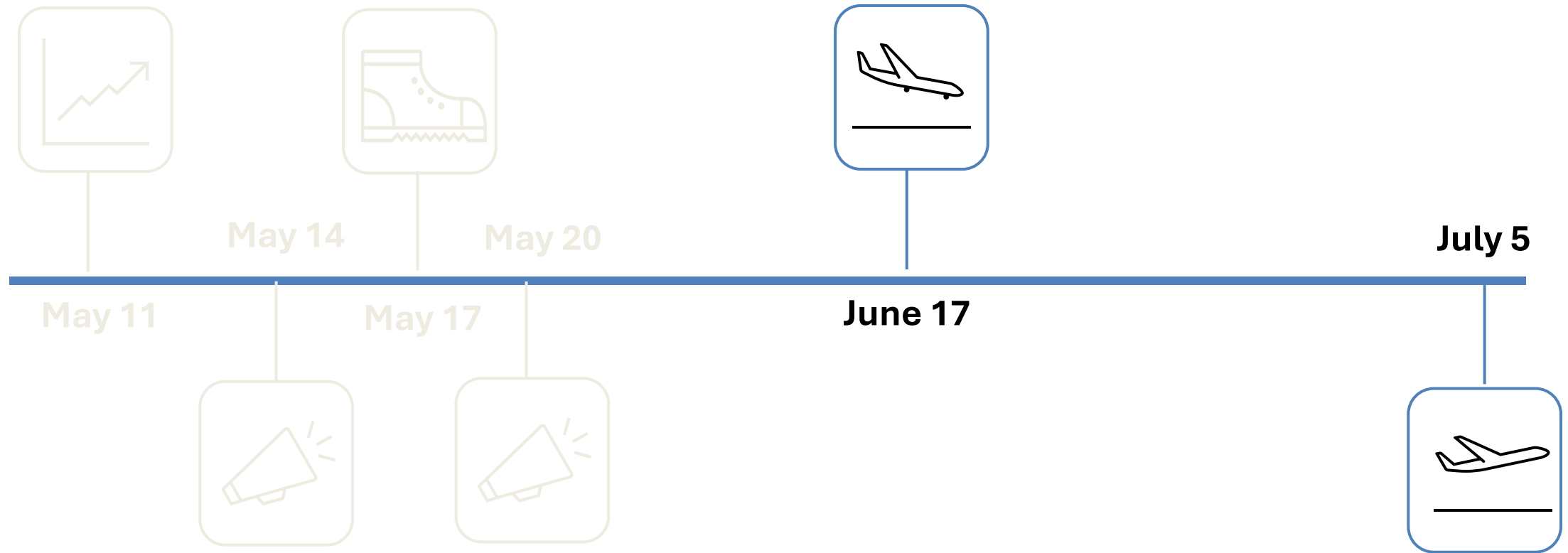
Medetomidine has been identified across several states in the U.S. and Canada, and is recently being observed in severe overdose outbreaks in major metropolitan areas (as marked).



Note: Medetomidine was reported in samples received from additional states (e.g., North Carolina, Ohio) to those mentioned above by a drug checking program.

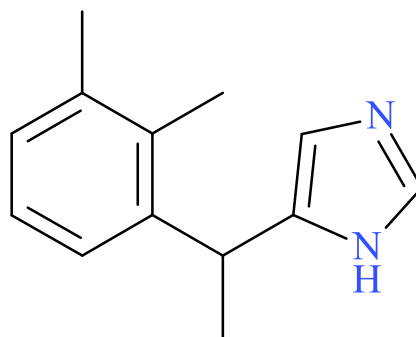


On June 17, CDPH and CDC started the investigation.



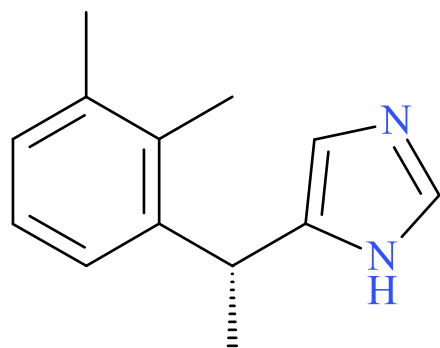
Medetomidine is a racemic mixture.

Medetomidine

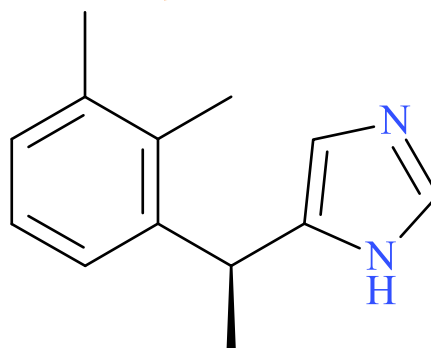


- Racemic mixture of 2 enantiomers
- Alpha-2 adrenergic receptor agonist
- Dose-dependent sedation
- Similar to xylazine, clonidine, tizanidine
- *Domitor*[®] : Veterinary use

- Not prepared or used alone



Levomeditomidine



Dexmedetomidine

- Active enantiomer
- *Precedex*[®] : Human use
- *Dexdomitor*[®] : Veterinary use

Medetomidine is a potent veterinary tranquilizer.

- Desirable effects
 - Sedation
 - Potent analgesia
 - Muscle relaxation
- Adverse effects
 - Respiratory depression
 - Bradycardia
 - Initial hypertension with later hypotension



Medetomidine is 200x more potent than xylazine.



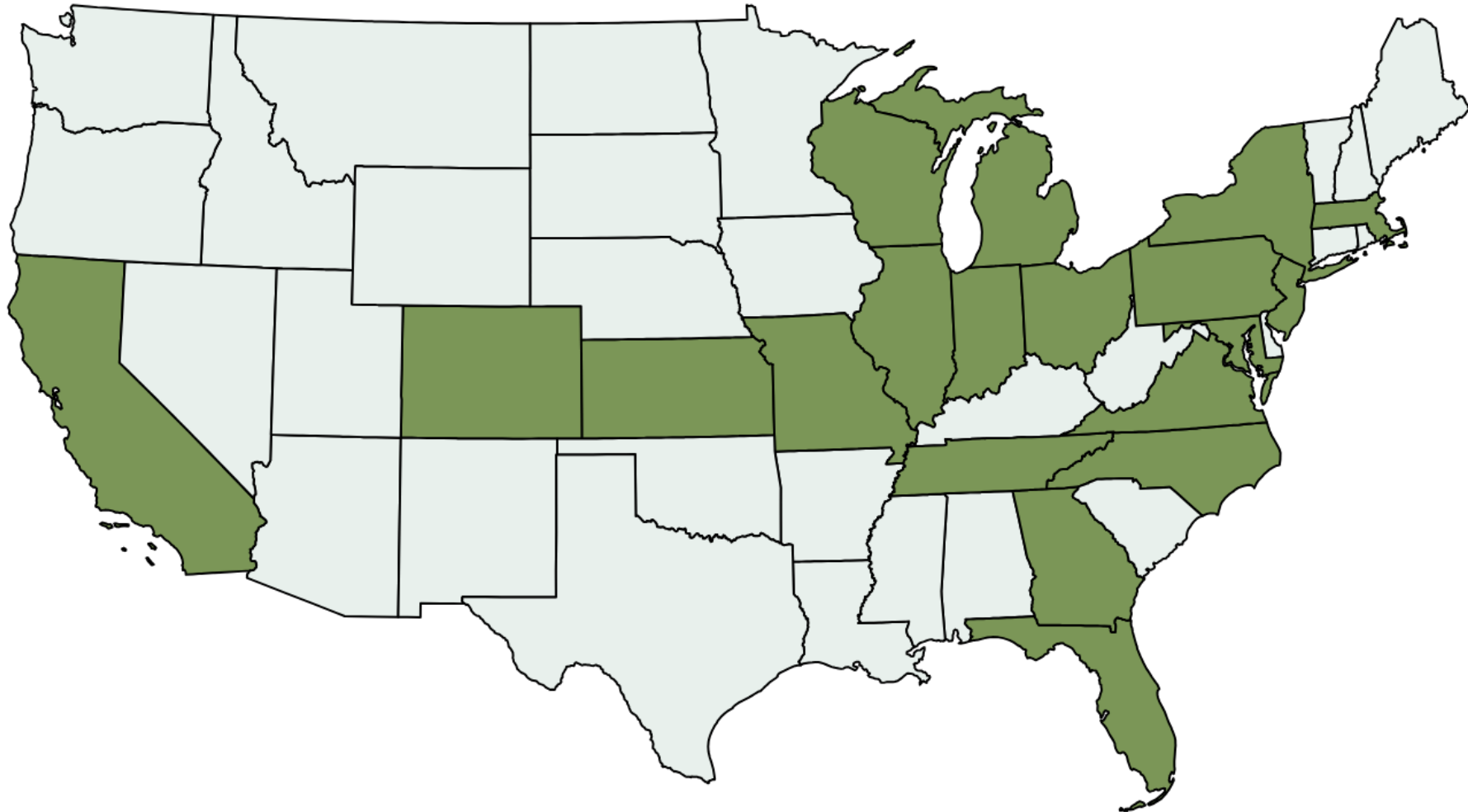
- Commonly referred to as “Tranq” or “Rhino Tranq.”
- Xylazine emerged as an adulterant in illicit drug products in the late 2000s.
- Detected increasingly during early 2020s, especially in Northeast United States.
- Drug-related deaths involving Xylazine have increased >10x from 2018 to 2021.



History of Medetomidine as an Adulterant

TIMEFRAME	DESCRIPTION OF MEDETOMIDINE IDENTIFICATIONS AND OVERDOSE EVENTS
Late 2022	Medetomidine begins appearing more regularly in the Maryland drug supply, following its first detection in July 2022. Medetomidine is commonly identified alongside fentanyl, xylazine, and other substances.
Mid-to-Late 2023	Medetomidine is sporadically identified in toxicology specimens collected from patients presenting to emergency departments after suspected opioid overdose (confirmed to not be administered). Overdose events originated from Missouri, Colorado, Pennsylvania, California, and Maryland . Medetomidine is commonly detected with fentanyl.
January 2024	An alert is issued out of Toronto, ON , about the emergence of medetomidine in the drug supply. This is followed by increased positivity in subsequent weeks and months, as medetomidine is found alongside fentanyl in suspected opioid products and commonly in combination with xylazine and other substances.
Early 2024	Medetomidine detections increase in drug materials and toxicology specimens originating from western Canada, including Vancouver, BC , commonly alongside fentanyl and other opioids.
Late April 2024	Medetomidine first appears in drug products in Philadelphia, PA , causing a large scale outbreak of overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine.
Early May 2024	Medetomidine first appears in a drug product in Pittsburgh, PA , associated with overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine.
Early May 2024	Medetomidine first appears in drug products in Chicago, IL , causing a large scale outbreak of overdoses and adverse events. Medetomidine is identified alongside fentanyl and xylazine, or alongside heroin without xylazine.

Medetomidine as an adulterant has now been found in many states.





LOCAL

Powerful animal sedative likely cause of overdose spike in Chicago



DONATE

HEALTH

Gangs mix another potent sedative into U.S. street drugs causing 'mass overdoses'

NBC NEWS



New street drug medetomidine complicating how overdoses are treated

| SAVE

A potent animal tranquilizer known as medetomidine is fueling a surge in overdoses across the nation. Unlike opioids, which can be countered with naloxone, also known as Narcan, medetomidine doesn't respond to the life-saving drug, making it even more dangerous when mixed with other substances.



HEALTH NEWS

A dangerous new animal sedative is making its way into the illegal drug supply

An animal tranquilizer called medetomidine has been linked to a recent rise in overdoses in Illinois, Michigan and Pennsylvania.



— Illicit drugs like these fentanyl-laced pills seized by the Drug Enforcement Administration have been found to contain a potent animal sedative called medetomidine. DEA via AP file

| SAVE

LOCAL

Powerful animal sedative likely cause of overdose spike in Chicago

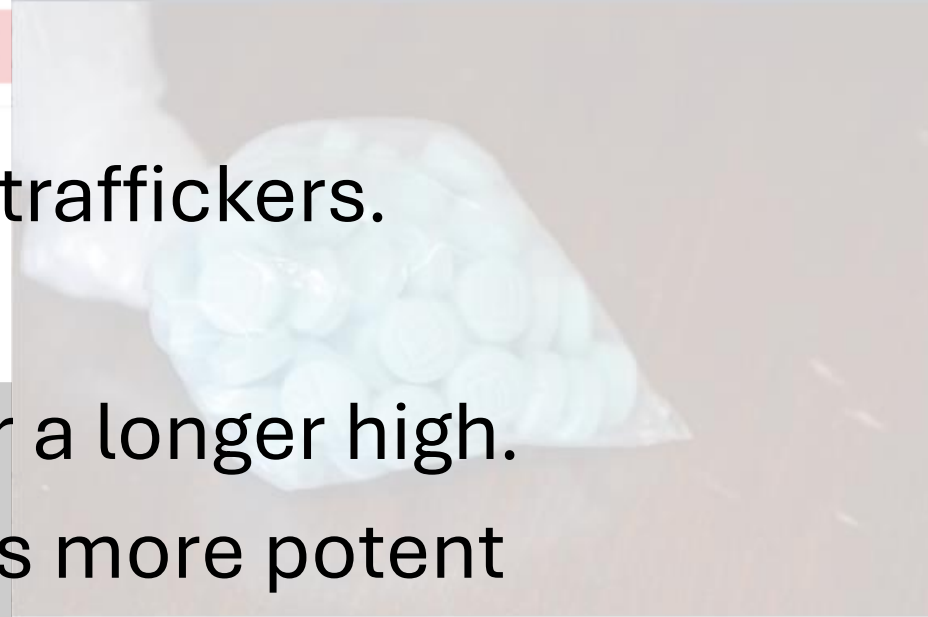
Why are veterinary tranquilizers in the illicit drug supply?

- May increase profit for illicit drug traffickers.
- Ease of availability and low cost.
- May attract individuals looking for a longer high.
- Expected trend of shifting towards more potent substances.

HEALTH NEWS

A dangerous new animal sedative is making its way into the illegal drug supply

Medetomidine, a sedative used in animals, has been linked to a recent rise in overdoses in Illinois, Michigan and Pennsylvania.



Illicit drugs like these fentanyl-laced pills seized by the Drug Enforcement Administration have been found to contain a potent animal sedative called medetomidine. DEA via AP file

f X e | SAVE

June 7, 2024 1:37 PM CDT

HEALTH

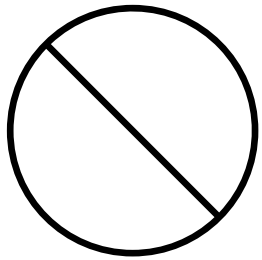
Gangs mix another potent sedative into U.S. street drugs causing spikes in overdoses

NBC NEWS

New street drug medetomidine complicating how overdoses are treated

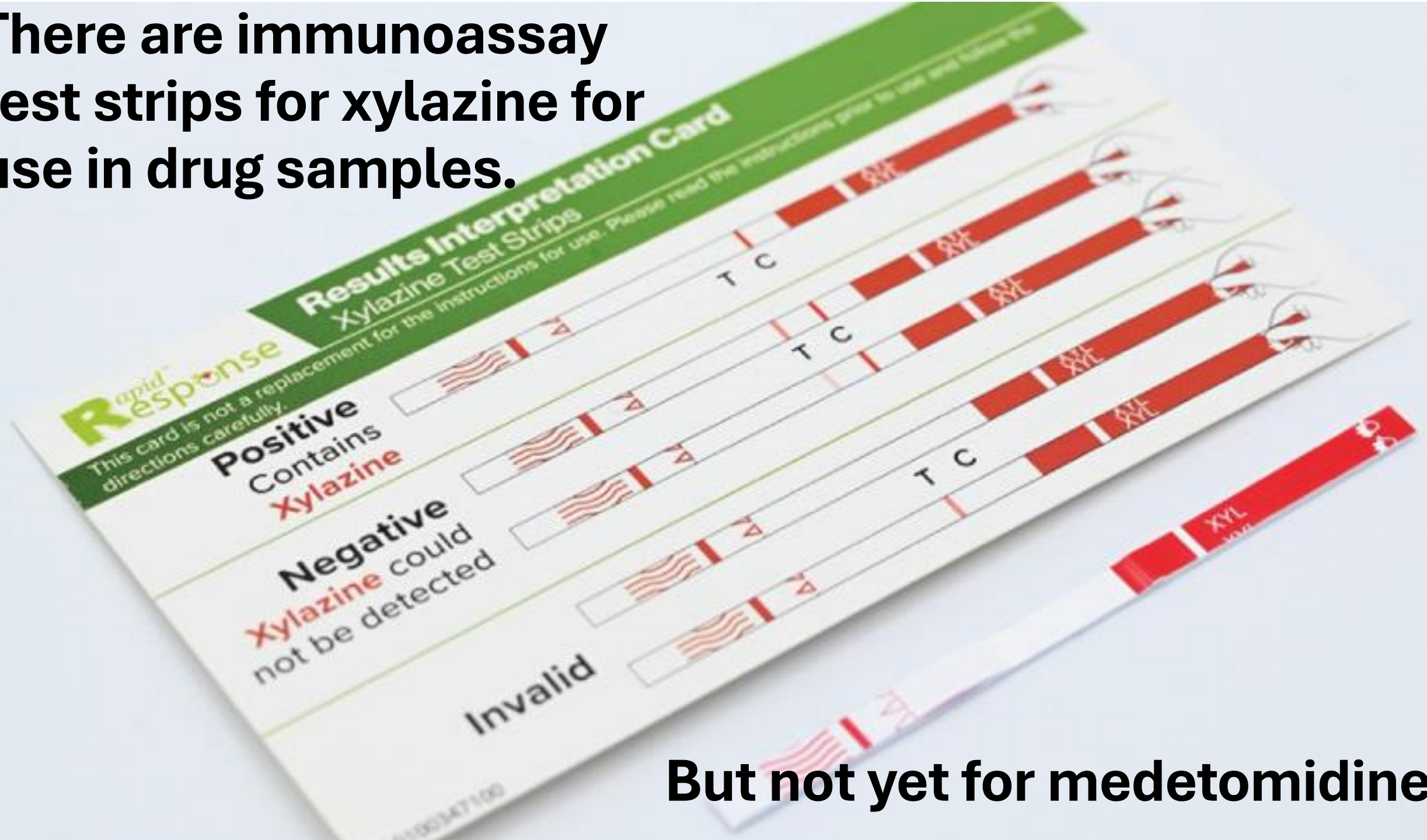
f X e | SAVE

A potent animal tranquilizer known as medetomidine is fueling a surge in overdoses across the nation. Unlike opioids, which can be countered with naloxone, also known as Narcan, medetomidine doesn't respond to the life-saving drug, making it even more dangerous when mixed with other substances.

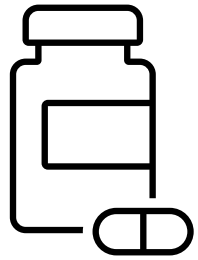


There are no reversal agents for medetomidine for use in humans.

There are immunoassay test strips for xylazine for use in drug samples.

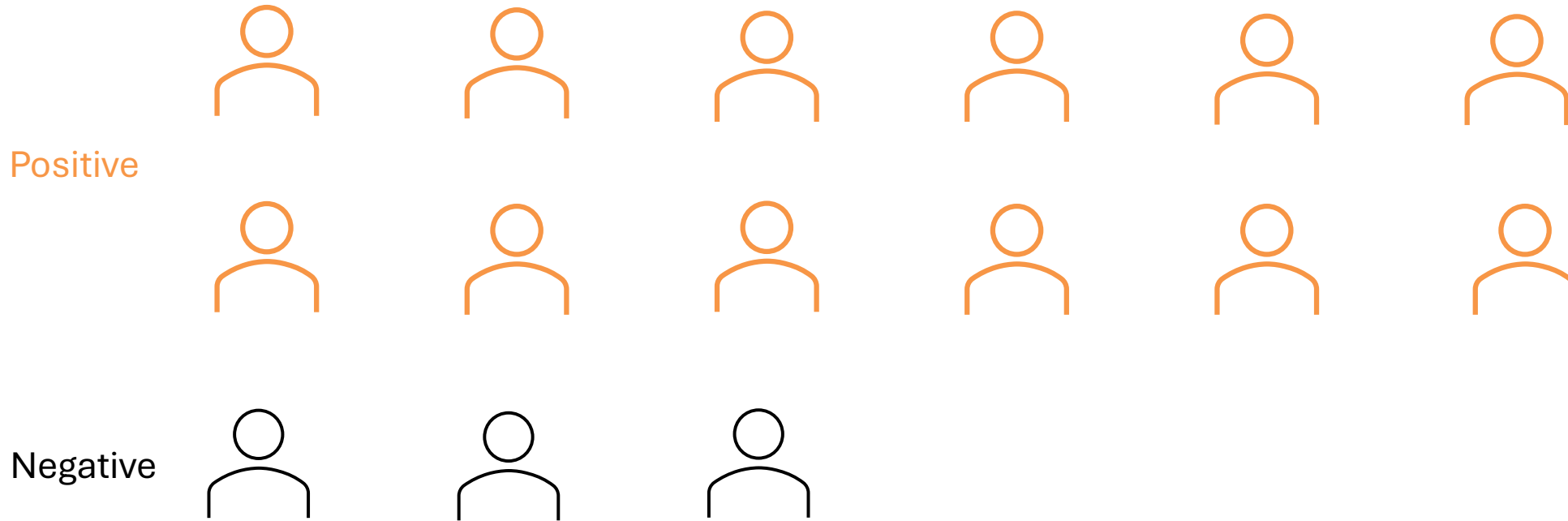


But not yet for medetomidine.

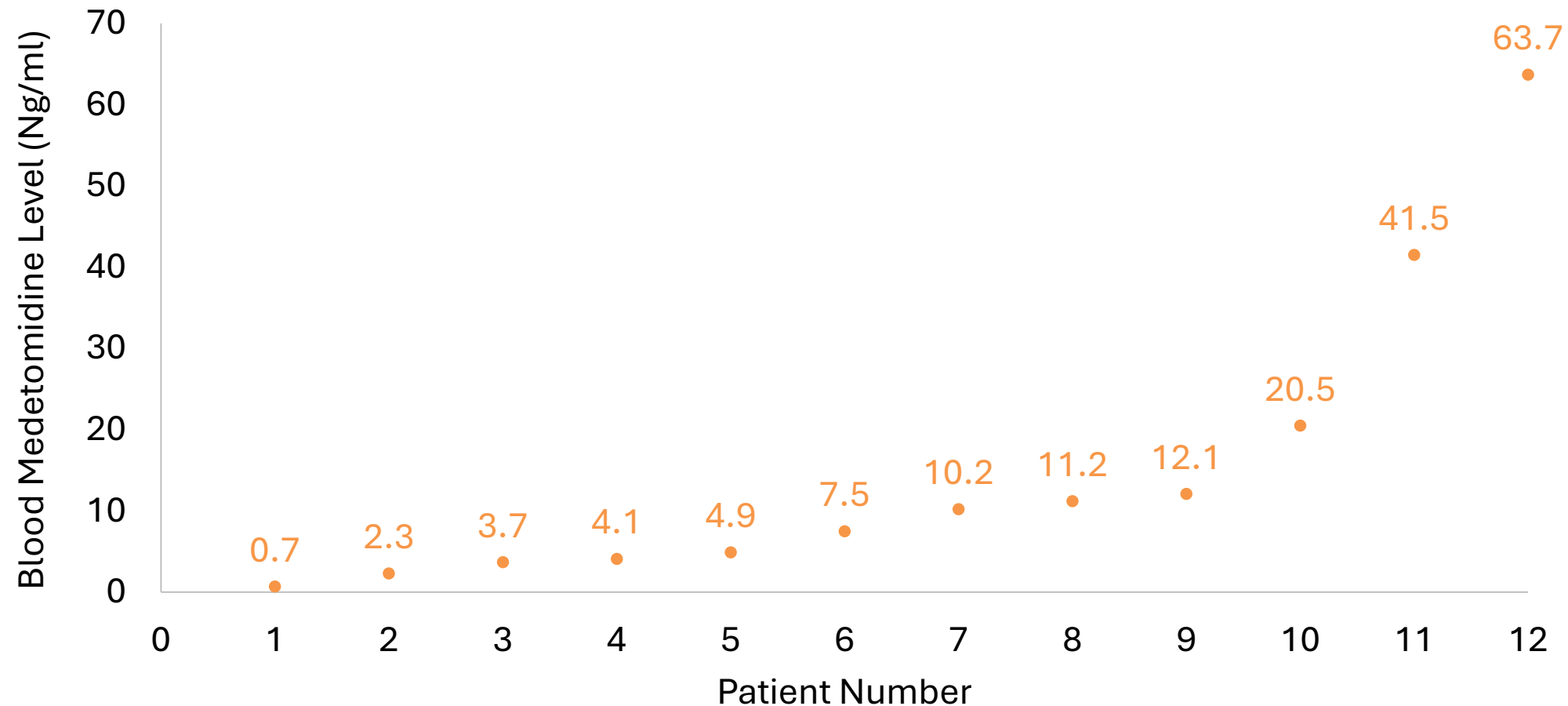


Investigation Results: Summarizing Toxicology and Drug Testing Data

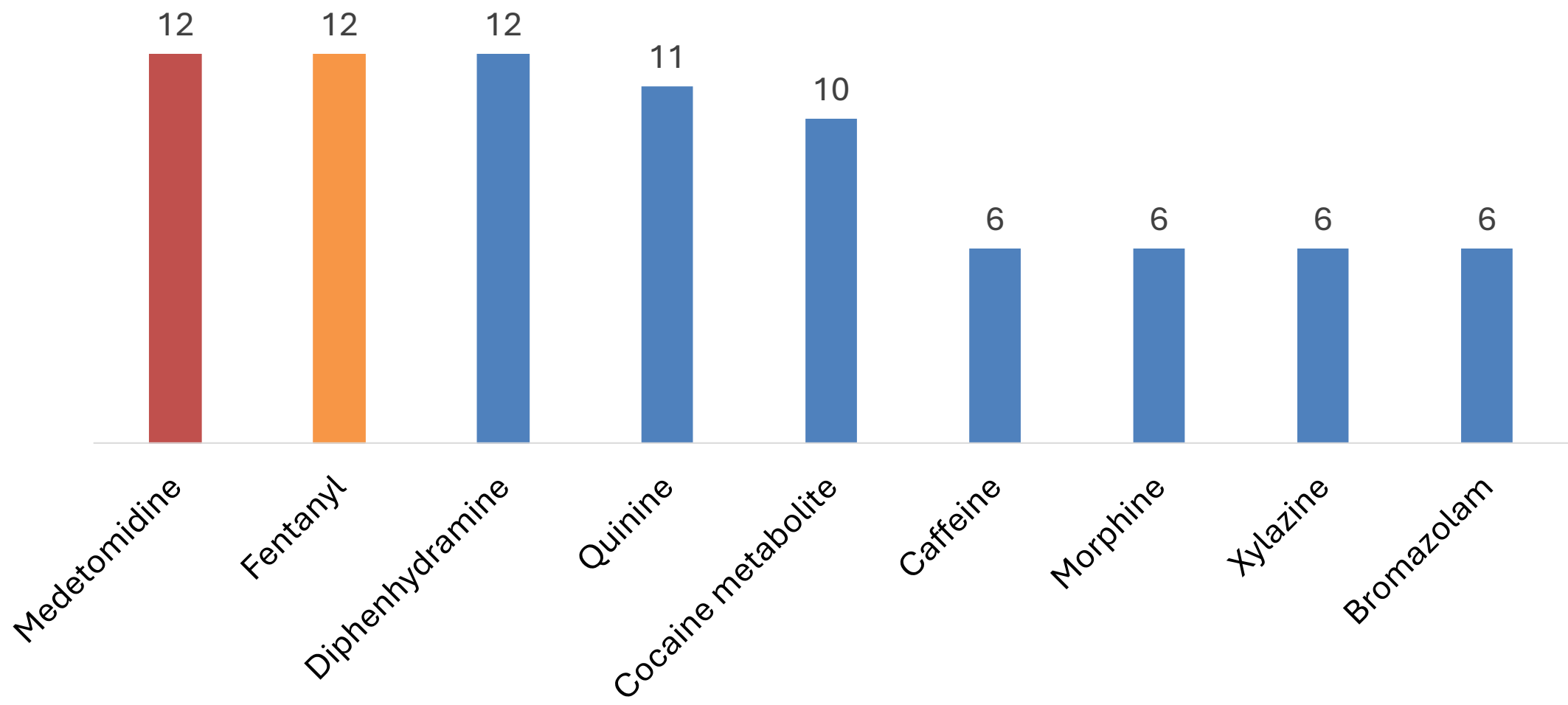
12 (80%) out of 15 blood samples were **positive** for medetomidine.



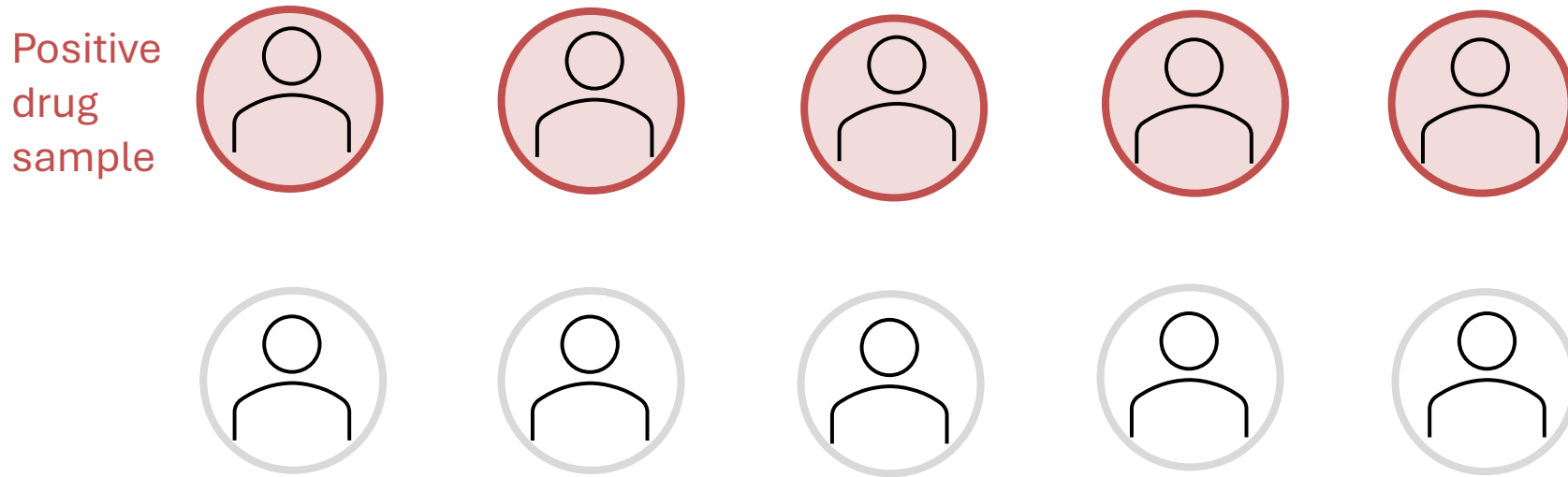
Blood medetomidine levels ranged from 0.7 to 63.7 ng/ml.



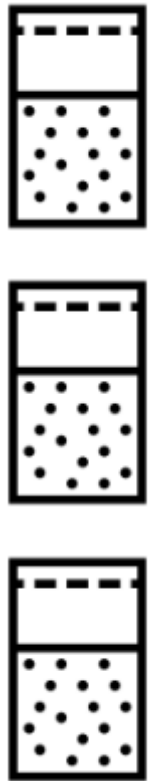
All 12 blood samples also contained **fentanyl.**



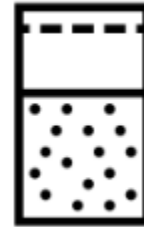
5 (50%) out of 10 drug samples were **positive** for medetomidine.



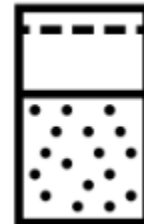
All 5 drug samples also contained **fentanyl**.



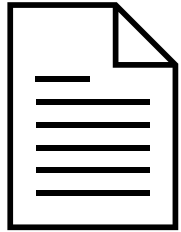
Medetomidine (6.3-12p)
Diphenhydramine (2.6-3p)
Heroin (1p)
Fentanyl (trace)



Xylazine (2p)
Fentanyl (1p)
Medetomidine (0.6p)
Diphenhydramine (0.5p)
Quinine (0.5p)
Ketamine (0.2p)
Alprazolam (trace)
Metonitazene (trace)
N-pyrrolidino metonitazene (trace)
Para-fluorofentanyl (trace)

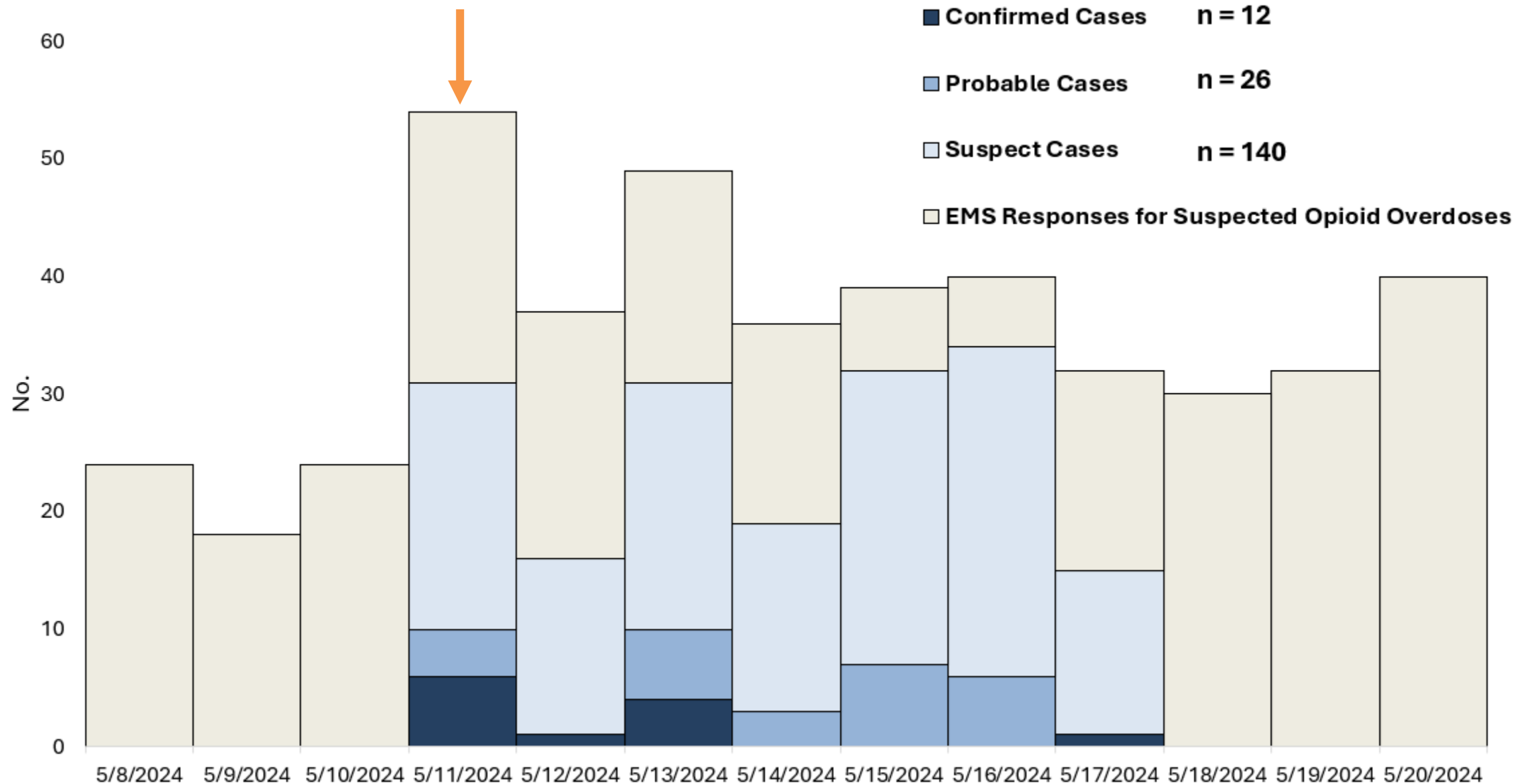


Fentanyl (209 ug/g)
Quinine (171 ug/g)
Xylazine (144 ug/g)
Diphenhydramine (104 ug/g)
Medetomidine (4.96 ug/g)
Cocaine (trace)
4-ANPP (trace)
6-acetyl morphine (trace)
Heroin (trace)
Despropionyl-para-fluorofentanyl (trace)
Para-fluorofentanyl (trace)



Investigation Results: Characterizing the cluster of cases

Cases from May 11-17 at 3 West Side Hospitals



Most cases were male.

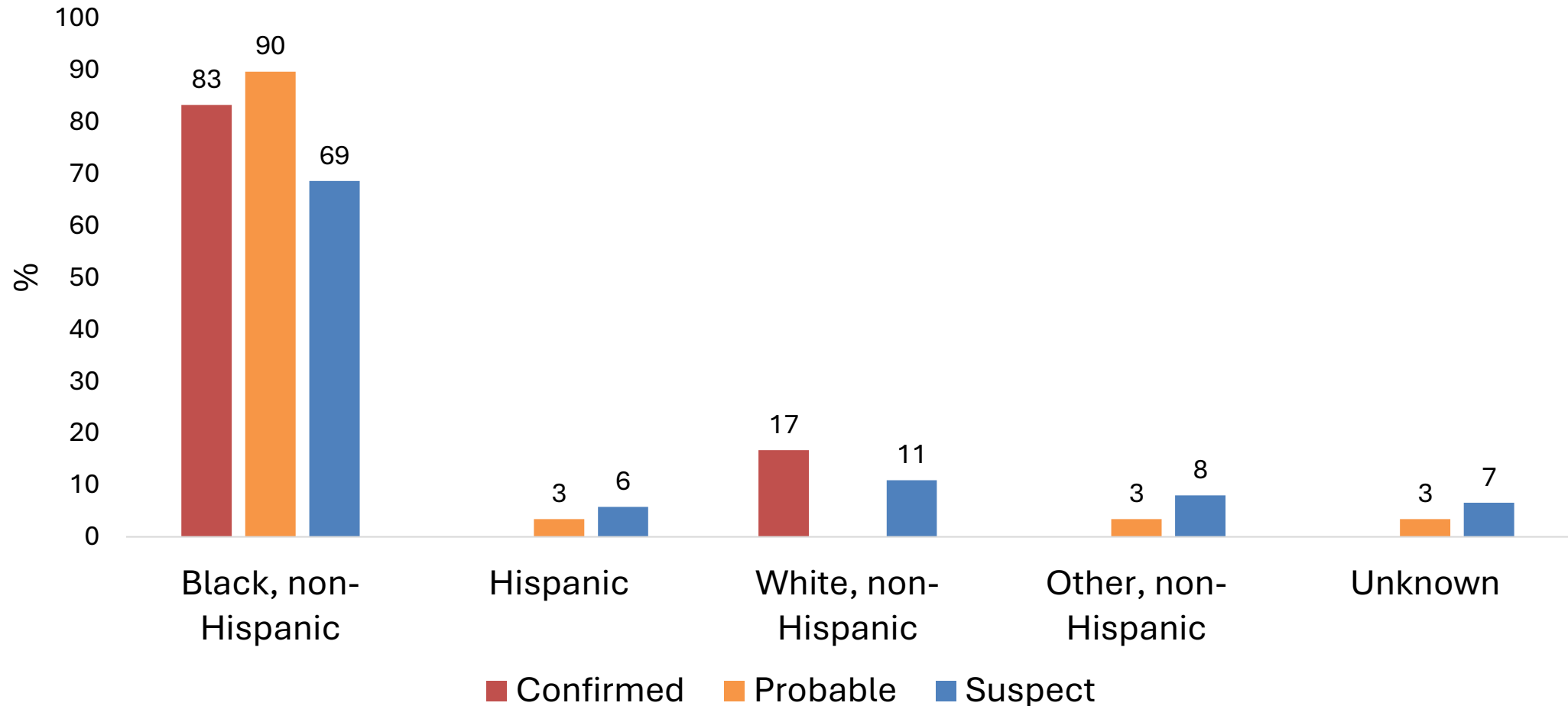


80%

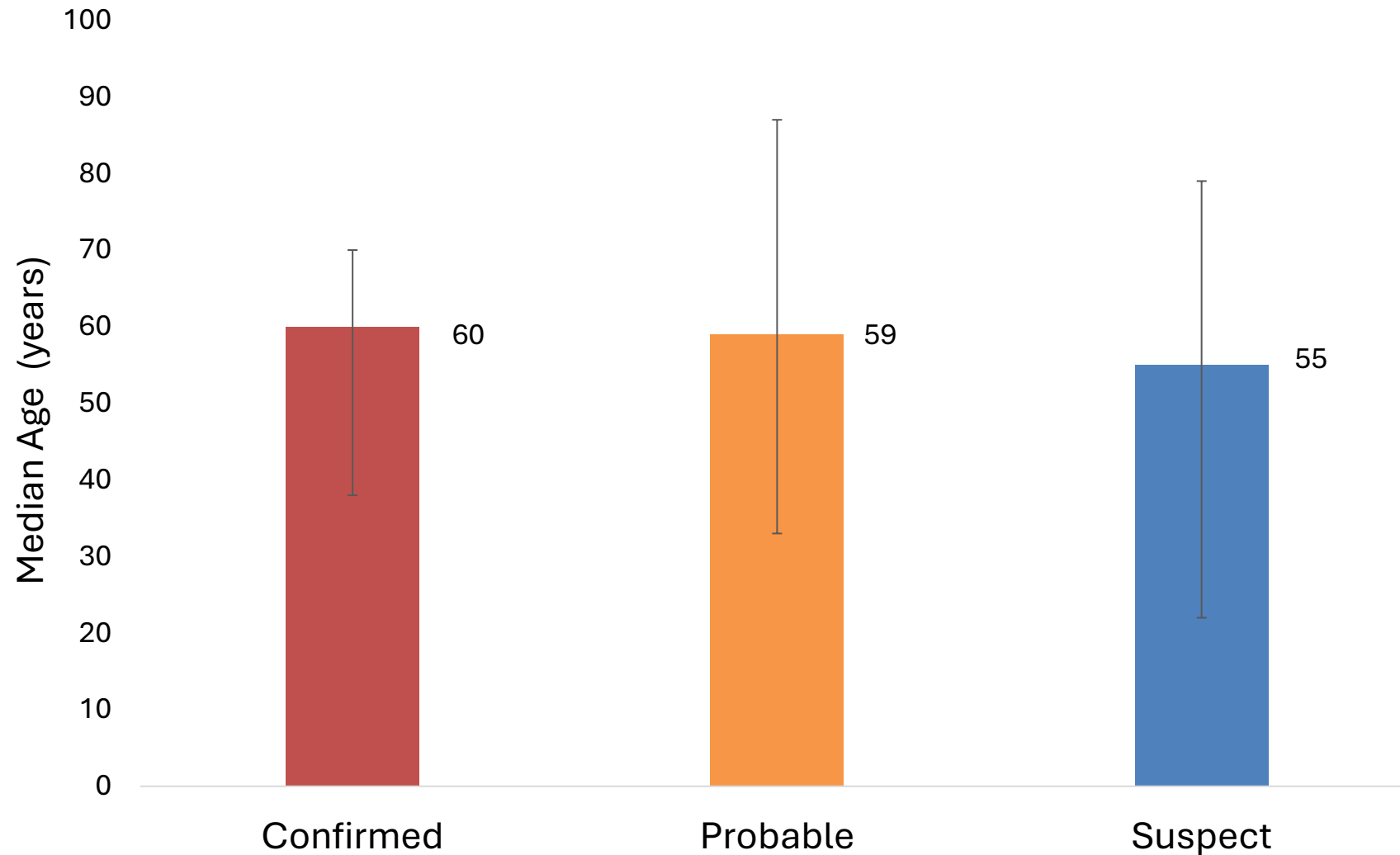


20%

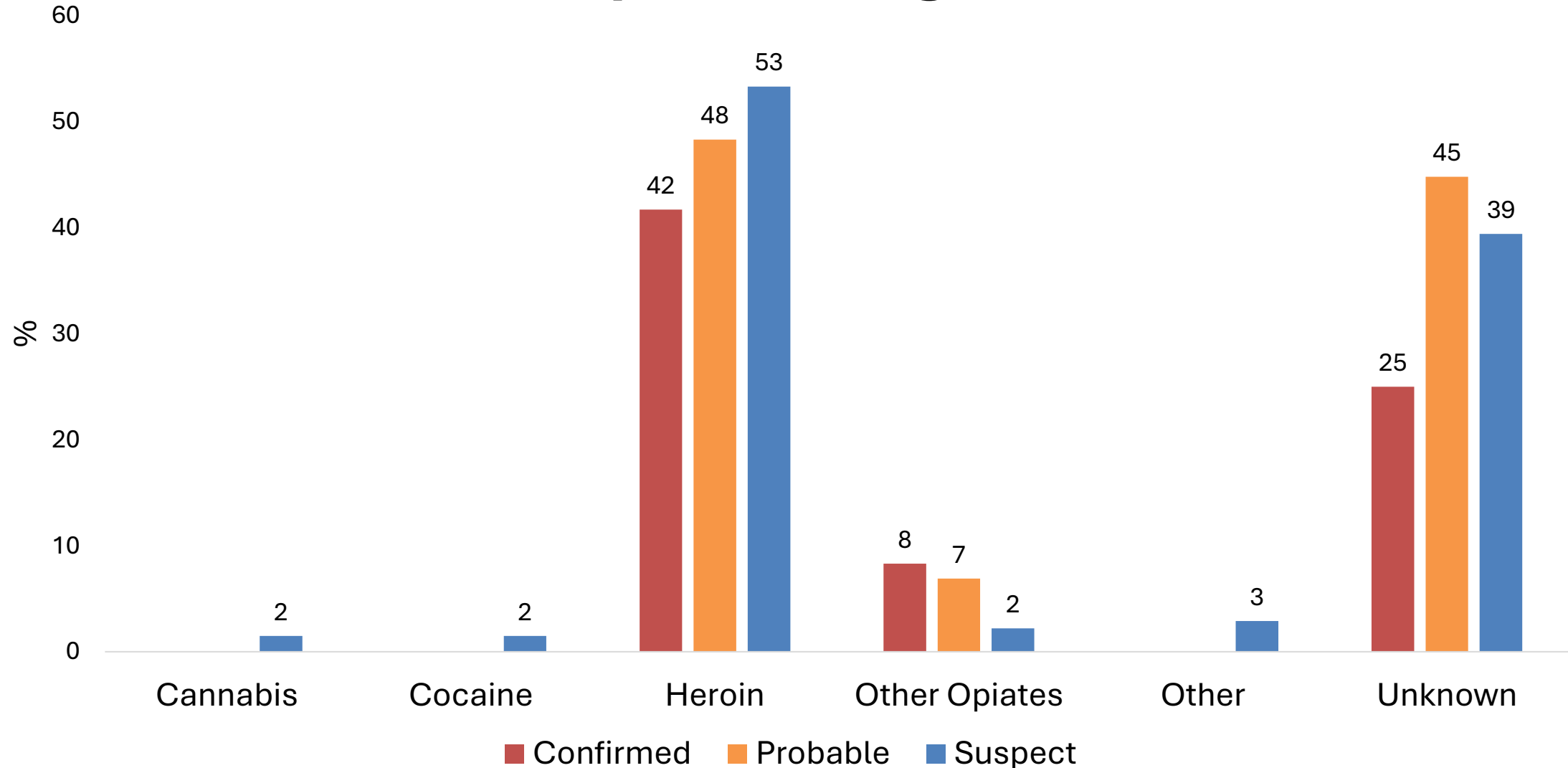
Most cases were Black, non-Hispanic.



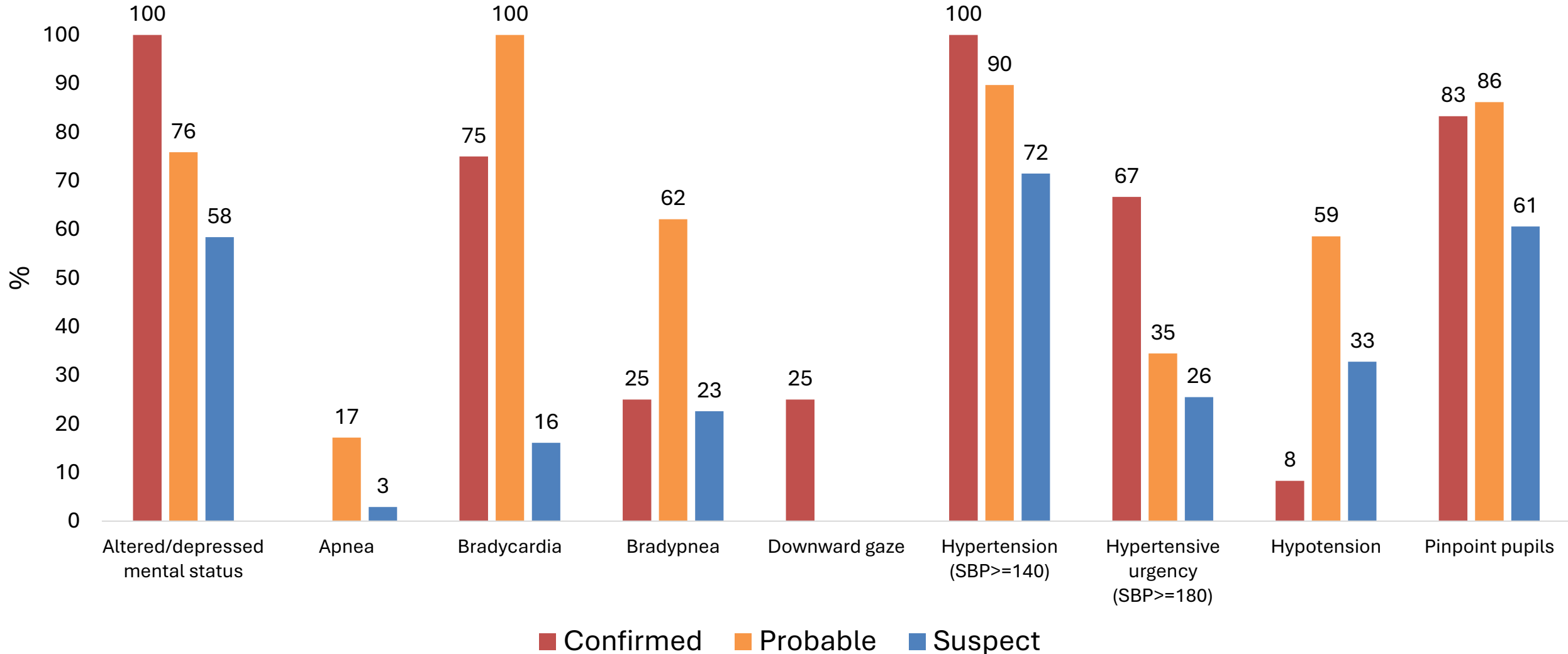
Most cases were aged >45 years.



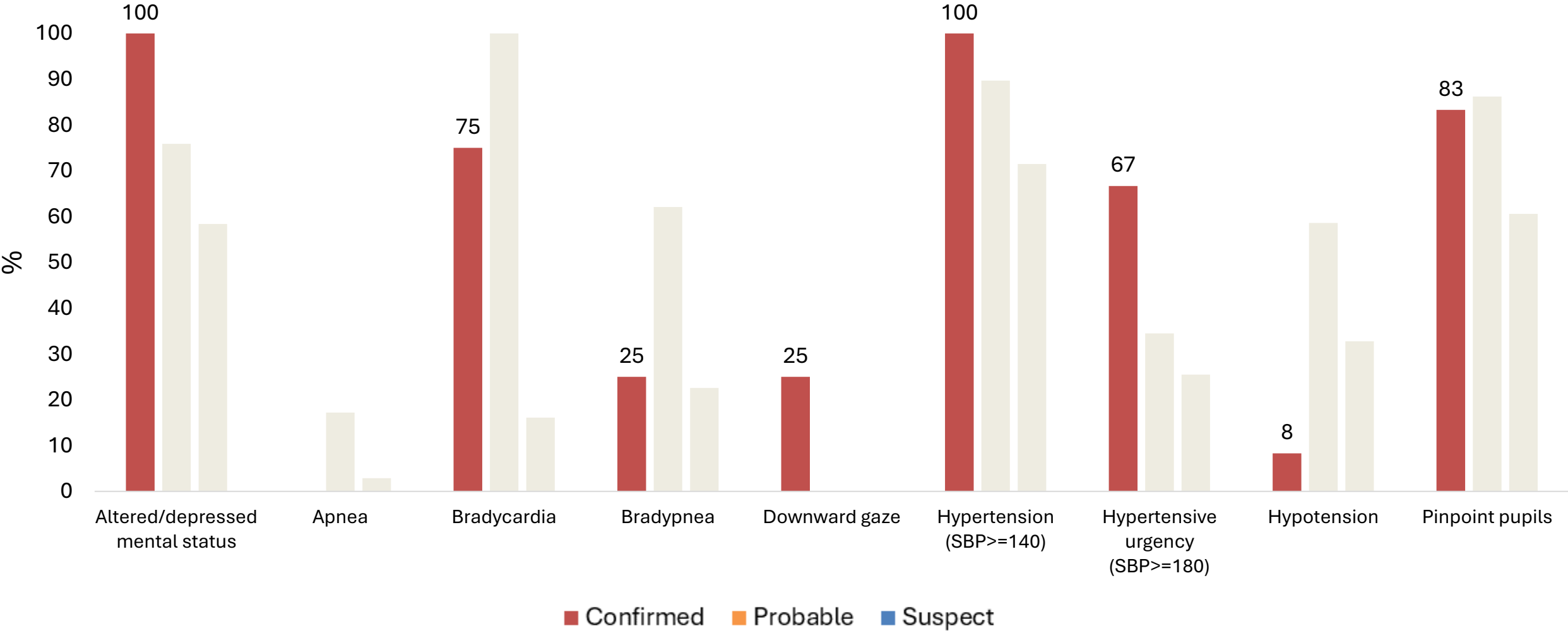
The most common reported drug used was heroin.



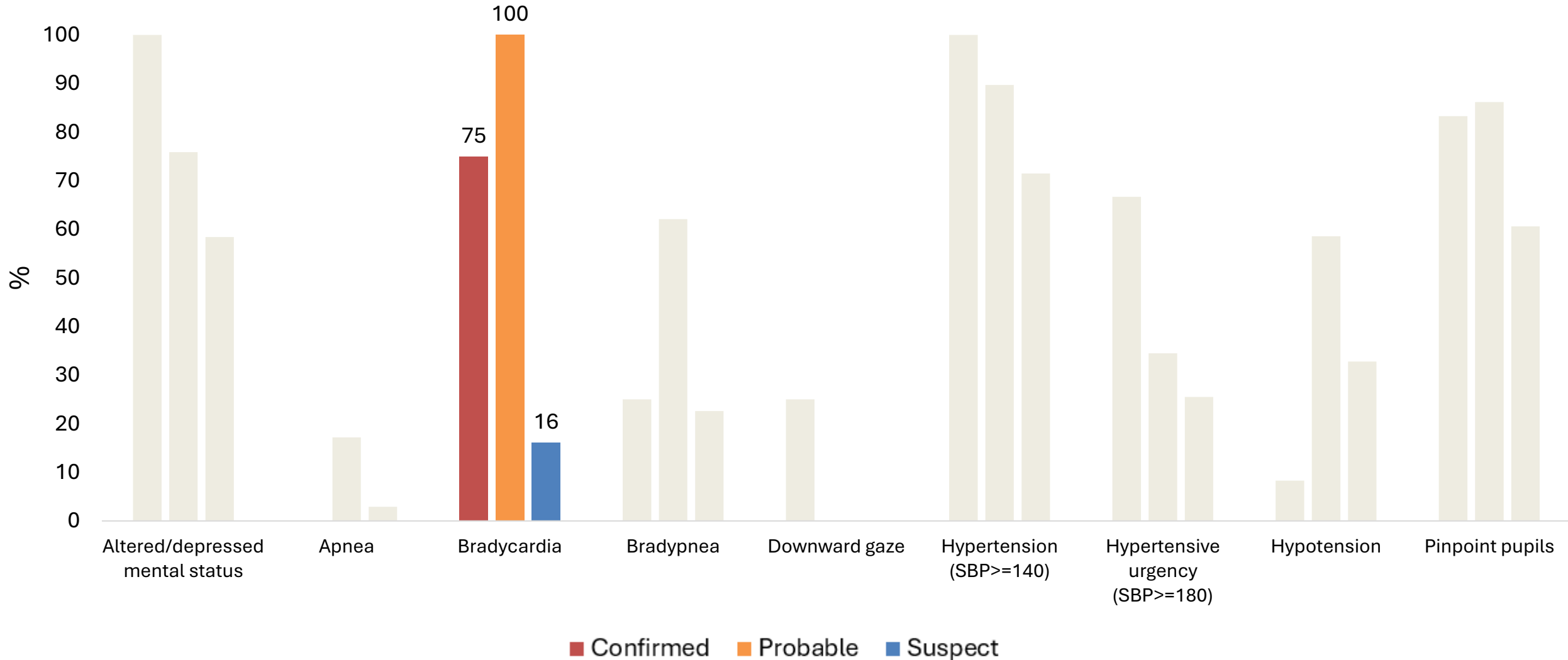
The most common symptoms upon presentation were...



Among **confirmed** cases, the most common signs were altered mental status, hypertension, pinpoint pupils, and bradycardia.



Most confirmed and all probable cases were bradycardic.



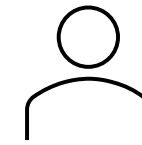
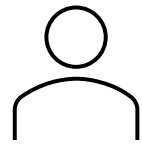
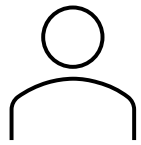
Among confirmed cases, 3 (25%) received atropine in the hospital.

Bradycardic,
given
atropine

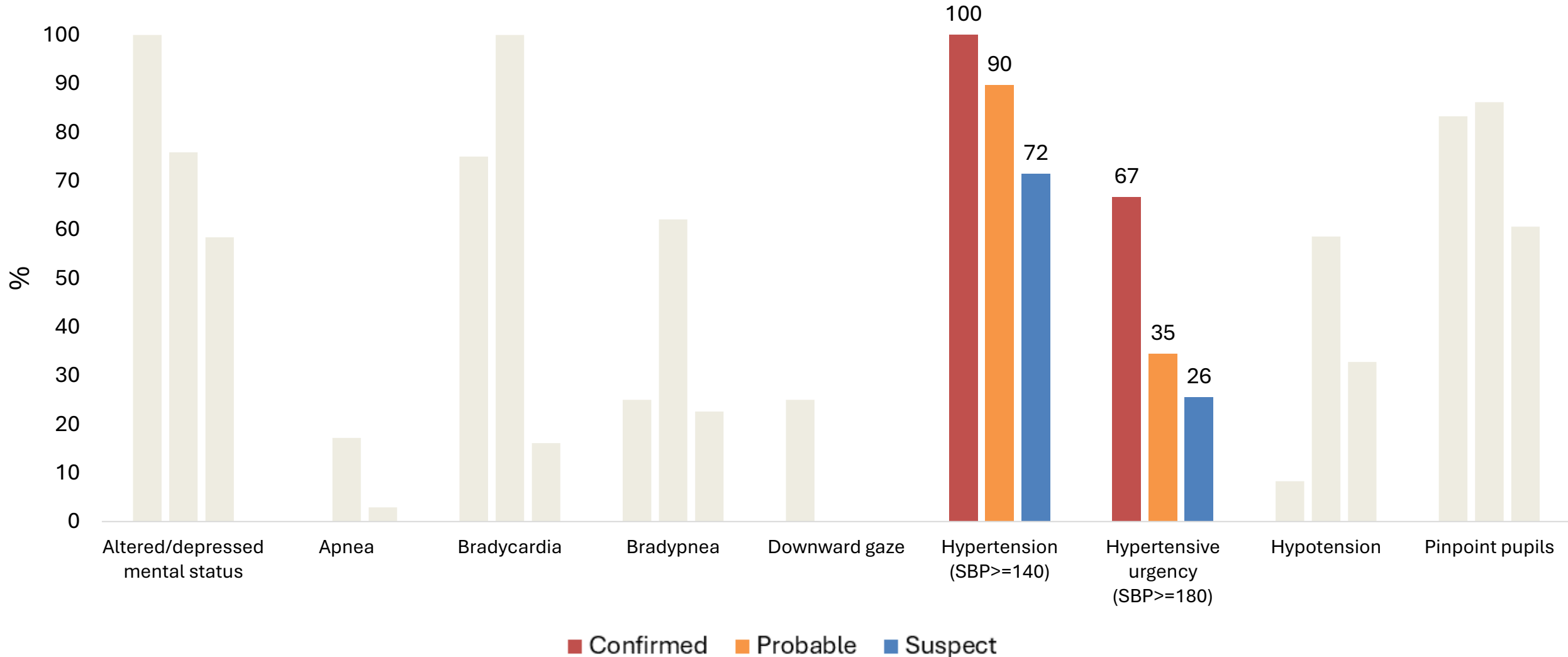


Bradycardic,
no atropine

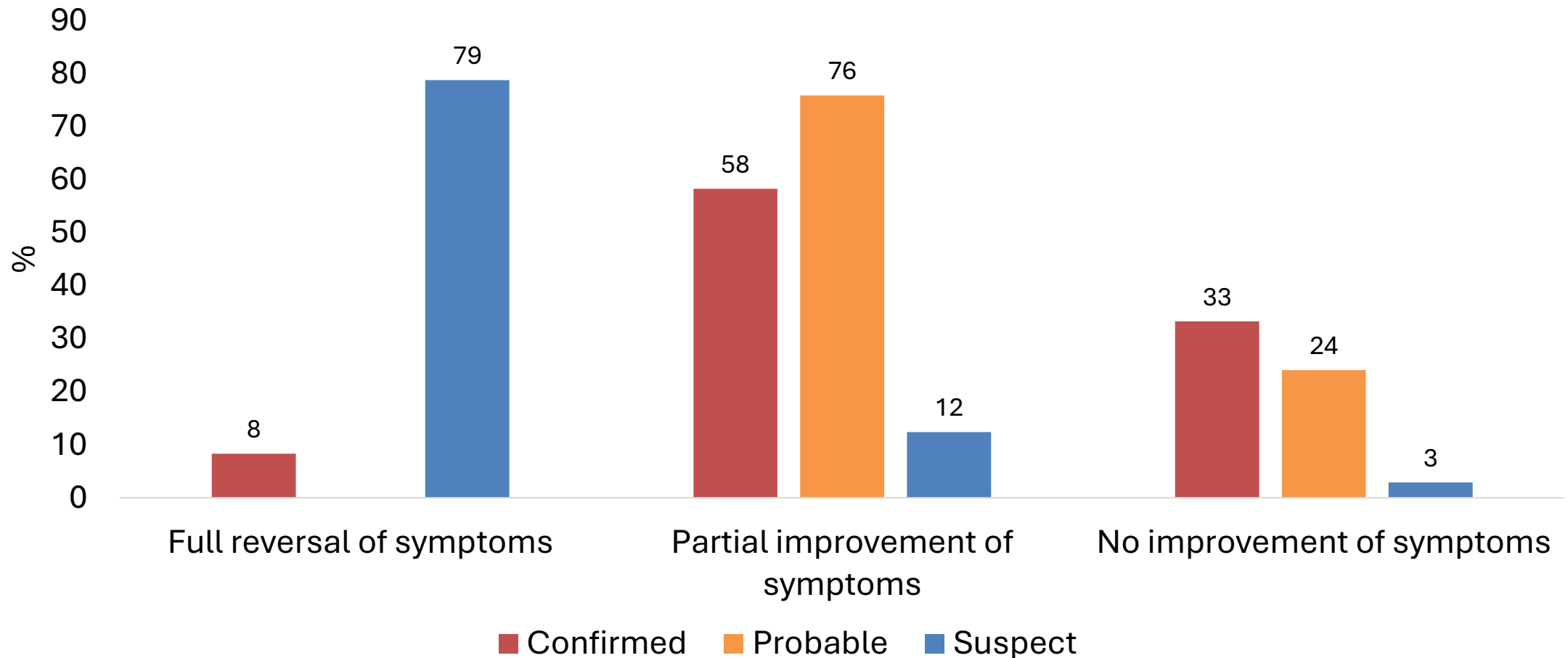
Not
bradycardic



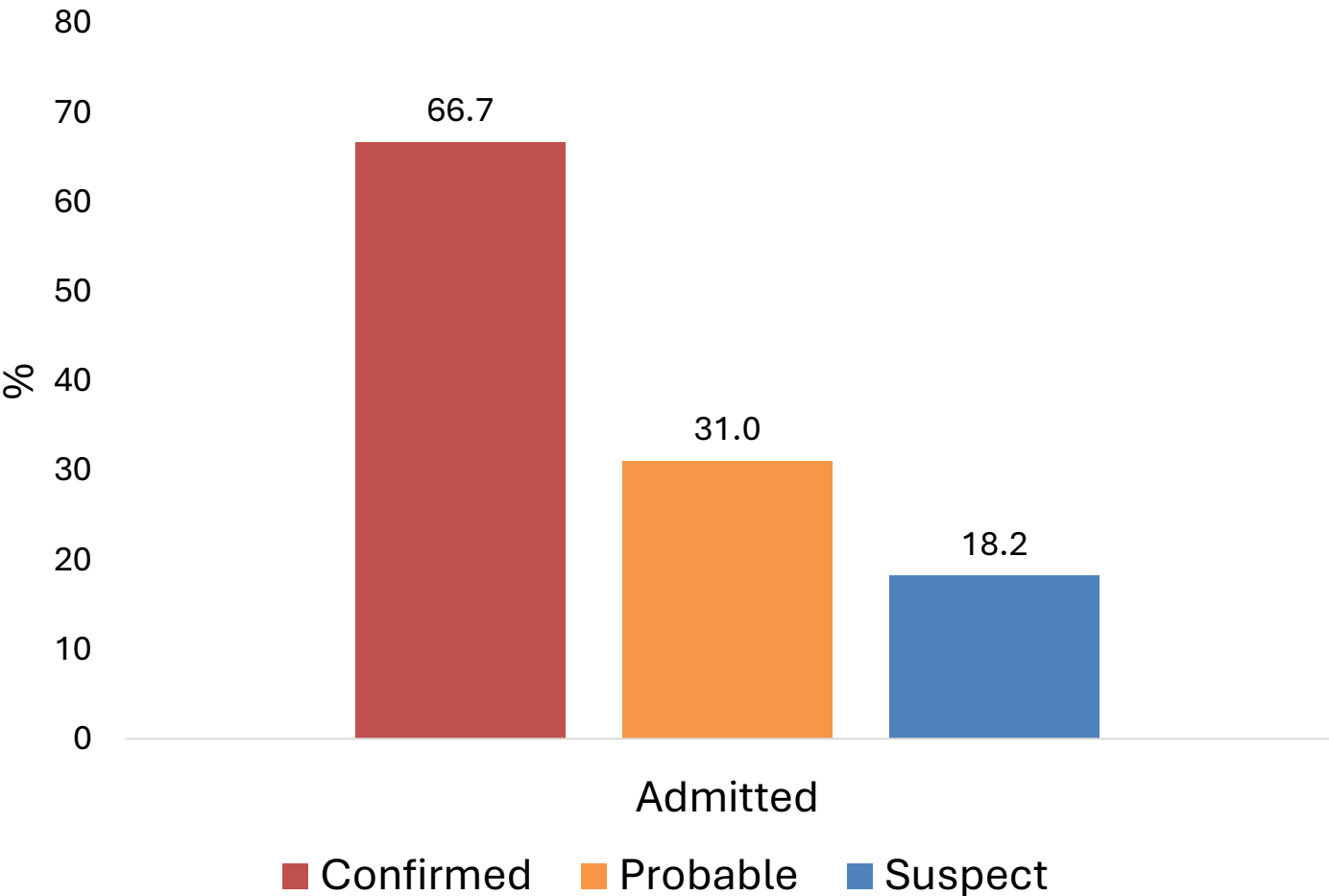
Hypertensive urgency was more common among confirmed cases.



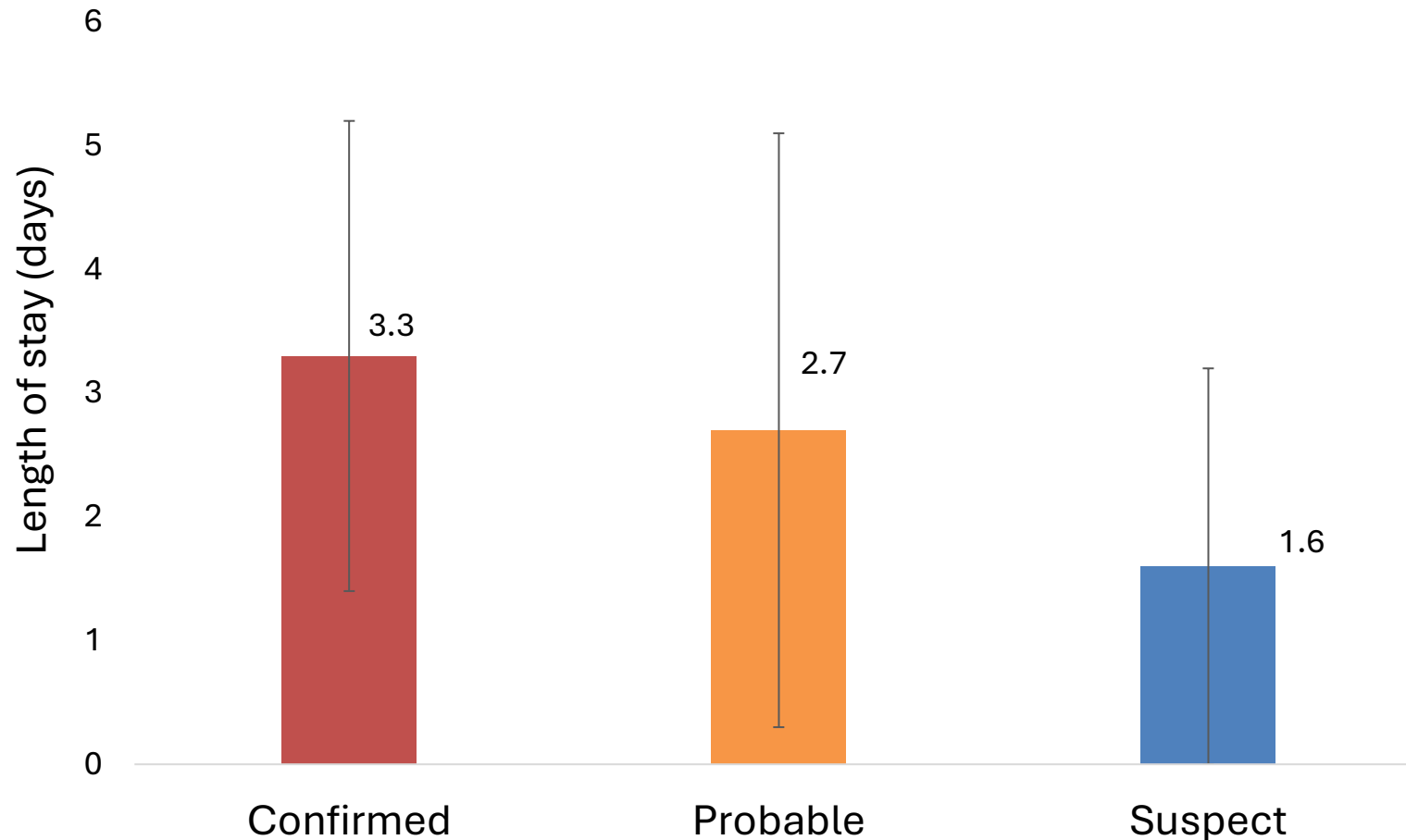
Most confirmed and probable cases did NOT have full reversal of symptoms with naloxone.



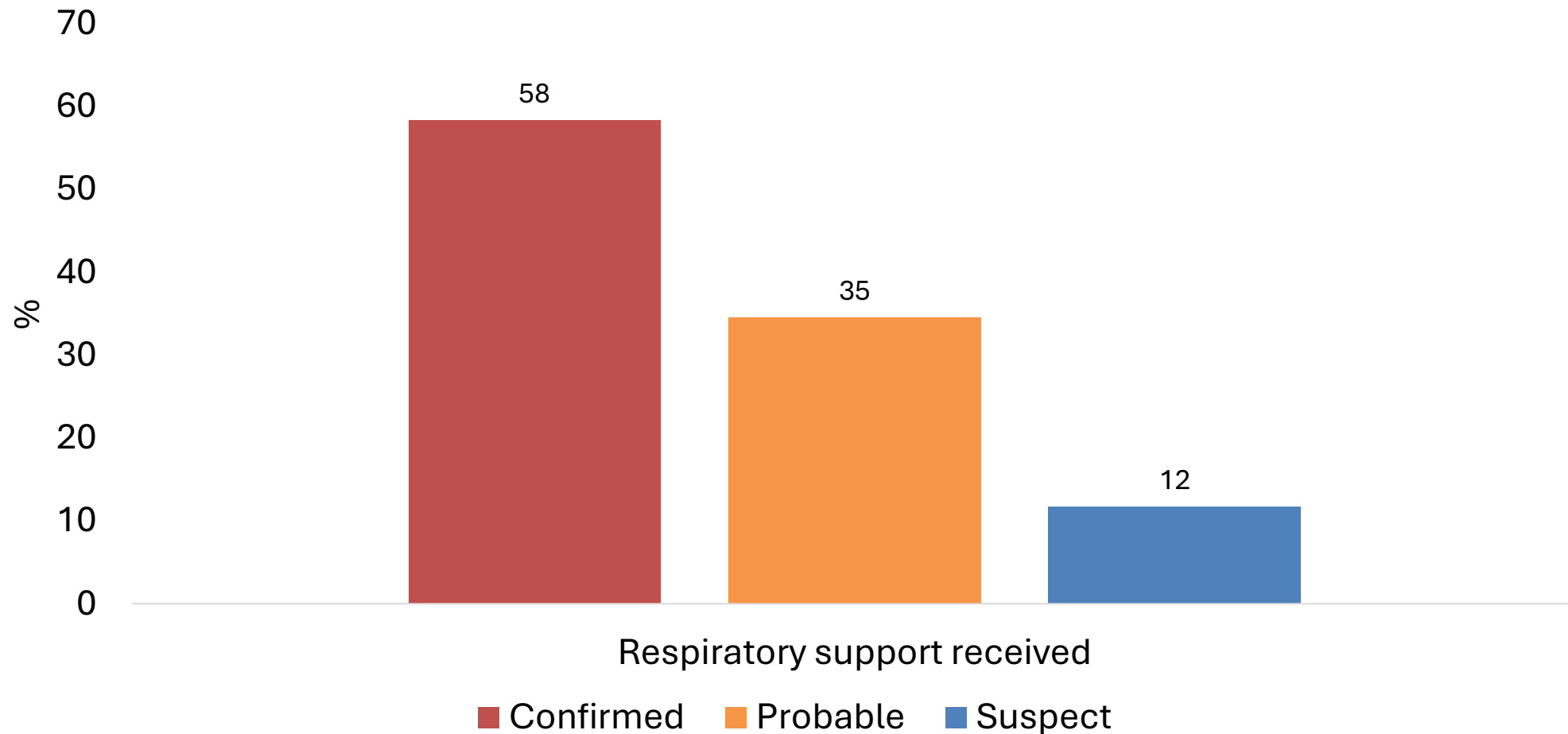
Confirmed cases had a higher percentage of hospital admission compared to probable and suspect cases.



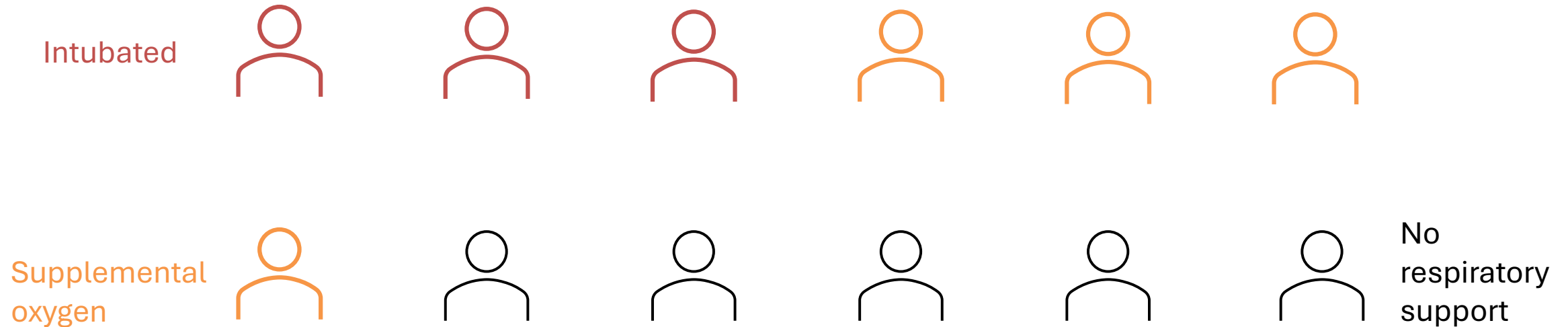
Among admitted cases, average length of stay was 1.6-3.3 days.



Confirmed cases were more likely to receive respiratory support than probable and suspect cases.

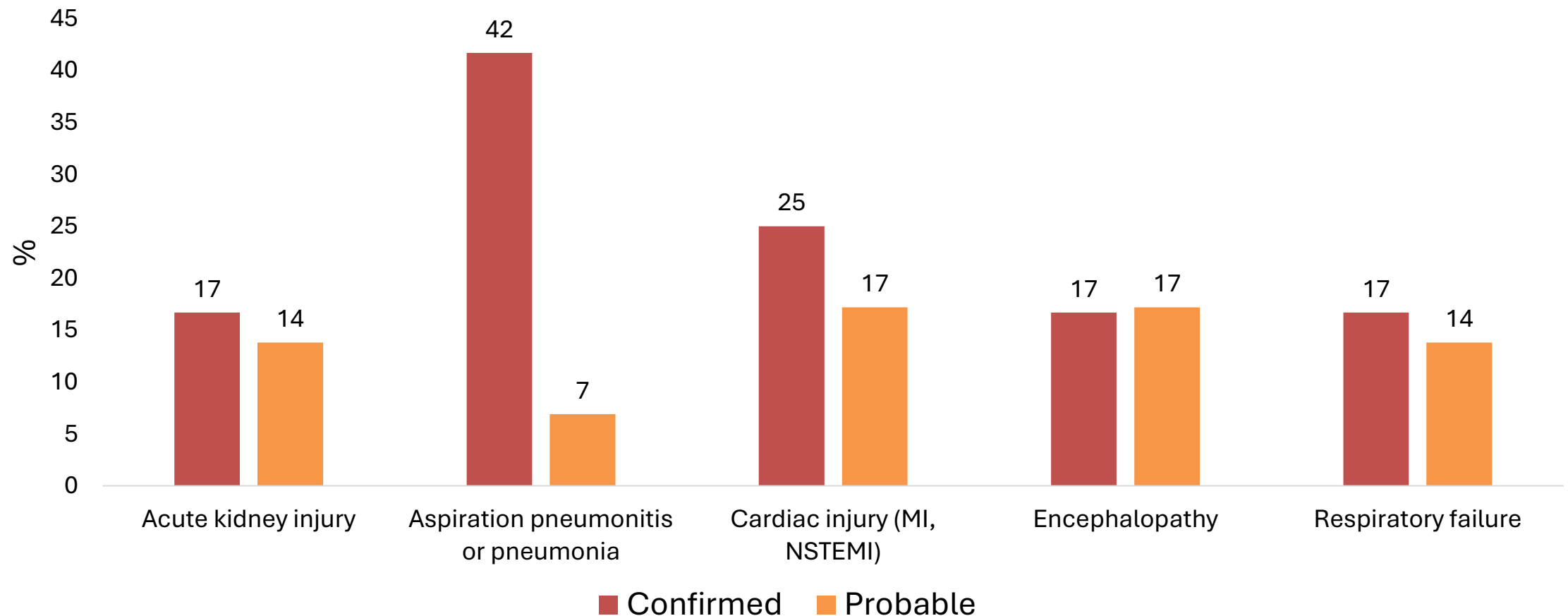


Among confirmed cases, **3 (25%)** were intubated.



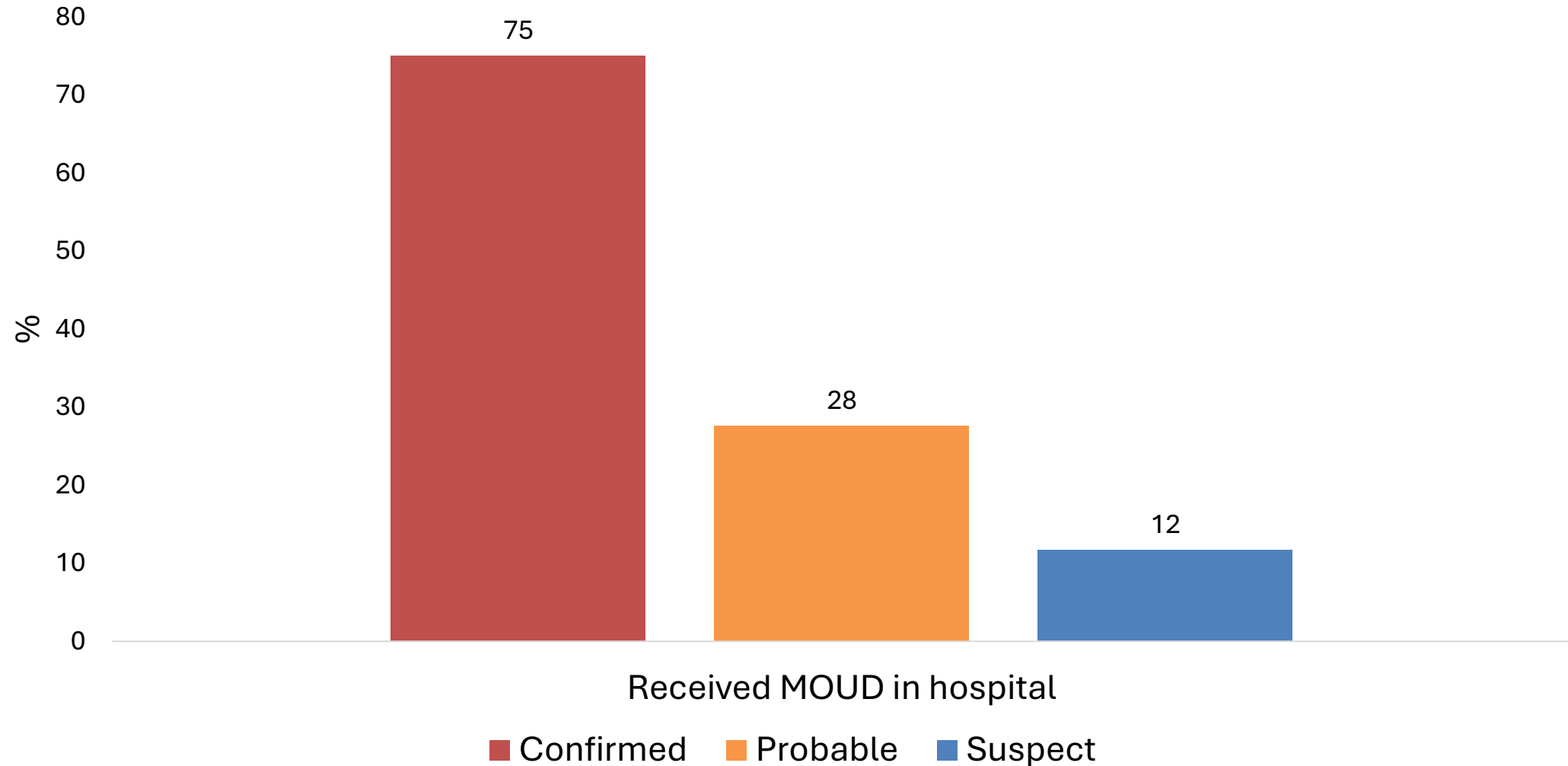
Median length of intubation (range): 1 day (1-2 days)

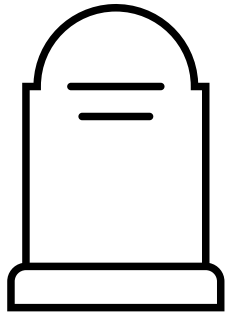
Confirmed cases experienced a high percentage of complications.



Suspect cases excluded from figure due to partial abstraction not including this information.

Most confirmed cases received MOUD in the hospital.





**There were no deaths confirmed
to be linked to medetomidine.**

Clinical Findings and Supportive Care Considerations for Xylazine (& Medetomidine)

Possible Clinical Findings (especially with polysubstance use)	Supportive Care Considerations
<p>Blood pressure instability Hypertensive urgency</p> <p>Heart rate instability Bradycardia</p> <p>Heavy sedation, unconsciousness, coma</p> <p>Respiratory depression or arrest</p> <p>Hyperglycemia (with rebound hypoglycemia)</p> <p>Cardiac arrhythmias</p> <p>Miosis</p> <p>Hyporeflexia</p> <p>CNS depression</p> <p>Enuresis (urinary incontinence)</p>	<p>Avoid CNS depressants</p> <p>Give oxygen</p> <p>Consider IV fluids</p> <p>Consider IV atropine (no clear data to support this)</p> <p>Ventilator assistance, possible intubation</p> <p>Consider IV insulin</p> <p>Consider ECG continuous monitoring</p> <p>Consider pulse oximetry continuous monitoring</p> <p>Consider replacement of potassium and magnesium</p> <p>Hemodialysis is not effective at removing xylazine due to its lipophilicity</p>

Wound Care

- Increased risk of developing skin wounds.
- Wounds can occur at skin sites that are not associated with injection and in individuals who don't inject substances.
- Begin as small superficial lesions with a white or purple center, with a dark red fluid discharge.

WOUND CARE TIPS FOR PEOPLE WHO INJECT DRUGS



Cleanse the wound with saline or sterile water. Treated tap water/castile soap are acceptable alternatives for those performing care at home.



Apply barrier ointment to peri-wound skin. Protecting the skin around a wound from drainage will prevent erosion of healthy tissue.



Cover the wound bed with a wound contact layer to prevent dressing adherence. Pack dead space in deep wounds so they heal evenly.



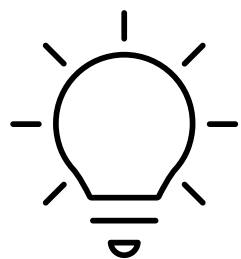
Use an absorbent secondary dressing to manage drainage.

Secure dressings with stretch gauze or elastic bandages as tape may damage wound margins. Manage necrotic tissue with autolytic, enzymatic, mechanical, or sharp debridement.



Aggressively treat any underlying substance use disorder and provide harm reduction education.

Refer to a higher level of care for concerns of systemic infection or need for surgical debridement.



Recommendations

Provide naloxone for all suspected drug overdoses.

- When responding to an overdose, **assume an opioid is involved and administer naloxone.**
- Overdose reversals that have tranquilizer involvement may not present the same.

Overdose: Not just naloxone!

If someone took benzos or xylazine (*tranq/sleepdope*), naloxone may not be enough! What do you do?!?

If they aren't breathing:

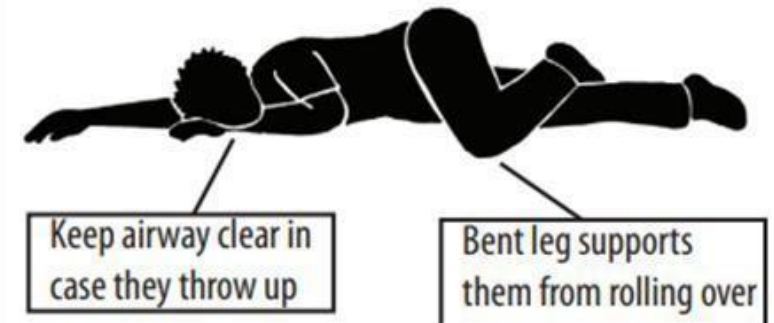
1. Try to **wake them up**
2. **CALL 911**, ask for EMS!!
3. **Use naloxone** to reverse fentanyl/opioid overdose. Give 1 or 2 doses. Naloxone takes 3-5 minutes to work!
4. While you are waiting for the naloxone, perform **rescue breathing**:
 - Take a deep breath, pinch their nose, cover their mouth with yours, blow into their lungs like blowing up a balloon
 - Two breaths to start then 1 every 5 seconds
5. **Keep checking for breathing**
 - Put your ear near their mouth and nose
 - Feel, look, listen for breathing, check for color returning
6. If they are still not breathing, **continue rescue breaths until EMS arrives**

If they are breathing, but not waking up:

There may be other drugs involved like benzos or xylazine (*tranq/sleepdope*). More naloxone won't help!

Roll them into **recovery position**:

- Roll them on their side, with one side's arm and leg straight, the other side's arm and leg bent. This position will keep them on their side so they won't choke if they vomit



Provide MOUD.

MAR NOW Services

- For patients
 - Immediate access to medication and counseling services for OUD, including **telephonic prescription** and home induction on buprenorphine.
 - Help with **transportation** to and from treatment and ensure that callers are connected to long-term care.
- For hospital staff
 - Assistance with **in-hospital buprenorphine induction** or provide other arrangements when buprenorphine induction is not indicated or preferred.
 - Offers **referral information** to outpatient care that supports recovery efforts post-discharge.

HELP IS HERE. NOW.



MAR NOW is a new service that connects you directly to a provider for opioid use disorder treatment.

Call the IL Helpline 833-234-6343 24/7 and ask for MAR NOW. You can receive medication over the phone, or a same-day appointment for treatment.

MAR (Medication assisted recovery) is a safe and effective treatment for opioid use disorder. If you have problems with heroin, fentanyl, or other opioid use, MAR can help.

MAR NOW is *available to all Chicagoans*, regardless of ability to pay, insurance status, or documentation.

Overdose is preventable.

Report overdose clusters to Illinois Poison Center.



Illinois Poison Center
**POISON
HELP**
1•800•222•1222

1-800-222-1222

Free, Confidential,
24/7/365 Helpline



833 W. Jackson Blvd
Suite 610
Chicago, IL 60607

312.906.6136
illinoispoisoncenter.org

DEA TOX PROGRAM FAQ For Hospital Staff

What is the DEA TOX program?

The DEA TOX program provides surveillance on overdoses due to novel psychoactive substances (NPS) involved in the synthetic drug abuse epidemic. The Drug Enforcement Administration (DEA) has partnered with the University of San Francisco (UCSF) to test clinical samples from overdose patients across the nation. The clinical samples will undergo enhanced NPS analytical testing for wide variety of synthetic, semi-synthetic and prescription drugs. It is difficult to identify novel synthetic drugs at most hospitals as most standard drug screens do not have the capability to test for the large variety of substances responsible for the synthetic drug epidemic. DEA TOX fills this gap and provides providers and public health with analytic information that would otherwise not be available.

Why should hospitals collaborate with the IPC and the DEA TOX program?

Synthetic drugs in communities change very rapidly and the ability to do expanded testing is not readily available in Illinois. By collaborating with IDPH and DEA TOX we can provide surveillance on new, novel drugs that cause injuries in the state. With this data, action plans can be developed including alerts and clinical education that can improve outcomes and reduce the harm from these products.

What types of clinical samples are accepted for testing?

Leftover samples from the time of presentation are sent to the UCSF lab for testing. Serum/Plasma and whole blood are preferred. In rare occasions, if serum/plasma or blood is unavailable, urine only may be accepted for testing. A minimum of 0.5 mL of plasma/serum, 1.0 mL of whole blood and 1.0 mL of urine is needed for testing of NPS in the specimens.

What is the cost of testing in the DEA TOX program?

The cost of the NPS testing is covered by the DEA TOX program. Shipping of the samples is covered by the hospital. If shipping is a hardship, IDPH may be able to pay for shipping, but this will delay arrival of the sample. If IDPH is needed to fund the shipping, the IPC staff will contact IDPH for pre-paid shipping labels (if available).

What is the procedure to have a sample sent for testing?

There is a protocol *DEA TOX Sample Collection and Shipping Protocol May 2021* that must be sent to the participating Illinois hospital. It contains the instructions on how and where to send the leftover clinical samples. All samples will be de-identified per the DEA Shipping Protocol.

How is the DEA TOX sample submission process initiated?

A synthetic drug or NPS exposure must first be suspected, either by patient history of NPS ingestion/inhalation or parenteral use OR presentations that do not fit a clear toxidrome (e.g. opioid appearance, but no response to naloxone). Once a potential synthetic drug exposure is suspected, the DEA TOX submission process can be started.

When do results come back for specimens sent to DEA TOX?

Specimen results will come back within 3 weeks after receipt of the sample at UCSF. The IPC will need the email of the treating provider or lab staff to return the DEA TOX results to.



Harm Reduction Messages

- Educate patients about xylazine and medetomidine in the illicit drug supply.
- Test products if you can using fentanyl and xylazine test strips or a drug checking program.
 - Surveillance drug checking is available through The Chicago Recovery Alliance (www.anypositivechange.org).
- Have someone with you when using or use the Never Use Alone Hotline (www.neverusealone.com).
- Start low and go slow.
- Try to avoid mixing substances.
- Carry naloxone and know how to use it.

Acknowledgments



COOK COUNTY
GOVERNMENT



THANK YOU!



[Chicago.gov/Health](https://chicago.gov/Health)



HealthyChicago@cityofchicago.org



[@ChicagoPublicHealth](https://www.facebook.com/ChicagoPublicHealth)



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

Diamond Shruumz, Product Recalls and Public Health's Role

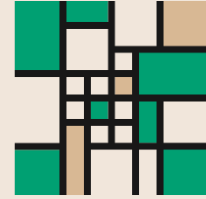
Presented by:



Sandra Martell, RN, DNP
Public Health Administrator
Winnebago County Health Department

Public Health Response

New Combatants in an Old War Against Opioid Overdoses:
Schrummz



W C H D

Winnebago County Health Department

Serving Our Whole Community



Date: September 19, 2024

Presentation To: IDPH FAST PHACT (Public Health Allied Clinician Talks)

Diamond Shroomz – Recall

- Recall of all Diamond Shroomz - brand products (chocolate bars, cones, and gummies)
 - June 27, 2024 - Prophet Premium Brands
 - June 28, 2024 - Food and Drug Administration Advisory On Recall
- Distributed Nationwide
 - States with cases = 33
 - Case counts as of September 18, 2024
 - Illnesses: 169
 - Hospitalizations: 66
 - Potentially associated deaths: 2



<https://www.fda.gov/food/outbreaks-foodborne-illness/investigation-illnesses-diamond-shroomz-brand-chocolate-bars-cones-gummies-june-2024>



Winnebago County

Health Department

Active Compounds Found In Shrooms

- Muscimol
 - Potent agonist Gamma-aminobutyric acid (GABA), which is the primary inhibitory neurotransmitter of the CNS
 - Acts as CNS depressant
- Acetylpsilocin
 - Serotonergic psychedelic drug
- Psilocin
 - Serotonergic psychedelic drug
- Pregabalin
 - Reduces electrical activity in the brain
 - Blocks nerve transmission signals
- Desmethoxyyangonin
 - Monoamine oxidase inhibitor
 - Increases dopamine levels
- Dihydrokavain and Kavain
 - Facilitate the function of GABA A receptors similar to benzodiazepines



Reported Symptoms Associated with Shruumz

- Seizures
- Agitations
- Involuntary/uncontrolled muscle contractions
- Loss of consciousness
- Confusion
- Sleepiness
- Nausea and vomiting
- Abnormal heart rates (tachycardia/bradycardia)
- Hypertension/hypotension
- Hallucinations
- Choking
- Excessive sweating
- Respiratory failure

Severe Illness Potentially Associated with Consuming Diamond Shruumz™ Brand Chocolate Bars, Cones, and Gummies

[Print](#)



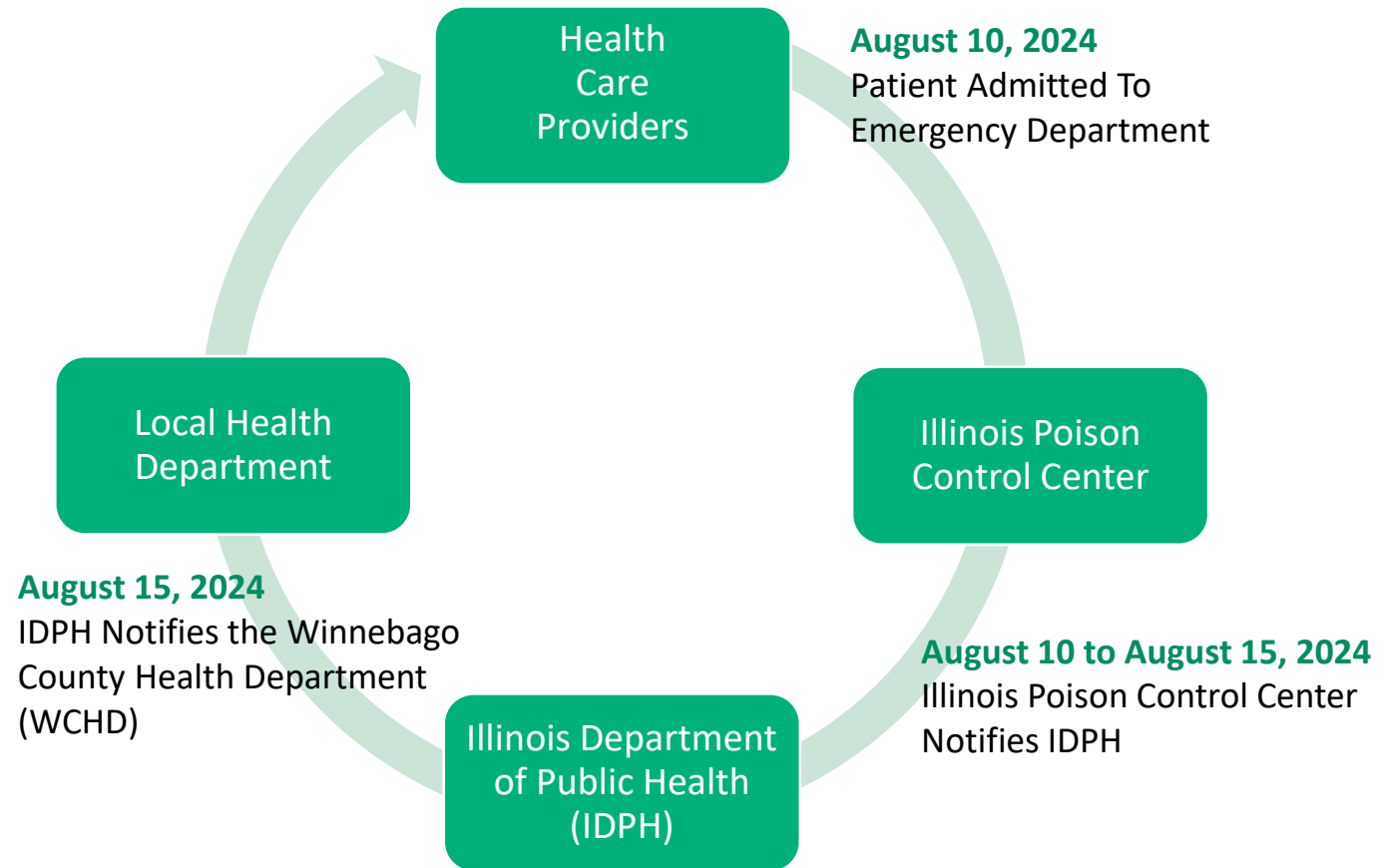
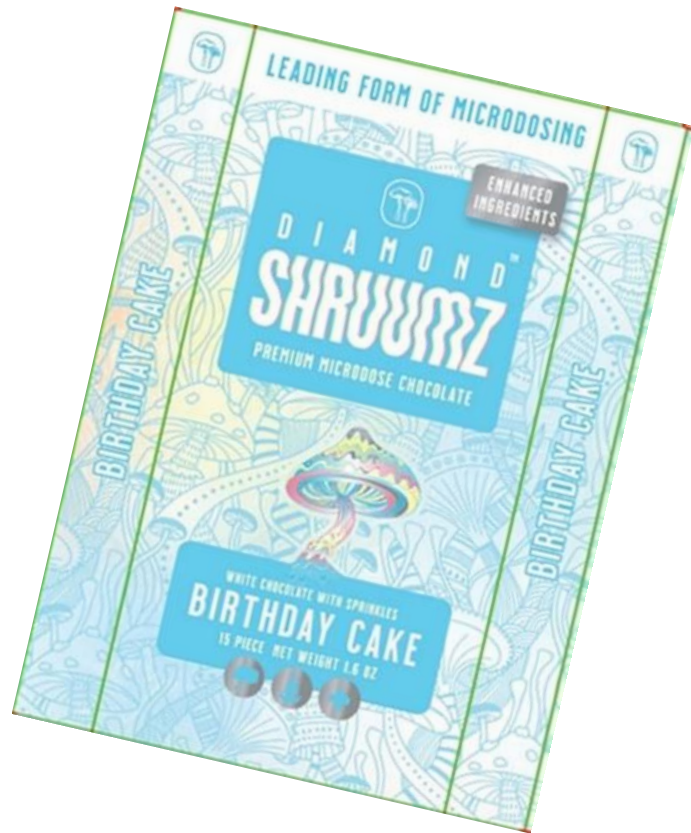
Distributed via the CDC Health Alert Network
June 12, 2024, 1:00 PM ET



Winnebago County

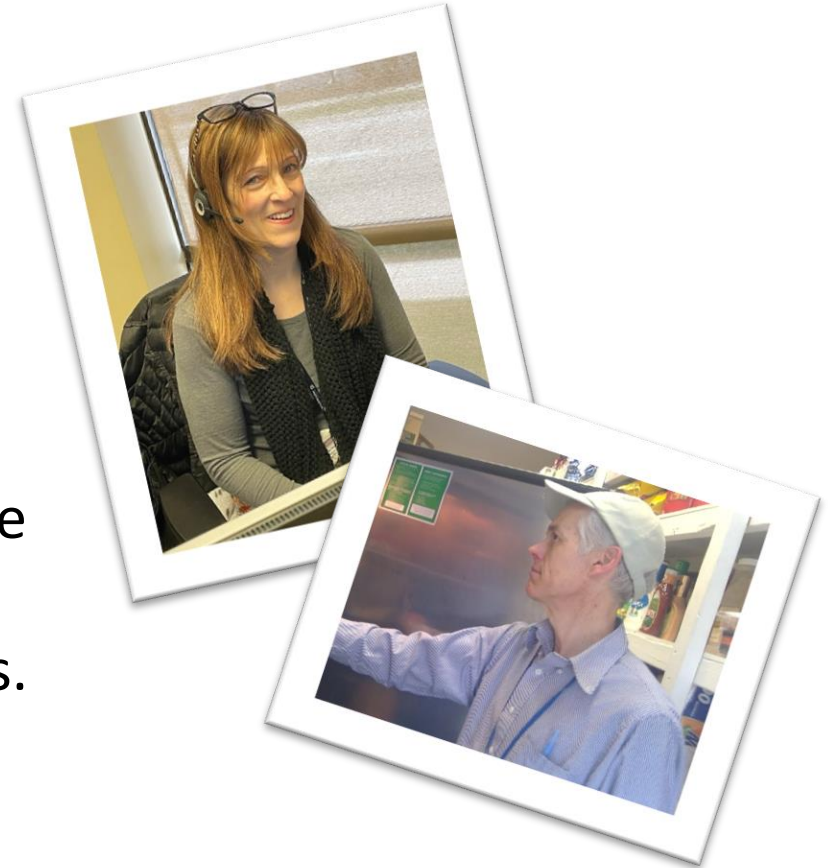
Health Department

Public Health Notification



Local Health Department Response

- Communicable Disease Investigation
 - Emergency department visit records review.
 - Case interview.
 - Syndromic surveillance follow-up.
- Environmental Health Investigation
 - Food inspections to identify the presence of the recalled product.
 - Removal of recalled product from store shelves.
 - Educating store managers on the dangers of recalled food product.



Winnebago County

Health Department

Communicable Disease Investigation

Not Your Typical Communicable Disease!

Overview of Case

- Works 3rd Shift
- Lives At Home With Parents
- Daily Routine
 - Vapes nicotine in the morning and before he goes to bed
 - 2 x a day will smoke a bong – marijuana
 - Never tried edibles before
- Video Gamer



Review of ED Records

- EMS transported the case arriving at emergency department (ED) - 5:23 p.m.
- History of bipolar disorder, anxiety, depression and marijuana/vape use.
- Symptoms reported after ingesting a candy bar approximately 3:45 p.m. as reported by parents:
 - nonverbal and looked dazed - staring blankly ahead;
 - restless "bouncing around" the house;
 - fell to the floor and was unable to get up;
 - became agitated and started screaming; and
 - "seizure like behavior" per EMS report.
- Poison control contacted.
- Case was discharged AMA (Against Medical Advice) at 12:26 a.m.



Case Interview

- Multiple attempts made to contact via phone and text message.
- Field (home visit) investigation initiated after failed phone/text message attempts.
 - Protocol for Case Reporting for Diamond Shroomz Outbreak Investigation
 - Appendix A: Case Investigation Form
 - Additional information: Source of Shroomz product



Case Interview

- Day of Emergency Department Visit
 - Went to the vape shop and received a free candy bar.
 - Vaped nicotine in the morning.
 - Did not smoke any marijuana or take prescribed medication.
 - Ate fast food at around 11:30 a.m.
- Candy Bar Experience
 - Ate a candy bar at 1:30 p.m.
 - Tasted “*Earthy*” and not like birthday cake.
 - Was super crunchy with crystals in the bar – “*like chewing bath salts.*”
 - Recommended serving is ½ bar to full bar (ate the full bar due to body size).
 - Does not remember anything after 2:00 p.m.



Syndromic Surveillance

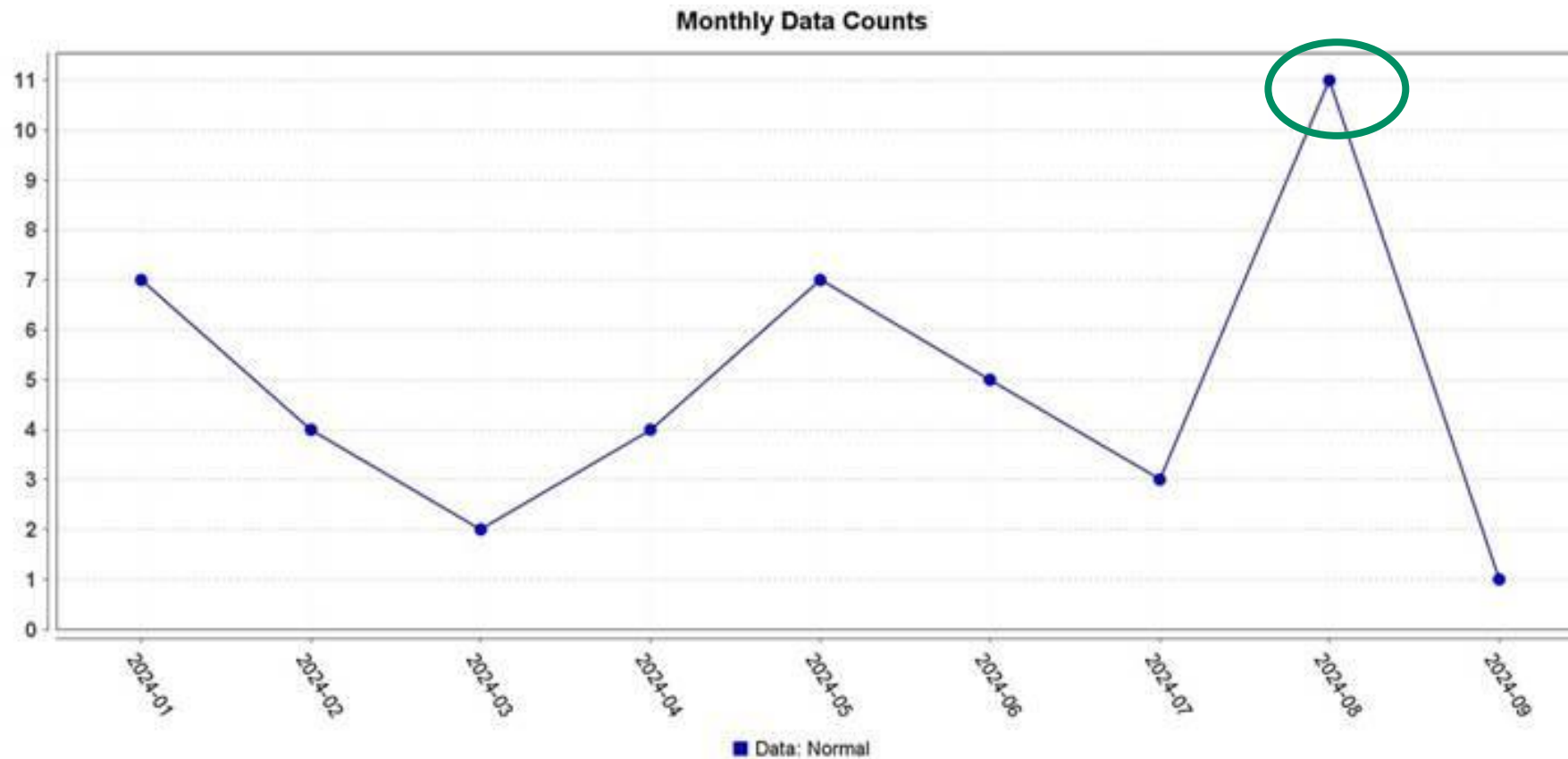
- Data collected from emergency department visits from acute care hospitals in Illinois.
 - (ESSENCE = Electronic Surveillance System for Early Notification of Community-based Epidemics).
- Data is submitted from IDPH to the Centers for Disease Control and Prevention's (CDC) BioSense Platform.
 - Data can then be accessed and analyzed by state and local health departments.
- Data collected includes:
 - Client demographics (age, gender, race, and ethnicity)
 - Location of visit and residential ZIP code
 - Time and date of visit
 - Chief complaint
 - Diagnosis
 - Reason for the visit



Winnebago County

Health Department

ESSENCE Data – Winnebago County



11 ED visits matching search codes identified. Based on the details, index case of 8.10.2024 was identified



Winnebago County

Health Department

Lessons Learned

- Setting up search code data in consultation with state partners to identify potential cases earlier in the process.
- Access to electronic health records by the local health department allows earlier identification and initiation of case contact.
- Field investigation provided additional information and allowed the health department to offer support to the individual.
- The case was motivated to provide information to prevent anyone else from having a similar experience.
- Environmental Health Inspection was needed to ensure that the product was not available, preventing additional cases.



Winnebago County

Health Department

Reminder To Report

- Health Care providers report immediately to the local health department.
 - Certain infectious diseases with important public health significance.
 - Any **unusual case** or cluster of cases that may indicate a public health hazard.

Unusual Case: hospitalized after consuming hallucinogenic candy bar.



Winnebago County

Health Department

Environmental Health Inspection

Not Your Typical Environmental Health Inspection!

Store Inspections

- 35 stores inspected
 - 9 locations with product
 - 124 packages of product removed from store shelves
-
- Identified stores that sell primarily tobacco products.
 - Looked for stores that advertise Delta 8, Kratom, CBD.



Winnebago County

Health Department

Stores With Product

- Stores where products were found included tobacco, convenience, and liquor stores.
- Stores that displayed advertisements for Delta 8/9, Kratom, and/or CBD were more likely to have product than those without advertisements.



Winnebago County

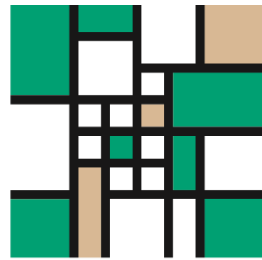
Health Department

Resolution to Identified Product

- Removal Options
 - Return to vendor or discard product.
 - 100% of establishments voluntarily complied with the recall.
 - Most choose to return the product to the company directly.
- Education and Awareness
 - Provided information regarding the recall and ongoing FDA investigation.
 - Expressed that removal of the product is in the best interest of the establishment and public health.

Lessons Learned

- No distribution reported in Winnebago County, but products were on shelves.
- Not all products are being sold; some are given away free.
- Stores that displayed advertisements for Delta 8/9, Kratom, and/or CBD were more likely to have the recalled product.
- Stores choose to voluntarily comply, but want to send it back to the seller on their own.
 - No local public health authority to discard the product.
 - Distributors were NOT disclosed by businesses.
- Remind health care providers to notify the local public health department in addition to poison control when there is an unusual case.



W C H D

Winnebago County Health Department



Serving Our Whole Community

Todd Kisner, MPH – Director, Health Protection

Todd Marshall, LEHP – Director, Environmental Health Improvement

Sandra Martell RN, DNP - Public Health Administrator

PublicHealth.wincoil.gov



@WinnCoHealth



@WinnebagoCountyHealth



Winncohealth

Next to come in the FAST PHACTs series

- October 17, 2024: "Tis the Sneezin': Preparing for the 2024-2025 Respiratory Season"
 - Will cover epidemiological projections for this season, updated immunization guidance including for nirsevimab, vaccine and treatment access, and health care setting considerations.
- November 21, 2024: "Sexual and Reproductive Health"
 - Will cover Sexually Transmitted Infection (STI) trends in Illinois, including congenital syphilis updates, Expedited Partner therapy, Doxy PEP, HIV PreP, and contraception services.

[Register Here](#)

Reach out to us!



<https://app.smartsheet.com/b/form/2ae48352ac624f95b63197b722830963>

This form should be used for questions from health care providers to IDPH Medical Services Division regarding IDPH resources, and is not intended to provide clinical guidance.

Date Submitted

First name

Last Name

Email Address

Telephone Number

Organization:

Is this Urgent (response requested within one (1) business day)?

Route To

Area of Inquiry:

- ☐ Reportable Condition
- ☐ IDPH Resources
- ☐ Health Advisory
- ☐ Other

Inquiry Details:



The Health Alert Network, HAN/SIREN, provides the tools and capacity for rapid, reliable, and secure web-based alerting as well as communication and organization-based health information sharing and collaboration. Siren is the emergency planning, alerting, and notification system for IDPH. It serves as a single central point for finding, creating, and sharing information. It also provides emergency preparation for federal, state and local offices.

To sign up for Siren at <https://dph.illinois.gov/siren.html>

or through this QR Code:





For those wishing to obtain CME Credit, complete the evaluation survey and Quiz at the end of this webinar or you can utilize the following weblink and/or QR Code:

<https://forms.office.com/g/iV5du5ttNb?origin=lprLink>



- CME Available for live attendance ONLY.
- Questions contact David Hale-Arroyo at David.hale-arroyo@illinois.gov