



Updates on Opioids – Fentanyl and Xylazine

June 3rd, 2022

Updates on Opioids- Fentanyl & Xylazine

Introductions



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Learning Objectives

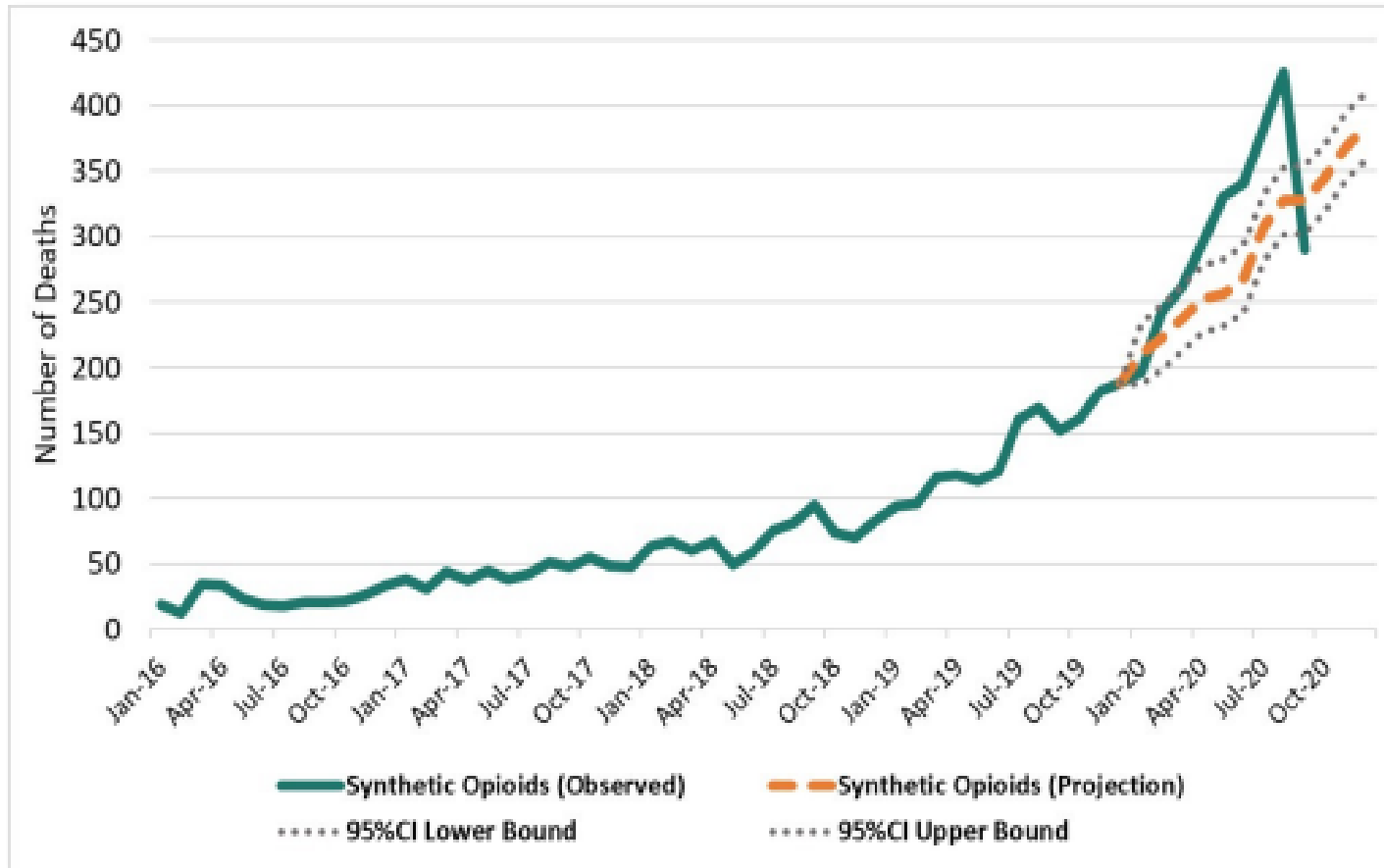
- **Lack of accurate awareness about fentanyl**
 - Among youth
 - As a contaminant/ additive in diverse substances
 - The truth about inadvertent exposure
- **Recognition of other contaminants in drug supply and adverse outcomes**
 - Xylazine

I DISCLAIMER

- This session was conducted for members of county-based teams in CA that are working to expand access to Medications for Addiction Treatment in jails and drug courts. The project is funded through California's Department of Health Care Services (DHCS) with State Opioid Response funding from SAMHSA. The content is being made available to all interested parties. Please note this content has not been professionally edited and the session was conducted using Zoom.
- In the case of any security issues that may occur, this session will immediately end. A separate email will be sent to all participants with further instruction.
- Any data and information collected through polls and chats will only be used to inform future webinar/learning collaborative topics and to provide DHCS with evaluation results.

FENTANYL DATA CALIFORNIA 2016-2020

Number of Preliminary Observed and Projected Synthetic Opioid-Related Overdose Deaths in California, 2016 – 2020



Source:
<https://skylab.cdph.ca.gov/ODdash/>
<https://www.cdph.ca.gov/Programs/CDPHP/sapb/Pages/Data.aspx>
https://www.cdph.ca.gov/Programs/CDPHP/sapb/CDPH%20Document%20Library/2020-Overdose-Mortality-Data-Brief_ADA.pdf

FENTANYL DATA CALIFORNIA 2021

Table 1. Preliminary monthly drug-related overdose deaths by substance

Month and Year	All Drug	Any Opioid	Prescription Opioids excl. Synthetics	Heroin	Synthetics excl. Methadone	Fentanyl	Psychostimulants with Abuse Potential	Cocaine
January 2021	975	629	113	91	496	496	531	124
February 2021	795	511	101	52	422	417	407	98
March 2021	915	607	102	81	513	507	506	113
April 2021	937	634	125	70	524	515	475	128
May 2021	916	615	98	63	532	527	488	106
June 2021	942	639	91	64	555	549	507	108
July 2021	959	627	104	60	536	530	522	107
August 2021	950	627	93	62	549	544	534	133
September 2021	885	576	86	67	496	495	469	110
October 2021	810	561	82	51	494	491	445	110
November 2021	685	454	66	40	393	388	349	95
December 2021	531	325	58	21	274	272	274	56

Data Sources: California Comprehensive Death File (Dynamic) 2021.
Data extraction date: 4/15/2022

CDPH Substance and Addiction Prevention Branch - Overdose Prevention Initiative
[Substance and Addiction Prevention Branch webpage \(www.cdph.ca.gov/sapb\)](http://www.cdph.ca.gov/sapb)

Sources: https://www.cdph.ca.gov/Programs/CCDC/PHP/sapb/CDPH%20Document%20Library/Prelim-Monthly-Death-Data_2022_03_FINAL-ADA.pdf

FACTS ABOUT FENTANYL

- Fentanyl is *involved in more deaths of Americans under 50 than any other cause of death*
- Fentanyl became the leading cause of opioid related OD death in CA since 2019
- Fentanyl is involved in more American youth drug deaths than heroin, methamphetamine, cocaine, benzodiazepines and Rx drugs COMBINED
- Fentanyl-involved deaths are fastest growing among 14–23-year-olds
- Overdose deaths linked to synthetic opioids, like fentanyl, tripled among teenagers in the last two years

Source: https://www.fentanylawarenessday.org/files/ugd/89faea_e40da0d83dd745a1bf1139db47af8bba.pdf

California Health Policy Strategies (2022) Policy Brief: The overdose crisis in CA 2017-2021. Sacramento, CA;

https://secureservercdn.net/198.71.233.109/zb0.123.myftpupload.com/wp-content/uploads/2022/01/california_overdose_crisis_jan2022.pdf

I POLL

○ One pill can kill?

- True
- False



HOW SUPPLIED

Pharmaceutical Fentanyl

Transdermal



Injectable



Transmucosal



Source: Insightcrime.org

Illicit Fentanyl

Pills



Pure Powder



Mixed with Heroin/sugar



Adulterated psychostimulants



I FENTANYL FOUND IN...

- Fentanyl is found in
 - Liquid form
 - Eye drops, nasal spray, dropped onto paper
 - Illicit opioids, stimulants, cannabis vape products
 - Illicitly manufactured stimulant, benzodiazepine & opioid pills
 - 99% of oxycodone pills submitted to crime lab contain fentanyl
- Pills look identical to legally manufactured pills
 - 40% contain a potentially fatal dose of fentanyl



Sources: <https://www.cdc.gov/stopoverdose/fentanyl/>
https://www.dea.gov/sites/default/files/2020-01/2019-NDTA-final-01-14-2020_Low_Web-DIR-007-20_2019.pdf
https://www.dea.gov/sites/default/files/2021-12/DEA-OPCK_FactSheet_December%202021.pdf
https://www.dea.gov/sites/default/files/2020-09/Fentanyl%20Used%20in%20Vape%20Pens_PRB%20FINAL.pdf

FACTS ABOUT FENTANYL

- Cannabis vape cartridges
 - Have been found to contain fentanyl
 - The San Diego County Medical Examiner (SDCME) reported in 2020 the first case in which they found fentanyl in a vape pen. The SDCME confirmed the following substances were found in a vape pen seized: carfentanil, furanyl fentanyl, cyclopropyl fentanyl, fentanyl, etizolam, and XLR-11 (a synthetic cannabinoid). 2020
- 2022 has seen an explosion of reported cases

Source: https://www.dea.gov/sites/default/files/2020-09/Fentanyl%20Used%20in%20Vape%20Pens_PRB%20FINAL.pdf

■ POTENCY OF FENTANYL



This photo is of 2 mg of fentanyl powder; a lethal dose in an average adult

- Fentanyl is 100 times more potent than morphine and at least 10 times as potent as heroin.

Source: U.S. Drug Enforcement Administration <https://www.nist.gov/image/fauxfentynallethaldose005jpg>

ONE PILL CAN KILL

- Potency
 - Morphine < heroin < fentanyl < carfentanyl/ sufentanyl
 - Other opioids: Nitazenes: protonitazene and isotonitazene
 - 3-10 times more potent than fentanyl
- Potency varies
 - Range from 1mg to 5mg fentanyl in different pills
 - Varies within a single pill from one location to another



Comparing the size of lethal doses of heroin, fentanyl, and carfentanyl. The vials here contain an artificial sweetener for illustration. (New Hampshire State Police Forensic Laboratory)

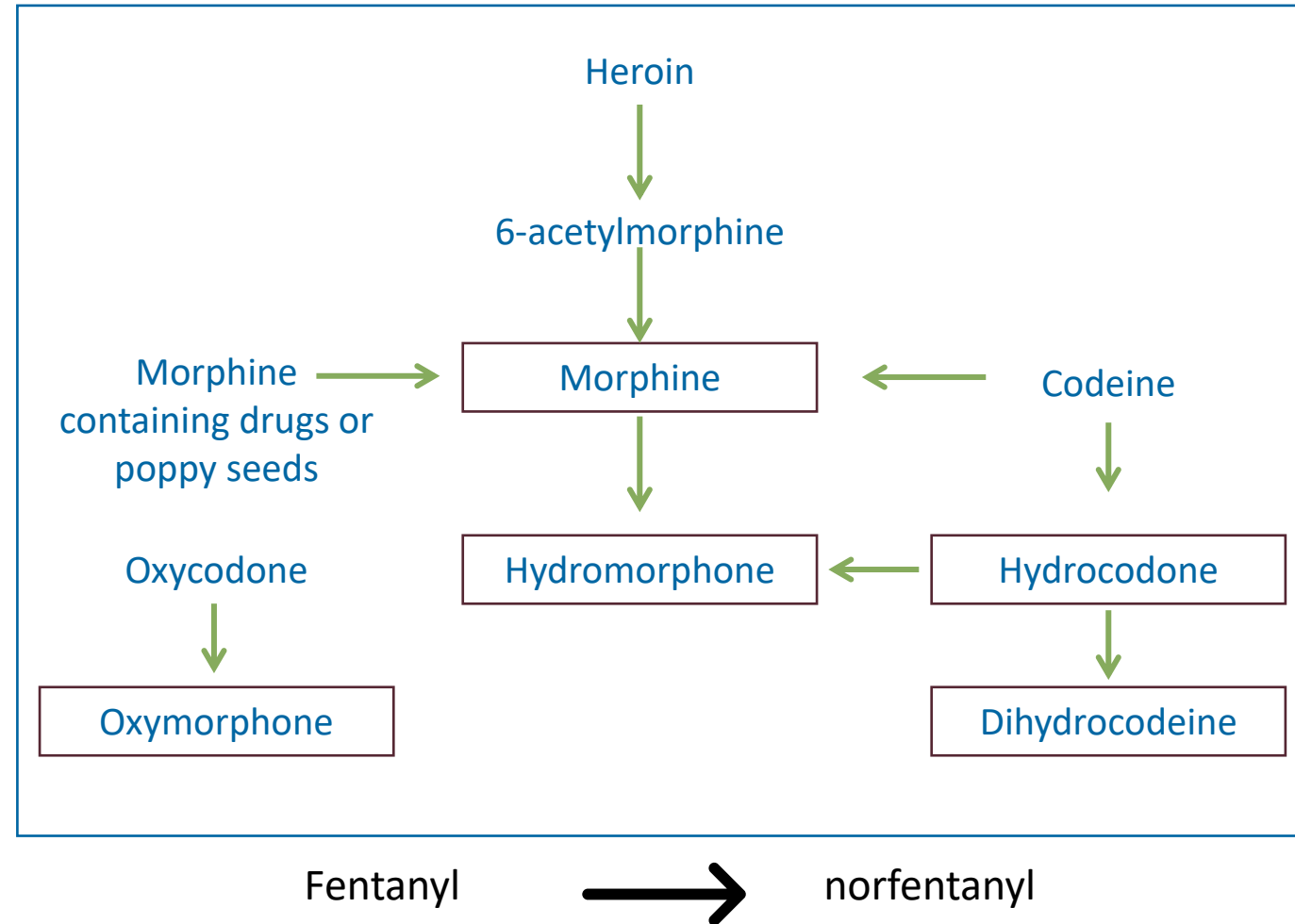
Sources: Baumann, 2018; Boas, 1985; Hug, 1981; Roy, 1988; Torralva, 2019

https://www.washingtonpost.com/local/dc-politics/new-opioids-more-powerful-than-fentanyl-are-discovered-in-dc-amid-deadly-wave-of-overdoses/2021/11/29/680afb2c-4d43-11ec-94ad-bd85017d58dc_story.html

https://www.dea.gov/sites/default/files/2021-12/DEA-OPCK_FactSheet_December%202021.pdf

DIFFERENCES AMONGST OPIOIDS

- Fentanyl is
 - Highly lipophilic
 - Crosses blood brain barrier quickly
 - Redistributes to adipocytes
 - 1000 times more lipid soluble than morphine
 - Morphine, heroin, fentanyl, buprenorphine
- Lipophilicity influences onset of action
 - The more lipophilic the faster the onset of action
 - Morphine 6 minutes, fentanyl 60 seconds
- **Take Home Points: Brain Effects**
 - **Morphine: slow in slow out**
 - **Fentanyl: fast in fast out**
 - **Heroin: fast in slow out**



Sources: Fairbairn 2017; Torralva, 2019
https://www.dea.gov/sites/default/files/2021-12/DEA-OPCK_FactSheet_December%202021.pdf

DIFFERENCES AMONGST OPIOIDS

- Detection in toxicology tests
 - Heroin, codeine, morphine and poppy seeds are all detected as morphine in routine toxicology tests
- Some tests will specifically detect 6 acetylmorphine
 - In order to differentiate heroin use from potential food or legal prescriptions
- To detect other opioids, you need the ability to detect other substances (true for point of care tests and confirmatory send-outs)
- Even point of care tests that **can** detect heroin, buprenorphine, and/or methadone **do NOT** detect fentanyl

Compound	Detected by positive	Detected by positive
Heroin	6 acetylmorphine	Morphine
Poppy seeds	Morphine	
Codeine	Codeine	
Morphine	Morphine	
Oxycodone	Oxycodone	Oxymorphone
Hydrocodone	Hydrocodone	Hydromorphone
Hydromorphone	Hydromorphone	
Fentanyl	Norfentanyl	
Buprenorphine	Norbuprenorphine	
Methadone	Methadone	2-ethylidene-1,5-dimethyl-3,3-diphenylpyrrolidine (EDDP)

Sources: <https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfClia/analyteswaived.cfm>

Sources: Fairbairn 2017 ; Torralva, 2019

https://www.dea.gov/sites/default/files/2021-12/DEA-OPCK_FactSheet_December%202021.pdf
<https://www.cms.gov/medicare-coverage-database/view/lcd.aspx?lcdId=35724&ver=68f>

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I DIFFERENCES AMONGST OPIOIDS

- Detection in toxicology tests
- Length of time detectable
 - Heroin & metabolites 4 days
 - Fentanyl 7 days
 - Norfentanyl 13 days



Sources: <https://www.aruplab.com/files/resources/pain-management/DrugAnalytesPlasmaUrine.pdf>
Huhn 2020

DIFFERENCES AMONGST OPIOIDS

Characteristic	Heroin	Fentanyl
Potency	2x morphine	100x morphine
Half-Life	3 hrs (morphine)	3.5 hrs
Respiratory Depression	20-30 min	2-5 min
Lipid (fat) solubility	200x morphine	1000x morphine
Ability to detect	Urine point of care & confirmatory testing	Not available in urine point of care testing; only confirmatory
Duration of detection	4 days	Up to 13 days

SOURCE: Suzuki J. et al. Drug Alcohol Depend. 2017;171:107-116; Fairbairn N. et al. Int J Drug Policy 2017;46:172-179

<https://www.cms.gov/medicare-coverage-database/search.aspx>

MYTHS AND FACTS: CORRECTING MISINFORMATION ABOUT FENTANYL EXPOSURE

MYTH: YOU NEED MORE NALOXONE TO REVERSE A FENTANYL OVERDOSE

Some sources say there is not a need for more naloxone for fentanyl overdoses

- Bell 2019
- Carpenter 2020



Some sources suggest need for more naloxone for fentanyl overdoses

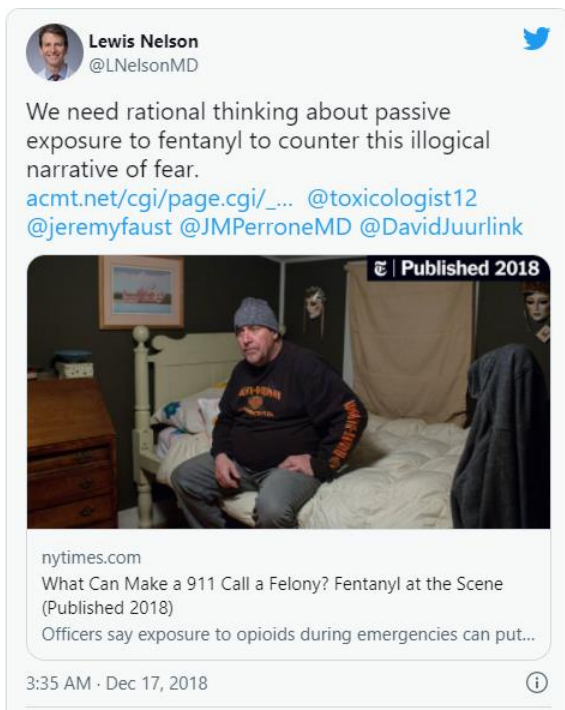
- Mayer 2018
- Schuman 2008
- Slavova 2017
- Somerville 2017
- Sutter 2017

FACT: WE DON'T KNOW IF YOU NEED MORE NALOXONE

- Call For Help
- Administer Naloxone
- Rescue Breathing
- Repeat Steps As Needed



“Any fentanyl exposure can kill innocent law enforcement, first responders and the public. Deputy Attorney General, Rod Rosenstein” – Sept. 2016



SOURCE: DEA

Opinion: ‘Passive’ fentanyl exposure: more myth than reality

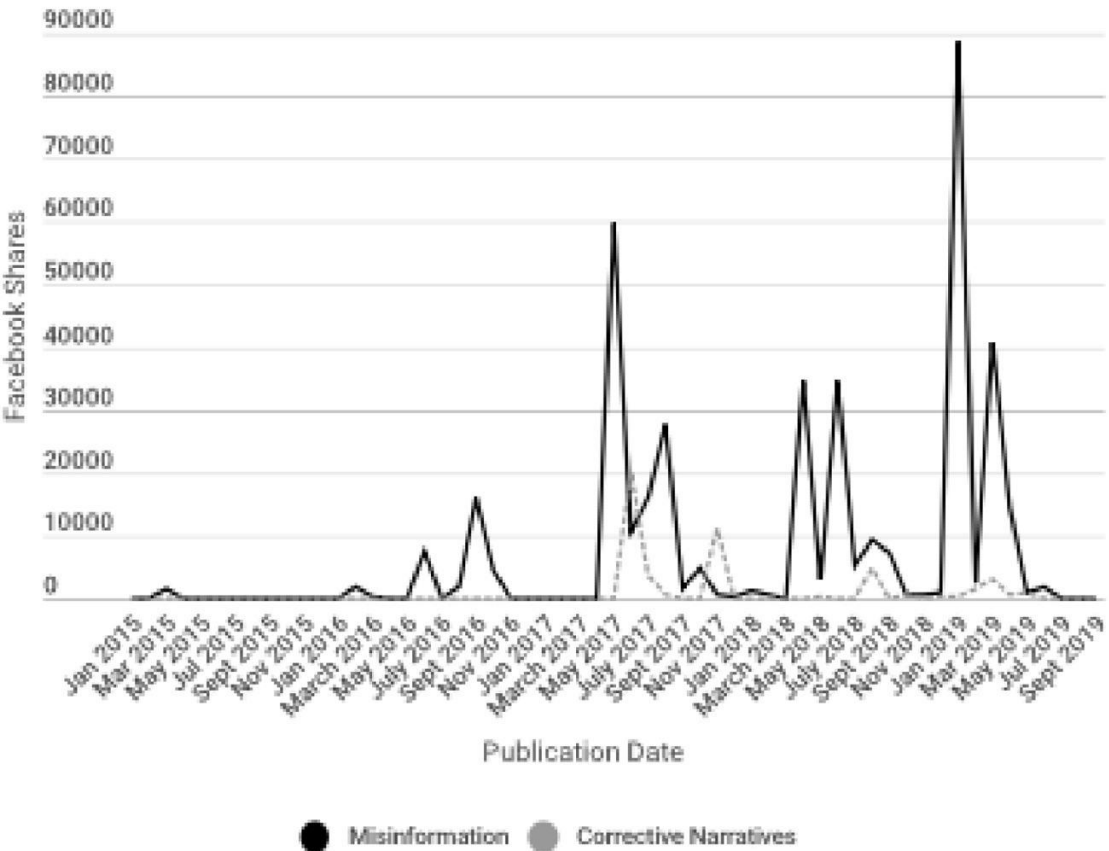
SOURCE: PBS Science, December, 2018



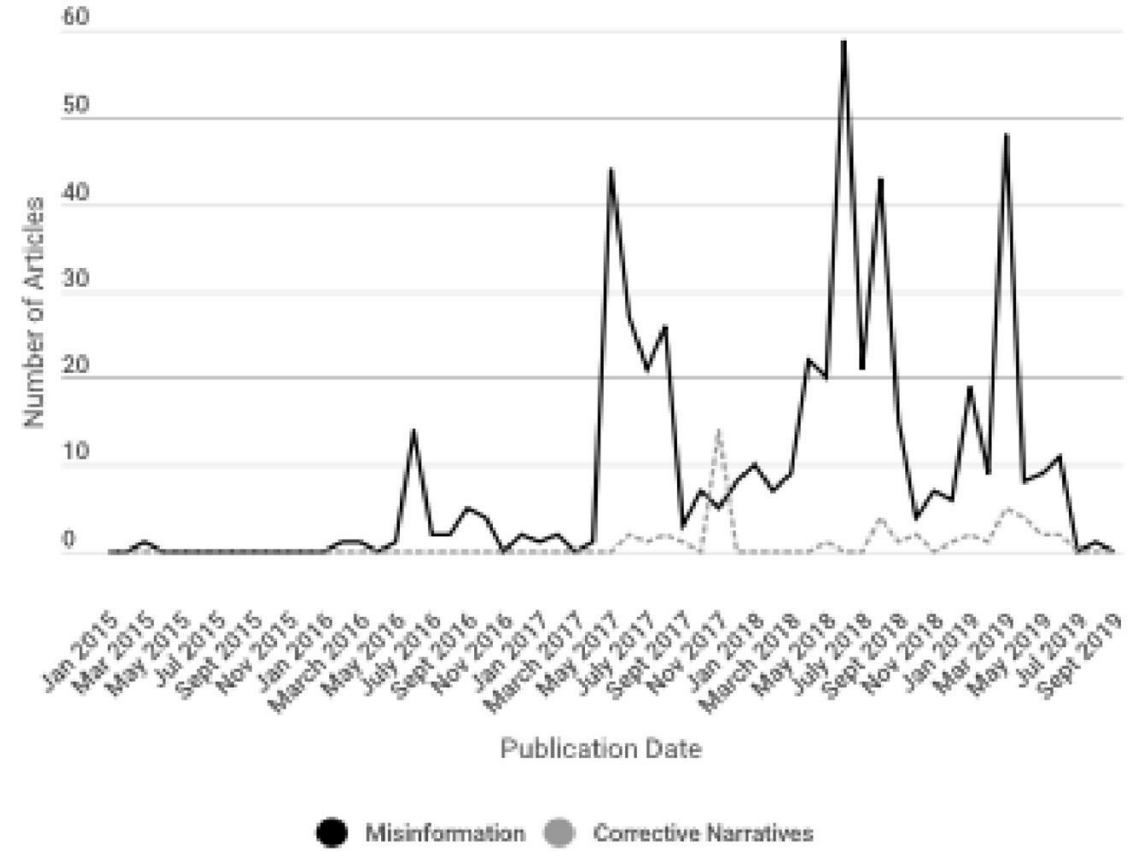
SOURCE: Voice of San Diego, Aug. 2021; Sept. 2021; Oct. 2021

MISINFORMATION AND THE MEDIA

Facebook Shares of Misinformation vs. Corrective Narratives



Mainstream Media Stories with Misinformation vs. Corrective Narratives



Source: Beletsky L, Seymour S, Kang S, et al. Fentanyl panic goes viral: The spread of misinformation about overdose risk from casual contact with fentanyl in mainstream and social media. *Int J Drug Policy*. 2020;86.

CONSEQUENCES OF FENTANYL EXPOSURE FEARS

- Slow or no law enforcement response to overdose calls (awaiting PPE, or just reluctant to engage)
- 911 calls for overdose now leading to felony arrests
- Heavy resource expenditures on PPE and related equipment

Fentanyl Overdose	Panic/Anxiety Attack
Profoundly slowed heartbeat	Rapid heartbeat and/or palpitations
Very low blood pressure	Sweating, chills, flushes
Dangerously low breathing rate	Breathing difficulties
Dizziness	Dizziness
Confusion	Chest pain
Sleepiness	Sudden overwhelming sense of doom
Loss of consciousness	Trembling
Bluish lips and nails	Numbness, tingling of extremities
Pinpoint pupils	Sense of choking
Weak muscles	



FACTS ABOUT EXPOSURE RISKS, SAFETY PRECAUTIONS & DECONTAMINATION RECOMMENDATIONS



AMERICAN COLLEGE OF MEDICAL TOXICOLOGY AMERICAN ACADEMY OF CLINICAL TOXICOLOGY

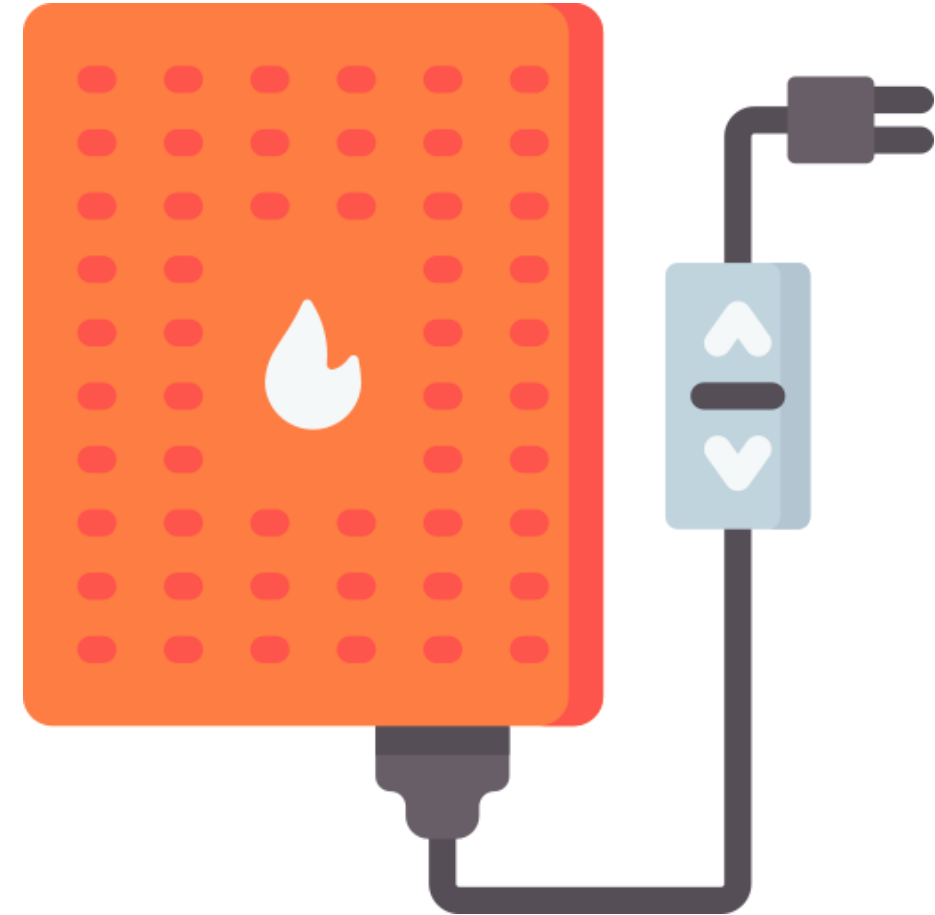
- “For routine handling of drugs nitrile gloves provide sufficient dermal protection”
- “Exceptional circumstances where there are drug particles or droplets suspended in the air, N95 mask provides sufficient protection”
- “In the unlikely event of poisoning naloxone should be administered”



Source: AMCT & ACCT Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5711758/>

AMERICAN COLLEGE OF MEDICAL TOXICOLOGY AMERICAN ACADEMY OF CLINICAL TOXICOLOGY

- Dermal
 - Patches take 3-13 hour to produce therapeutic blood concentrations of fentanyl
 - Patches are designed to deliver the medication. They adhere to skin & have agents to push fentanyl through skin
 - If both palms were covered in fentanyl patches it would take 14 minutes to get an effect
 - Increased absorption from covering large surface areas, broken skin and/or heat
- Tablets & powders require dissolution for absorption
 - Touching a tablet does not lead to absorption
 - Powder sits on skin
 - Powder is easy to brush or wash off with soap and water
 - DO NOT use alcohol-based hand sanitizers to wash off



Source: <https://www.flaticon.com/free-icons/healthcare-and-medical> title="healthcare and medical icons">Healthcare and medical icons created by Freepik - Flaticon

Source: AMCT & ACCT Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5711758/>

AMERICAN COLLEGE OF MEDICAL TOXICOLOGY AMERICAN ACADEMY OF CLINICAL TOXICOLOGY

- Inhalation
 - Unprotected individual would require 200 minutes of exposure to reach a concerning blood level of fentanyl
- Mucous membranes: 30-fold absorption compared to skin
 - If splash to eyes or mouth
 - Wash immediately
 - Be prepared to administer naloxone
 - Be prepared to provide rescue breathing



Source: AMCT & ACCT Position Statement: Preventing Occupational Fentanyl and Fentanyl Analog Exposure to Emergency Responders
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5711758/>

CDC/ NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH

- *Suspect that illicit drugs may be present, but no illicit drug products are visible*
 - Example: An EMS response to a suspected drug overdose where information indicates illicit drug products are suspected but are not visible on scene
 - Wear nitrile gloves
 - No mask required



Photo from Canva

Source: <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>

2019 PPE Basics for First Responders Exposed to Fentanyl retrieved from <https://www.safetyandhealthmagazine.com/articles/18841-ppe-basics-for-first-responders-exposed-to-fentanyl-niosh-releases-video#:~:text=NIOSH%20recommends%20wearing%20nitrile%20gloves,R100%20respirator%3B%20and%20protective%20eyewear.>

- Small amounts of illicit drugs in powder or liquid are visible
 - Example: An EMS response to a suspected overdose where small amounts of powder or liquid are visible
 - Wear nitrile gloves
 - Wear a fitted mask
 - Wear eye protection



Source: <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>

CDC/ NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH

- Liquid or large amounts of powder are visible
 - Example: An illicit drug storage or distribution facility, milling operation, or production laboratory
 - Wear gloves
 - Wear mask
 - Wear eye protection
 - Wear coveralls



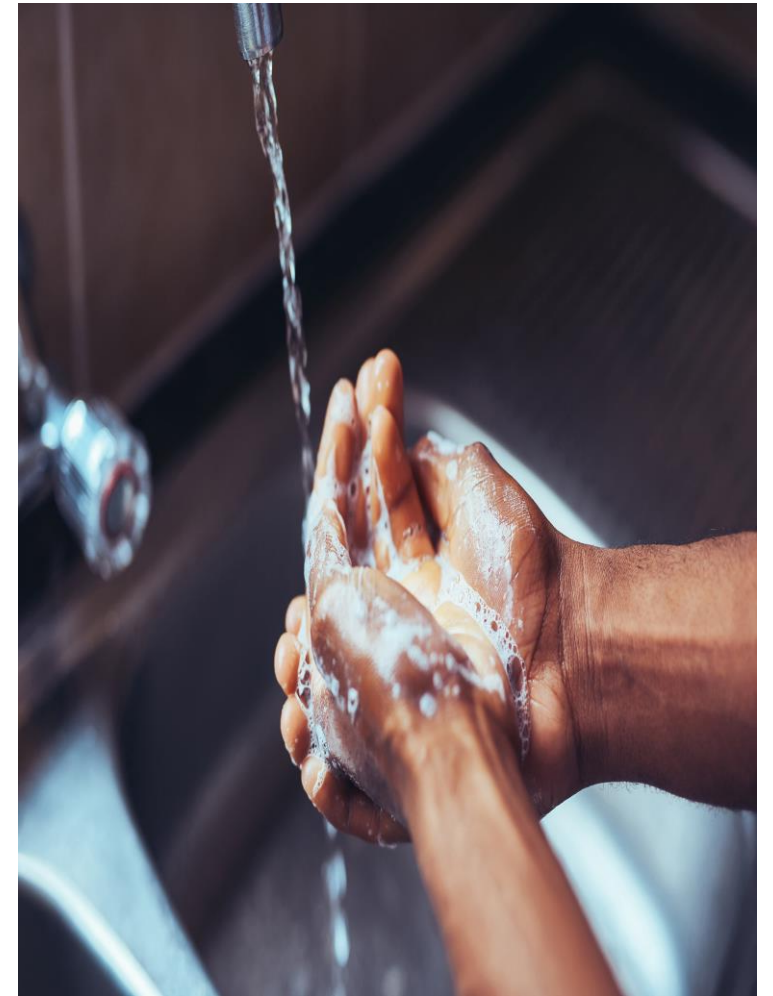
Source: <https://www.cdc.gov/niosh/topics/fentanyl/risk.html>

EXPOSURE RISK AND PRECAUTIONS: National Institute on Occupational Safety and Health (NIOSH) SUMMARY

	Minimal (No amount of suspected illicit drug is visible)	Moderate (Small amount of suspected illicit drug is visible)	High (Large amounts of suspected illicit drug is visible)
Hand	Nitrile gloves	Nitrile gloves	Nitrile gloves
Respiratory		N, P, or R 100 disposable filtering mask	Air purifying respirator (APR) or PAPR
Dermal		Wrist/arm protection	Hazmat Suit
Face and Eye		Safety goggles	Safety goggles
Decontamination Recommendations	Wash hands with soap and cool water	Dispose of protective gear and wash before entering building	Dispose of outer garments (suit) and wash before entering building

DECONTAMINATION SUMMARY

- Minimal powder contamination should be washed with soap and water
- Surfaces can be cleaned with bleach solutions or peracetic acid (pool chemicals)
- Fentanyl is stable in water for days, so wash off
- Avoid use of isopropyl-based hand sanitizers



Source: Photo from PowerPoint

TIME FOR A POLL

Inadvertent fentanyl exposure regularly leads to overdose of first responders.

Is this a legend or reality?

- Legend
- Reality

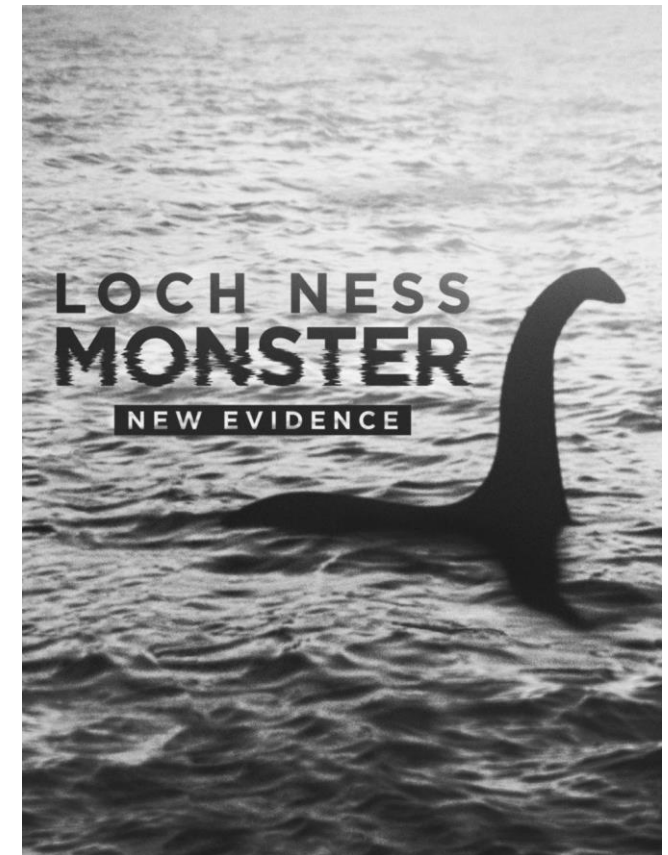


Photo from IMDb

SHOCKING FACTS ABOUT OVERDOSE DEATHS

- The problem
 - 77.3% opioid-involved OD deaths had no evidence of naloxone administration
 - The highest percentages of decedents lacking evidence of naloxone administration were those with
 - Highest educational attainment (doctorate or professional degree, 87.0%)
 - Oldest (55-64 years, 83.4%; ≥65 years, 87.3%)
 - Youngest ages (<15 years, 87.5%)
 - Parental consent is required
- The answer
 - Harm Reduction
 - Prevention efforts
 - Including naloxone

Source: Quinn K, Kumar S, Hunter CT, O'Donnell J, Davis NL. Naloxone administration among opioid-involved overdose deaths in 38 United States jurisdictions in the State Unintentional Drug Overdose Reporting System, 2019. *Drug Alcohol Depend.* 2022 Jun 1;235:109467. doi: 10.1016/j.drugalcdep.2022.109467. Epub 2022 Apr 16. PMID: 35461083; PMCID: PMC9106898.

HOW TO GET NALOXONE IN CALIFORNIA

- Naloxone is the effective opioid reversal medication
 - Storage sites at work, in your bags and backpacks
 - Know how to use it
- Naloxone distribution project
[https://www.dhcs.ca.gov/individuals/Pages/Naloxone Distribution Project.aspx](https://www.dhcs.ca.gov/individuals/Pages/Naloxone%20Distribution%20Project.aspx)
- Available through Medi-Cal with a prescription

Administration of Naloxone

• Intranasal NARCAN[®] Nasal Spray

- 1 PEEL** back the package to remove the device.
- 2 PLACE** the tip of the nozzle in either nostril until your fingers touch the bottom of the patient's nose.
- 3 PRESS** the plunger firmly to release the dose into the patient's nose.

Caution: do not prime the device as most or all of the medication will be dispensed



<http://www.narcannasalspray.com/nns-4-mg-dose/how-to-use-nns/>

I HARM REDUCTION

- Harm reduction: interventions aimed at reducing the negative effects of health behaviors without necessarily extinguishing the problematic health behaviors completely.
- MAT very effective to decrease use of illicit opioids
 - At one time it was considered harm reduction
 - Now it is considered standard of care
- Harm reduction messages for clients
 - Test for fentanyl
 - Don't use alone or tell someone where you are
 - Educate on alternative routes administration (booty bump)
 - If using needles, use clean supplies
 - Go slow (use a test dose)
 - Don't stack doses
 - When desired, refer to treatment
 - Know about your Good Samaritan Law
 - Have naloxone available
 - Know how to recognize OD and use naloxone

Source: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=1799.102.

I FENTANYL TEST STRIPS (FTS)

- Fentanyl test strips (FTS) are a simple, inexpensive, and evidence-based method of averting drug overdose.
 - Receiving a positive test was associated with positive change in OD risk behavior.
 - Federal funds can be used to purchase FTS.
 - Limitations
 - Positive test provides information
 - Negative test should be viewed as lack of information due to inconsistent fentanyl presence within product
 - Can't detect analogues, new opioids, xylazine...



<https://www.healthaffairs.org/doi/10.1377/hblog20210601.974263/full>

Sources: <https://www.technologynetworks.com/applied-sciences/news/fentanyl-test-strips-help-to-prevent-overdoses-310792>
Krieger (2018) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6701177/>
<https://www.samhsa.gov/newsroom/press-announcements/202104070200>
Peiper et al. 2019

TIME FOR A POLL

Do you carry naloxone with you at all times?

- Yes
- No



Photo from Addiction Treatment Forum



Responding to a Fentanyl Overdose: What California First Responders Need to Know

California has seen an increasing number of fentanyl/fentanyl analog-related overdoses. Preliminary 2018 data report 743 fentanyl-related overdose deaths (an increase of 72% from 2017).¹ With fentanyl in our drug supply, first responders (e.g., emergency medical services and law enforcement) are likely to encounter it on the job and may have safety concerns. To address these concerns, the American College of Medical Toxicology (ACMT) and the American Academy of Clinical Toxicology (AACT) released a position statement for first responders.²



The risk of clinically significant exposure to emergency responders is extremely low.

According to the ACMT and AACT Position Statement:

- Incidental skin absorption is unlikely to cause clinical signs of toxicity.
- Nitrile gloves provide sufficient protection for routine handling.
- Simple washing with soap and water is adequate to remove fentanyl from contaminated skin. *Hand sanitizers and cleaning agents may increase fentanyl absorption and should not be used.*
- If drug particles are suspended in the air, a fit-tested N95 respirator provides reasonable protection.



Assisted ventilation and naloxone administration is the standard first aid response to opioid overdose.

Signs, Symptoms, and Management of a Suspected Fentanyl Overdose:

- Fentanyl produces characteristic opioid overdose signs and symptoms including decreased level of consciousness, slowed breathing, lack of response to stimulation, and constricted pupils.
- Peak respiratory depression can occur in 5 minutes or less. A rapid response is imperative.³
- Naloxone administration and assisted ventilation are the most critical interventions.
- California Poison Control System can assist in the management of a suspected fentanyl overdose. They can be reached at 1-800-222-1222.

Aftercare for Overdose Victims:

First responders can be critical liaisons linking those suffering from opioid use disorder with treatment and follow-up care. When possible, people who have experienced overdose should be linked to care based on their individual circumstances:

- Harm reduction and syringe services programs provide a variety of health and social services for people who use drugs and often serve as trusted entry points to other parts of the health system. Click here to [find a harm reduction provider near you](https://tinyurl.com/yxmycoj3) (<https://tinyurl.com/yxmycoj3>).
- Medications used to treat opioid use disorder reduce the risk of overdose. Click here to find [local substance use disorder treatment in your community](https://chooseamat.org) (<https://chooseamat.org>).

If You Need Naloxone in Your Agency/Community:

A [list of naloxone access options in California](https://tinyurl.com/yvt2busc) (<https://tinyurl.com/yvt2busc>) is available from the California Health Care Foundation. Community members can also [access naloxone through local harm reduction services](https://tinyurl.com/yxmycoj3) (<https://tinyurl.com/yxmycoj3>).

Frequently Asked Questions



I have heard news reports about first responders developing toxicity from just entering the room where someone has overdosed. Should I be concerned?

Mass media reports of fentanyl toxicity by first responders through passive contact in their job duties are more myth than fact. In order to create clinically significant toxicity, an adequate dose of fentanyl must be absorbed into the blood stream and enter the central nervous system. Simply being in a room where fentanyl is present will not result in toxicity or overdose.



If I see white powder on the scene next to an overdose victim, do I need to wear a mask?

An undisturbed white powder is unlikely to be an inhalation risk to first responders. Even in industrial settings at the highest airborne concentration, it would take 200 minutes of exposure to achieve a dose of 100mcg of fentanyl.² However, if drug particles are suspended in the air, a fit-tested N95 respirator is suggested.



Can I experience opioid toxicity if I get fentanyl on my skin?

It would be highly unlikely to experience opioid toxicity from incidental dermal exposure. Absorption of fentanyl from transdermal patches designed to deliver the drug systemically requires hours to produce a therapeutic serum level. To prevent the possibility of absorption, immediate cleansing with soap and water should follow any inadvertent contact.



Will assisted ventilation with a bag-valve-mask or barrier mask put me at risk of inhaling fentanyl from an overdose victim?

Fentanyl and other opioids are not exhaled or excreted through sweat or the skin; therefore, first responders are not at risk of toxicity when providing assisted ventilation.



Do I need to administer more doses of naloxone to reverse a fentanyl overdose?

Fentanyl overdoses are responsive to naloxone like other opioids. Standard naloxone dosing should be implemented with repeated administration every 2-3 minutes until respiratory function is restored. Early and concurrent introduction of ventilatory support should always be a priority.⁴



I see the same patients for an opioid overdose multiple times. What can I do as a first responder to stop this cycle?

Individuals who have experienced an overdose are at the highest risk of experiencing a subsequent overdose. Linking patients to local harm reduction and substance use disorder treatment programs that provide medications for opioid use disorder are the most critical interventions to prevent future overdoses. First responders should also ensure that survivors of an overdose have naloxone on hand for themselves and others.

¹ <https://cdph.ca.gov/OpioidDashboard>

² Moss MJ et al. ACMT and AACT position statement: preventing occupational fentanyl and fentanyl analog exposure to emergency responders. *Clinical Toxicology* 2018;56:297-300.

³ Harper MH et al. The Magnitude and Duration of Respiratory Depression produced by Fentanyl and Fentanyl plus Droperidol in Man. *JPET* 1976;199:464-468.

⁴ Lynch MJ, Suyama J, Guyette F. Scene Safety and Force Protection in the era of ultra-potent Opioids. *Prehospital Emergency Care* 2018;22:157-162.

I BUT WAIT, IT'S NOT JUST ABOUT FENTANYL: XYLAZINE

- Regularly occurs in used syringes from syringe exchange
 - mixed with opioids
 - mixed with stimulants
- Associated dangers
 - Slow breathing, sedation, coma
 - Body temperature changes
 - Heart and kidney problems
 - Skin necrosis
 - Increased risk of overdose
- What is it? ANIMAL TRANQUILIZER
 - Agonist at alpha 2 adrenergic receptors
 - Decreases release of norepinephrine and dopamine
 - Approved by FDA as a veterinary anesthetic (sedating and muscle relaxing)
- Sought after by some for its effects



FIGURE 1: Black and green necrotic and scaly lesions of the patient's forearms.

New Jersey State Police Drug Monitoring Initiative Office of Drug Monitoring & Analysis, Drug Monitoring Initiative (DMI) 2.2022

Sources: Friedman 2022;

<https://www.nflis.deadiversion.usdoj.gov/nflisdata/docs/NFLISDrug2020AnnualReport.pdf>

TIME FOR A POLL

Has anyone seen or heard directly from a patient about xylazine?

- Yes
- No



FIGURE 1: Black and green necrotic and scaly lesions of the patient's forearms.

New Jersey State Police Drug Monitoring Initiative Office of Drug Monitoring & Analysis, Drug Monitoring Initiative (DMI) 2.2022

FENTANYL PSA

THE CURRENT STATE

Three Waves of the Rise in Opioid Overdose Deaths

The graph displays the number of deaths per 100,000 population from 1999 to 2019. It is divided into three waves: Wave 1 (1999-2010) shows a rise in prescription opioids; Wave 2 (2010-2013) shows a rise in heroin; and Wave 3 (2013-2019) shows a rise in synthetic opioids. The total deaths per 100,000 population increase significantly over time, reaching approximately 16 by 2019.

Year	Any Opioid	Other Synthetic Opioids (e.g., Tramadol or Fentanyl, prescribed or illicitly manufactured)	Heroin	Commonly Prescribed Opioids (Natural & Semi-Synthetic Opioids and Methadone)
1999	3.5	0.1	0.1	3.3
2000	3.8	0.1	0.1	3.6
2001	4.1	0.1	0.1	3.9
2002	4.4	0.1	0.1	4.2
2003	4.7	0.1	0.1	4.5
2004	5.0	0.1	0.1	4.8
2005	5.3	0.1	0.1	5.1
2006	5.6	0.1	0.1	5.4
2007	5.9	0.1	0.1	5.7
2008	6.2	0.1	0.1	6.0
2009	6.5	0.1	0.1	6.3
2010	6.8	0.1	0.1	6.6
2011	7.1	0.1	0.1	6.9
2012	7.4	0.1	0.1	7.2
2013	7.7	0.1	0.1	7.5
2014	8.0	0.1	0.1	7.8
2015	8.3	0.1	0.1	8.1
2016	8.6	0.1	0.1	8.4
2017	8.9	0.1	0.1	8.7
2018	9.2	0.1	0.1	9.0
2019	9.5	0.1	0.1	9.3

SOURCE: National Vital Statistics System Mortality File.

HMA INSTITUTE ON ADDICTION

DR. WALLER

HMA INSTITUTE ON ADDICTION

View and Share Here: <https://www.youtube.com/watch?v=KUfaFxS9nUs>

CONTACT US

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I POLLING QUESTIONS

1. Overall, today's webinar was:

- A. Very useful**
- B. Somewhat useful**
- C. Not very useful**
- D. Not useful at all**

2. The material presented today was:

- A. At the right level**
- B. Too basic**
- C. Too detailed**

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