

# Bringing Care To People: Building a Continuum of Care

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Associate Professor of Emergency Medicine, Medical Toxicology, and Addiction

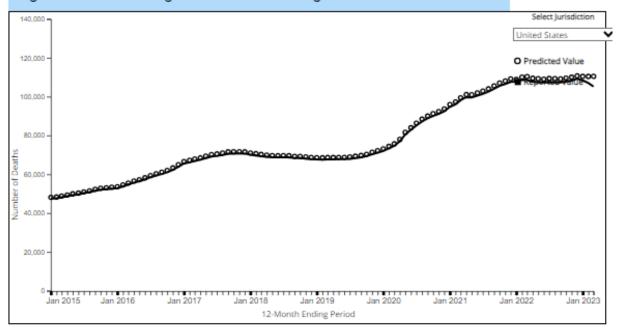
## **National Overdose Death Outlook**

### 105,452 Overdose Deaths Reported in 2022

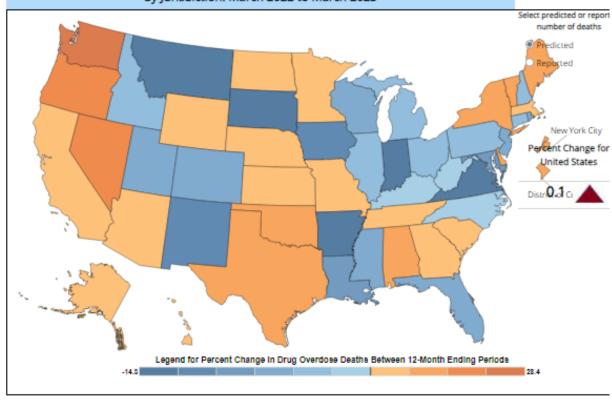
12 Month-ending Provisional Number and Percent Change of Drug Overdose Deaths

Based on data available for analysis on: August 6, 2023

Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths; United States



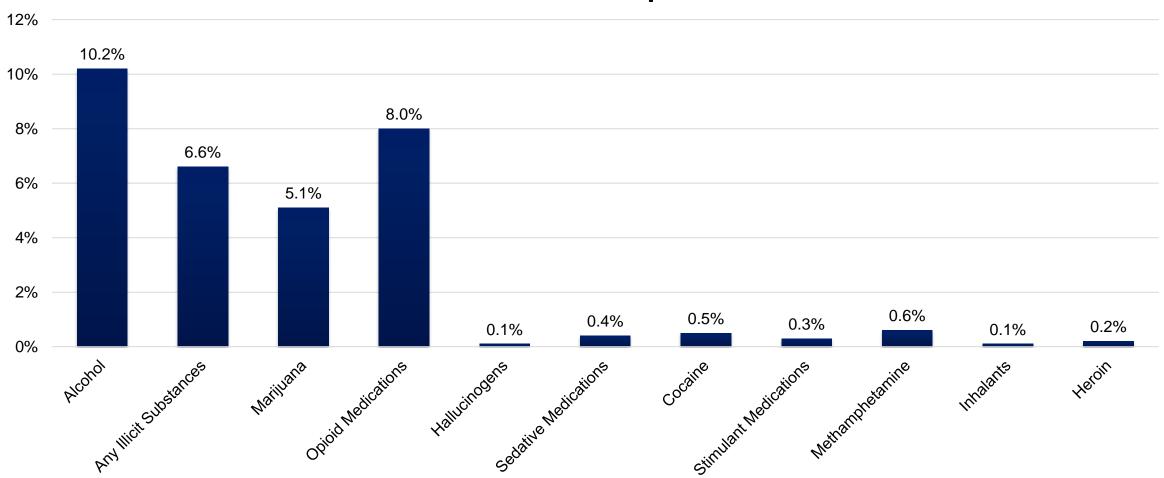






## **SUD Rates in the United States**

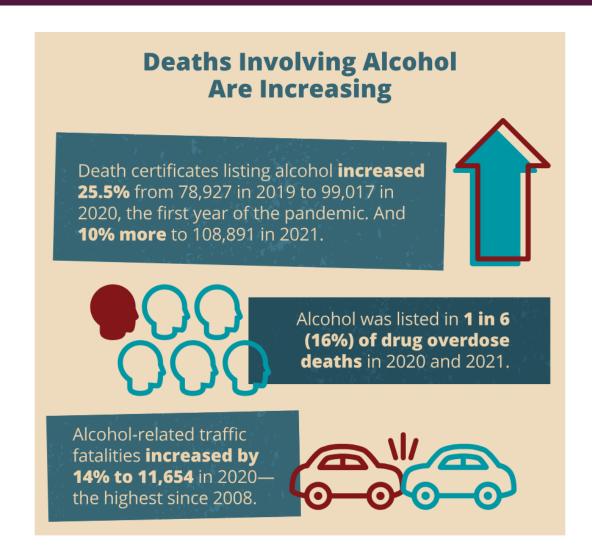
### % SUD in U.S. Population



Center for Behavioral Health Statistics and Quality. (2021). Results from the 2020 National Survey on Drug Use and Health: Detailed tables. Rockville, MD: Substance Abuse and Mental Health Services Administration. Retrieved from <a href="https://www.samhsa.gov/data/">https://www.samhsa.gov/data/</a>

### **Alcohol Related Disease**

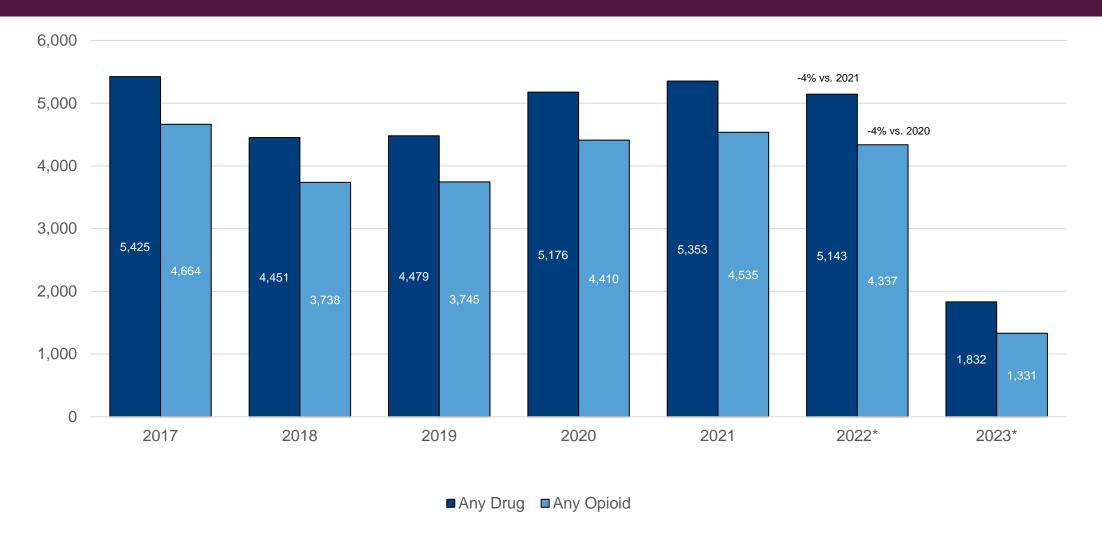
- ~140,000 alcohol-related deaths per year
  - Acute intoxication
  - Chronic medical illness, e.g. liver and cardiovascular disease
- Acute alcohol intoxication in ~21% of completed suicides
- Frequently present in drug overdose deaths
  - >20% in Allegheny County







# Estimated PA Drug Overdose Deaths, 2017 – 2023\*

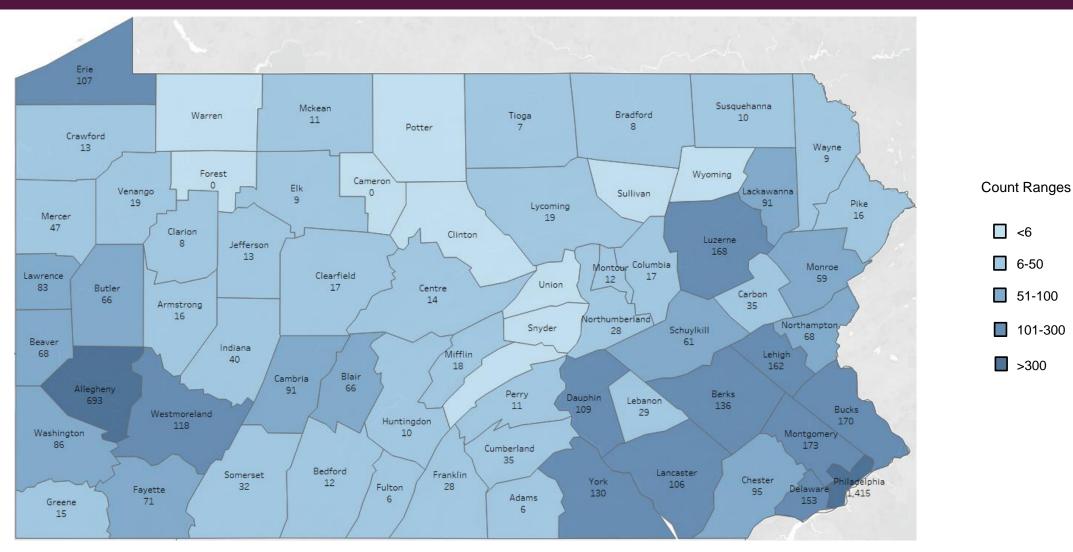


<sup>\*2022/2023</sup> death data is preliminary, based on death record data as of July 2023. Please note that death records for overdose deaths are often delayed by 3-6 months and counts may change.

Counts do not include suicides or homicides where someone intended to harm another person by poisoning.



# Pennsylvania Unintentional Any Drug† Overdose Deaths, Counts by County, 2022\* (n=5,143)



†Any Drug overdoses include overdoses from illicit, prescription or over-the-counter drugs, excluding alcohol-only related overdoses. Data for counties with values between 1 and 5 are not displayed.

\*2022 death data is preliminary, based on death record data as of July 2023. Please note that death records for overdose deaths are often delayed by 3-6 months and 2022 counts may change. Counts do not include suicides or homicides where someone intended to harm another person by poisoning.



# Racial Disparity in Drug Overdose Deaths





2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

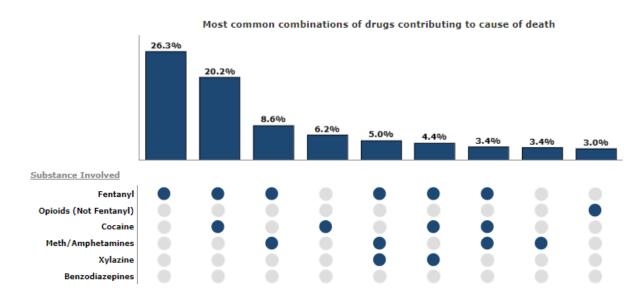
Compares the overdose death rates per 100,000 population between Black, White, and individuals of Other races. The rate for each race group is calculated using the population of individuals of that race in Allegheny County.

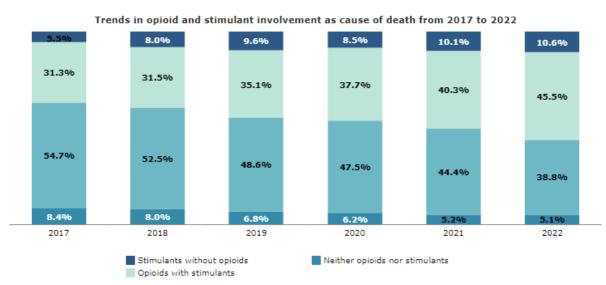


# **Drugs Involved in PA Overdose Deaths**

- Fentanyl remains the single most prominent drug associated with OD deaths
- Growing presence of stimulants, primarily in association with opioids
- Xylazine identified in ~9% of PA OD deaths in 2022
- Non-fentanyl opioids present in only ~3% of OD deaths in 2022

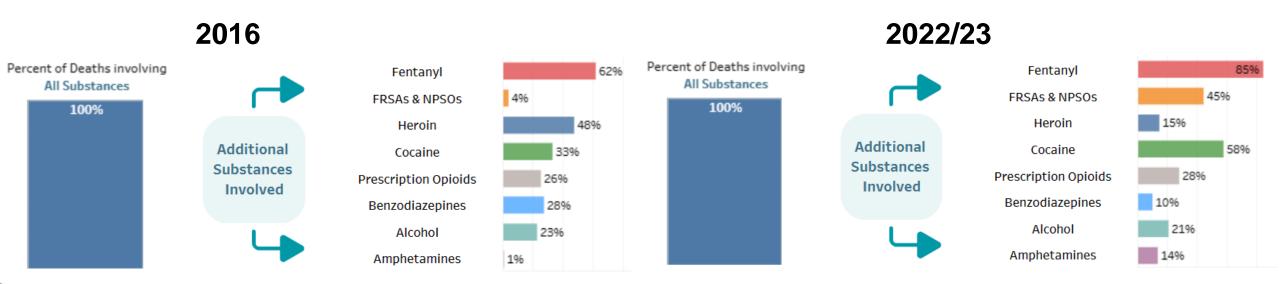
Pennsylvania ODSMP – Drug Overdose Surveillance Interactive Data Report | Tableau Public





# Drugs Involved in Allegheny County OD Deaths

- Similar trend in Allegheny County
  - Growing percentage of opioid + stimulant associated overdose deaths
  - 85% of overdose deaths involved fentanyl plus additional deaths related to fentanyl analogs
  - Only ~7.5% involved stimulants without opioids





# **Xylazine**

- Recent increase in prevalence, but has adulterated heroin/fentanyl intermittently for decades
  - Present in 760 PA overdose deaths in 39 counties during 2022<sup>1</sup>
  - Present throughout the U.S. drug supply<sup>2</sup>
- Veterinary alpha-2 agonist sedative
- Synergistic effect to enhance and prolong opioid effect (aka "legs")
- Acute toxicity can include sedation, miosis, bradycardia, and hypotension
- Not reversed with naloxone
  - Supportive treatment, rescue breathing
- Test strips now available for purchase
- Associated with skin wounds/ulcers
- Potential withdrawal syndrome complicating opioid withdrawal management



<sup>1.</sup> Pennsylvania Bulletin (pacodeandbulletin.gov)

<sup>2.</sup> The Growing Threat of Xylazine and its Mixture with Illicit Drugs (dea.gov)

# **Xylazine Throughout the US**

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

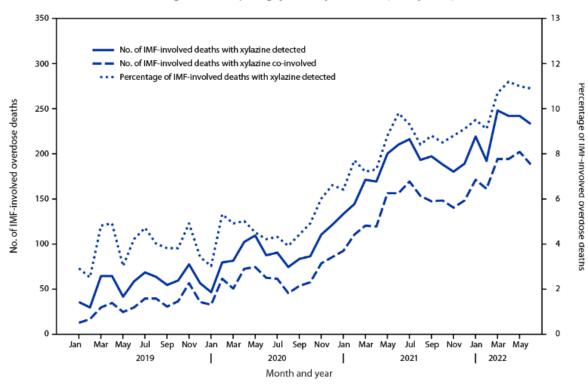
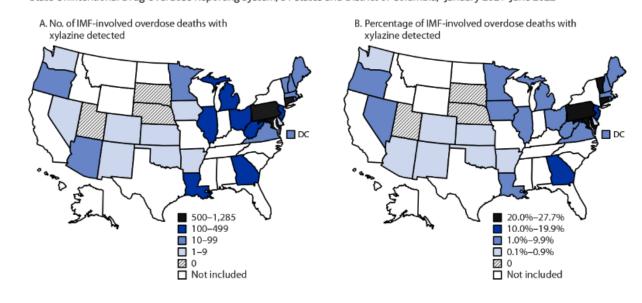


FIGURE 2. Number and percentage of drug overdose deaths involving\* illicitly manufactured fentanyls, by xylazine detection or co-involvemen

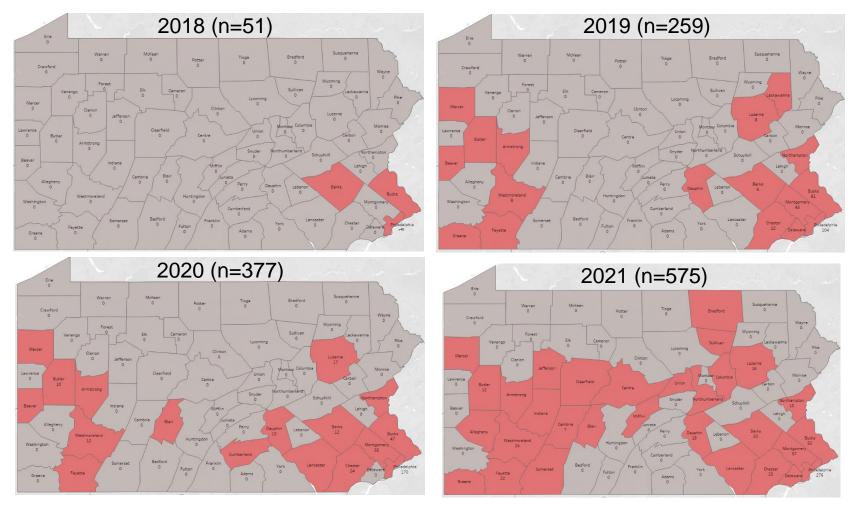
— State Unintentional Drug Overdose Reporting System, 31 states and District of Columbia, lanuary 2021–June 2022

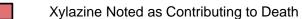


Kariisa M, O'Donnell J, Kumar S, Mattson CL, Goldberger BA. Illicitly Manufactured Fentanyl–Involved Overdose Deaths with Detected Xylazine — United States, January 2019–June 2022. MMWR Morb Mortal Wkly Rep 2023;72:721–727.



## **Emerging Fatal Overdose Trends: Xylazine in Pennsylvania**







# **Emerging Fatal Overdose Trends: Xylazine in Pennsylvania**

| Year  | Number of Overdose Deaths where Xylazine Contributed to Death | Number of Counties where Xylazine Contributed to Death |
|-------|---|--|
| 2017  | 0   | 0  |
| 2018  | 51  | 3  |
| 2019  | 259   | 17   |
| 2020  | 377   | 17   |
| 2021  | 575   | 30   |
| 2022* | 760   | 39   |

<sup>\*2022</sup> death data is preliminary, based on death record data as of July 2023. Please note that death records for overdose deaths are often delayed by 3-6 months and counts may change.

# **Counterfeit Pills**

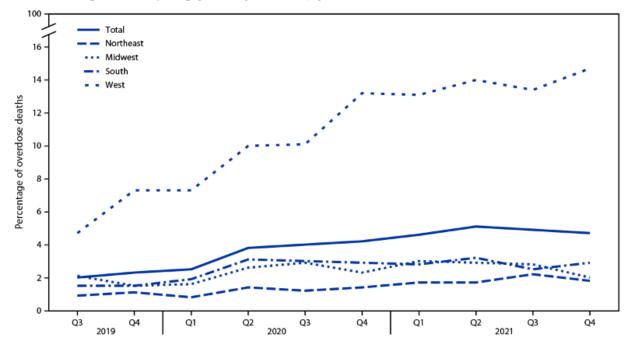
Table 7. Drug Product exhibit #2

| Drug Class Drug Found* Confirmed Levels: mg of drug/gram of drug product (%)  Exhibit 1: Total Weight – 112.0 mg |                                   |    |                | Actual Amount<br>within Drug Product |
|--|-----------------------------------|----|----------------|--------------------------------------|
| Pain Reliever  | Acetaminophen <sup>1</sup>        |    | 966 (96.6)     | 108 mg                               |
| Opioid   | Fentanyl <sup>2</sup>             |    | 35 (3.5)       | 3.9 mg                               |
| Precursor  | 4-ANPP <sup>3</sup>               | WA | 3.2 (0.32)     | 0.36 mg                              |
| Precursor  | N-Methyl Norfentanyl <sup>3</sup> |    | 0.015 (0.0015) | 0.0017mg (1.7 μg)                    |
| Opioid   | Acetyl Fentanyl <sup>4</sup>      |    | 0.014 (0.0014) | 0.0016 mg (1.6 μg)                   |

Figure 3: Drug Product exhibit #2 - Blue "M30" Tablet



FIGURE. Percentage of drug overdose deaths with evidence of counterfeit pill use, by quarter\* and U.S. Census Bureau region† — State Unintentional Drug Overdose Reporting System, 30 jurisdictions, July 2019–December 2021





- DEA TOX Quarterly Report-2<sup>nd</sup> Quarter 2022
- O'Donnell J, Tanz LJ, Miller KD, et al. Drug
   Overdose Deaths with Evidence of Counterfeit Pill
   Use United States, July 2019–December 2021.
   MMWR Morb Mortal Wkly Rep 2023;72:949–956

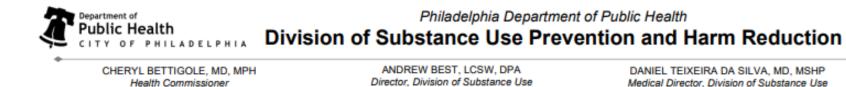


# "-Nitazenes"

- 2-benzylbenzimidazole analogs or "-nitazenes" infrequently identified in PA and elsewhere
- Up to ~10x as potent as fentanyl (but ~1/10<sup>th</sup> as potent as carfentanil)
- Total/effective dose of naloxone similar to that required for fentanyl, but repeat dosing has been reported in tiny patient cohort due to prolonged effects<sup>1</sup>

Prevention and Harm Reduction

Potential for prolonged sedation



#### **Health Alert**

Prevention and Harm Reduction

Nitazene analogs, a novel class of synthetic opioids more potent than fentanyl, detected in Philadelphia

December 21, 2022

#### SUMMARY POINTS

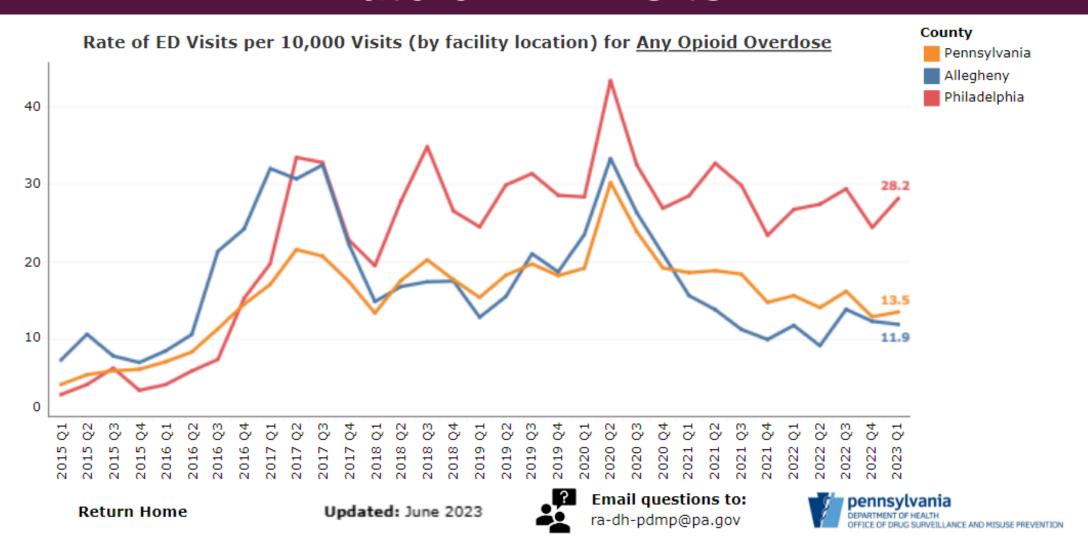
- Nitazene analogs are synthetic opioids that are up to 40 times more potent than fentanyl
- First identified in the United States in 2019
- First identified in Philadelphia as early as October 2022
- Individuals who experience an opioid overdose after using nitazene analogs will respond to naloxone (e.g., Narcan®).

 Amaducci A, Aldy K, Campleman SL, Li S, Meyn A, Abston S, Culbreth RE, Krotulski A, Logan B, Wax P, Brent J, Manini AF; Toxicology Investigators Consortium Fentalog Study Group. Naloxone Use in Novel Potent Opioid and Fentanyl Overdoses in Emergency Department Patients. JAMA Netw Open. 2023 Aug 1;6(8):e2331264. doi:

> 10.1001/jamanetworkopen.2023.312 64. PMID: 37642962; PMCID: PMC10466160.



### Rate of ED Visits



<sup>1.</sup> Pennsylvania ODSMP – Drug Overdose Surveillance Interactive Data Report | Tableau Public. Accessed 6/28/2023



# Creating a Continuum from Use to Recovery

Active Substance Use Contemplation and Engagement

Early Treatment Early Recovery

Sustained Recovery



### **Harm Reduction**

- "Harm reduction is a set of practical strategies and ideas aimed at reducing negative consequences associated with drug use. Harm Reduction is also a movement for social justice built on a belief in, and respect for, the rights of people who use drugs."
- "Harm reduction" is at the core of all healthcare, not just substance use disorder
- "The physician must...have two special objects in view with regard to disease, namely to do good or to do no harm."-Hippocrates
  - By not reducing harm when one has the capacity to do so you are, in fact, inflicting harm

- 1. Harm Reduction Principles | National Harm Reduction Coalition. Accessed 9/15/2022
- 2. Hajar R. The Physician's Oath: Historical Perspectives. Heart Views. 2017 Oct-Dec;18(4):154-159. doi: 10.4103/HEARTVIEWS.HEARTVIEWS\_131\_17. PMID: 29326783; PMCID: PMC5755201.



### **Harm Reduction**

### Naloxone

Fentanyl and Xylazine Test Strips

 Syringe service programs (where available)

Safe Consumption Sites





# Syringe Service Programs (SSPs)

- 50% reduction in incidence of HIV and Hep C
- New users of SSPs are:
  - 5x more likely to enter SUD treatment
  - 3x more likely to stop using drugs
- Decreased overdose mortality
- Reduce the presence of discarded needles
- No difference in crime rates in areas with and without SSPs



# Overdose Prevention Supplies

### **PA Overdose Prevention Program**

The *Pennsylvania Overdose Prevention Program (POPP)* launched in August 2023 as a joint initiative between the Pennsylvania Commission on Crime and Delinquency (PCCD) and the <u>Pennsylvania Department of Drug and Alcohol Programs (DDAP)</u>. The program offers multiple formulations of naloxone as well as drug checking strips designed to detect xylazine and fentanyl at no cost to individuals and organizations across Pennsylvania.

POPP's goal is to enhance community-based distribution and harm reduction efforts, with a focus on reaching individuals with the greatest risk of experiencing overdose. These include, but are not limited to, the following populations:

- · People who are currently using substances;
- · People who know someone currently using substances;
- · Individuals using syringe service programs (SSPs) and harm reduction services; and
- · Justice-involved individuals with substance use disorders, including people who were recently incarcerated.

#### **How to Request Overdose Prevention Supplies**

Any organization in Pennsylvania who is interested in naloxone and/or drug checking strips may make a request to receive these supplies at no cost using an interactive map on PCCD's website (coming soon!) or the **POPP Request Form** .

Organizations requesting supplies through the POPP Request Form will be asked to provide information on the type(s) of product you would like to receive, how much product you are requesting, and how you plan to use the supply.

PCCD is currently able to purchase the following products:

- Intranasal 4mg naloxone (Narcan, Padagis)
- Intranasal 8mg naloxone (Kloxxado)
- Intramuscular naloxone (vials only various products)
- Fentanyl test strips (BTNX, DanceSafe)
- Xylazine test strips (BTNX, DanceSafe)

Pennsylvania Overdose Prevention Program (pa.gov)



### Make "Meeting people where they are" mean something



Home About Events Advocacy Support Contact

### Support Us Find a location Call our team If you use drugs, we help you stay safe. Our service is free, easy, private and hassle-free. Why you can trust us How our What service you can works get

#### Find a location

We have one office location, and four mobile van locations. You don't need to call ahead, but do check hours first. We are open only at certain times.











Prevention Point Pittsburgh (pppgh.org)



### Make "Meeting people where they are" mean something



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### **UPMC CLINIC CARE**



√ Need Help? Call us.

1-877-637-2924

Send us a Message

# Center for Inclusion Health

At Allegheny Health Network (AHN), we believe all people should have access to the high-quality, personalized care we offer across western Pennsylvania.

#### Featured Services

Our programs address the obstacles that make it hard for people to access care, helping to improve people's health while reducing costs.

#### Center for Recovery Medicine

We are committed to connecting more patients and families with life-changing substance abuse treatment. Learn more about recovery medicine. Call (412) 359-4644 to learn more.

LEARN MORE

#### Homeless Health Care

We help people in unstable living situations by providing care at multiple homeless shelters, on the streets, in hospitals, and at other locations. To learn more, contact inclusionhealth@ahn.org.

GET CONNECTED

#### Positive Health Clinic

We offer rapid HIV testing and comprehensive care people affected by HIV. Providers who specialize HIV management provide this care. Contact (412) 359-3360 to learn more

CHECK OUT OUR PROGRAM

HOME

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EVENTS

NEWS

CONTACT US



YOUR CARE

**ENGAGE** 

GIVE

Behavioral Health Addiction Services Intellectual Disabilities Physical Health Intervention Services Homeless Services Faith Communities



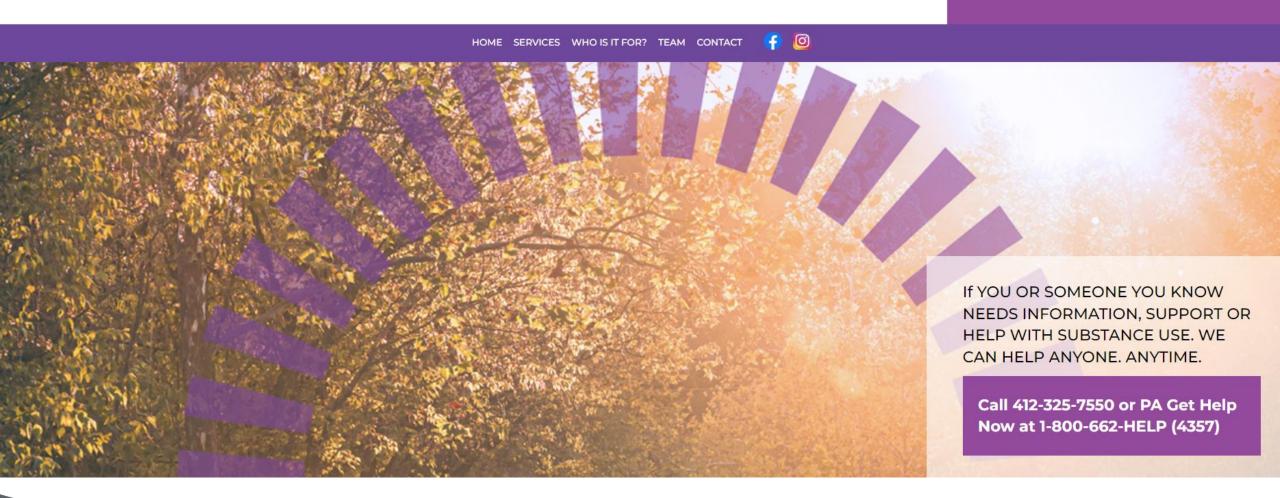
#### **Homeless Services**

<u>The Clinic - Second Avenue Commons</u>
<u>Center for Inclusion Health | Allegheny Health Network (ahn.org)</u>
About Pittsburgh Mercy's Operation Safety Net® - Pittsburgh Mercy



We are open 365 days per year 24 hours per day 7 days per week Call 412-325-7550 or PA Get Help Now at 1-800-662-HELP (4357)

> 326 Third Avenue Pittsburgh, PA 15222



# Recovery Community Organizations

#### **Programs and Services Available**



ABOUT US

CHEDULE

REQUEST SUPPORT

CONTACT US

SUPPORT RECOVERY





#### Pittsburgh, PA - Recovery Community Center



Our Pittsburgh Recovery Community Center (RCC) is the first and only RCC and RCO in Pittsburgh! Located in the Southside, we employ a range of non-clinical peer recovery support specialists to provide individual & family member and loved one recovery support services, community education and training, and a 7 day a week drop-in center for use

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#### Peer Recovery Support Services

Partner with one of our certified peer recovery support specialists to work on your personal journey. Specialized services for individuals living with mental health and substance use concerns; family members; pregnant and postpartum mothers; individuals returning from incarceration; and those who are interested in reducing the harm related to substance use.



#### **Family Support Services**

Our family peer recovery support specialists work directly with family members and loved ones to learn more about recovery, mental health, substance use, and craft their own individual recovery plans to build the skills and recovery capital to live healthy and successful lives.



#### **Prosocial Activities and Mutual Aid Meetings**

We offer in-person, digital, and virtual all recovery meetings (general, women's, LGBTQ+, & family), 12-step recovery meetings, harm reduction works meetings, movie and game nights, & life skills workshops each week. No need to enroll in 1 on 1 services to participate.



#### **Recovery Friendly Workplace & Employment Support**

Local employers can work with our team of Recovery Friendly Workplace peer specialists to become RFW certified and better support their employees in or seeking recovery. We also work with individuals who are unemployed and underemployed to support their recovery and secure gainful employment with a recovery friendly employer in their area.



#### **Pregnant and Postpartum Recovery Support**

Pregnant and postpartum mothers who are currently using substances, engaged in substance use disorder treatment, or actively in recovery can partner with one of our PPR peer specialists to actively work on their recovery and being a parent in recovery. Services include direct support, resource navigation, care coordination, parenting education and workshops, housing and childcare support, and more.



#### **Re-entry and Forensic Peer Support**

Individuals who are returning from incarceration, currently incarcerated, or otherwise in the justice system can partner with a forensic peer specialist to navigate their recovery, their legal system concerns, and identify key social determinants of recovery that need to be addressed in the short and long term.



#### Overdose Response and Harm Reduction Services

We train individuals, organizations, and other community stakeholders how to identify and respond to overdose events, utilize naloxone to reverse opioid overdose events, test their substances with fentanyl and xylazine test strips, and otherwise support individuals at elevated risk of an overdose in their local communities. We also distribute personal hygiene kits, safer use kits, food, clean clothing supplies, and daily essentials to those in need.



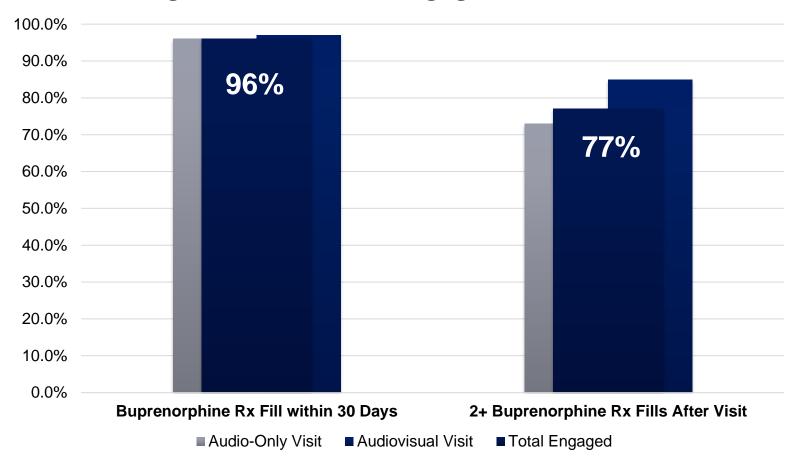


# UPMC Medical Toxicology Telemedicine Bridge Program

UPMC Medical Toxicology is providing addiction medicine bridge clinic services via telemedicine throughout Pennsylvania in collaboration with the PA Department of Drug and Alcohol Programs and local Single County Authorities (SCAs).

# **Excellent Rate of Engagement in Buprenorphine Treatment**

Telemedicine Bridge Clinic Patients Engaged in OUD Medication Treatment



Lynch MJ, Houck P, Meyers J, Schuster J, Yealy DM. Use of a Telemedicine Bridge Clinic to Engage Patients in Opioid Use Disorder Treatment. J Addict Med. 2022 Mar 7. doi: 10.1097/ADM.000000000000967. Epub ahead of print. PMID: 35258040.

### **6 Month Outcomes**

- 150 UPMC For You patients with continuous coverage before and after bridge clinic visit for OUD
- Increased outpatient behavioral health and primary care utilization; decreased ED and inpatient utilization
- Reduction in costs 6 months after first bridge visit comparted to month before
  - 62% reduction in unplanned care costs
  - 38% reduction in all care costs excluding pharmacy
  - 10% reduction in all care costs including pharmacy
- Median days of buprenorphine treatment increased from 0% to 73% with persistent mean and median coverage >50% after 6 months



### Prehospital Buprenorphine and Harm Reduction

- Pilot project initiated by City of Pittsburgh EMS in 11/2021
  - 3<sup>rd</sup> jurisdiction in the country to implement
- Patients in adequate withdrawal or otherwise appropriate for buprenorphine therapy
- Coupled with warm handoff through Pittsburgh Poison Center and scheduling at telemedicine bridge clinic
- Leave behind naloxone for patients who decline transport
- Harm reduction resources provided to >500 patients

Pittsburgh (PA) EMS Begins Administering Buprenorphine for Opioid Overdoses

By JEMS Staff - 11.23.2021













Photo/Pittsburgh EMS



<sup>1.</sup> Carroll GG, Wasserman DD, Shah AA, Salzman MS, Baston KE, Rohrbach RA, Jones IL, Haroz R. Buprenorphine Field Initiation of ReScue Treatment by Emergency Medical Services (Bupe FIRST EMS): A Case Series. Prehosp Emerg Care. 2021 Mar-Apr;25(2):289-293. doi: 10.1080/10903127.2020.1747579. Epub 2020 May 4. PMID: 32208945

<sup>2.</sup> Pittsburgh (PA) EMS Begins Administering Buprenorphine for Opioid Overdoses - JEMS: EMS, Emergency Medical Services

Training, Paramedic, EMT News

# **Emergency Department Interventions**

- Stigma reduction and screening
- Harm Reduction Interventions
  - Naloxone to go (7000 kits in 4.5 years)
  - Fentanyl test strips to go
  - Xylazine test strips to go
- Buprenorphine induction
  - Varying strategies
- Buprenorphine prescribing
  - X-waiver elimination
  - Buprenorphine to go
- Warm handoff
  - EHR Order
  - ED Outpatient Care Coordinators
  - Virtual platform



### Pennsylvania Substance Use Navigation (PA-SUN) Program

The Pennsylvania Substance Use Navigation (PA-SUN) Program is a new statewide initiative to enhance treatment options for patients with opioid use disorder (OUD) by increasing access to medication-assisted treatment (MAT) using Food and Drug Administration-approved medication for the treatment of OUD in Emergency Departments (EDs).

PA-SUN aims to reduce opioid overdose deaths by:

- Increasing the number of EDs that are prepared to initiate buprenorphine, prescribe or dispense naloxone, and facilitate linkage to treatment, and
- 2. Reducing barriers and supporting clinical quality improvement.

The Department is offering EDs in Pennsylvania the opportunity to receive free technical assistance, consultation, and support from expert opioid medical consultant clinicians with OUD treatment knowledge to optimize care for patients with OUD.

Collaboration with the PA-SUN Program may help hospitals receive performance incentive payments through the Hospital Quality Improvement Program (HQIP). More information on HQIP ED OUD treatment incentive payments may be found on the  $\underline{\text{DHS website}}.$ 



# **Hospital Addiction Care**

- Specialized addiction consult team including initiation of buprenorphine<sup>1</sup>:
  - 72% engagement in outpatient treatment VS.
  - 12% in patients who were simply detoxified
  - Reduced 30 day illicit drug use
- Internal Medicine and Toxicology provide hospital-based addiction medicine consultation
  - Safar telecare and telemedicine consultations available to all UPMC PA hospitals
  - Critical collaboration with social work, addiction nurses, pharmacy
  - Promote seamless continuation of care to community or residential treatment providers



### **Post-Acute Care**

- Inpatient withdrawal management and medical recovery care (Mercy and Mckeesport)
- Skilled Nursing placement is a consistent barrier
  - Bethlehem Haven Medical Respite Care
  - Kane Mckeesport substance use disorder unity
  - UPMC/UPMC Health Plan Senior Living pilot

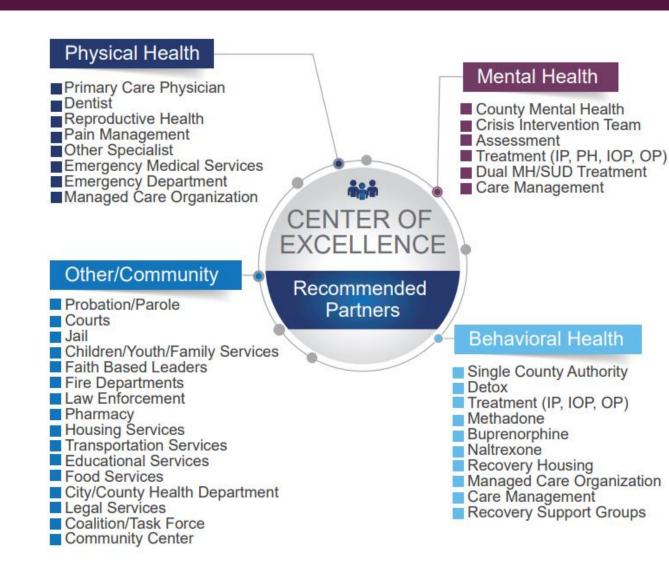


# Treatment During and After Incarceration

- Overdose death rate is ~10x higher in the first 2 weeks after release from jail compared to the general population<sup>1</sup>
  - Risk is higher in women and individuals with mental health disorders
- Any history of incarceration is associated with a ~4x greater risk of overdose death<sup>2</sup>
- Expanding MOUD access at county, state, and federal jails is critical
- Transition to community care including medications and harm reduction
- Gaps in healthcare coverage can complicate existing barriers
- AHN Rethinking Incarceration and Empowering Recovery (RIvER) Clinic
  - 1. Hartung DM, McCracken CM, Nguyen T, Kempany K, Waddell EN. Fatal and nonfatal opioid overdose risk following release from prison: A retrospective cohort study using linked administrative data. J Subst Use Addict Treat. 2023 Apr;147:208971. doi: 10.1016/j.josat.2023.208971. Epub 2023 Feb 10. PMID: 36821990.
  - 2. Gan WQ, Kinner SA, Nicholls TL, Xavier CG, Urbanoski K, Greiner L, Buxton JA, Martin RE, McLeod KE, Samji H, Nolan S, Meilleur L, Desai R, Sabeti S, Slaunwhite AK. Risk of overdose-related death for people with a history of incarceration. Addiction. 2021 Jun;116(6):1460-1471. doi: 10.1111/add.15293. Epub 2020 Nov 27. PMID: 33047844.

# Centers of Excellence

- 35 Sites in Allegheny County designated as opioid Centers of Excellence (COEs)
- Rapid access to OUD treatment
- Access to peer support and care coordination
- Access to behavioral health resources
- Ideally integrated into primary care infrastructure for long-term transition



Centers of Excellence (pa.gov)



# Maintaining Long-Term Recovery

- Residential therapy for appropriate patients, e.g. polysubstance, co-occurring mental health, unstable environment
- Transition of medical care, e.g. MOUD/MAUD, to primary care providers
- Ensure access to mental health care
- Community and family support services; support social needs, employment, etc.
- Maintain vigilance given lifelong impact of substance use disorder and potential return to use
- Refer to more intensive care as needed



Active Substance Use Contemplation and Engagement

Early Treatment Early Recovery Sustained Recovery

- Harm Reduction
- SDOH
- Safe spaces

- Stigma/Language
- Peer Support
- System navigation

- Low Barrier
- Comfort
- Rapidly accessible
- Any door or window

- Withdrawal management
- SDOH
- Mental and physical health

- Social supports
- Coping and relapse prevention planning
- Mental and physical health maintenance

# **Non-linear Continuum of Care**





# **Questions?**



