



**DIVISION OF  
SUBSTANCE USE  
PREVENTION AND  
HARM REDUCTION**

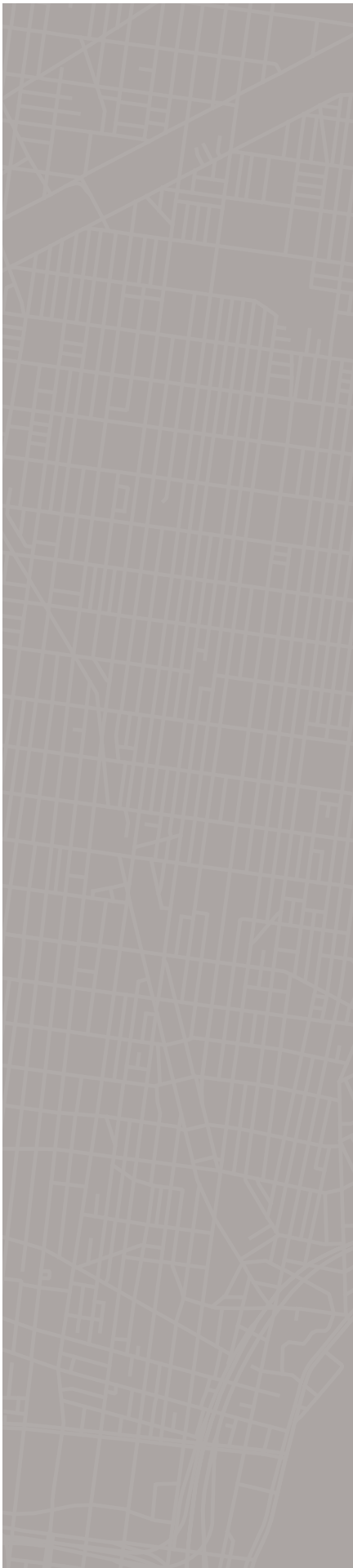
**2021**

**ANNUAL REPORT**



Department of  
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CITY OF PHILADELPHIA



**PRIMARY AUTHORS:**

- Aoife Andrews, MPH
- Maya Puleo, MPH
- Jewell Johnson, MPH
- Dana Higgins, MPH

**CONTRIBUTORS AND EDITORS:**

- Jennifer Shinefeld, MS
- Neha Sastry, MPH
- Melissa Miller, MPH
- Eman Addish, MPH
- Annie Brogan, MPA
- Deborah Hinds, MPH
- Zoe Soslow, MS
- Dana Kurzer-Yashin, BA
- Jeffrey Hom, MD, MPH
- Andrew Best, DPA, MPA, MSS, LCSW
- Daniel Teixeira da Silva, MD, MSHP

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## TABLE OF CONTENTS

INTRODUCTION .....	4
REPORT HIGHLIGHTS .....	5
SURVEILLANCE .....	6
Prescribing Trends .....	6
Morbidity .....	11
Emergency Medical Services .....	11
Emergency Department Visits .....	12
Maternal and Child Outcomes .....	13
Hospitalizations .....	15
Infections Related to Substance Use .....	18
Mortality .....	22
RESPONDING TO THE HARMS OF SUBSTANCE USE .....	30
Laws and Policies .....	30
Academic Detailing .....	31
Community Response .....	32
Environmental Impact .....	35
SUPPLEMENTAL TABLES .....	37

# INTRODUCTION

The Substance Use Prevention and Harm Reduction (SUPHR) division at the Philadelphia Department of Public Health (PDPH) aims to ensure that people who use drugs receive the harm reduction and treatment resources needed while reducing the number of people who initiate the use of illicit opioids and other drugs. During the COVID-19 pandemic, overdoses and other harms associated with substance use, such as skin and soft tissue infections, houselessness, and social and structural stigma toward people who use drugs, continued to impact Philadelphia and its' people. While substance use has been a public health priority, the current lethality of illicitly manufactured synthetic opioids, specifically fentanyl and its analogues, has escalated this priority into a public health emergency.

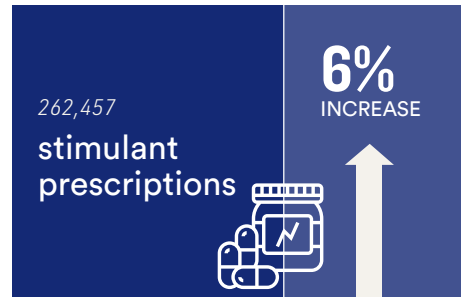
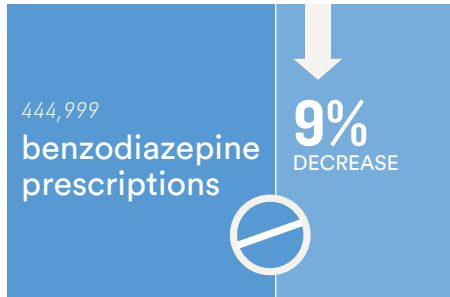
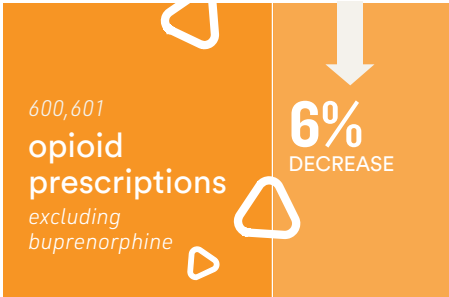
More recently, exposure to illicitly manufactured synthetic opioids has impacted communities of color in Philadelphia. Stimulant-only deaths have been, and continue to be, highest among non-Hispanic Black Philadelphians. However, since 2019, deaths involving opioids and stimulants have been increasing at rates higher for non-Hispanic Black Philadelphians compared to other racial and ethnic groups in the city. The rapid increase in deaths involving opioids and stimulants is likely from fentanyl and its analogues being added to counterfeit pressed pills that resemble legitimate prescriptions or individuals mixing it, unintentionally or intentionally, with other illicit substances like heroin or cocaine. Moreover, SUPHR is keenly aware of and committed to addressing the ramifications caused by the carceral strategies used in the “War on Drugs” approach. Instead of using this as an opportunity to develop a treatment and harm reduction infrastructure, governments chose to incarcerate individuals resulting in a services vacuum in the current opioid crisis. While people of all races and ethnicities who use opioids may still struggle to access available resources like medications for opioid use disorder, people who use stimulants navigate a dearth of treatment options, partly because of the lack of FDA-approved drugs to treat stimulant use.

Moving forward, SUPHR will continue to prioritize the development of culturally responsive treatment and harm reduction materials, the use of drug checking to inform people who use drugs about the composition of the drugs they're using, as well as strengthening ongoing connections and partnerships with diverse community-based organizations that serve populations uniquely impacted by the drug epidemic, past and present. This report describes the trends of controlled substance prescriptions, the health effects and mortality of substance use, the division's community response, and policies enacted in 2021.



REPORT HIGHLIGHTS

**IN 2021** compared to 2020



Emergency Department Visits:



2,192 individuals were trained to use naloxone in 100 training sessions.

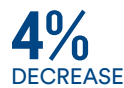
(43 virtual/39 in person/18 pop-up)

1,276 unintentional overdose deaths occurred.

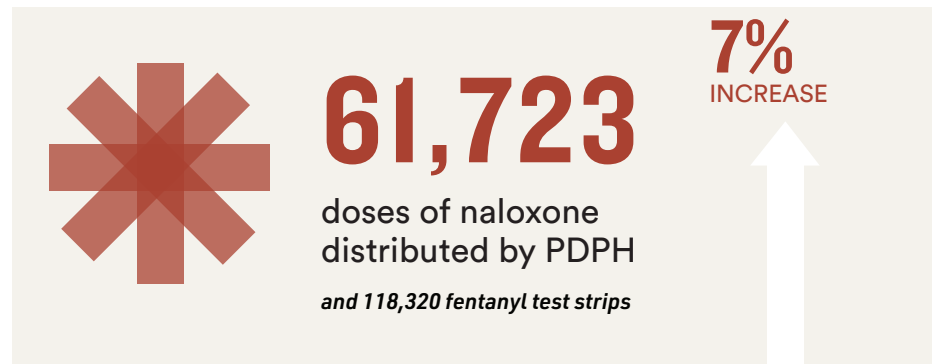
5% increase from 2020

581 opioid overdose-related non-fatal hospitalizations occurred.

18% decrease from 2020



263 cases of neonatal abstinence syndrome were reported to PDPH.



EMERGENCY MEDICAL SERVICES



PRESCRIBING TRENDS

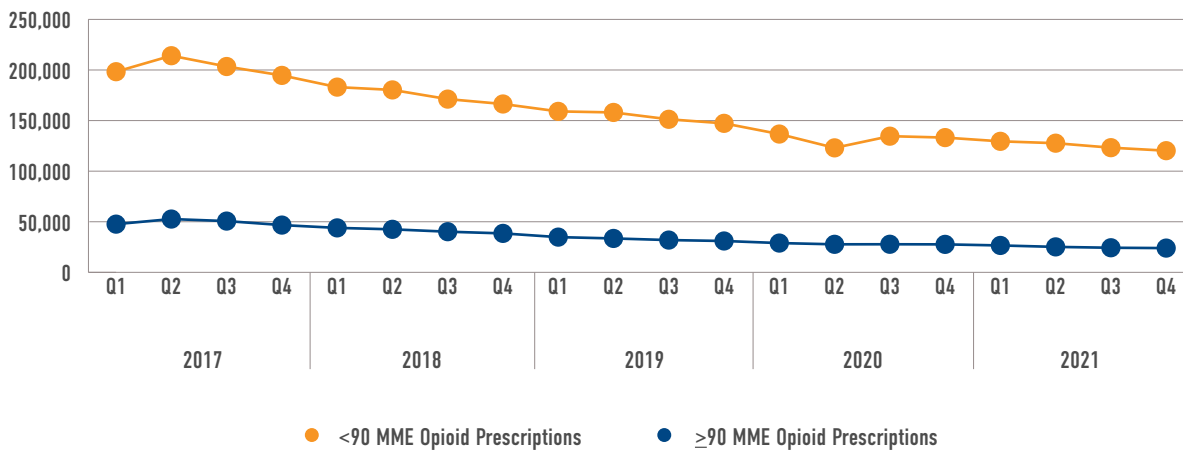
While prescription medications are dispensed to Philadelphia residents daily, certain prescriptions dispensed to Philadelphia residents are monitored via the Pennsylvania Prescription Drug Monitoring Program (PDMP) to reduce the potential for misuse and diversion. The PDMP is an electronic database, implemented in 2016, that collects information on all controlled substances, including opioid (e.g. Percocet and buprenorphine), benzodiazepine (e.g. Ativan and Xanax), and stimulant (e.g. Adderall and Ritalin) prescriptions. Counts of prescriptions, prescribers, and patients may differ from previous reports as the Pennsylvania Department of Health has recently implemented more frequent updates of prescriber practice locations to more accurately reflect prescriptions associated with prescribers who have their primary practice address located in Philadelphia.

OPIOID PRESCRIBING

- There were 120,246 opioid prescriptions (excluding high doses) dispensed to Philadelphia residents in the last quarter of 2021, a decrease of 39% from the first quarter of 2017 (Figure 1).

During the same period, there were 23,968 high dose prescriptions, opioid prescriptions that are 90 morphine milligram equivalents (MME) or higher, dispensed to Philadelphia residents, a decrease of 50% from the first quarter of 2017 (Figure 1).

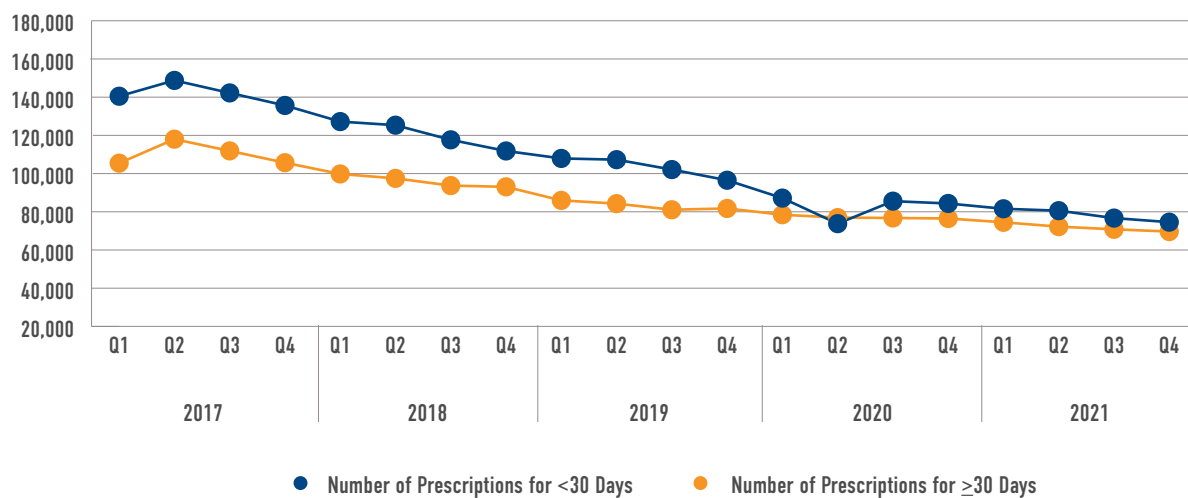
FIGURE 1  
NUMBER OF OPIOID PRESCRIPTIONS (EXCLUDING BUPRENORPHINE)  
PRESCRIBED TO RESIDENTS PER QUARTER



Data Source: Pennsylvania Prescription Drug Monitoring Program

- The number of opioid prescriptions with a days' supply less than 30 days decreased 47% from 140,491 prescriptions in the first quarter of 2017 to 74,570 prescriptions in the last quarter 2021 (Figure 2). The number of opioid prescriptions with a days' supply of 30 days or more decreased 34% from 105,454 prescriptions in the first quarter of 2017 to 69,644 prescriptions in the last quarter 2021 (Figure 2).
- During the last two quarters of 2021, there was a surge of COVID-19 transmission that may have led to elective surgeries and procedures being canceled in an effort to reduce COVID-19 transmission, similar to the initial outbreak of COVID-19 in the second quarter of 2020. Despite these potential cancellations, the number of prescriptions with a days' supply less than 30 days did not drop below the number of prescriptions with a days' supply of 30 or more days, like in the second quarter of 2020.

**FIGURE 2**  
**NUMBER OF OPIOID PRESCRIPTIONS (EXCLUDING BUPRENORPHINE)**  
**PER QUARTER STRATIFIED BY DAYS SUPPLY**

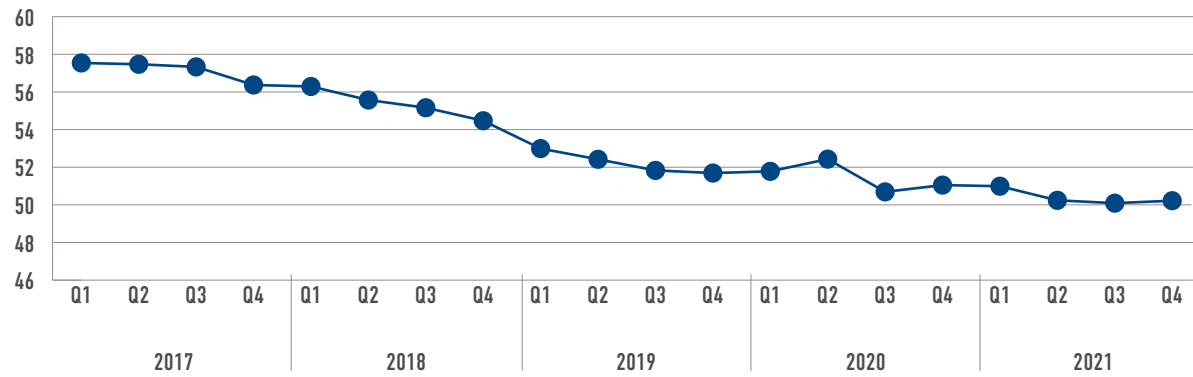


Data Source: Pennsylvania Prescription Drug Monitoring Program

- The average day supply per opioid prescription, excluding buprenorphine prescriptions, remained consistent over time from 19.4 days in the first quarter of 2017 compared to 19.6 days in the last quarter of 2021 (data not shown).
- The median day supply per opioid prescription, excluding buprenorphine prescriptions, slightly increased during the same time period from 22 days in the first quarter of 2017 to 26 days in the last quarter of 2021 (data not shown).

- The average daily MME per opioid prescription, excluding buprenorphine prescriptions, decreased 13% from 57.5 MME in the first quarter of 2017 to 50.2 MME in the last quarter of 2021 (Figure 3).

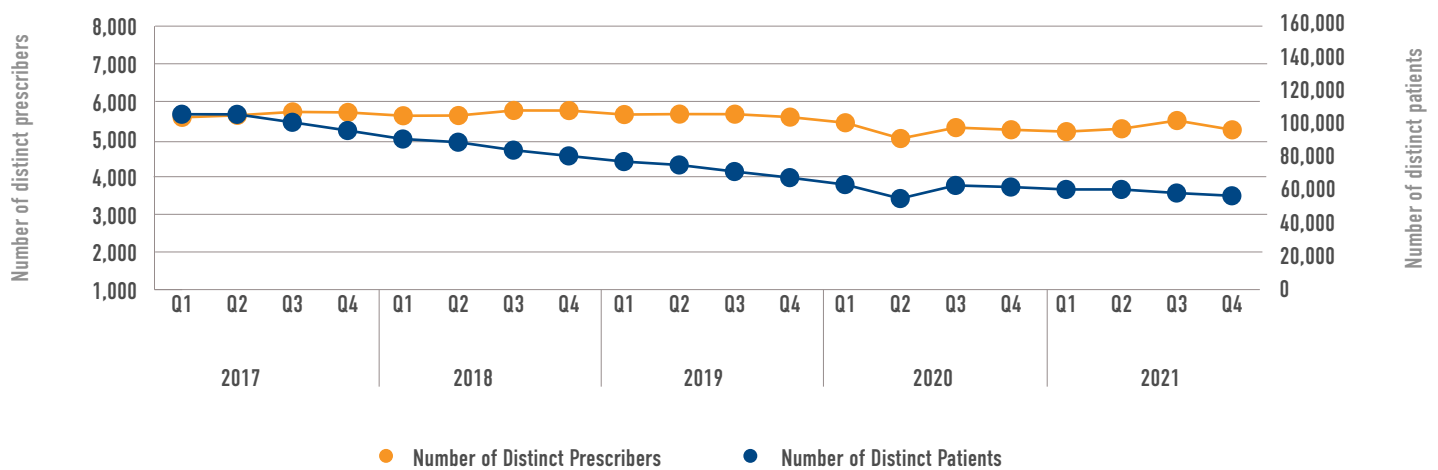
**FIGURE 3**  
**AVERAGE DAILY MME PER OPIOID PRESCRIPTION**  
**(EXCLUDING BUPRENORPHINE) PER QUARTER**



Data Source: Pennsylvania Prescription Drug Monitoring Program

- The number of distinct prescribers who wrote an opioid prescription to Philadelphia residents has remained consistent over time from 5,577 prescribers in the first quarter of 2017 to 5,245 in the last quarter of 2021. During that same time, the number of distinct patients receiving an opioid prescription decreased 45% from 113,122 patients in the first quarter of 2017 to 62,055 patients in the last quarter of 2021 (Figure 4).

**FIGURE 4**  
**NUMBER OF DISTINCT OPIOID (EXCLUDING BUPRENORPHINE)**  
**PRESCRIBERS AND PATIENTS PER QUARTER**



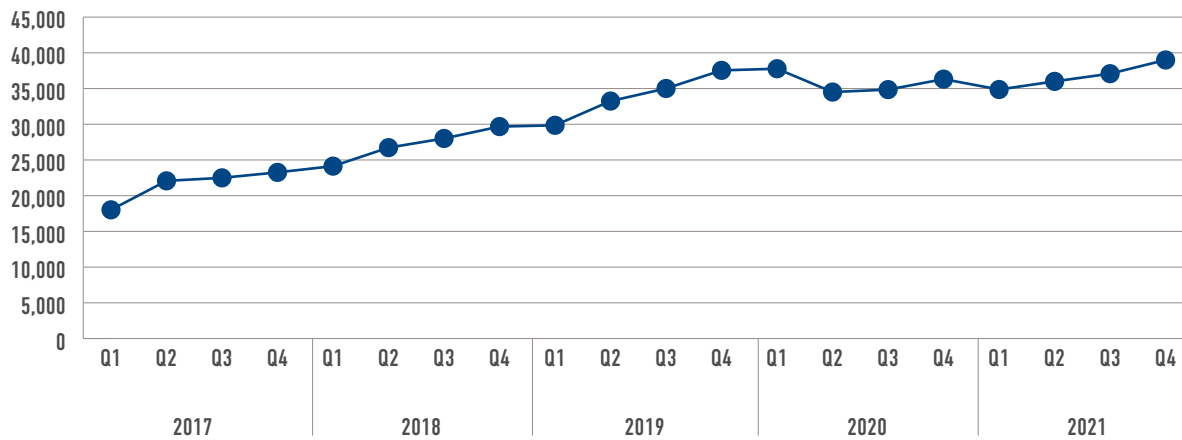
Data Source: Pennsylvania Prescription Drug Monitoring Program



### Buprenorphine prescribing

- Buprenorphine is one of the three medications approved by the Food and Drug Administration (FDA) to treat opioid use disorder (OUD). Buprenorphine can be prescribed in outpatient offices by licensed physicians and advanced practice providers, such as physician assistants and nurse practitioners. Of note, the PDMP does not capture buprenorphine prescriptions dispensed in substance use clinics.
- Between the first quarter of 2017 and the first quarter of 2020, the number of buprenorphine prescriptions increased 110% from 18,018 prescriptions in 2017 Q1 to 37,773 prescriptions in 2020 Q1. However, after the initial onset of the COVID-19 pandemic, there was a 9% decrease in the number of buprenorphine prescriptions dispensed. By the last quarter of 2021, there were 39,000 buprenorphine prescriptions dispensed (Figure 5).

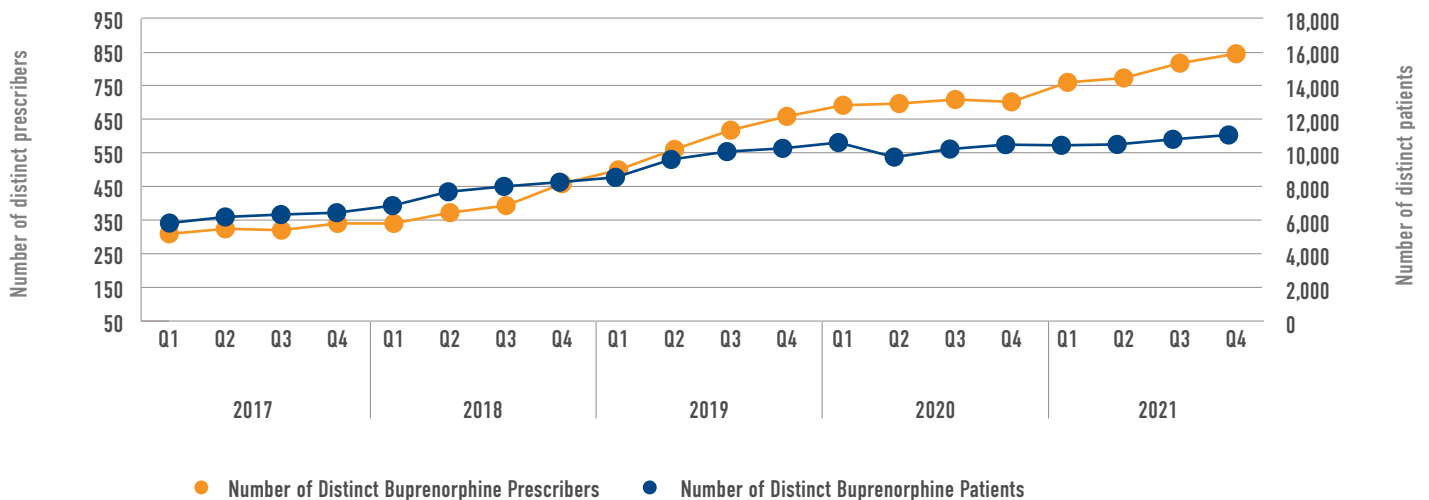
FIGURE 5  
BUPRENORPHINE PRESCRIPTIONS TO RESIDENTS PER QUARTER



Data Source: Pennsylvania Prescription Drug Monitoring Program

- The number of distinct prescribers who wrote a buprenorphine prescription to Philadelphia residents has continued to increase since 2017. However, after an 81% increase between the first quarter of 2017 and the first quarter of 2020, the number of distinct patients receiving a buprenorphine prescription decreased in the second quarter of 2020 and plateaued between the third quarter of 2020 and the second quarter of 2021. By the last quarter of 2021, the number of distinct patients who received a buprenorphine prescription slightly increased to 11,124 patients (Figure 6).

FIGURE 6  
NUMBER OF DISTINCT BUPRENORPHINE PRESCRIBERS  
AND PATIENTS PER QUARTER



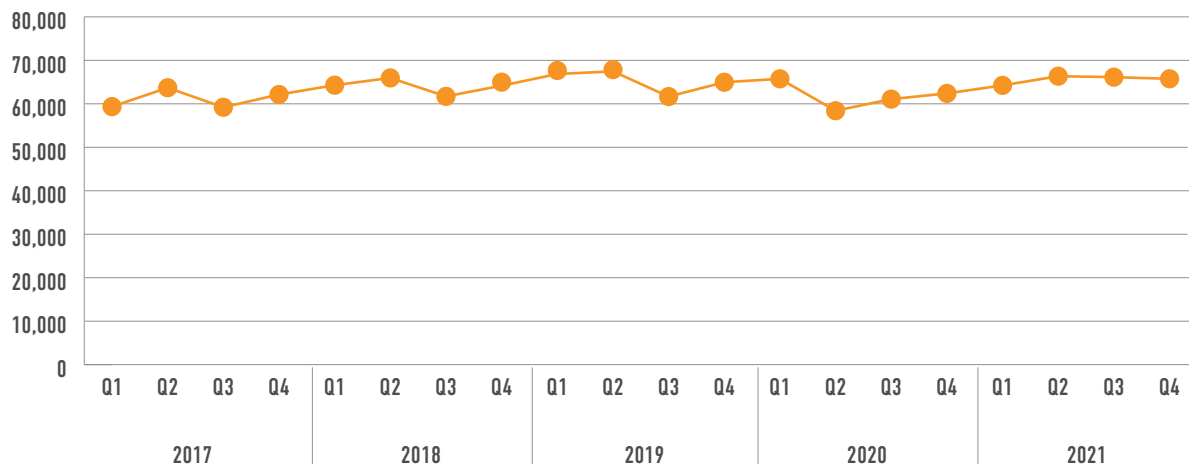
Data Source: Pennsylvania Prescription Drug Monitoring Program

### Stimulant Prescribing

Prescription stimulants are medications used to treat attention-deficit hyperactivity disorder (ADHD). These medications include amphetamine (Adderall), lisdexamfetamine (Vyvanse), and methylphenidate (Ritalin).

- Stimulant prescriptions have increased 11% from 59,355 prescriptions in the first quarter of 2017 to 65,754 prescriptions in the last quarter of 2021 (Figure 7).

**FIGURE 7**  
**NUMBER OF STIMULANT PRESCRIPTIONS RECEIVED BY RESIDENTS**



Data Source: Pennsylvania Prescription Drug Monitoring Program

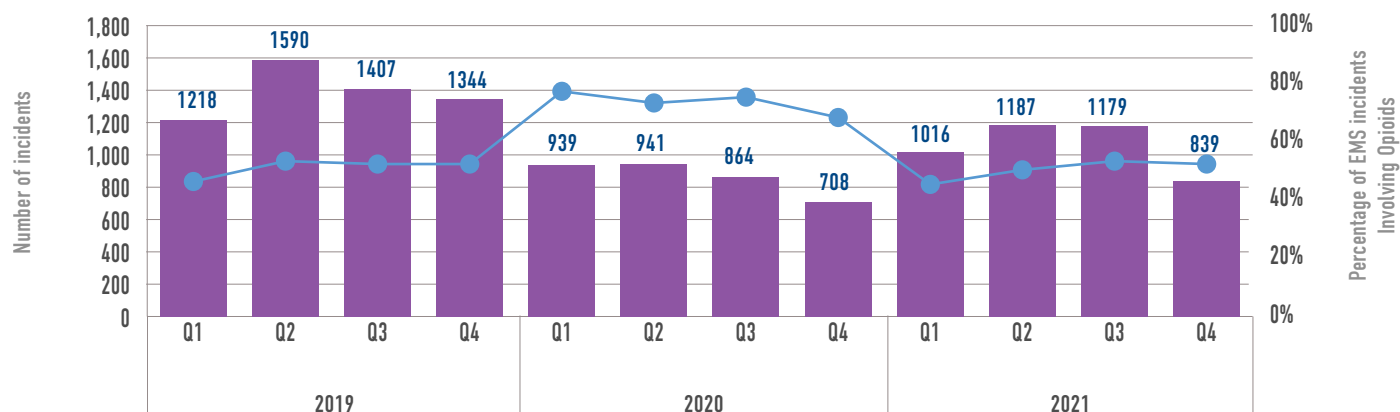
- In addition to opioids and stimulants, benzodiazepines (prescription medications used to treat anxiety, insomnia, and seizure disorders) are also being prescribed to Philadelphians in large quantities. In the last quarter of 2021, 106,956 benzodiazepine prescriptions were dispensed to Philadelphia residents, a 31% decrease from 154,487 benzodiazepine prescriptions dispensed to Philadelphia residents in the first quarter of 2017 (see Supplemental Table 6).

## MORBIDITY

### Emergency Medical Services

- In 2021, there were 4,221 substance-related Emergency Medical Services (EMS) incidents, a 22% increase from the 3,452 substance-related EMS incidents in 2020.
- The proportion of substance-related EMS incidents involving an opioid decreased to 49% (n=2,075) in 2021 from 73% (n=2,504) in 2020.

FIGURE 8  
NUMBER OF SUBSTANCE-RELATED\* EMS INCIDENTS

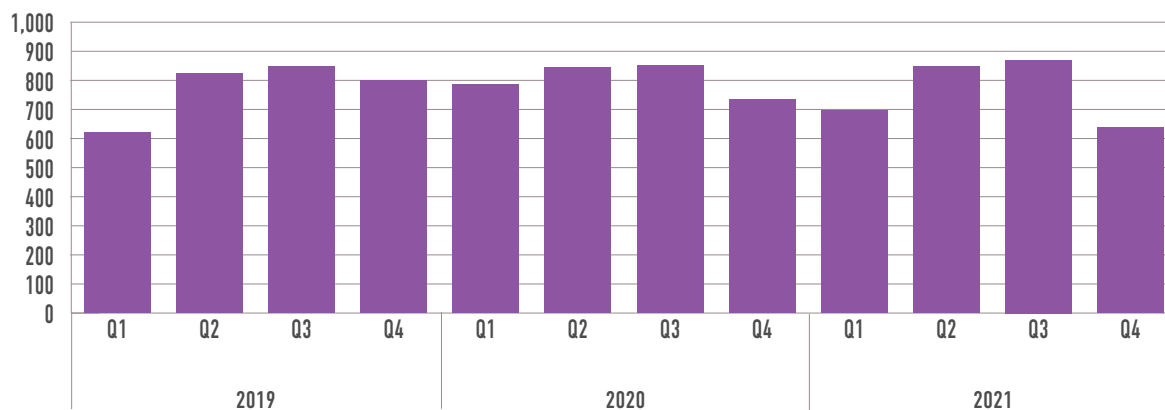


\*Specific to EMS Incidents with Primary Impression of “Cocaine Use”, “Hallucinogen Use”, “Inhaled Substance Use”, “Opioid Use”, and “Substance Use”.

Data Source: Philadelphia Fire Department

- In 2021, there were 3,050 substance-related EMS incidents that involved naloxone being administered by an Emergency Medicine Technician (EMT) or paramedic. The number of naloxone administrations is higher than the number of opioid-involved incidents, as administering naloxone is standard practice when a person has been found unresponsive, regardless of primary impression. Of note, naloxone administrations do not include the number of incidents where a community member administered naloxone.

FIGURE 9  
NUMBER OF NALOXONE DOSES ADMINISTERED BY EMS

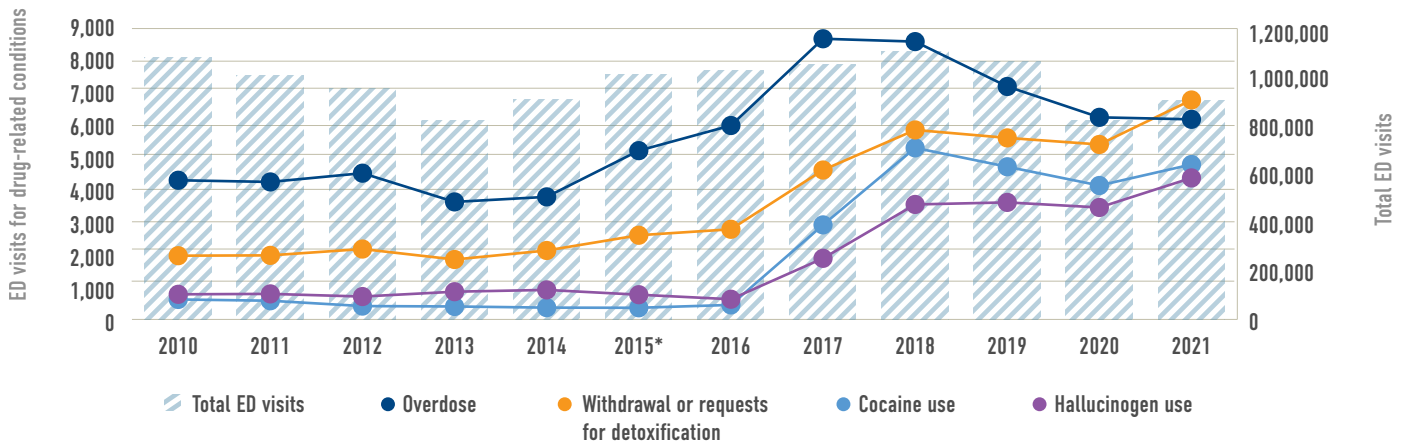


Data Source: Philadelphia Fire Department

## Emergency Department (ED) Visits in 2021

- 6,077 ED visits for overdoses from opioids or unspecified substances, a 1% decrease from 2020 (Figure 10).
- 6,675 visits for withdrawal or requests for detoxification, a 26% increase from 2020 (Figure 10).
- 4,680 visits for cocaine use and 4,264 visits for hallucinogen use, a 16% and 27% increase from 2020, respectively (Figure 10).
- Of note, ED visits for all conditions regardless of diagnosis increased 10% from 2020 to 2021. The total number of ED visits in 2020 decreased due to the COVID-19 pandemic (Figure 10).

FIGURE 10  
NUMBER OF EMERGENCY DEPARTMENT VISITS FOR DRUG-RELATED CONDITIONS



\*The U.S. transitioned to International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) from International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the last quarter of 2015.

Data Source: Philadelphia Department of Public Health Syndromic Surveillance System

## Mandated ED reporting to PDPH

- In 2020, Philadelphia City Council passed legislation requiring acute care hospitals in Philadelphia to report aggregate counts of individuals seen in the ED for substance-related reasons and their discharge disposition to PDPH. Hospitals began reporting data on a quarterly basis in the third quarter of 2020.

### In 2021:

- There were 16 hospitals that reported data to PDPH.
- 11,388 patients were seen in the ED for a visit related to opioid use disorder (OUD).
- 3,315 patients were treated for drug overdoses.
- 6,792 patients received a referral to substance use treatment.
- 3,105 patients were treated with buprenorphine.
- 1,902 patients were prescribed naloxone at discharge.



## Maternal and Child Outcomes

- Opioid use and dependence among people of childbearing age assigned female sex at birth has been a public health concern. Between 2010 and 2015, the rate of maternal opioid use or dependence increased 159% from 6 cases per 1,000 live hospital births in 2010 to 15 cases per 1,000 live hospital births in 2015. Since the peak in 2015, the rate of maternal opioid use decreased 22% to 12 cases per 1,000 live hospital births in 2021 (Figure 11).
- Substance use among pregnant people also increases the risk of giving birth to an infant with neonatal abstinence syndrome (NAS), a clinical diagnosis involving the signs and symptoms that an infant displays when withdrawing from opioids, benzodiazepines, and barbiturates that the infant had been exposed to in the womb. Treating NAS includes medications for opioid use disorder (MOUD) and non-pharmacological treatments.
- Between 2010 and 2018, the rate of NAS increased 109%, from 7 cases per 1,000 live hospital births in 2010 to 14 cases per 1,000 live births in 2018. Since 2018, the rate of NAS decreased 22% to 11 cases per 1,000 live births in 2021. (Figure 12).
- In 2018, NAS was added to the list of conditions that must be reported to PDPH by the Philadelphia Board of Health. Receipt of this information allows PDPH's NAS program to link infants and parenting persons to home visitation programs as well as harm reduction and early intervention services including naloxone training and substance use treatment.
- While the rate of NAS has decreased since 2018 (Figure 12), there were 263 cases of NAS reported to PDPH in 2021, an average of 22 cases per month (Figure 13).

FIGURES 11 and 12

\*The U.S. transitioned to International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) from International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the last quarter of 2015.

Data Source: Pennsylvania Health Care Cost Containment Council

FIGURE 13

Data Source: Philadelphia Department of Public Health, Neonatal Abstinence Syndrome Program

FIGURE 11  
RATE OF MATERNAL OPIOID USE OR DEPENDENCE  
PER 1,000 LIVE HOSPITAL BIRTHS

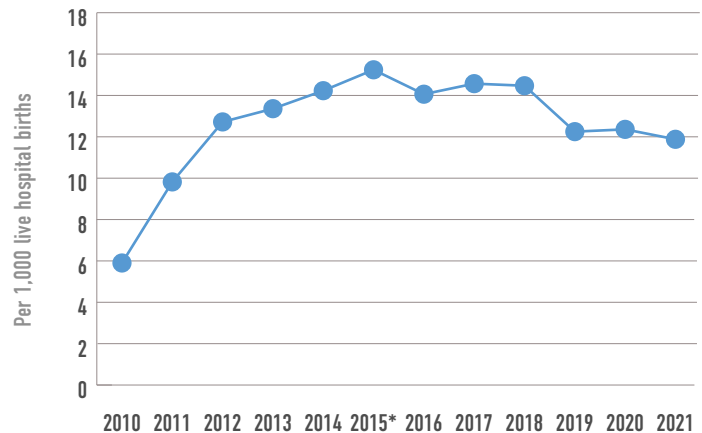


FIGURE 12  
RATE OF NEONATAL ABSTINENCE SYNDROME  
PER 1,000 LIVE HOSPITAL BIRTHS

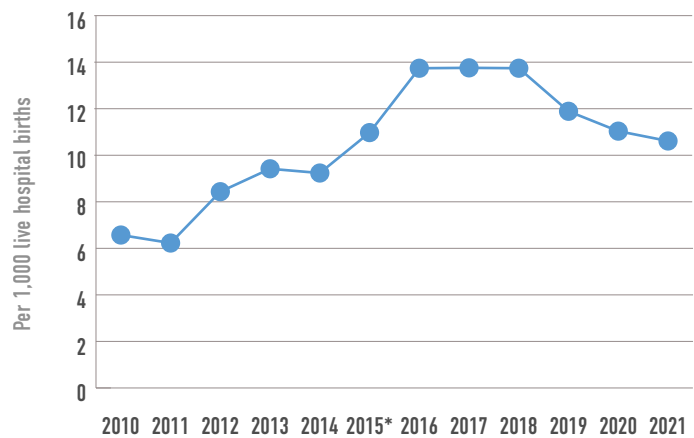
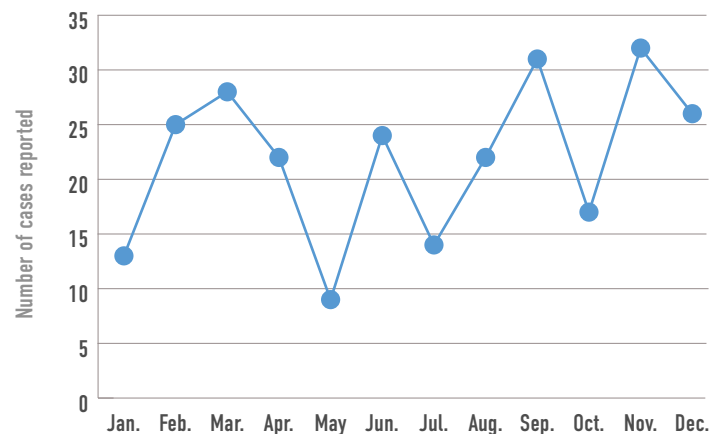


FIGURE 13  
NEONATAL ABSTINENCE SYNDROME CASES REPORTED  
TO PDPH BY MONTH, 2021



- Similar to 2020, most birthing parents with an infant diagnosed with NAS were non-Hispanic White and between 30-39 years old in 2021 (Table 1).

TABLE 1

DEMOGRAPHICS OF BIRTHING PARENTS WHO GAVE BIRTH TO INFANTS WITH NAS, 2020, 2021 COMPARED WITH ALL BIRTHING PARENTS WHO GAVE BIRTH, 2021

Age Category	Birthing Parents of Infants with NAS Reported to PDPH, 2020		Birthing Parents of Infants with NAS Reported to PDPH, 2021		All Birthing Parents who Gave Birth, 2021	
	N	%	N	%	N	%
<18	0	0%	0	0%	686	3%
19-29	91	33%	92	35%	9,677	42%
30-39	170	62%	155	59%	11,464	50%
40+	14	5%	15	6%	1,136	5%
Race/Ethnicity						
non-Hispanic White	124	45%	123	47%	7,658	34%
non-Hispanic Black	83	30%	81	31%	8,277	36%
Hispanic	30	11%	32	12%	4,481	20%
Asian	*	*	*	*	1,620	7%
Other	*	*	*	*	375	2%
Unknown	36	13%	20	8%	446	2%

\* Counts less than 6 have been suppressed.

Infants diagnosed with NAS display a collection of signs and symptoms including, but not limited to inconsolability, restlessness, poor feeding, hyperirritability, hyperactive reflexes, tremors, sweating, seizures, and nasal flaring. These signs and symptoms are used to quantify the severity of the syndrome, also known as a Finnegan score.

- In 2021, Philadelphia infants diagnosed with NAS had an average Finnegan score of 11 with a range of 3-20 signs and symptoms (data not shown).
- In 2021, 25% of birthing parent/infant pairs were positive for both opioid and non-opioid drugs. This is a higher proportion than what was observed in 2020 and 2019 (Table 2).
- Compared to 2020, there was an increase in medications for Opioid Use Disorder (MOUD) exposure amongst non-Hispanic Black birthing parent/infant pairs in 2021 (data not shown).

TABLE 2

SUBSTANCES DETECTED BY HOSPITAL TOXICOLOGY SCREENING†

Substance Exposure	2019		2020		2021	
	N	%	N	%	N	%
MOUD‡ only	65	25%	55	20%	42	18%
Opioids only	47	18%	44	16%	43	19%
Non-opioid drugs only	36	14%	33	12%	25	11%
MOUD + Opioids	34	13%	30	11%	23	10%
MOUD + Opioids + non-opioid drugs	26	10%	22	8%	21	9%
Opioid + Non-opioid drugs	34	13%	58	21%	57	25%
MOUD + Non-opioid drugs	18	7%	30	11%	17	7%
Unknown	0	0%	*	*	35	13%

†Includes results of mothers of infants with NAS and infants with NAS.

‡MOUD indicates medications used for opioid use disorder (methadone, naltrexone, and buprenorphine).

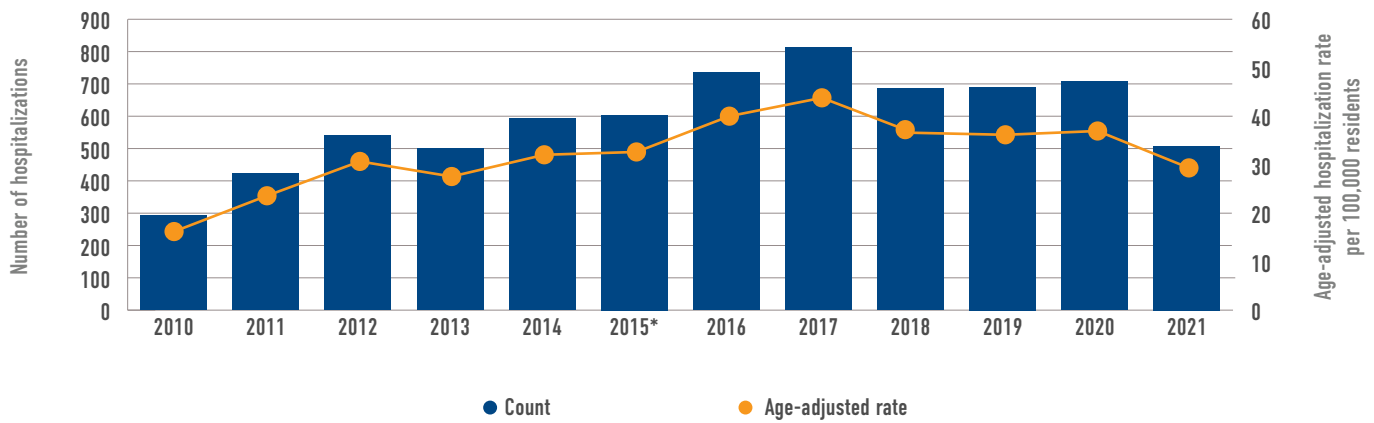
\*Counts less than 6 have been suppressed.

Data source: Philadelphia Department of Public Health Neonatal Abstinence Syndrome Program

## HOSPITALIZATIONS

- Between 2010 and 2017, the number of non-fatal opioid overdose hospitalizations increased from 292 in 2010 to 812 in 2017. Since 2017, the number of non-fatal opioid overdose hospitalizations decreased to 581 in 2021 (Figure 14).
- The age-adjusted rate rose 95% from 19 non-fatal opioid hospitalizations per 100,000 residents in 2010 to 36 non-fatal opioid hospitalizations per 100,000 residents in 2021 (Figure 14).

FIGURE 14  
NON-FATAL OPIOID OVERDOSE HOSPITALIZATIONS



\*The U.S. transitioned to International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) from International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the last quarter of 2015.

Data Source: Pennsylvania Health Care Cost Containment Council



- In 2021, the highest proportion of individuals hospitalized for a non-fatal opioid overdose were between 35-44 years old (24.1%, n=140) and non-Hispanic White (41.1%, n=239) (data not shown).
- Compared to 2020, a larger proportion of patients assigned male sex at birth were between 45-54 years old (22.3%, n=82) and non-Hispanic Black (36.8%, n=135), while a larger proportion of patients assigned female at birth were between 35-44 years old (27.1%, n=58) and non-Hispanic White (50.9%, n=109) (Table 3).

**TABLE 3**  
**DEMOGRAPHICS OF NON-FATAL OPIOID OVERDOSE HOSPITALIZATIONS**

	2020				2021			
	Males Assigned at Birth		Females Assigned at Birth		Males Assigned at Birth		Females Assigned at Birth	
	N	%	N	%	N	%	N	%
<b>Total</b>	<b>486</b>	<b>68.6</b>	<b>222</b>	<b>31.4%</b>	<b>367</b>	<b>63.2%</b>	<b>214</b>	<b>36.8%</b>
<b>Age</b>								
0-14 years old	0	0.0	0	0.0%	0	0.0%	*	*
15-24 years old	23	4.7	11	5.0%	10	2.7%	*	*
25-34 years old	94	19.3	36	16.2%	61	16.6%	45	21.0%
35-44 years old	119	24.5	41	18.5%	82	22.3%	58	27.1%
45-54 years old	98	20.2	46	20.7%	82	22.3%	35	16.4%
55-64 years old	95	19.6	54	24.3%	67	18.3%	36	16.8%
65+ years old	57	11.7	34	15.3%	65	17.7%	36	16.8%
<b>Race/Ethnicity</b>								
Non-Hispanic White	187	38.5	106	47.8%	130	35.4%	109	50.9%
Non-Hispanic Black	166	34.2	90	40.5%	135	36.8%	77	36.0%
Hispanic	63	13.0	12	5.4%	56	15.3%	6	2.8%
Other	70	14.4	14	6.3%	46	12.5%	22	10.3%

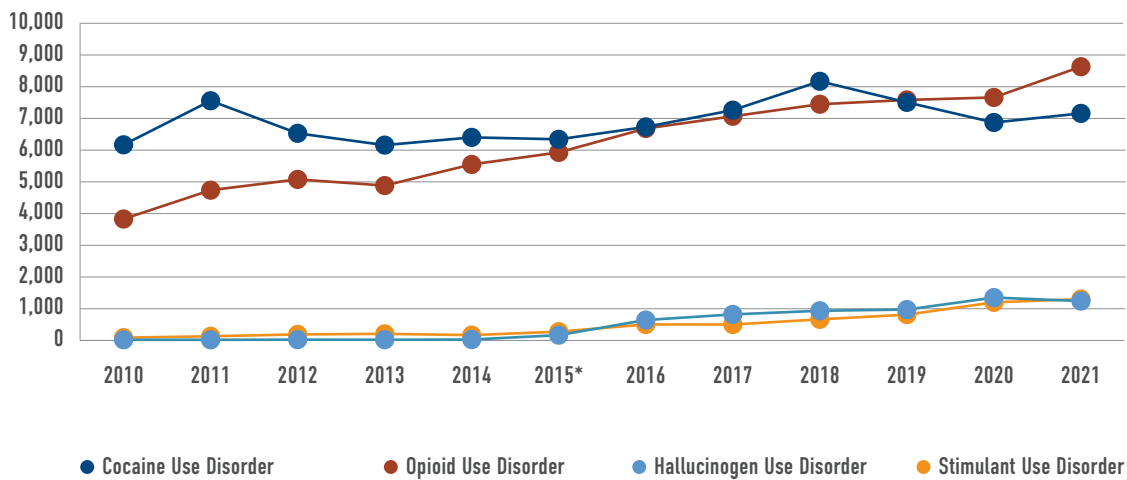
\* Counts less than 6 are suppressed

Data Source: Pennsylvania Healthcare Cost Containment Council



- The number of hospitalizations for cocaine use or dependence have remained relatively consistent since 2010. The highest number of hospitalizations that occurred in any one year period was in 2018 with 8,171 hospitalizations for cocaine use or dependence (Figure 15).
- During the same period, the number of hospitalizations for opioid use disorder has continued to increase from 3,829 in 2010. By 2021, there were 8,631 non-fatal hospitalizations for opioid use disorder (Figure 15).
- While the number of hospitalizations for hallucinogen use or dependence and other stimulant use or dependence has increased over the last decade (Figure 15), counts between 2010 and 2015 may be underreported as ICD-9-CM diagnosis codes were not as specific for these drugs as ICD-10-CM diagnosis codes.

FIGURE 15  
NON-FATAL HOSPITALIZATIONS FOR SUBSTANCE USE



\*The U.S. transitioned to International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) from International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the last quarter of 2015.  
Data Source: Pennsylvania Health Care Cost Containment Council

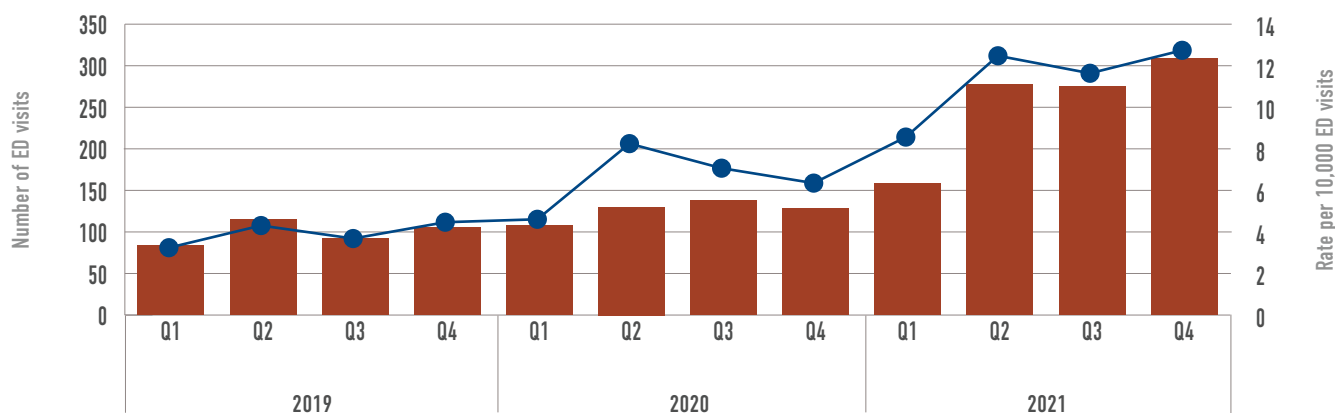
### Infections related to Substance Use-Bacterial infections

- People who inject drugs may experience infections from a lack of sterile conditions including, but not limited to, unsanitary water sources, re-use of injection equipment, and inability to properly clean the injection site prior to use. Bacterial infections include but are not limited to, cellulitis, abscesses, and necrotizing fasciitis (collectively referred to skin and soft tissue infections or SSTI). Complications of these infections that often occur with injection drug use include osteomyelitis (infection of the bone), endocarditis (infection of the lining of the heart and/or heart valves), bacteremia (infection of the blood), and sepsis (life-threatening condition resulting from a major infection). Of note, xylazine, a veterinary drug commonly found in combination with fentanyl, has been associated with severe skin ulcerations. These wounds may occur at the site of the injection site or other parts of the body.

In 2021:

- 1,019 ED visits for SSTI associated with substance use a rate of 11.3 per 10,000 ED visits (Figure 16).

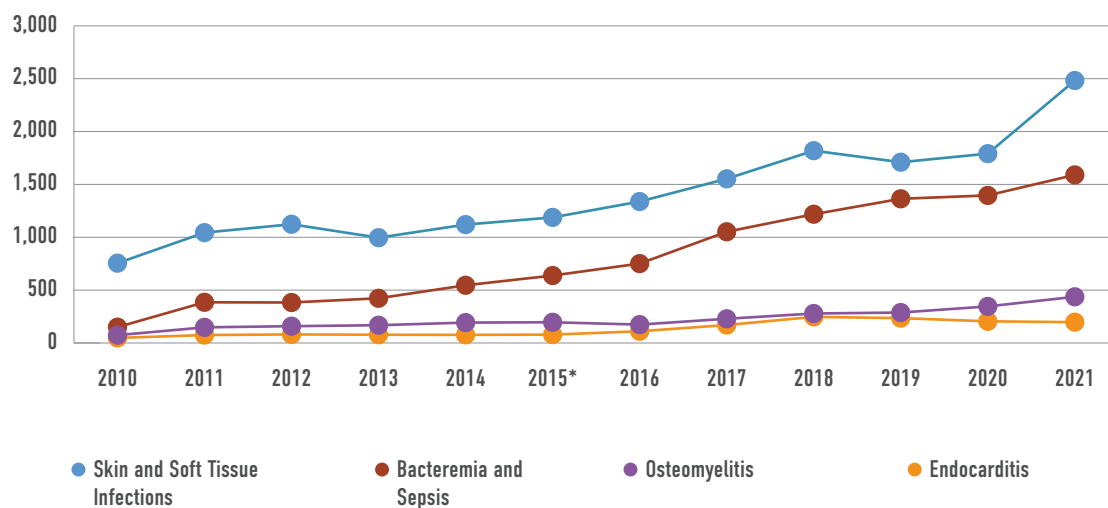
FIGURE 16  
ED VISITS FOR SKIN AND SOFT TISSUE INFECTIONS BY QUARTER



Data Source: Philadelphia Department of Public Health Syndromic Surveillance System

- 2,483 hospitalizations for SSTI associated with injection drug use, a 39% increase from 2020 (Figure 17).
- 1,590 hospitalizations for bacteremia and sepsis, a 14% increase from 2020 (Figure 17).
- 437 hospitalizations for osteomyelitis, a 26% increase from 2020 (Figure 17).
- 197 hospitalizations for endocarditis, a 4% decrease from 2020 (Figure 17).

FIGURE 17  
HOSPITALIZATIONS FOR INFECTIONS ASSOCIATED WITH SUBSTANCE USE



\*The U.S. transitioned to International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) from International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) in the last quarter of 2015. Data Source: Pennsylvania Health Care Cost Containment Council

### Infections related to Substance Use-Viral Hepatitis

- High rates of Hepatitis C virus (HCV) and Hepatitis B virus (HBV) infection occur among people who inject drugs, especially those who share injecting equipment and other drug equipment. The first 6 months after the virus enters the body is commonly known as the acute phase of the infection. Many may clear HCV on their own during the acute phase but for most people, an acute infection develops into a chronic infection. Most people with an HBV infection clear their infection. Injection drug use is a primary risk factor for HCV and HBV, and in 2021, 80% and 69% of individuals in Philadelphia with acute HCV and HBV reported a history of injecting drugs, respectively.
- From 2015 to 2021, there was a 30% increase in confirmed acute HBV cases, though the increase through 2019 was 330% (Figure 18).
- Among 2021 acute HBV cases, 69% reported any drug use, 69% reported injection drug use, and 11% reported experiencing homelessness (data not shown).
- Along with reported opioid use, powder and crack cocaine use was reported among people experiencing acute HBV in 2021.
- From 2015 to 2021, there was a 62% increase in confirmed acute HCV cases, though the increase was 140% through 2019 (Figure 19).
- Among acute HCV cases, 93% reported any drug use, 80% reported injection drug use, and 20% reported experiencing homelessness (data not shown).
- Aside from reported opioid use, those with confirmed acute HCV reported cocaine, methamphetamine, hallucinogen, and tranquilizer use.
- Counts of HCV cases are underestimates as the majority of people with HCV do not experience any signs or symptoms, and may not seek care or testing during their acute disease.

FIGURE 18  
ACUTE CASES OF HEPATITIS B VIRUS (HBV)

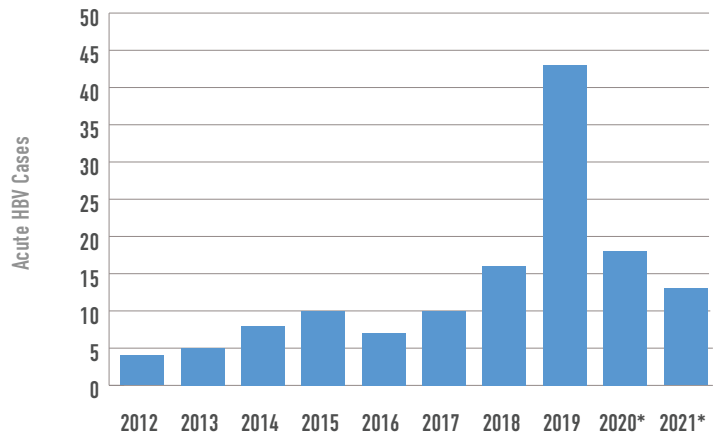
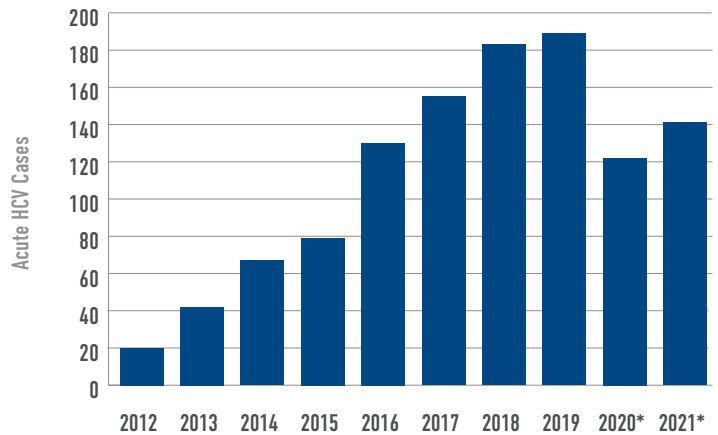


FIGURE 19  
ACUTE CASES OF HEPATITIS C VIRUS (HCV)



\* Totals for 2020 and 2021 were likely to have been impacted by the COVID-19 pandemic  
Data Source: Philadelphia Department of Public Health Viral Hepatitis Program

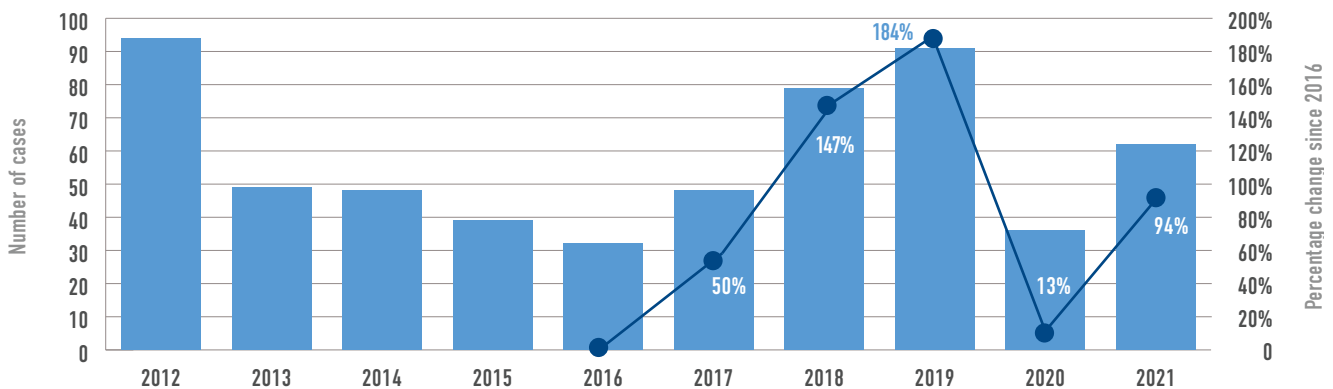
### Infections related to Substance Use-HIV

- In September 2018, PDPH identified a new outbreak of HIV infections among persons who inject drugs (PWID) after years of steady declines attributed to the implementation of the local syringe exchange program in 1992.
- The number of new HIV diagnoses among PWID, including PWID assigned male at birth and have sex with men (MSM/PWID), rose to a peak at 91 new diagnoses in 2019. During 2020, however, COVID-19 presented a major barrier to accessing HIV testing, which likely contributed to a decrease in new diagnoses among this population in 2020 (Figure 20).
- During 2021, new diagnoses continued to increase indicating the ongoing risk for HIV acquisition among PWID and their sexual and injection equipment sharing partners. PDPH's Division of HIV Health continues to use data-driven approaches, including targeted testing, linkage to and re-engagement in care activities, and collaborative prevention strategies to respond to this outbreak. More specifically, AACO has expanded funding for syringe service programs, implemented low threshold HIV prevention services, and released a Health Alert to increase awareness of the outbreak among Philadelphia-area providers.

#### In 2021:

- There were 62 newly diagnosed cases of HIV among PWID, a 94% increase from 2016, the last year where a decrease was observed in this population (Figure 20).
- 69% (n=43) of newly diagnosed cases occurred among PWID and 31% (n=19) occurred among MSM/PWID (data not shown). The majority of newly diagnosed cases among PWID, including MSM/PWID, occurred in people assigned male sex at birth (79%, n=49), individuals aged 30-39 (55%, n=34) and non-Hispanic White individuals (68%, n=42) (data not shown).
- Among PWID newly diagnosed with HIV during 2021, 67% were linked to care within 1 month of HIV diagnosis (data not shown).

**FIGURE 20**  
NUMBER OF NEWLY DIAGNOSED CASES OF HIV (REGARDLESS OF AIDS STATUS) IN ALL PWID



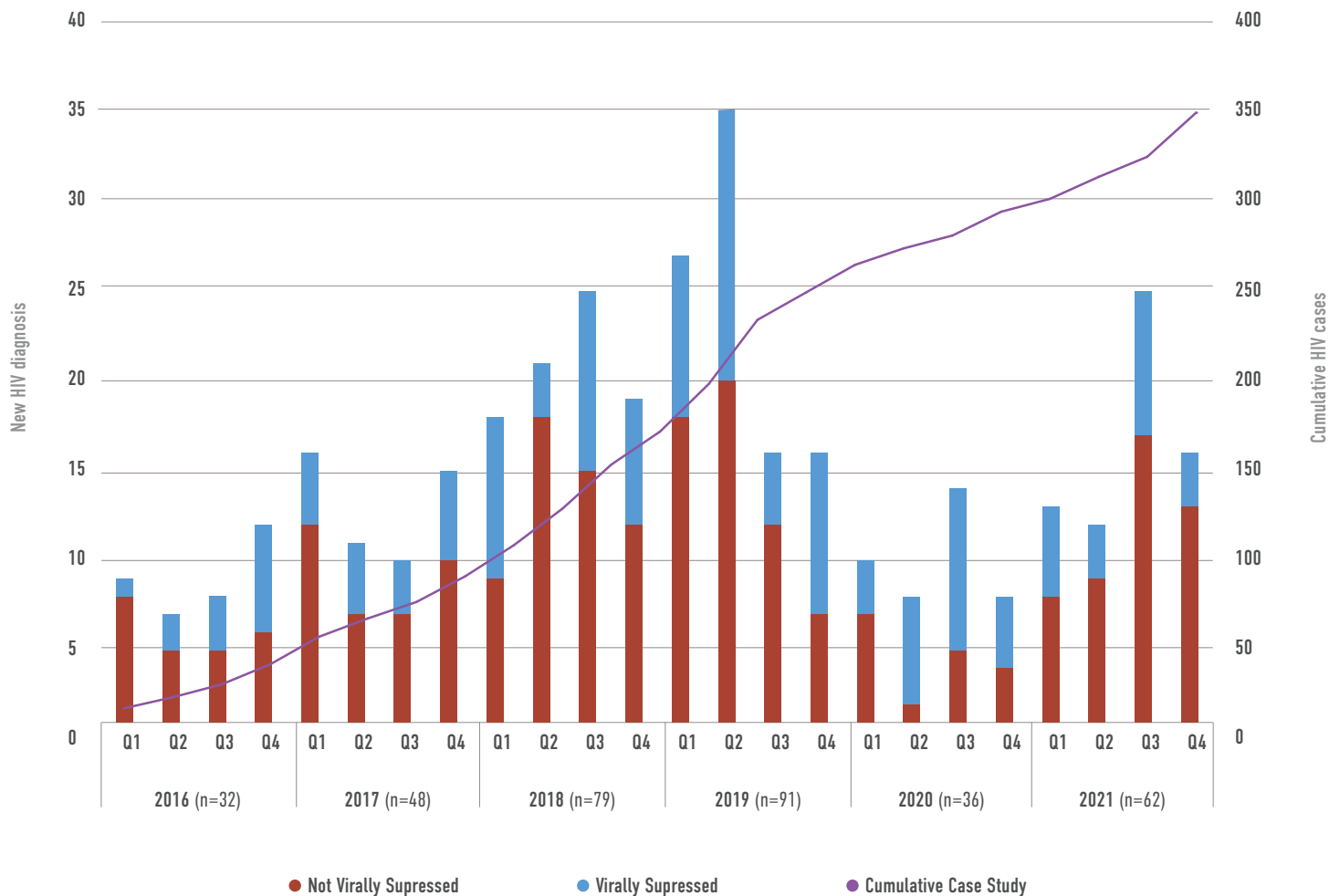
Data Source: Philadelphia Department of Public Health, Division of HIV Health



Among all people living with diagnosed HIV infection (PLWDH) with an injection-related risk documented at time of diagnosis with evidence of care during the last 5 years (2017 - 2021):

- 82% received HIV care during 2021 as evidenced by a CD4 or viral load during the calendar year (data not shown).
- 70% were virally suppressed at last measure in 2021, defined as having at least 1 viral load in the calendar year, with the last reported result being <200 copies/mL (data not shown).

FIGURE 21  
NEW HIV DIAGNOSIS AMONG PWID AND VIRAL SUPPRESSION STATUS



Note: PWID Includes PWID/MSM. Viral Suppression is defined as a viral load <200 copies/mL at last measure in the 2021 calendar year, regardless of year of HIV diagnosis. Individuals with no evidence of a viral load are considered not virally suppressed.

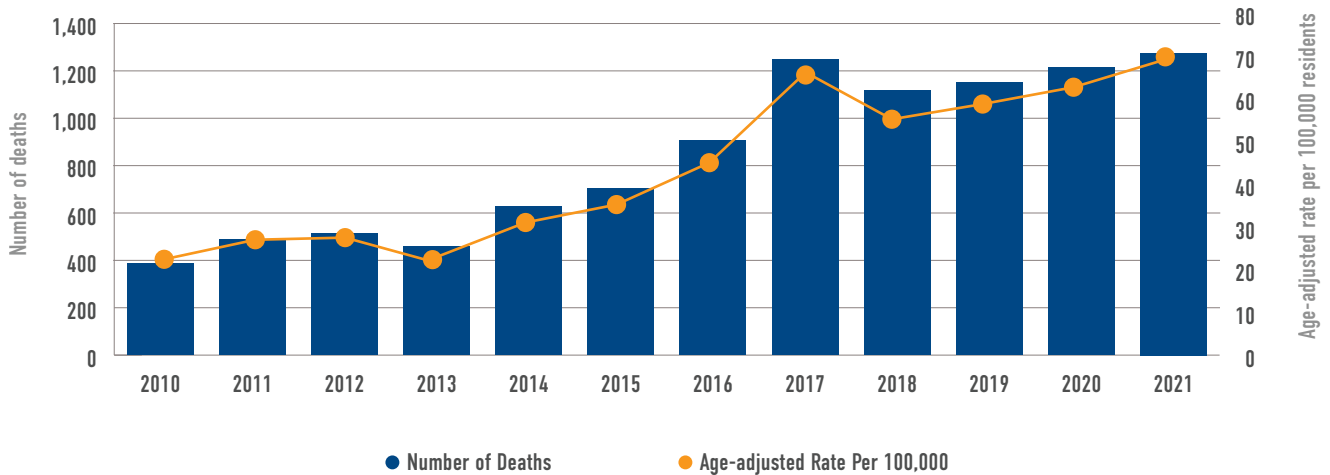
Data Source: Philadelphia Department of Public Health, Division of HIV Health

## MORTALITY

### In 2021:

- Philadelphia experienced the most unintentional fatal overdoses on record with 1,276 unintentional overdose deaths, a 5% increase from 2020 (Figure 22).
- The age-adjusted mortality rate increased from 23.6 deaths per 100,000 residents in 2010 to 73.6 deaths per 100,000 residents in 2021 (Figure 22).

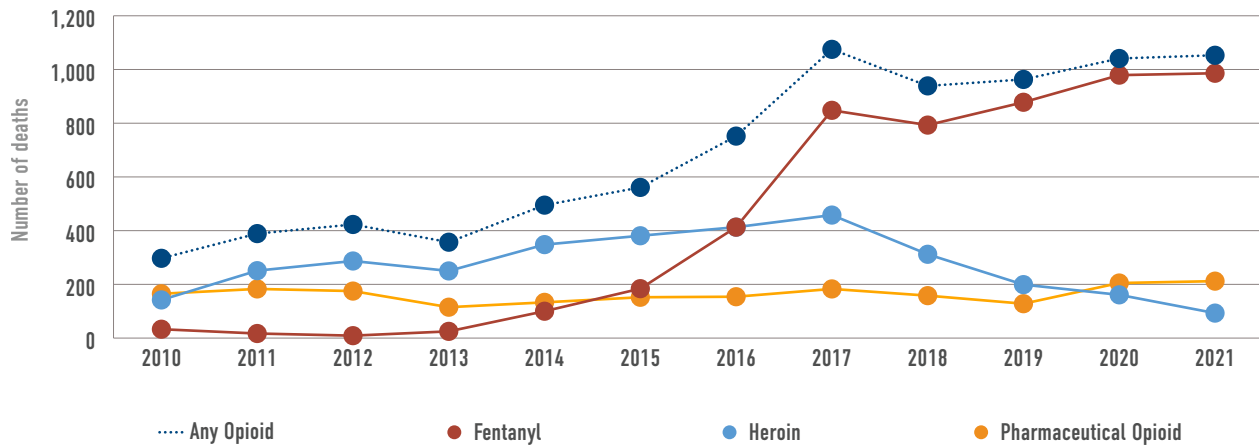
FIGURE 22  
NUMBER AND AGE-ADJUSTED RATE OF UNINTENTIONAL OVERDOSE DEATHS



\*Rates are age-adjusted using the Census 2000 US standard population.  
Data Source: Philadelphia's Medical Examiner's Office

- There were 1,052 (83%) unintentional overdose deaths involving any opioid in 2021, a 1% increase from 1,041 overdose deaths involving any opioid in 2020 (Figure 23).
- There were 986 (77%) unintentional overdose deaths involving fentanyl in 2021, a <1% increase from 979 unintentional overdose deaths in 2020 (Figure 23). Of note, fentanyl has largely replaced heroin in the illicit drug market in Philadelphia and remains the leading opioid found in opioid-involved unintentional overdose deaths.
- There were 93 (7%) unintentional overdose deaths involving heroin in 2021, a 42% decrease from 161 unintentional overdose deaths in 2020 (Figure 23).
- There were 212 (17%) unintentional overdose deaths involving a pharmaceutical opioid in 2021, a 3% increase from 205 overdose deaths in 2020 (Figure 23).

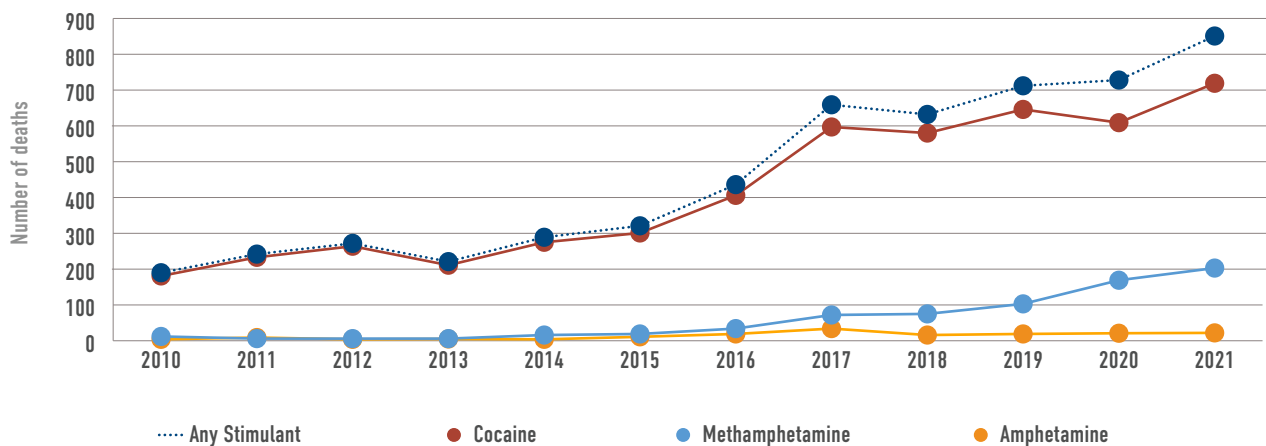
**FIGURE 23**  
**NUMBER OF UNINTENTIONAL OPIOID-INVOLVED OVERDOSE DEATHS BY OPIOID TYPE\***



\*Types of opioids detected are not mutually exclusive  
 Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

- There were 851 (67%) unintentional overdose deaths involving any stimulant in 2021, a 17% increase from 728 overdose deaths involving any stimulant in 2020 (Figure 23).
- There were 719 (56%) unintentional overdose deaths involving cocaine in 2021, an 18% increase from 609 unintentional overdose deaths involving cocaine in 2020 (Figure 24).
- There were 203 (16%) unintentional overdose deaths involving methamphetamine in 2021, a 20% increase from 169 unintentional overdose deaths involving methamphetamine in 2020 (Figure 24).
- There were 22 (2%) unintentional overdose deaths involving amphetamine in 2021, a 5% increase from 21 unintentional overdose deaths involving amphetamine in 2020 (Figure 24).
- Of note, between 2016 and 2021, there were 43 overdose decedents who died in a hospital and hospital testing could not differentiate between methamphetamine and amphetamine (data not shown).

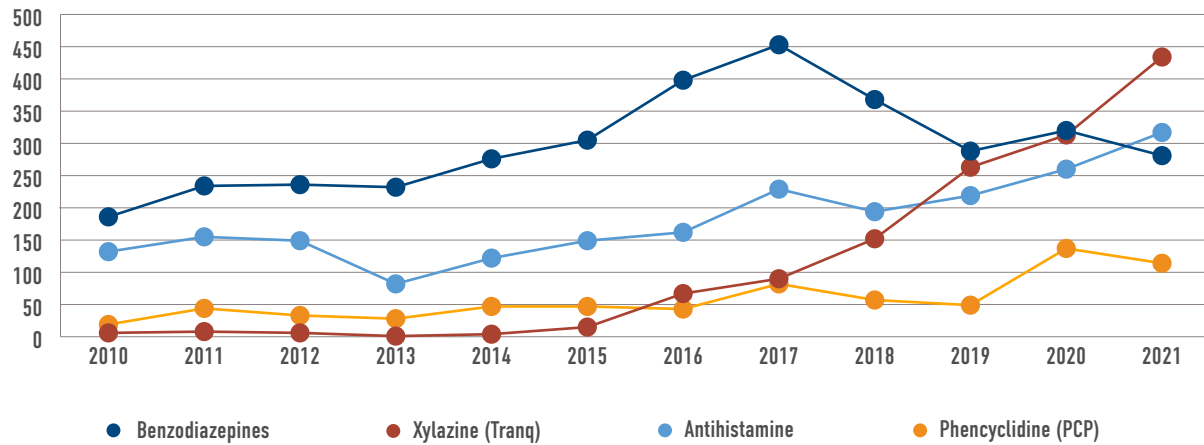
**FIGURE 24**  
**NUMBER OF UNINTENTIONAL STIMULANT-INVOLVED OVERDOSE DEATHS BY STIMULANT TYPE\***



\*Types of stimulants detected are not mutually exclusive  
 Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

- In 2021, 434 (34%) unintentional overdose deaths had xylazine detected in toxicology tests, an increase of 39% from 2020 (Figure 25).
- In addition to xylazine, antihistamines are often used as an adulterant in the drug supply. In 2021, 317 (25%) unintentional overdose deaths had antihistamines detected in toxicology tests (Figure 25).
- Phencyclidine (PCP), a hallucinogen, was involved in 114 (9%) unintentional overdose deaths in 2021, decreasing 17% from 2020 (Figure 25).
- While benzodiazepine prescriptions (see Supplemental Table 6) and the number of unintentional overdose deaths involving benzodiazepines decreased in 2021, novel or “designer” benzodiazepines, benzodiazepines not approved for medical use, have been identified in Philadelphia’s illicit drug market.

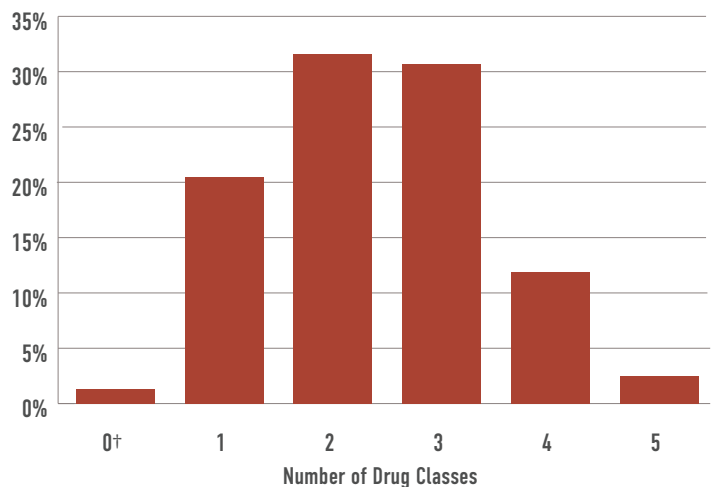
**FIGURE 25**  
**NUMBER OF UNINTENTIONAL OVERDOSE DEATHS BY OTHER DRUGS**



\*Types of other drugs detected are not mutually exclusive  
Data Source: Philadelphia Department of Public Health, Medical Examiner’s Office

- While the preceding graphs don’t show mutually exclusive groups, the detection of multiple substances in decedent toxicology results is common in Philadelphia. Among Philadelphia’s 2021 unintentional overdose decedents, there were an average of 3 specific drugs detected in toxicology tests. Of note, increasing the number of substances, intentionally or unintentionally, increases the risk of adverse effects and death (data not shown).
- When these substances were categorized by drug class, the largest proportion of overdose decedents (33%, n=415) had 2 different drug classes of concern (opioids, stimulants, benzodiazepines, PCP, alcohol, and xylazine) detected in toxicology tests (Figure 26).
- Of note, a decedent may have multiple substances from the same drug class detected in toxicology tests (e.g. oxycodone, fentanyl, and heroin are all in the opioid drug class).

**FIGURE 26**  
**PERCENTAGE OF DECEDENTS BY NUMBER OF DRUG CLASSES\* DETECTED**



\*Drug classes of concern include opioids, stimulants, PCP, benzodiazepines, alcohol, and xylazine.  
†Decedents with counts of zero indicate that opioids, stimulants, PCP, benzodiazepines, alcohol, and xylazine were not detected in toxicology tests but other drugs classes (i.e. antidepressants, anticonvulsants, antihistamines, antipyretics, etc) were detected.  
‡Percentages of decedents with 6 or more drug classes detected are not presented due to counts less than 6.  
Data Source: Philadelphia’s Medical Examiner’s Office

Table 4 shows the most frequently detected drug class combinations of 2021's unintentional overdose decedents. The largest proportion of overdose decedents (13%, n=164) had at least one opioid and at least one stimulant detected in their toxicology test. The second most frequent drug class combination detected among 2021 unintentional overdose decedents were those with at least one opioid, at least one stimulant, and xylazine (11%, n=142).

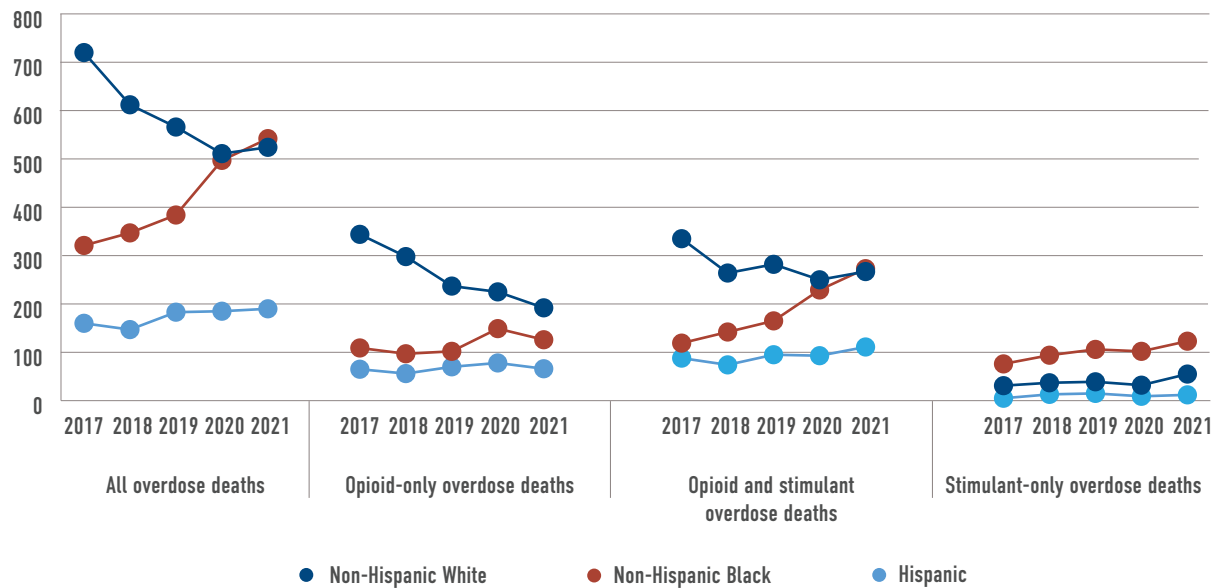
**TABLE 4**  
**DETAILED DRUG COMBINATIONS\* OF 2021 OVERDOSE DECEDENTS**

Any Opioid	Any Stimulant	Any Benzodiazepine	Ethanol	PCP	Xylazine	Number of Overdose Decedents	Percent of Total Overdose Decedents
+	+					164	13%
+	+				+	142	11%
+						133	10%
	+					110	9%
+	+		+			105	8%
+					+	77	6%
+		+				69	5%
+	+		+		+	61	5%
+	+	+				51	4%
	+		+			51	4%
+	+	+			+	46	4%
+		+			+	34	3%
+			+		+	24	2%
+			+			23	2%
+	+			+		19	1%
+	+			+	+	17	1%
+	+		+	+		15	1%
	+	+				14	1%
				+		13	1%
+	+	+	+			12	1%
+		+	+		+	10	1%
+	+	+	+		+	9	1%
	+			+		9	1%
						9	1%
+		+	+			8	1%
+	+	+	+	+		6	0%

+ Indicates positive toxicology results. \*Drug combinations with decedent counts fewer than 6 are not presented in the table.  
 Data source: Philadelphia Medical Examiner's Office

- From 2020 to 2021, unintentional overdose deaths involving opioids-only have decreased while unintentional overdose deaths involving opioids and stimulants, and stimulants-only have increased across all race and ethnicity groups (Figure 27).
- Of note, in 2021 73% (n=396) of non-Hispanic Black unintentional overdose deaths involved a stimulant (both with and without the presence of opioids) compared to 61% (n=322) of non-Hispanic White unintentional overdose deaths and 65% (n=123) of Hispanic unintentional overdose deaths (data not shown).

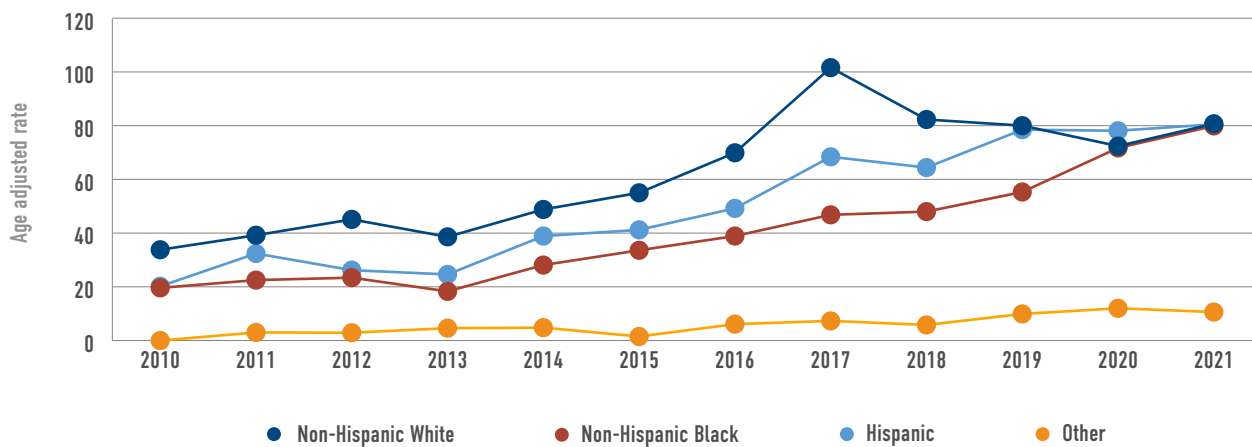
**FIGURE 27**  
**NUMBER OF UNINTENTIONAL OVERDOSE DEATHS BY RACE/ETHNICITY AND DRUGS INVOLVED**



Data Source: Philadelphia Medical Examiner's Office

Historically, the age-adjusted mortality rate was highest among non-Hispanic White individuals. However, in recent years despite decreases in deaths among non-Hispanic White individuals, increasing overdose deaths among communities of color have been observed. In 2021, the age-adjusted mortality rate for Non-Hispanic White, Non-Hispanic Black, and Hispanic residents were nearly identical at approximately 80 deaths per 100,000 residents (Figure 28).

**FIGURE 28**  
**AGE ADJUSTED OVERDOSE MORTALITY RATE BY RACE/ETHNICITY**



\*Rates are age-adjusted using the Census 2000 US standard population.  
 Data Source: Philadelphia Medical Examiner's Office

Table 5 shows that the largest proportion of those who died of an unintentional overdose in 2021 were:

- Non-Hispanic Black (43%, n=542)
- Male (72%, n=918)
- Between the ages of 35-44 (25%, n=316)
- Compared to 2020, overdose mortality rates increased in almost all demographic groups. However, the largest percent increases were among females (24%) and those age 45-54 (17%).

**TABLE 5**  
**DEMOGRAPHICS OF UNINTENTIONAL OVERDOSE DECEDENTS IN PHILADELPHIA, 2020-2021**

	2020			2021		
	Age-adjusted Rates Per 100,000 Residents	N	Percent	Age-adjusted Rates Per 100,000 Residents	N	Percent
<b>Total</b>	<b>67.3</b>	<b>1,214</b>	<b>100</b>	<b>73.6</b>	<b>1,276</b>	<b>100</b>
<b>Sex</b>						
Males Assigned at Birth	105.7	912	75.1	110.7	918	71.9
Females Assigned at Birth	33.1	302	24.9	40.9	358	28.1
<b>Age<sup>†</sup></b>						
0-14 years old	*	*	*	*	*	*
15-24 years old	*	*	*	*	*	*
25-34 years old	64.2	248	20.4	63.6	225	17.6
35-44 years old	132.4	312	25.7	135.0	316	24.8
45-54 years old	142.4	269	22.2	167.0	312	24.5
55-64 years old	142.6	275	22.7	156.7	299	23.4
65+ years old	28.6	71	5.9	37.4	86	6.7
<b>Race/Ethnicity</b>						
Non-Hispanic White	72.4	511	42.1	80.7	524	41.1
Non-Hispanic Black	71.7	497	40.9	79.9	542	42.5
Hispanic	78.1	185	15.2	80.5	190	14.9
Other	12.0	21	1.7	10.6	20	1.6

\* Counts less than 6 are suppressed

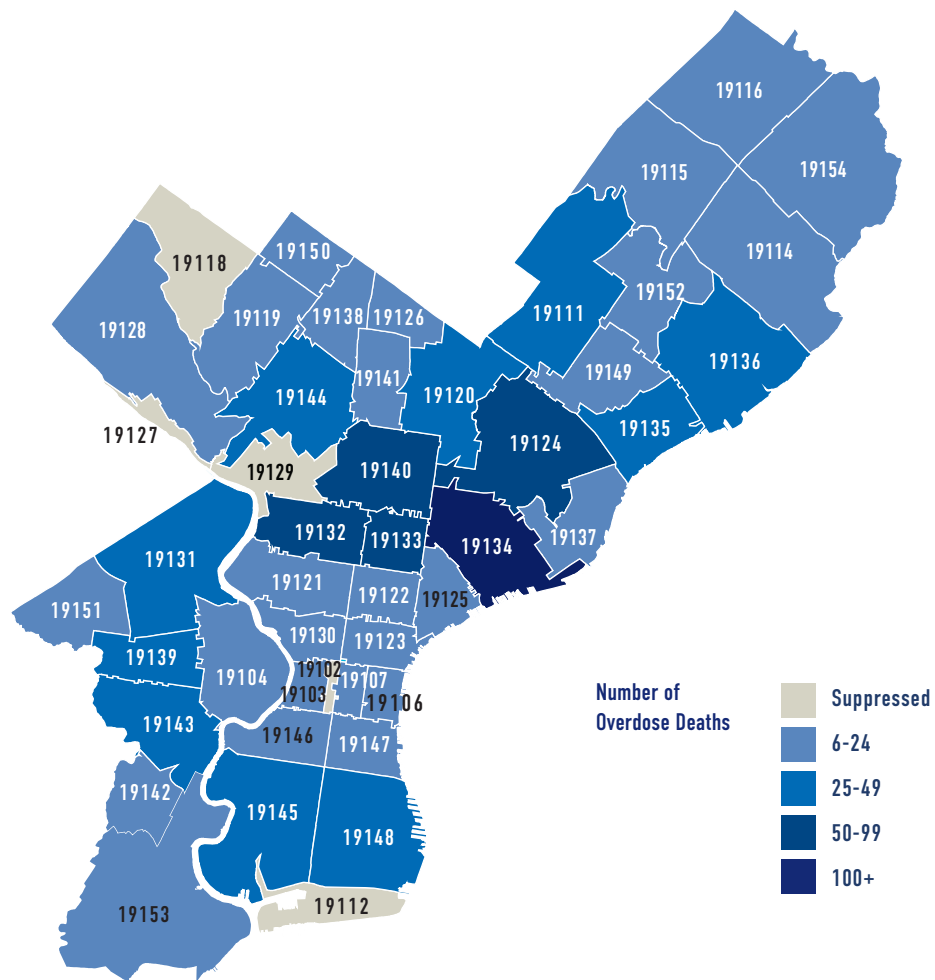
† Calculation of age specific rates includes Philadelphia Residents only

Data Source: Philadelphia Medical Examiner's Office



- In 2021, the largest number of overdose fatalities (169 deaths) occurred in the 19134 zip code followed by 19140 (84 deaths), 19124 (80 deaths), 19133 (56 deaths), and 19132 (52 deaths) (Figure 29).

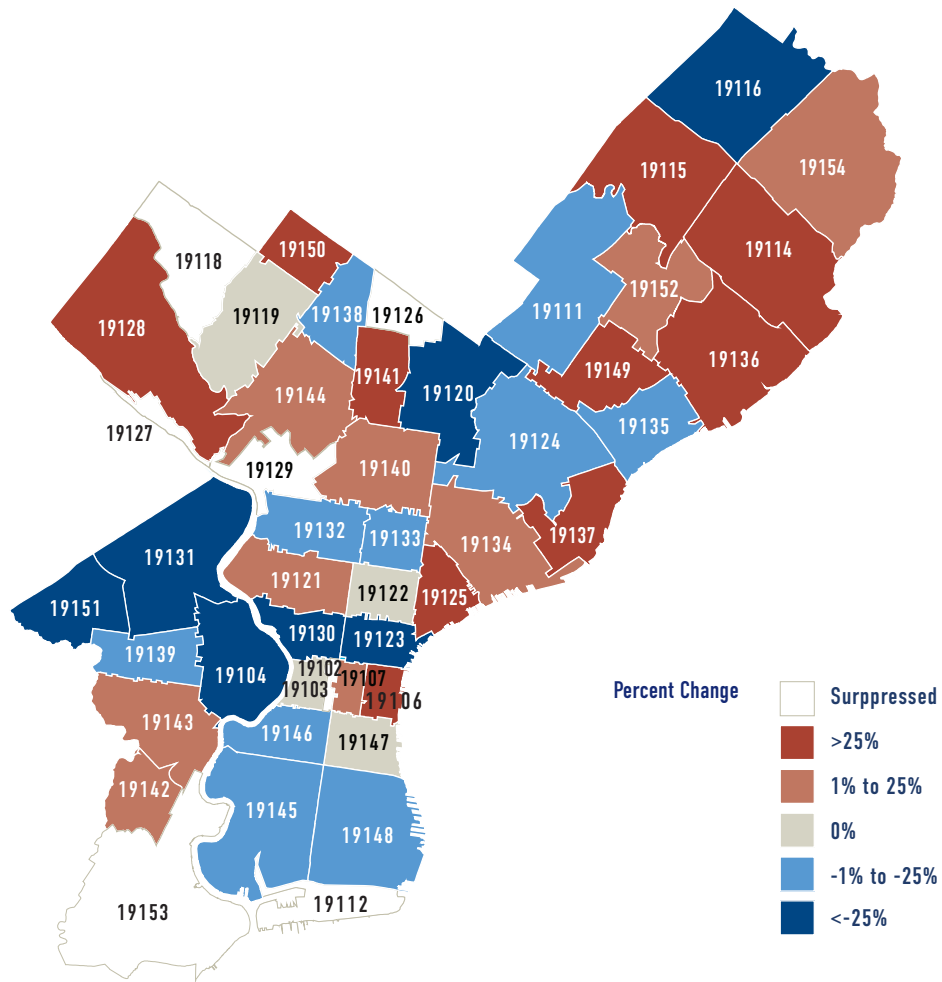
**FIGURE 29**  
**NUMBER OF OVERDOSES BY INCIDENT LOCATION, 2021**



Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

- Although the total number of overdose deaths increased across Philadelphia from 2020 to 2021, increases were not uniform across the city. The largest percent increases occurred in zip codes 19137 and 19141. (Figure 30).

**FIGURE 30**  
**PERCENT CHANGE IN FATAL OVERDOSES, 2020-2021**



Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

# RESPONDING TO THE HARMS OF SUBSTANCE USE

## LAWS AND POLICIES

### Pennsylvania's Opioid Disaster Declaration

- On January 10, 2018, Governor Wolf signed a statewide disaster declaration to combat Pennsylvania's growing opioid epidemic. The disaster declaration was designed to strengthen and expand the state's ability to treat people with substance use disorder, collect data, and save lives. After being renewed 15 times, Pennsylvania's General assembly declined to extend it for a 16th time and on August 25, 2021, Pennsylvania's opioid disaster declaration ended. Fortunately, several initiatives under the disaster declaration, such as increasing residents' access to naloxone (the opioid overdose reversal medication) and improving access to the Prescription Drug Monitoring Program, have remained intact following the end of the declaration.

### Controlled Substance, Drug, Device, and Cosmetic Act

- Also known as the Act of April 14, 1972, the Controlled Substance, Drug, Device, and Cosmetic Act was passed to create guidelines around the manufacture, sale, and possession of controlled substances, other drugs, and other devices, as well as penalties associated with violations of the law. In 2021, several bills were introduced to the Pennsylvania General Assembly to amend the Controlled Substance, Drug, Device, and Cosmetic Act to facilitate access to harm reduction resources.
- Senate Bill 926 was introduced to amend the Controlled Substance, Drug, Device, and Cosmetic Act by excluding syringes and needles provided by pharmacists, health care providers, or by public/private entities to a person participating in a syringe service program, from the definition of drug paraphernalia, thereby legalizing syringe service programs. Of note, this bill has not yet been passed by the State Senate.
- House Bill 1393 and Senate Bill 845 were introduced to amend the Controlled Substance, Drug, Device, and Cosmetic Act by excluding fentanyl test strips from the definition of drug paraphernalia. Of note, House Bill 1393 was signed by Governor Wolf on November 3, 2022 and will go into effect January 1, 2023.

### Achieving Better Care by Monitoring All Prescriptions Program (ABC-MAP) Act

- The Achieving Better Care by Monitoring All Prescriptions Program (ABC-MAP) Act established the Pennsylvania Prescription Drug Monitoring Program (PDMP) and was amended in 2020 to give local health departments access to identified PDMP data. House Bill 1774 was passed on September 30, 2021, which amended the act's expiration date from June 30, 2022, to December 31, 2028.

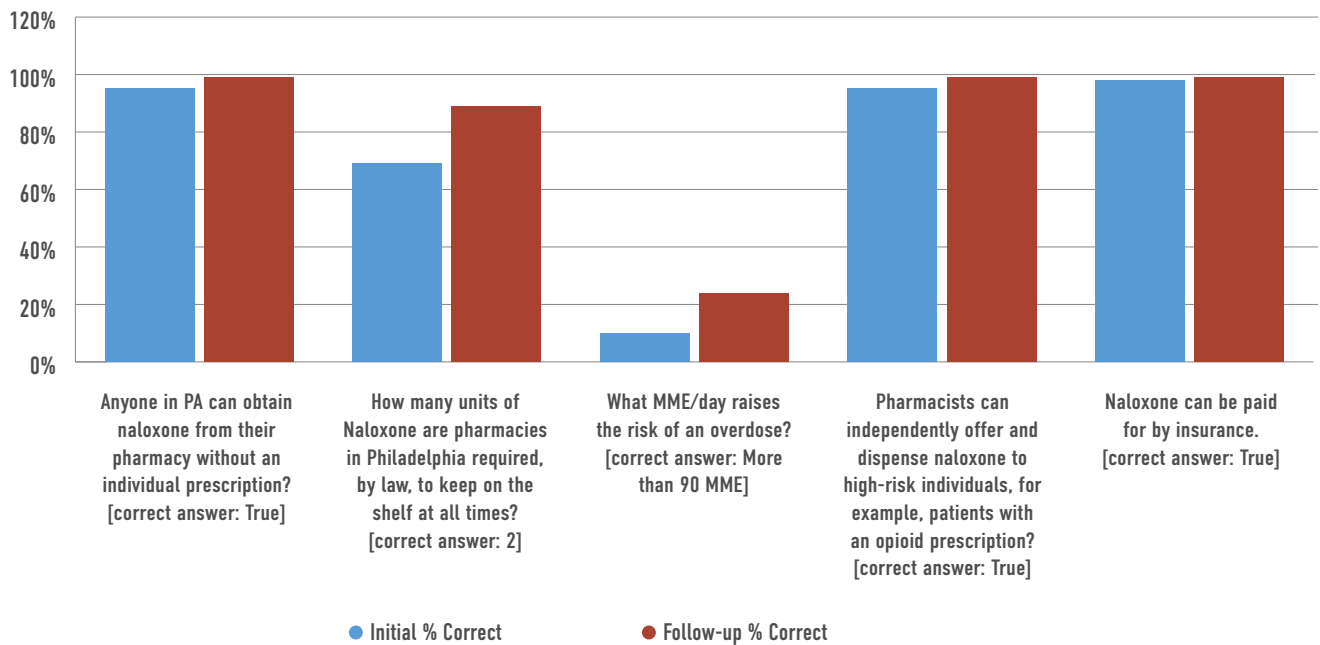
### Philadelphia Executive Order 4-21

- Following the rise of overdose deaths locally and nationally in 2020, in April 2021, the CDC reversed policy and allowed federal grant recipients to purchase fentanyl test strips. After this decision, on August 2, 2021, Mayor Jim Kenney signed executive order 4-21 that changed city policy, decriminalizing the possession and distribution of fentanyl test strips. This was done at the same time as PDPH launched a public outreach campaign with information on how and why to test for fentanyl.

## ACADEMIC DETAILING

- Academic detailing is an evidence-based approach that promotes public health messaging through the delivery of key campaign messages to medical professionals. In 2021, PDPH conducted three virtual academic detailing campaigns, reaching 2,008 unique medical professionals. The first and third campaign, which focused on prescribers, promoted judicious opioid prescribing and routine use of Pennsylvania’s PDMP and recommended all outpatient prescribers obtain X-waivers to prescribe buprenorphine, respectively. The second campaign, which focused on pharmacists, encouraged pharmacy staff to proactively offer and dispense naloxone to patients who were at increased risk of opioid-related harms. A survey examining provider knowledge both before and after the completion of the detailing campaigns were distributed. Figure 31 shows the results from the second campaign, that assessed pharmacists’ knowledge on Naloxone.

**FIGURE 31**  
**PHARMACISTS’ KNOWLEDGE ASSESSMENT BEFORE AND AFTER RECEIVING PUBLIC HEALTH**  
**DETAILING ON NALOXONE**



Data Source: OnCall LLC

## COMMUNITY RESPONSE

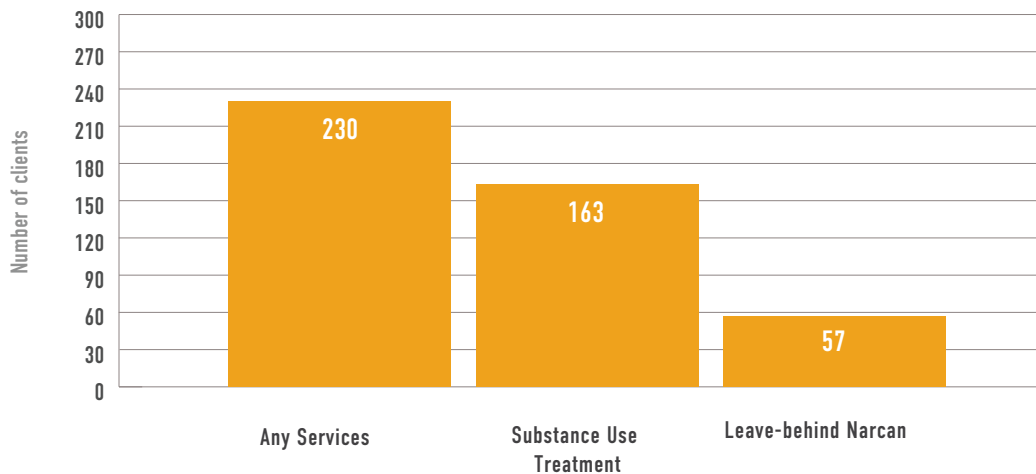
### Philly LIFTS

- The Philly LIFTS (Linking Infants and Families to Services) program, implemented after Neonatal Abstinence Syndrome (NAS) became a reportable condition in Philadelphia, was designed to help families combat the challenges of substance use, by providing direct support and services to parenting people and children affected by NAS. The program's outreach team, which includes an outreach specialist, harm reduction specialist, and public health nurse, reach out to families affected by NAS via mail and then follow up with interested families to schedule a home visit. During the home visit, families are provided with baby supplies and given resources on naloxone training, infectious disease prevention training, as well as information on sexually transmitted infections (STI) and family planning. In addition to the home visit, the Philly LIFTS program also offers a support group for parenting people to meet with one another and share their stories.

### AR-2

- Philadelphia's Alternative Response Unit-2 (AR-2), launched in 2019 as a collaboration between the Philadelphia Fire Department (PFD) EMS, the Department of Behavioral Health and Intellectual disAbility Services (DBHIDS), and PDPH - is a PFD vehicle staffed with a paramedic lieutenant and case manager that responds to non-fatal overdose incidents when the individual declines EMS transport to an emergency department. Once the individual who overdosed is identified, AR-2 offers several services to clients, including leave behind naloxone, information on linkage to care, and a direct connection to drug use treatment. AR-2 also engages individuals through community outreach and distributes naloxone.
- In 2021, 767 individuals were identified by AR-2 after responding to the scene of an overdose or from community outreach.
- Of the identified individuals, 30% (n=230) of clients agreed to speak with an AR-2 case manager (Figure 32).
- Of the identified individuals, 21% (n=163) were linked to substance use treatment (Figure 32).

FIGURE 32  
SERVICES ACCEPTED BY AR-2 CLIENTS



Data Source: Philadelphia Fire Department

## Linkage and Engagement After Prison (LEAP) Program

- Funded by PDPH, Action Wellness launched the LEAP program in 2020 to assist formerly incarcerated individuals living with opioid use disorder (OUD) with medical case management, vocational support, job training, and court advocacy. Of note, LEAP was not in Philadelphia jails between November 18, 2020, and April 5, 2021 due to COVID-19 restrictions.

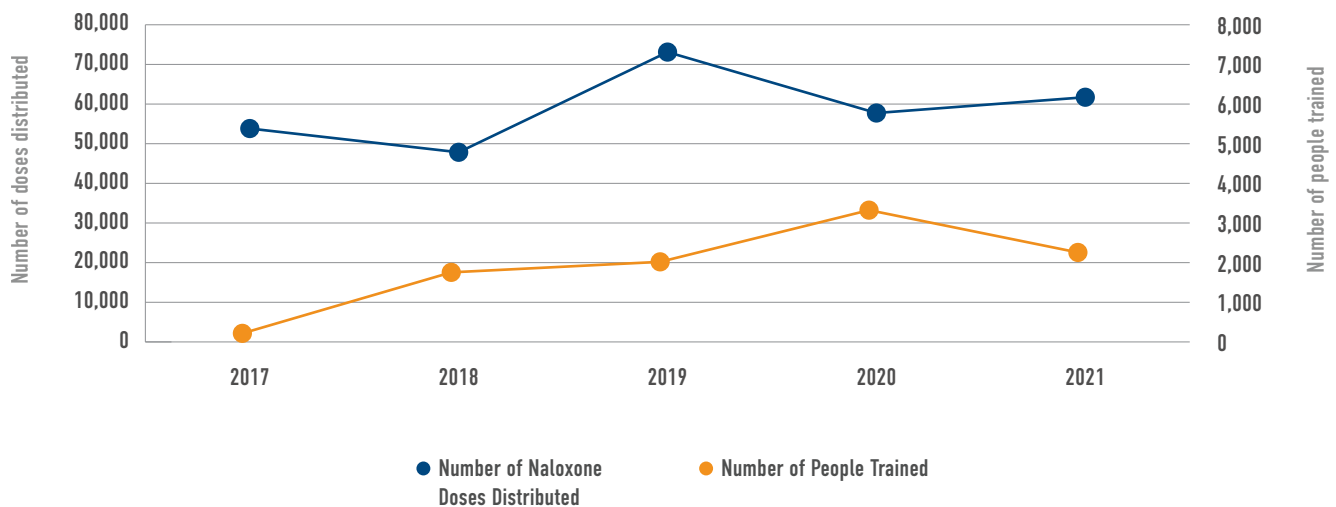
### In 2021

- 369 people were referred to the program
- 120 people were accepted into the program
  - » 43% (n=52) were non-Hispanic Black and 30% (n=36) were Hispanic
  - » 38% (N=45) were between the ages of 26-35 years old and 29% (n=35) were between 36-45 years old.
  - » 82% (n=98) were assigned as male at birth

## Training and Distribution

- In 2021, PDPH distributed 61,723 doses of naloxone (57,476 doses of brand-name naloxone (Narcan) and 4,247 doses of generic naloxone), to key stakeholders such as law enforcement agencies, criminal-legal organizations, and community-based organizations. The number of doses distributed increased 7% from 2020 (n=57,742) (Figure 33).
- In 2021, there were 2,192 people trained to use naloxone in 100 PDPH trainings, a 33% decrease from the number of people trained in 2020. Of the total trainings, 18 were pop up, 43 were virtual, and 39 were in-person (Figure 33).
- In 2021, PDPH started a fentanyl test strip (FTS) campaign to help with distributing fentanyl test strips, a highly sensitive tool used to detect trace amounts of fentanyl in drugs. The FTS campaign consisted of 45 pop-up events across the city and distributed 11,715 FTS and 394 doses of Narcan over a four-month period (data not shown).
- By the end of 2021, SUPHR distributed 118,320 FTS and trained 1,264 people to use FTS in 57 trainings (data not shown).

FIGURE 33  
NUMBER OF NALOXONE DOSES DISTRIBUTED AND INDIVIDUALS TRAINED ON OVERDOSE REVERSAL



Data Source: Philadelphia Department of Public Health, Division of Substance Use Prevention and Harm Reduction

## Drug Checking

- As Philadelphia's illicit drug market continued to become more volatile in 2021, PDPH established a partnership with the Center for Forensic Science Research and Education (CFSRE), a program at the Fredric Rieders Family Foundation, to accurately assess Philadelphia's changing illicit drug supply.
  - » In the first quarter of 2021, CFSRE issued the first drug checking report where 40 drug samples were tested. Findings in the report showed that xylazine was the leading adulterant in fentanyl samples. In the subsequent quarterly reports issued by CFSRE, para-fluorofentanyl had been increasing in the heroin supply and novel benzodiazepines were identified in counterfeit pills.

## OD Stat

- Philadelphia's Overdose Fatality Review (OFR) program, also known as OD Stat, continued to conduct in-depth reviews of overdose decedents in 2021. OD stat's mission is to identify missed opportunities for interventions through the review of overdose decedents' drug use history and interactions with city agencies. In 2021, OD stat reviewed 17 decedents, 4 in each of the first, third, and fourth quarters, and 5 decedents in the second quarter. While COVID-19 restrictions were less strict in 2021, the quarterly meeting remained virtual as it allowed for higher attendance and provided increased accessibility for out-of-state experts.
- Several recommendations were made to address the overdose crisis across Philadelphia from the 2021 reviewed cases, including, but not limited to:
  - » PDPH should expand overdose prevention, naloxone, and fentanyl test strip distribution to new community partners.
  - » PDPH should create a city-wide work group with clinical providers to discuss evolving clinical education needs. This group should focus on inpatient and emergency levels of care, expanding to outpatient once clinical protocols are developed. This work group will share information and recommendations with the larger provider community via guidelines and/or conferences/webinar.

- » DBHIDS should provide 24/7 access to DBHIDS funded bed-based levels of care.
- » PDPH should provide harm reduction resources to the Office of Reentry Partnerships (ORP) to include in their resource packet provided to people leaving incarceration. PDPH will provide a script to ORP to include in outreach calls about harm reduction resources.
- » PDPH should create communications materials to promote strategies for safer use while alone. Materials should be distributed citywide and ensure areas of the city with less harm reduction/treatment resources are prioritized. PDPH will prioritize providing overdose prevention and harm reduction resources, including but not limited to naloxone and fentanyl test strips, to Black and Latinx-led organizations, and organizations serving primarily Black and Latinx Philadelphians.

## PhillyHEALS (Bereavement Support Services)

- As the overdose crisis continues to affect every demographic group in Philadelphia, the number of friends and families left to grieve continues to grow. Since untreated grief can lead to negative health consequences and additional trauma, Philly HEALS (Healing and Empowerment After Loss) offers a number of free bereavement support services for people who have lost a loved one to substance use. These services include, but are not limited to, peer support groups, grief workshops including grief counseling for adults (18 years and older) and grief counseling for children and adolescents, as well as bereavement support for peers and clinicians.

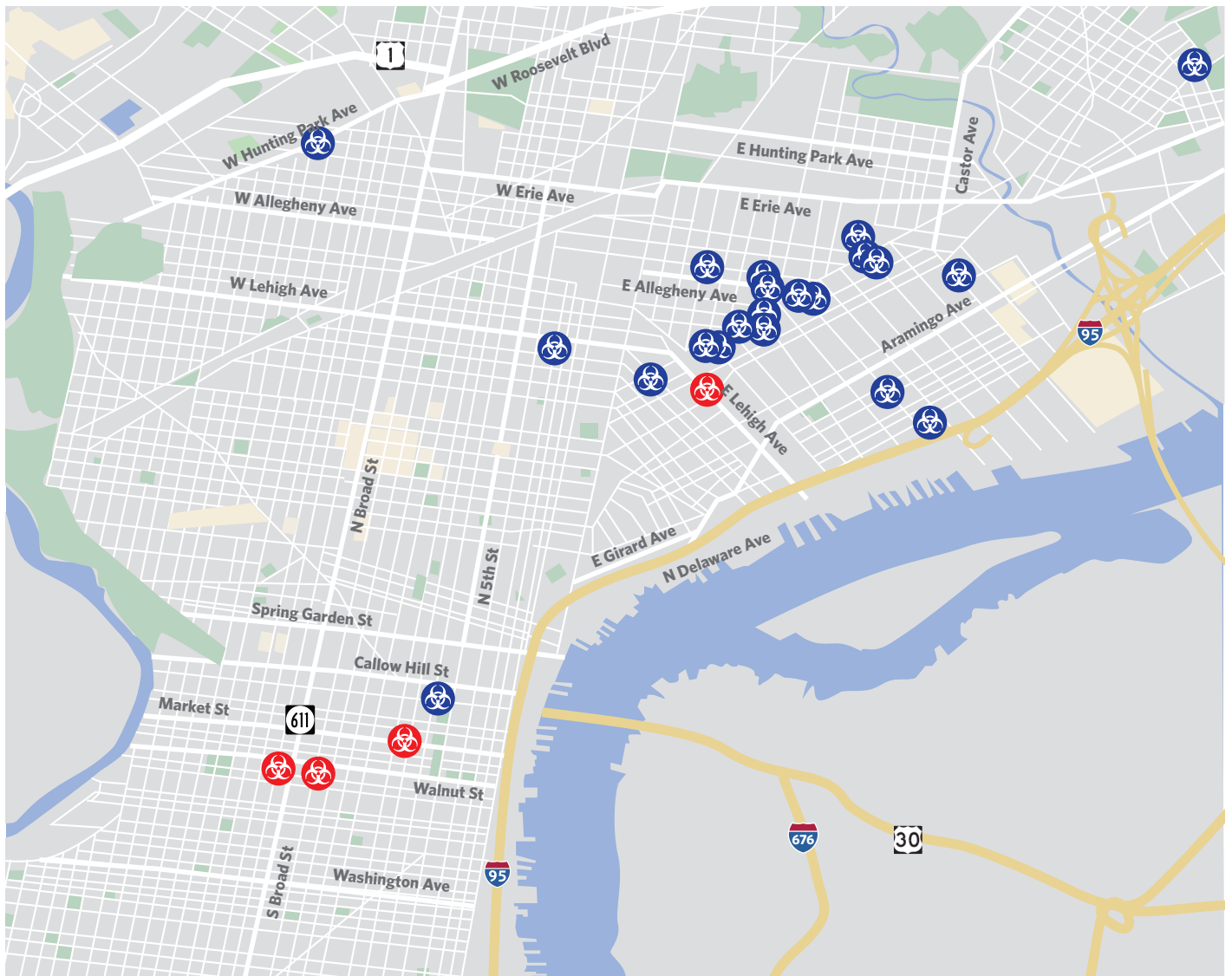


## ENVIRONMENTAL IMPACT

### Syringe Disposal

- Exposure to used sharps (e.g. needles and syringes) and other drug paraphernalia increase the risk of adverse health effects to Philadelphia residents. Safely disposing of used sharps prevent the spread of infectious diseases, mentioned previously in this report, such as Hepatitis B virus (HBV), Hepatitis C virus (HCV), and Human Immunodeficiency virus (HIV). In 2021, PDPH added four more syringe disposal boxes and collected approximately 22,515 used sharps in the 27 disposal boxes across the city (shown on the map below).

### SYRINGE DISPOSAL LOCATIONS



 Existing Sharp Disposal Boxes

 New Sharp Disposal Boxes

## KIND

- The Kensington Initiative for Needle Disposal (KIND) was established as a collaborative effort between Prevention Point Philadelphia and Impact Services, with funding from PDPH, to create a source of income for community members by employing individuals who have lived experience with drug use or homelessness. Continuing into its third year of operation, KIND collected 32,359 used sharps and other drug litter, a 78% decrease from 2020. While there was a large decrease from the previous year, efforts were replaced by Project Reach.

## Project Reach

- Project Reach, established in 2020, is an additional program that was originally implemented to supplement the environment cleanups in Kensington due to the increased amount of drug equipment and trash being disposed of during the height of the COVID-19 stay-at-home measures. Unlike the other sanitation programs in Kensington, Project Reach is a harm reduction-focused sanitation program with an objective to improve the quality of life for residents in communities that have been heavily impacted by drug use and ensure that naloxone is provided to businesses, residents, and high-risk populations. In 2021, 55,392 syringes were collected, 2,048 doses of Narcan, 95 doses of generic naloxone, and 3,450 fentanyl test strips were given out to the community.



## SUPPLEMENTAL TABLES

TABLE 6

Distinct Counts of Benzodiazepine Prescriptions, Prescribers, and Patients, Philadelphia, 2017-2021			
Quarter	Total Prescriptions	Number of Distinct Prescribers	Number of Distinct Patients
2017 Q1	154,487	4,411	72,310
2017 Q2	169,732	4,427	72,232
2017 Q3	161,878	4,522	69,723
2017 Q4	158,323	4,470	67,962
2018 Q1	154,258	4,507	66,477
2018 Q2	153,778	4,532	65,553
2018 Q3	149,464	4,559	63,401
2018 Q4	146,737	4,562	61,849
2019 Q1	138,169	4,484	59,774
2019 Q2	137,650	4,512	58,672
2019 Q3	132,614	4,536	56,088
2019 Q4	130,388	4,508	55,554
2020 Q1	127,589	4,426	55,539
2020 Q2	121,729	3,939	52,642
2020 Q3	120,833	4,247	52,368
2020 Q4	119,517	4,229	51,669
2021 Q1	114,370	4,208	50,763
2021 Q2	113,210	4,281	50,039
2021 Q3	110,463	4,381	49,075
2021 Q4	106,956	4,198	47,834

Data Source: Pennsylvania Prescription Drug Monitoring Program

TABLE 7

<b>Distinct Counts of Stimulant Prescriptions, Prescribers, and Patients, Philadelphia, 2017-2021</b>			
<b>Quarter</b>	<b>Total Prescriptions</b>	<b>Number of Distinct Prescribers</b>	<b>Number of Distinct Patients</b>
2017 Q1	59,355	1,905	28,467
2017 Q2	63,698	1,962	28,979
2017 Q3	59,207	1,957	27,318
2017 Q4	62,134	1,964	27,764
2018 Q1	64,284	1,968	29,187
2018 Q2	65,954	2,001	29,554
2018 Q3	61,713	2,039	27,707
2018 Q4	64,173	2,039	28,046
2019 Q1	66,857	2,015	30,204
2019 Q2	67,469	2,018	30,042
2019 Q3	61,673	2,028	28,006
2019 Q4	64,956	2,054	28,459
2020 Q1	65,747	2,026	29,336
2020 Q2	58,411	1,966	26,409
2020 Q3	61,080	2,025	27,401
2020 Q4	62,397	1,996	27,420
2021 Q1	64,239	1,994	28,728
2021 Q2	66,352	2,018	29,650
2021 Q3	66,130	2,107	29,493
2021 Q4	65,754	2,050	29,009

Data Source: Pennsylvania Prescription Drug Monitoring Program

TABLE 8

<b>Overdose Mortality Rate*, Count, Percent by Opioid Detection, Philadelphia, 2010-2020</b>						
<b>Opioid Overdose Death</b>				<b>Non-Opioid Overdose Death</b>		
<b>Year</b>	<b>Age-adjusted Rate per 100,000 residents</b>	<b>N</b>	<b>Percent</b>	<b>Age-adjusted Rate per 100,000 residents</b>	<b>N</b>	<b>Percent</b>
2010	18.1	297	76.7%	5.5	90	23.3%
2011	22.8	389	79.6%	5.6	100	20.5%
2012	25.0	423	82.5%	5.0	90	17.5%
2013	20.0	357	77.6%	5.6	103	22.4%
2014	27.6	495	78.8%	7.6	133	21.2%
2015	31.6	561	79.9%	8.0	141	20.1%
2016	40.3	752	82.9%	8.3	155	17.1%
2017	58.6	1,075	88.3%	7.7	142	11.7%
2018	49.2	939	84.1%	9.8	177	15.9%
2019	52.8	963	83.7%	10.2	187	16.3%
2020	57.1	1,041	85.8%	10.2	173	14.3%
2021	61.1	1,052	82.5%	12.6	224	17.6%

\* Calculation of age-adjusted rates includes Philadelphia Residents only. Rates are age-adjusted to Census 2000 US Standing Population  
 Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

TABLE 9

**Rates<sup>†</sup>, Count, and Column Percentages of Opioid Overdose-Related Deaths by Age Category,  
Philadelphia, PA, 2010-2021**

Year	Ages 15-29 years old			Ages 30-44 years old			Ages 45-59 years old			Ages 60 years old and older		
	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent
2010	13.5	61	20.5%	28.8	97	32.7%	41.7	122	41.1%	-	17	5.7%
2011	16.1	89	22.9%	41.7	141	36.3%	47.8	142	36.5%	-	17	4.4%
2012	19.9	95	22.5%	48.1	166	39.2%	45.9	143	33.8%	-	19	4.5%
2013	16.8	84	23.5%	36.0	133	37.3%	39.0	118	33.1%	7.7	22	6.2%
2014	22.9	113	22.8%	50.5	178	36.0%	54.4	172	34.8%	11.1	32	6.5%
2015	26.1	120	21.4%	54.6	206	36.7%	62.9	188	33.5%	16.0	47	8.4%
2016	29.7	159	21.1%	71.7	282	37.5%	81.9	259	34.4%	17.0	51	6.8%
2017	37.9	187	17.4%	116.6	466	43.4%	108.3	337	31.4%	27.3	85	7.9%
2018	31.7	163	17.4%	84.8	363	38.7%	101.1	306	32.6%	32.2	107	11.4%
2019	31.4	149	15.5%	98.0	407	42.3%	102.5	297	30.8%	33.9	109	11.3%
2020	24.2	121	11.6%	102.0	431	41.4%	120.5	349	33.5%	41.8	139	13.4%
2021	30.4	122	11.6%	99.1	412	39.2%	133.6	376	35.7%	43.7	141	13.4%

-Death rates based on counts less than 20 deaths were too few to calculate a reliable rate.

† Calculation of age specific rates includes Philadelphia Residents only

Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

TABLE 10

**Rates<sup>†</sup>, Count, and Column Percentages of Non-opioid Overdose-Related Deaths by Age Category,  
Philadelphia, PA 2010-2019**

Year	Ages 15-29 years old			Ages 30-44 years old			Ages 45-59 years old			Ages 60 years old and older		
	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent	Age Specific Rate per 100,000 residents	N	Percent
2010	-	10	11.1%	-	19	21.1%	15.8	47	52.2%	-	14	15.6%
2011	-	11	11.0%	8.2	31	31.0%	14.6	44	44.0%	-	14	14.0%
2012	-	11	12.2%	-	11	12.2%	17.7	54	60.0%	-	14	15.6%
2013	-	12	11.7%	6.1	24	23.3%	17.1	51	49.5%	-	15	14.6%
2014	-	8	6.0%	10.1	38	28.6%	21.3	66	49.6%	7.1	21	15.8%
2015	-	14	9.9%	9.7	38	27.0%	21.7	65	46.1%	8.0	24	17.0%
2016	-	11	7.1%	8.3	30	19.4%	26.0	79	51.0%	10.9	35	22.6%
2017	-	13	9.2%	7.8	34	23.9%	22.8	67	47.2%	9.3	28	19.7%
2018	-	11	6.2%	10.3	41	23.2%	30.4	88	49.7%	11.4	37	20.9%
2019	-	16	8.6%	9.2	37	19.8%	28.1	82	43.9%	15.7	52	27.8%
2020	*	*	*	10.7	43	24.9%	29.1	82	47.4%	13.9	45	26.0%
2021	*	*	*	9.9	39	17.4%	37.2	109	48.7%	21.7	71	31.7%

\* Counts less than 6 are suppressed

-Death rates based on counts less than 20 deaths were too few to calculate a reliable rate.

† Calculation of age specific rates includes Philadelphia Residents only

Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

TABLE 11

Opioid-Related Overdose Mortality Rate*, Count, Percent by Sex Assigned at Birth, Philadelphia, 2010-2021						
Year	Females Assigned At Birth			Males Assigned At Birth		
	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent
2010	10.4	88	29.6%	26.7	209	70.4%
2011	11.8	99	25.5%	35.0	290	74.6%
2012	15.8	135	31.9%	35.3	288	68.1%
2013	12.0	113	31.7%	29.0	244	68.4%
2014	17.6	162	32.7%	38.5	333	67.3%
2015	15.9	147	26.2%	49.3	414	73.8%
2016	24.8	234	31.1%	57.7	518	68.9%
2017	28.9	273	25.4%	91.9	802	74.6%
2018	25.7	252	26.8%	75.9	687	73.2%
2019	25.8	243	25.2%	83.3	720	74.8%
2020	28.1	259	24.9%	89.5	782	75.1%
2021	34.8	302	28.7%	90.7	750	71.3%

\* Calculation of age-adjusted rates includes Philadelphia Residents only. Rates are age-adjusted to Census 2000 US Standard Population.

Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

TABLE 12

Non-Opioid-Related Overdose Mortality Rate*, Count, Percent by Sex, Philadelphia, 2010-2021						
Year	Females Assigned At Birth			Males Assigned At Birth		
	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent
2010	3.5	29	32.2%	7.8	61	67.8%
2011	3.2	30	30.0%	8.5	70	70.0%
2012	2.7	25	27.8%	7.8	65	72.2%
2013	3.7	34	33.0%	8.0	69	67.0%
2014	4.5	38	28.6%	11.2	95	71.4%
2015	5.7	50	35.5%	10.9	91	64.5%
2016	4.7	46	29.7%	12.7	109	70.3%
2017	5.1	51	35.9%	11.0	91	64.1%
2018	5.9	51	28.8%	14.4	126	71.2%
2019	6.1	58	31.0%	15.2	129	69.0%
2020	5.0	43	24.9%	16.2	130	75.1%
2021	6.2	56	25.0%	20.0	168	75.0%

\* Calculation of age-adjusted rates includes Philadelphia Residents only. Rates are age-adjusted to Census 2000 US Standard Population.

Data Source: Philadelphia Department of Public Health, Medical Examiner's Office



TABLE 13

Age-adjusted Opioid Mortality Rates†, Counts, and Percentages, by Race, Philadelphia, 2010-2021												
Year	Non-Hispanic White			Non-Hispanic Black			Hispanic (any race)			Other		
	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent
2010	31.0	198	66.7%	11.3	76	25.6%	13.1	23	7.7%	*	*	*
2011	36.2	246	63.2%	13.2	83	21.3%	28.8	56	14.4%	*	*	*
2012	43.0	280	66.2%	15.1	99	23.4%	21.6	41	9.7%	*	*	*
2013	33.9	238	66.7%	10.7	68	19.1%	21.9	47	13.2%	*	*	*
2014	45.2	312	63.0%	16.0	112	22.6%	31.4	67	13.5%	*	*	*
2015	48.9	343	61.1%	21.9	145	25.9%	35.2	71	12.7%	*	*	*
2016	64.7	468	62.2%	25.4	169	22.5%	43.0	101	13.4%	-	14	1.9%
2017	96.3	679	63.2%	34.0	228	21.2%	64.7	153	14.2%	-	15	1.4%
2018	76.1	562	59.9%	32.7	239	25.5%	57.0	130	13.8%	-	8	0.9%
2019	73.5	519	53.9%	39.8	267	27.7%	69.7	165	17.1%	-	12	1.3%
2020	67.5	475	45.6%	54.2	378	36.3%	71.3	171	16.4%	-	17	1.6%
2021	71.4	459	43.6%	59.9	399	37.9%	74.4	177	16.8%	-	17	1.6%

† Calculation of age-adjusted includes Philadelphia Residents only. Rates are age-adjusted to Census 2000 US Standard Population.

\* Counts less than 6 are suppressed

-Death rates based on counts less than 20 deaths were too few to calculate a reliable rate.

Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

TABLE 14

Age-adjusted Non-Opioid Mortality Rates <sup>†</sup> , Counts, and Percentages, by Race, Philadelphia, PA 2010-2020												
Year	Non-Hispanic White			Non-Hispanic Black			Hispanic (any race)			Other		
	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent	Age-adjusted Rate per 100,000 residents	N	Percent
2010	2.8	24	26.7%	8.3	54	60.0%	-	12	13.3%	0	0	0
2011	3	32	32.0%	9.3	62	62.0%	-	6	6.0%	0	0	0
2012	2.1	20	22.2%	8.4	60	66.7%	-	9	10.0%	*	*	*
2013	4.7	35	34.0%	7.6	58	56.3%	-	6	5.8%	*	*	*
2014	3.6	33	24.8%	12.1	83	62.4%	-	14	10.5%	*	*	*
2015	6.1	47	33.3%	11.7	82	58.2%	-	11	7.8%	*	*	*
2016	5.2	41	26.5%	13.5	100	64.5%	-	13	8.4%	*	*	*
2017	5.3	41	28.9%	12.8	93	65.5%	-	7	4.9%	*	*	*
2018	6.2	50	28.3%	15.4	108	61.0%	-	17	9.6%	*	*	*
2019	6.5	47	25.1%	15.4	117	62.6%	-	18	9.6%	*	*	*
2020	5	36	20.8%	17.4	119	68.8%	-	14	8.1%	*	*	*
2021	9.3	65	29.0%	20.0	143	63.8%	-	13	5.8%	*	*	*

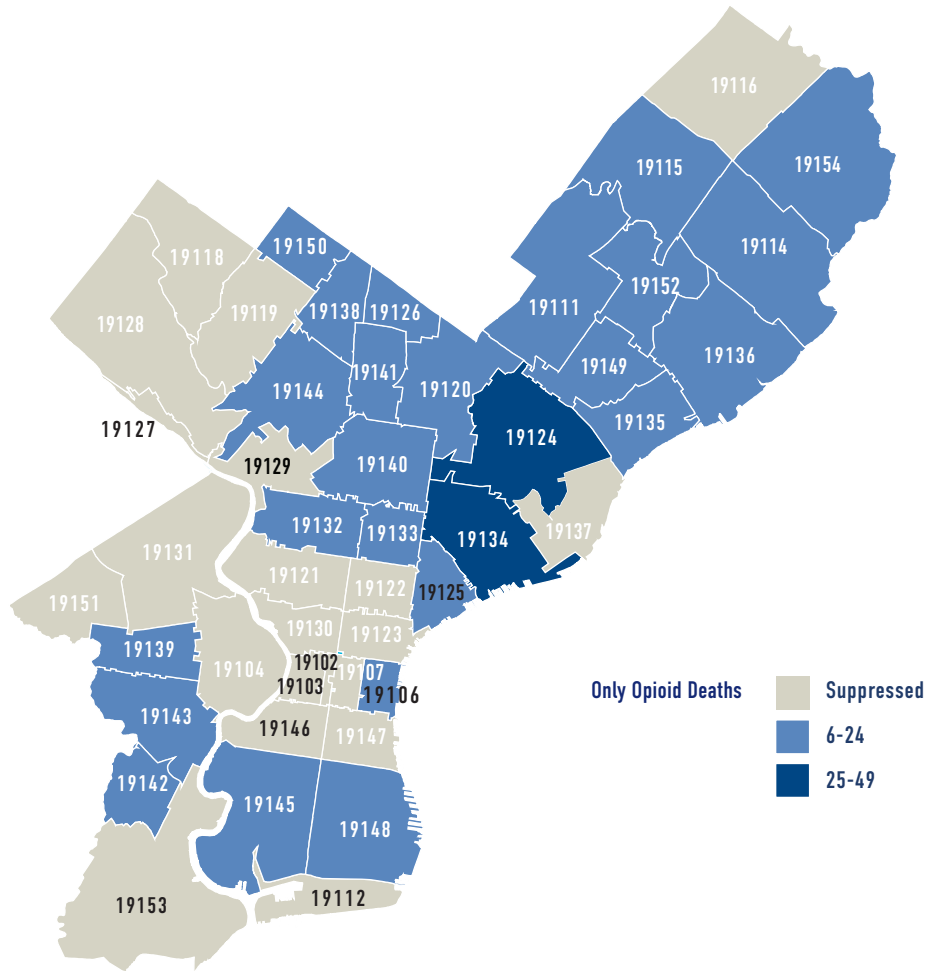
<sup>†</sup> Calculation of age-adjusted includes Philadelphia Residents only. Rates are age-adjusted to Census 2000 US Standard Population.

\* Counts less than 6 are suppressed

-Death rates based on counts less than 20 deaths were too few to calculate a reliable rate.

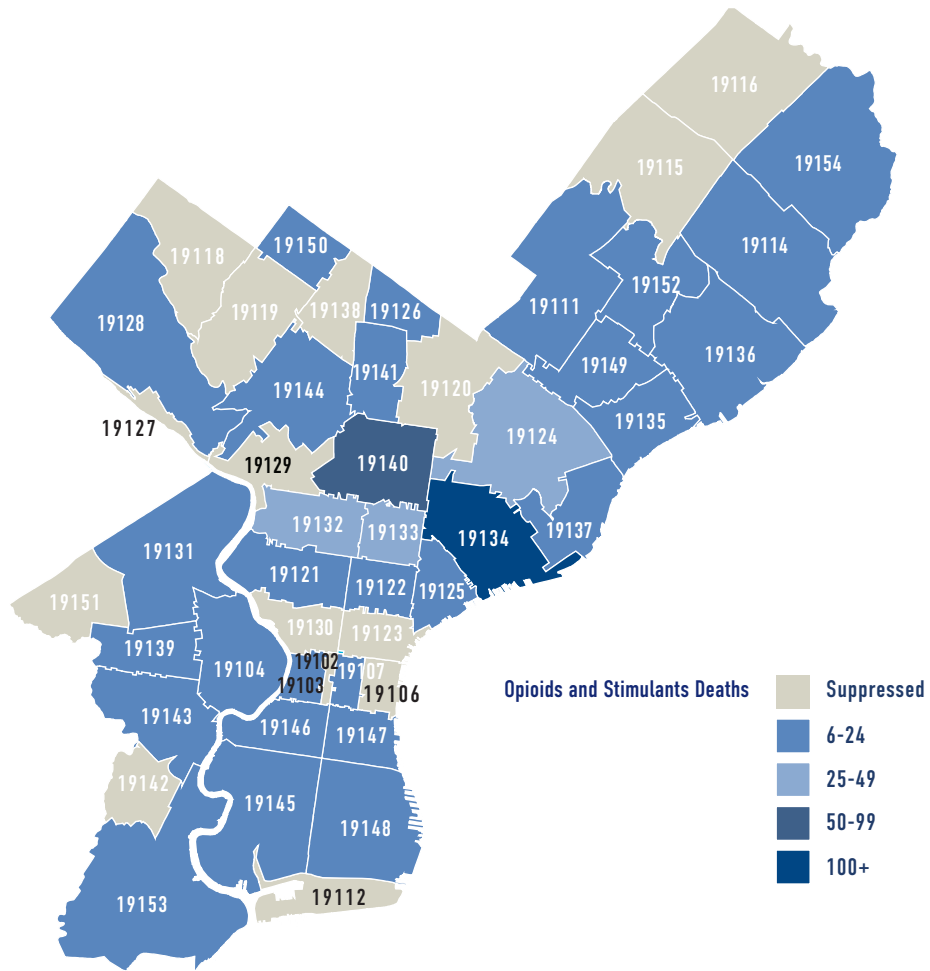
Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

**FIGURE 33**  
**NUMBER OF OVERDOSE DECEDENTS WITH ONLY OPIOIDS DETECTED IN TOXICOLOGY TESTS, 2021**



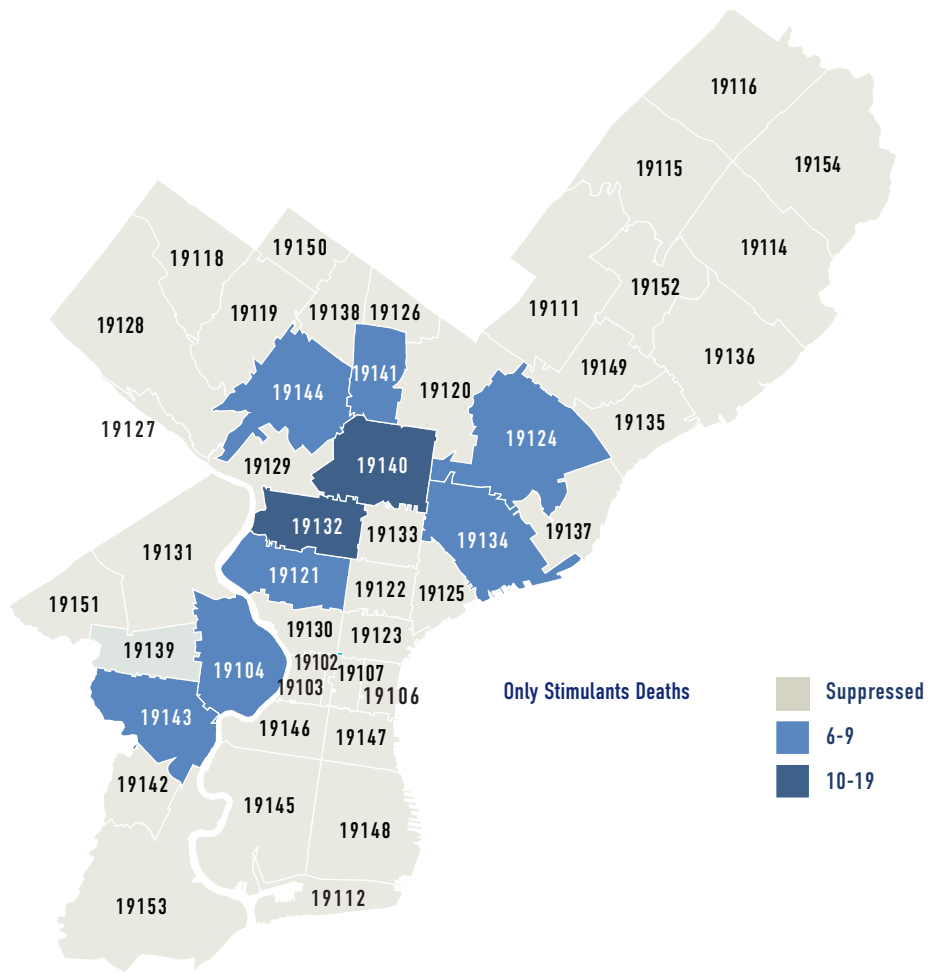
Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

**FIGURE 34**  
**NUMBER OF OVERDOSE DECEDENTS WITH OPIOIDS AND STIMULANTS DETECTED IN TOXICOLOGY TESTS, 2021**



Data Source: Philadelphia Department of Public Health, Medical Examiner's Office

**FIGURE 35**  
**NUMBER OF OVERDOSE DECEDENTS WITH ONLY STIMULANTS DETECTED IN TOXICOLOGY TESTS, 2021**



Data Source: Philadelphia Department of Public Health, Medical Examiner's Office



123 South Broad Street, 11th Floor  
Philadelphia, PA 19109

