

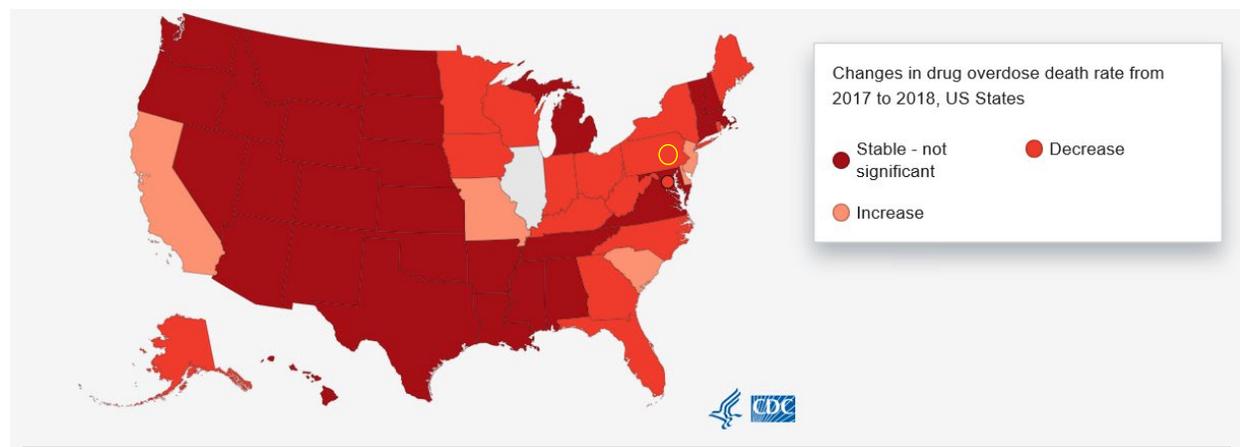
4.3.10 Opioid Addiction Response

The following section provides the hazard profile (hazard description, location, extent, previous occurrences and losses, probability of future occurrences, and impact of climate change) and vulnerability assessment for the Opioid Addiction Response hazard in Dauphin County.

Pennsylvania is experiencing an unprecedented epidemic of drug abuse and drug-related deaths, affecting residents throughout the state. In 2019, 4,458 drug overdose deaths were identified statewide. Of those deaths, 83.9 percent (3,742) have been confirmed to be opioid-related, a 0.1 percent increase compared to the 3,737 in 2018 (PA Department of Health 2020). In 2018, Pennsylvania had the fourth highest rate of drug overdose deaths in the country. In 2019, there were 101 drug overdose-related deaths within Dauphin County (Overdose Free PA n.d.)

Death rates have been stable in the majority of the United States, with some states reporting a decrease, including Pennsylvania. (highlighted on Figure 4.3.10-1) (Centers for Disease Control and Prevention [CDC] 2019). The Dauphin County drug overdose death rate per 100,000 people was 44 in 2018 (Overdose Free PA n.d.).

Figure 4.3.10-1. Statistically Significant Drug Overdose Death Rate Increase and Decrease from 2017 to 2018



Source: Centers for Disease Control and Prevention (CDC) 2019

Note: Yellow circle over Dauphin County

In 2017, the U.S. Drug Enforcement Administration (DEA) Philadelphia Division and the University of Pittsburgh prepared a document titled, “Analysis of Overdose Deaths in Pennsylvania, 2016” to assist law enforcement’s efforts to identify and combat drug suppliers, and ultimately drug abuse and related overdoses (DEA Philadelphia Division 2017). The drugs included in the analysis (listed in Table 4.3.10-1) were selected based on (1) law enforcement intelligence regarding frequency of abuse and diversion, and (2) the most common drugs present in drug-related overdose deaths according to national public safety and public health sources.

For the purpose of this Hazard Mitigation Plan (HMP) update and as identified by the Steering Committee, the drugs included in Table 4.3.10-1 below will be discussed in further detail in this section. This section also describes the location and extent, range of magnitude, past occurrence, future occurrence, and vulnerability assessment for the opioid addiction response hazard for the Dauphin County HMP.

Table 4.3.10-1. Drugs Included in Analysis of Drug-Related Overdose Deaths, Pennsylvania, 2017

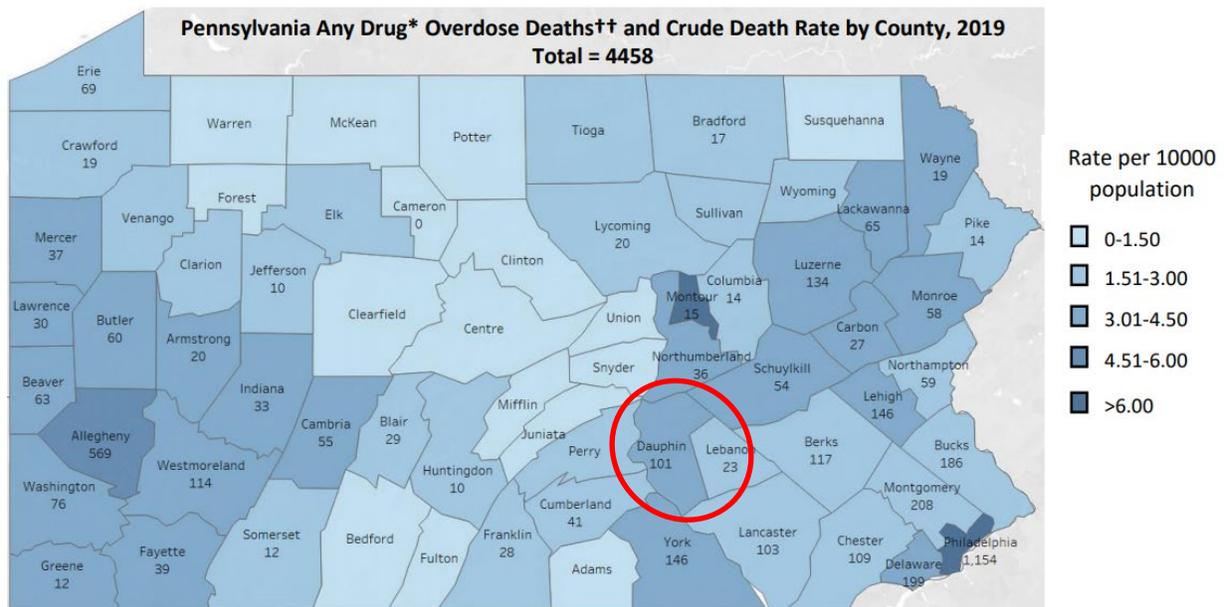
Drug Category	Substances Included in Analysis		
Benzodiazepines	Alprazolam Chlordiazepoxide Clonazepam Delorazepam	Diazepam Estazolam Flurazepam Lorazepam	Midazolam® Oxazepam Temazepam
Cocaine			
Fentanyl/Fentanyl-Related Substances (FRS)/Non-Prescription Synthetic Opioids (NPSO)	3-Methylfentanyl 4-Methoxy-Butyryl Fentanyl Acetyl Fentanyl Acryl Fentanyl	Carfentanil Fentanyl Fluorobutyrfentanyl Fluorofentanyl	Furanyl Fentanyl Para-Fluoro-Isobutyryl Fentanyl/FIBF Sufentanil U-47700
Heroin			
Other Illicit Drugs	Lysergic Acid Diethylamid (LSD) Methylenedioxy-amphetamine (MDA) 3,4-Methylenedioxymethamphetamine (MDMA)	Methamphetamine Phencyclidine (PCP)	
Prescription Opioids	Hydrocodone Hydromorphone Meperidine	Morphine Oxycodone Oxymorphone	Tapentadol Tramadol

Source: DEA Philadelphia Field Division 2017

4.3.10.1 Location and Extent

The number of overdoses within Dauphin County has increased from 2015 to 2019. The number of opioid overdoses peaked in 2018 with 120 overdoses. The number of reported opioid overdoses decreased from 2018 to 2019 from 120 to 101 overdoses. (Pennsylvania Department of Health 2019.). As shown in Figure 4.3.10-2, in 2019, Dauphin County had a rate of 3.01-4.50 drug-related overdose deaths per 10,000 people.

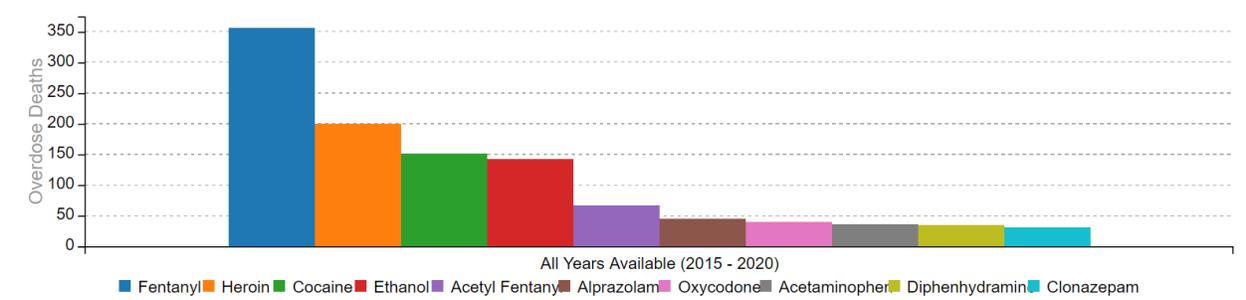
Figure 4.3.10-2. Pennsylvania Overdose Deaths and Crude Rate by County, 2019



Source: Pennsylvania Department of Health 2019
 Note: The red oval indicates the location of Dauphin County.

The figure shows that fentanyl was the most frequently reported drug category associated with overdose deaths in the county, followed by heroin.

Figure 4.3.10-3. Top 10 Drugs Present in 2015–2020 Drug-Related Overdose Deaths, Dauphin County



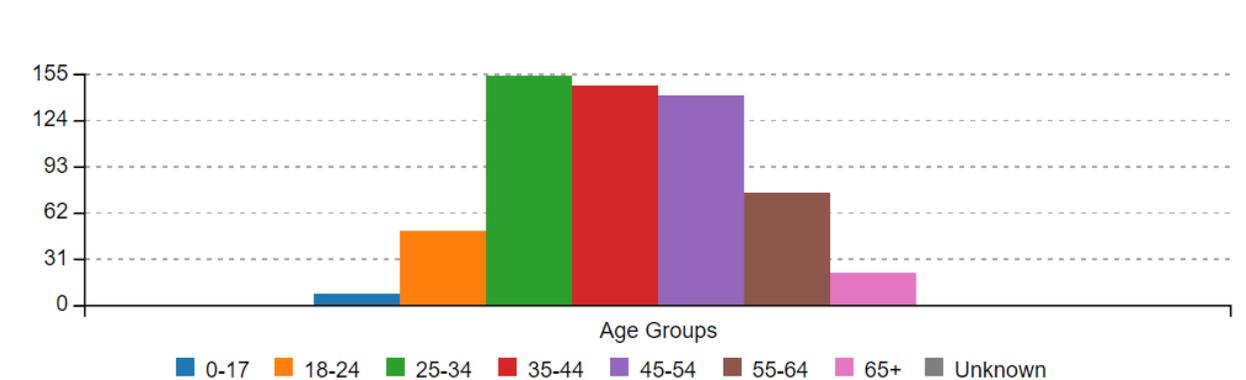
Source: *Overdose Free PA 2020*

4.3.10.2 Range of Magnitude

Age

Overdose Free PA indicated 541 overdose deaths between 2015 and 2020 in Dauphin County. The age groups with the highest number of overdoses were (in descending order) 25–34, 35–44, 45–54, with these three age groups composing 74 percent of overdose deaths in the county (Overdose Free PA n.d.).

Figure 4.3.10-4. Age Distribution of Drug-Related Overdose Decedents, Dauphin County, 2015–2020



Source: *Overdose Free PA 2020*

Gender

In 2016, 2017, and 2018, Fentanyl was the drug category most frequently associated with overdose deaths among males and females in the county. In 2018, toxicology reports identified the three most prevalent drug categories associated with overdose deaths among males in Dauphin County as fentanyl (82 percent), heroin (42 percent), and FRSs and NPSOs (29 percent). The three most prevalent drug categories associated with overdose deaths among females were fentanyl (74 percent), cocaine (47 percent), and benzodiazepines (39 percent), as shown in Figure 4.3.10-5.

Figure 4.3.10-5. Drug Presence among Drug-Related Overdose Decedents by Gender 2016–2018 in Dauphin County, Pennsylvania

Drug Category	2016		2017		2018	
	Female	Male	Female	Male	Female	Male
Fentanyl	45%	60%	74%	76%	74%	82%
Heroin	42%	40%	37%	56%	26%	42%
Cocaine	19%	19%	7%	20%	47%	27%
Benzodiazepines	32%	25%	19%	16%	39%	21%
Rx Opioids	10%	19%	11%	26%	13%	14%
Ethanol	23%	38%	22%	26%	18%	25%
FRSs & NPSOs	6%	8%	11%	29%	24%	29%
Other Illicit Drugs	16%	6%	4%	6%	16%	11%

Source: Overdose Free PA 2018

Race and Ethnicity

Figure 4.3.10-6 shows the breakdown of overdose deaths by race and ethnicity in Dauphin County from 2016–2018. Fentanyl, heroin, and ethanol were most prevalent in the White and Black populations; fentanyl, heroin, cocaine, and FRSs and NPSOs were most prevalent in the Hispanic population; and fentanyl, heroin, and benzodiazepines were most prevalent in the Other population.

Figure 4.3.10-6. Drug Presence by Race and Ethnicity Among Drug-Related Overdose Decedents, Dauphin County, Pennsylvania, 2016–2018

Drug Category	White	Black	Hispanic	Other
Fentanyl	70%	63%	96%	75%
Heroin	41%	37%	50%	75%
Cocaine	22%	29%	33%	25%
Benzodiazepines	24%	21%	17%	50%
Rx Opioids	20%	11%	4%	13%
Ethanol	25%	34%	29%	
FRSs & NPSOs	20%	21%	33%	13%
Other Illicit Drugs	10%	11%		25%

Source: Overdose Free PA 2020

4.3.10.3 Past Occurrence

Deaths from drug overdose are an increasing public health burden in the United States. A total of 67,367 drug overdose-related deaths were reported in 2018 (National Institute on Drug Abuse n.d.). Table 4.3.10-2 shows the annual accidental drug-related deaths in Dauphin County from 2015 to 2020. Drug-related deaths in Dauphin County increased from 2015 to 2018, but in 2019, the number of drug-related deaths decreased.

Table 4.3.10-2. Accidental Drug-Related Deaths, Dauphin County, Pennsylvania 2015–2020

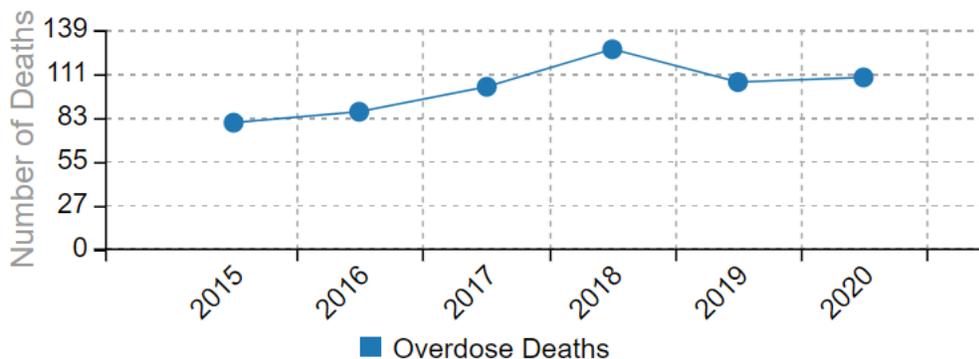
Year	Drug-Related Deaths	Population
2015	81	272,983
2016	88	273,707
2017	104	275,710
2018	128	277,097
2019	107	278,299
2020*	91	N/A

Source: *Overdose Free PA, U.S. Census 2015-2019*

Note: *Data available as of December 17, 2020

Figure 4.3.10-7 shows the changes in overdose death rates from 2015 to 2020 for Dauphin County, Pennsylvania.

Figure 4.3.10-7. Annual Drug-Related Deaths, Dauphin County, 2015–2020



Source: *Overdose Free PA 2020*

Pennsylvania Governor Wolf declared the heroin and opioid epidemic a statewide disaster emergency on January 10, 2018. He has signed six renewals of the proclamation since then. This first-ever public health disaster declaration is meant to enhance state response, increase access to treatment, and save lives. A command center at the Pennsylvania Emergency Management Agency (PEMA) tracks progress and enhances coordination of health and public safety agencies. The declaration specifies 13 key initiatives organized by three areas of focus. The three areas of focus are listed below, with the associated key initiatives described beneath each area:

1. Enhancing Coordination and Data Collection to Bolster State and Local Response
 - Establishes an Opioid Command Center located at PEMA, which will house the Unified Opioid Coordination Group that will meet weekly during the period of the disaster declaration to monitor implementation and progress of the initiatives in the declaration.

- Expands Access to Prescription Drug Monitoring Program (PDMP) to Other Commonwealth Entities for Clinical Decision-Making Purposes to improve treatment outcomes and better monitor compliance among prescribers. Since 2016, 90,000 physicians have conducted more than 1 million searches on the PDMP.
- Adds Overdoses and Neonatal Abstinence Syndrome (NAS) as Reportable Conditions in Title 28, Chapter 27 to the Pennsylvania Department of Health (DOH) to increase data collection and improve outcomes in both areas.
- Authorizes Emergency Purchase Under Procurement Code for Hotline Contract with Current Vendor, giving the Pennsylvania Department of Drug and Alcohol Program (DDAP) further emergency purchase authorization to allow the department to enter into a contract with the current drug and alcohol hotline vendor for uninterrupted services. To date, the 24/7 helpline, 1-800-662-HELP, has received more than 18,000 calls to connect those suffering from substance use disorder with treatment.

2. Improving Tools for Families, First Responders, and Others to Save Lives

- Enables emergency medical services providers to leave behind naloxone by amending the current standing order to include dispensing by first responders, including emergency medical technicians (EMT). The existing naloxone standing order and funding for naloxone to first responders has allowed for more than 5,000 lives to be saved, helping connect sufferers to treatment for substance use disorder.
- Allows pharmacists to partner with other organizations to increase access to naloxone by waiving regulations to allow pharmacists to partner with other organizations, including prisons and treatment programs, to make naloxone available to at-risk individuals upon discharge from these facilities.
- Allows for the immediate temporary rescheduling of all fentanyl derivatives to align with the federal DEA schedule while working toward permanent rescheduling.
- Authorizes emergency purchasing under Section 516 of the Procurement Code to allow for an emergency contract to expand the advanced body scanner pilot program currently in place at Wernersville State Hospital that is used on re-entrants returning to the facility. This would prevent the program from lapsing.

3. Speeding Up and Expanding Access to Treatment

- Waive the face-to-face physician requirement for Narcotic Treatment Program (NTP) admissions to allow initial intake review by a certified registered nurse practitioner (CRNP) or physician assistant (PA) to expedite initial intakes and streamline coordination of care when an individual is most in need of immediate attention.
- Expand access to medication-assisted treatment (MAT) by waiving the regulatory provision to permit dosing at satellite facilities even while counseling remains at the base of the NTP. This allows more people to receive necessary treatments at the same location, increasing their access to care and chances for recovery.

- Waive annual licensing requirements for high-performing drug and alcohol treatment facilities to allow for bi-annual licensure process, which streamlines licensing functions and better allocates staff time. DDAP will request that facilities seek a waiver by filing exception requests to the annual licensing requirement.
- Waive the fee provided for in-statute for birth certificates for individuals who request a good-cause waiver by attesting that they are affected by opioid use disorder (OUD). This is of particular importance to individuals experiencing homelessness and other vulnerable populations who often cannot obtain copies of their birth certificates to access treatment and other benefits due to the financial requirements.
- Waive separate licensing requirements for hospitals and emergency departments to expand access to drug and alcohol treatment to allow physicians to administer short-term MAT consistent with DEA regulations without requiring separate notice to DDAP.

4.3.10.4 Future Occurrence

One of the most important components in reducing drug-related deaths is to prevent initial drug use; as such, the impact of education and prevention strategies in use today are geared to reduce the number of overdose deaths that will be shown in future years. The DEA Philadelphia Field Division will continue efforts, in conjunction with law enforcement and public health partners, to define and address the factors impacting availability and abuse of illicit drugs and diverted pharmaceuticals in Pennsylvania, which will ultimately impact the number of overdose deaths.

As evidenced by the upward trajectory of drug-related overdose deaths over the past several years throughout Dauphin County, Pennsylvania, and United States, the drug overdose hazard is likely to continue if something is not done. A crisis exists among law enforcement, public health entities, and educators to address drug availability, drug treatment, and drug education.

The identified hazards of concern for Dauphin County were ranked for relative risk in Section 4.4 of this plan. The probability of occurrence, or likelihood of the event, is one parameter used for ranking hazards. Based on historical records, the probability of occurrence for drug overdose events in Dauphin County is considered *highly likely*. Section 4.4 provides further information on PEMA’s risk factor methodology and the risk factors used to determine each hazard’s risk rank.

4.3.10.5 Vulnerability Assessment

To understand risk, a community must evaluate the assets that are exposed and potentially vulnerable to the identified hazard. The following sections evaluate and estimate the potential impact of drug overdose deaths on Dauphin County, including:

- Overview of vulnerability
- Impact on (1) life, health, and safety; (2) general building stock and critical facilities; (3) economy; (4) the environment; and (6) future growth and development
- Effects of climate change on vulnerability
- Further data collections that will assist with understanding of this hazard over time

Overview of Vulnerability

This section is being added as an introductory representation, with hopes that future HMP updates will include more enhanced data for Dauphin County as well as successful mitigation actions. At this time, available data

support the need to create awareness and provide education to Dauphin County residents regarding this hazard of concern.

Impact on Life, Health, and Safety

The population that uses opioids their family and friends, as well as first responders, are vulnerable to opioid addiction and overdose deaths. According to the 2014–2018 American Community Survey 5-Year Estimates, Dauphin County’s population was 277,097. The rates of drug overdose deaths are continuing to increase. According to CDC, in 2018, Pennsylvania had one of the top four highest observed drug overdose death rates in the country (CDC 2020). As discussed above, Dauphin County drug overdose death rate per 10,000 people was 3.01-4.50 in 2018 (Overdose Free PA n.d.).

Impact on General Building Stock and Critical Facilities

No structures are anticipated to be affected directly by drug-related overdose deaths.

Impact on the Economy

The impact the drug overdose hazard has on the economy and estimated dollar losses are difficult to measure and quantify.

Impact on the Environment

As discussed in the 2018 Pennsylvania State HMP, fentanyl and fentanyl-related substances are hazardous materials and should be treated as such. Depending on the potency of the drug, it can take as little as the equivalent of a few micrograms to cause health complications (DEA 2019).

According to a recent study, environmental scientists at the Cary Institute of New York found traces of opioids and other drugs in streams, rivers, and lakes. These traces came from human urine and feces, and medications that have been flushed down the toilet. However, the ecological and environmental impacts are unknown. The U.S. Environmental Protection Agency (EPA) suggests that while the risks of pharmaceuticals found in wastewater, ambient water, and drinking water is low, further research is needed (EPA n.d.).

Future Growth and Development

Areas targeted for potential future growth and development in the next 5 to 10 years have been identified across Dauphin County (further discussed in Section 2.4 of this HMP). Any areas of growth could be potentially impacted by the drug overdose hazard because the entire county is exposed and potentially vulnerable.

Effect of Climate Change on Vulnerability

Climate change is not anticipated to affect vulnerability associated with drug overdose deaths.

Additional Data and Next Steps

For the HMP update, any additional information regarding localized concerns and past impacts will be collected and analyzed. These data will be developed to support future revisions to the plan. Future mitigation efforts could include building on existing state, county, and local efforts.