

DATA BRIEF: Naloxone Distribution in the Allegheny County Jail to Prevent Overdose

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Allegheny County Department of Human Services, Allegheny County Health Department and Allegheny County Jail

In Allegheny County, opioid-related fatal overdoses have been increasing in recent years. In 2017, 623 opioid-related overdoses occurred in the County, an increase of 12 percent over 2016 and the fourth consecutive year in which the number of fatal overdoses was higher than in any prior year.¹

1 For more information about opiate-related overdose deaths in the region, see [“Opioid-Related Overdose Deaths in Allegheny County, 2015–2016.”](#)

People released from jail are particularly vulnerable to the risk of overdose. In 2017, 21 percent of County residents who died of an opioid-related overdose had been released from the Allegheny County Jail (ACJ) within a year of their death, and, of those, about 40 percent died during the month following their jail release.

2 Naloxone (hydrochloride) is a medication designed to rapidly reverse opioid overdose. The naloxone kits provided to people being released from jail include two doses of nasal spray along with an information card.

To reduce the risk of fatal overdose, the ACJ began offering free naloxone kits² to all offenders who went through the jail’s discharge protocol beginning in October 2016 with the hope that more availability of the kits might save lives, both those of the individuals receiving the kits as well as others with whom they may come in contact. This data brief describes the naloxone distribution efforts by ACJ and summarizes the demographics and locations of people who received naloxone kits upon their release.

Paul* had a history of opioid use and had been in and out of ACJ during the past 10 years. Paul was released late 2017 after a 13-month stay in the jail. Upon release, he was provided with a naloxone kit for use in the case of an overdose. Following release, he expressed his intention to refrain from using opioids again.

Paul was living with his mother and had found employment. By all accounts, Paul was doing well. About a month after release, however, Paul returned to using drugs. Shortly thereafter, Paul was found unconscious at home. Paul’s uncle administered the naloxone provided to Paul upon his release from ACJ and revived him. Just days after this experience, Paul entered treatment and, as of the time of this report, has remained in early recovery. Paul’s uncle said:

“None of this could’ve taken place if [naloxone] hadn’t been in the medicine cabinet. The story would’ve been another dead young man, full of life, full of potential, wasted away. Because the [naloxone] was there, we now have somebody that’s in treatment. We don’t know how this will play out, but we know that he’s alive and that he has every kind of opportunity to live a life, a full life.”

*Name has been changed

“People with opioid use disorder should have the tools and resources to help them get back on track... There is hope that when we give people an opportunity and potential to live, even if it is not within the ideal time frame, recovery will happen. Without naloxone, even more fatal overdose incidents would occur.”

— Dr. Latika Davis-Jones, Assistant Deputy Director, Bureau of Drug and Alcohol, DHS

METHODOLOGY

ACJ administrative records were used to identify inmates who had received a naloxone kit. Naloxone recipients were then matched to client records in the Allegheny County Data Warehouse³ to determine each individual’s most recent known address at the time of their release from jail. Records from the Allegheny County Office of the Medical Examiner (ACOME) were used to determine whether individuals died of an opioid-related overdose after being released from jail. Only people who died within the County are included in the ACOME’s data; individuals who died outside of the County are not included in this analysis.

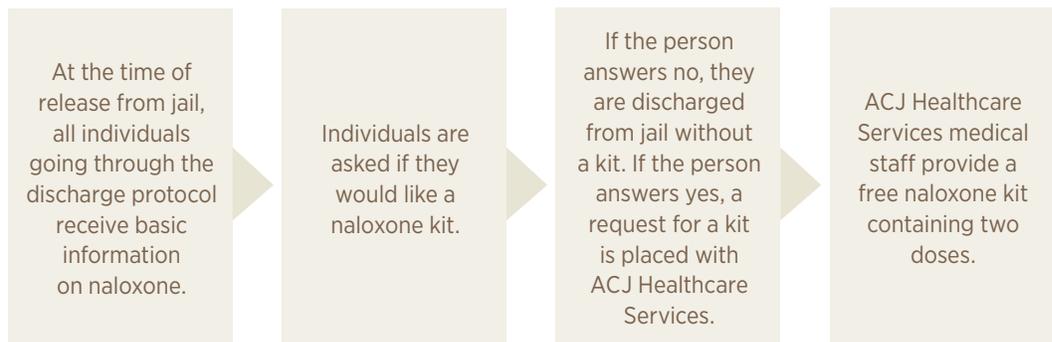
- 3 The Data Warehouse brings together and integrates client and service data from a wide variety of sources both internal and external to the County. More information available [here](#).
- 4 Binswanger IA¹, Stern MF, Deyo RA, Heagerty PJ, Cheadle A, Elmore JG, Koepsell TD. 2007. Release from prison—a high risk of death for former inmates. *N Engl J Med*. <https://www.ncbi.nlm.nih.gov/pubmed/17215533>
- 5 Strang, J., McCambridge, J., Best, D., Beswick, T., Bearn, J., Rees, S., Gossop, M., 2003. Loss of tolerance and overdose mortality after inpatient opiate detoxification: follow up study. *Br. Med. J.* 326, 959–960.

BACKGROUND

Individuals with opioid use disorder (OUD) who are released from jail are particularly vulnerable to overdose. In a study in Washington state, the risk of overdose death was found to be about 13 times greater in the first two weeks after release from jail when compared to that of other state residents.⁴ This higher risk was observed to be related to lower drug tolerance following a period of abstinence.⁵

In Allegheny County, people going through the jail’s discharge protocol are provided with information about overdose prevention and are offered a naloxone kit. The kit includes an instruction card that lists the steps to administer the medicine and provides information on where to obtain more kits if needed.

FIGURE 1: Process for Naloxone Distribution at ACJ



FINDINGS

Opioid Use Disorder in ACJ

While available data does not allow us to quantify the exact number of people in ACJ who have opioid use disorder, we are able to approximate the size of that population by looking at the number of people who were placed on detoxification protocols⁶ in the jail. Of the 8,251 people who went through the discharge protocol in 2017, about 1,448 (18%) were placed on detoxification protocols.

6 Individuals who self-report withdrawal symptoms or who appear to be under the influence of a substance or experiencing withdrawal symptoms are assessed by healthcare staff utilizing withdrawal scales. Withdrawal scale outcomes determine whether an individual receives detox protocol.

7 Not all people booked in the jail go through the discharge protocol; for example, people who are transferred to another facility, released to alternative housing, or released to pretrial electronic monitoring do not go through the protocol.

Naloxone Distribution at Release from ACJ

Between October 2016 and February 2018, 1,399 unique people received naloxone kits at release from jail, about 17 percent of the people who went through the discharge protocol during this time period.⁷ Some people were released from the jail more than once during that time and therefore received more than one kit for a total of 1,428 kits distributed during the period of study. Among the people who received the kits:

- Sixty-six percent were male, compared to 76 percent male for the population that went through the jail's discharge protocol in 2017.
- The average age was 36 (median of 34), compared to an average age of 35 (median 32) for those who went through the discharge protocol.
- The average length of stay in ACJ was 35 days (median 8 days), compared to 44 days (median 7 days) for those who went through the discharge protocol.
- Forty-two percent received detox services while in jail. For comparison, 18 percent of those who went through the discharge protocol received detox services.

Overdose Deaths of People Who Received a Naloxone Kit

Of the 1,399 people who received a naloxone kit at release from ACJ, 21 (1.5%) had died of overdose by the time of this analysis;⁸ of those, 13 (57%) had undergone detox while in jail. It is difficult to compare the 1.5 percent death rate of people who received a naloxone kit at the time of jail exit to the death rate of others leaving the jail since we do not know the risk level of the people in the second group. We can, however, compare the number of people who received a naloxone kit and later died of an overdose (21 people) to the total number of people who died of an overdose within 3 months of leaving jail, which includes those who received kits and those who did not (93 people in 2017). To put this into context, 623 people died of an opiate overdose in the County in 2017, as noted above.

8 Data for overdose deaths comes from ACOME data housed in the Data Warehouse and was pulled in January 2018.

“The jail temporarily houses our neighbors, family members, and friends as they navigate their legal process. We provide care for approximately 22,000 individuals annually and have the ability to multiply our effects by providing the best care possible. If we can reach one person, or prevent one overdose, we may impact a family we have never even met. People struggling with addiction deserve to have the chance to find recovery, and their loved ones deserve to have them alive.”

— Laura Williams, Chief Deputy Warden of Healthcare Services, ACJ

Communities Where Individuals Resided After Release and Where Fatal Overdoses Occurred

The maps below show the locations where individuals who received naloxone at release from jail resided after their release. As described below, many of the locations to which individuals with naloxone were returning have also had high incidences of opioid-related deaths, suggesting that kits went to high-risk communities where we could expect a strong impact.

Figure 2 displays Allegheny County municipalities, excluding the City of Pittsburgh, where individuals who received naloxone kits at jail release resided after leaving ACJ.

The municipalities that experienced relatively high numbers of both opioid-related deaths and released offenders who had received naloxone kits included Penn Hills, McKeesport, McKees Rocks and Ross.⁹

9 [Opioid-Related Overdose Deaths in Allegheny County, 2015–2016](#)

FIGURE 2: Distribution of ACJ Naloxone Kits by Allegheny County Municipality (Excluding the City of Pittsburgh)

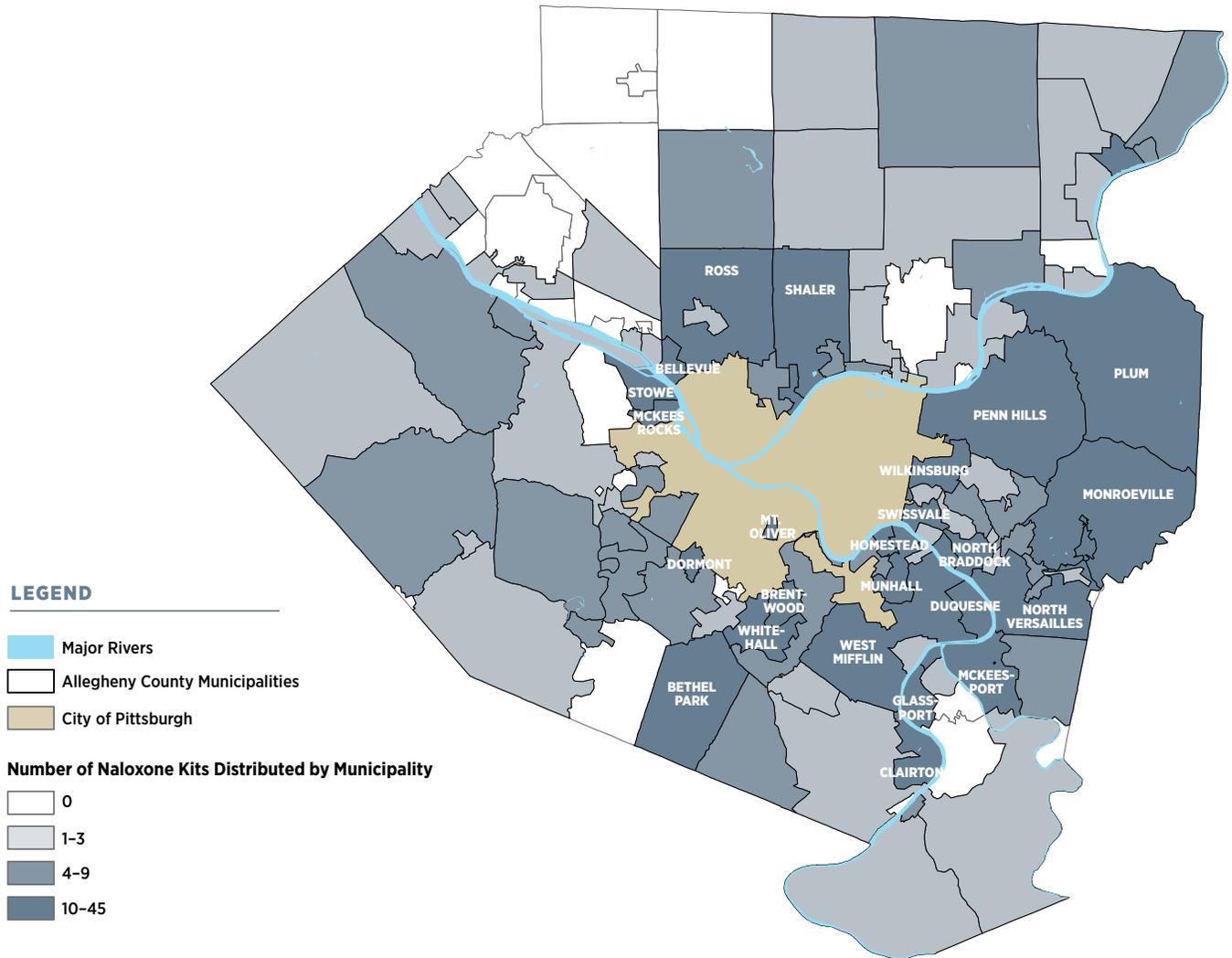
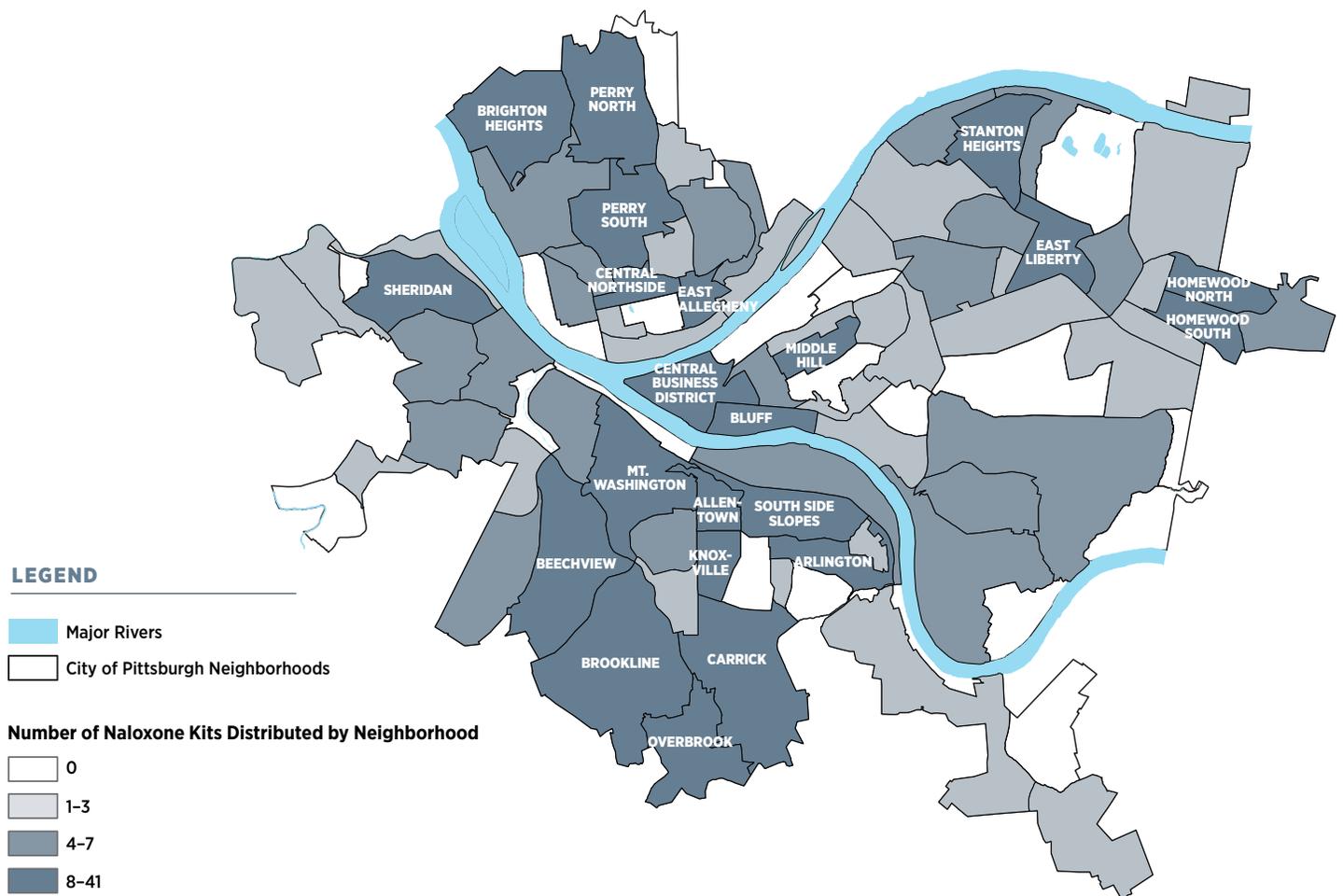


Figure 3 displays Pittsburgh neighborhoods where individuals who received naloxone kits resided after leaving ACJ.

Several of the neighborhoods in which people who received naloxone kits at jail release resided were also communities that experienced the highest numbers of opioid-related deaths in recent years; these neighborhoods included Carrick, Brookline, Mount Washington and Beechview.

FIGURE 3: Distribution of ACJ Naloxone Kits by City of Pittsburgh Neighborhood



NEXT STEPS

ACJ continues to expand and improve dissemination of naloxone and overdose prevention education within the jail. One way of increasing the availability of naloxone in the community is encouraging dissemination to individuals who do not use opioids, but who may be in close contact with those who do. Having naloxone in these types of situations has saved lives. As naloxone distribution becomes even more widespread, the stigma related to carrying naloxone will hopefully be lessened as well.

In addition to naloxone distribution, ACJ is continuing to address fatal opioid-related overdoses in other ways:

- Staff education to better understand, recognize and address overdoses
- Signage on every ACJ housing unit that highlights treatment opportunities and overdose prevention strategies
- Referrals to Center of Excellence providers — which coordinate opiate-related substance use disorder care for people with Medicaid — upon clients' release from jail
- Allowing community providers to enter the facility, establish relationships with clients and complete level of care assessments to determine clients' treatment needs
- Exploring ways to expand Medication-Assisted Treatment (MAT) in the jail

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