CAMBRIDGE

OPIOID OVERDOSE

DATA REPORT

2022-2023

Cambridge
Public Health
Department

CHA
Cambridge
Health Alliance

CAMBRIDGE OPIOID OVERDOSE DATA REPORT 2022-2023

INTRODUCTION

Substance use disorder and its impact on individuals and communities cannot be understated. In 2022, nearly 81,806 people in the U.S. died from an opioid overdose.[1] Massachusetts has the fourteenth highest opioid overdose mortality rate in the country as of 2022.[2] Locally, city and community partners offer a wide range of services across the continuum of care for substance use disorder prevention, intervention, treatment, and recovery support.

This Cambridge opioid overdose data report is a result of a multi-year surveillance effort. The report compiles data from the two-year period 2022-2023. Going forward, the health department intends to report this data yearly. The report is designed to provide residents, first responders, city officials, health professionals, and the media with data to better understand how the opioid crisis is affecting Cambridge. It is hoped that this and future reports will inform the city's prevention and response strategies and help relevant groups monitor progress in curbing the epidemic. Of particular relevance are the opioid abatement dollars being received by Cambridge for this purpose. Programs and interventions funded by these dollars may be influenced by the findings in this and future reports. More information about the abatement funds and city efforts to incorporate lived experience feedback may be found on our website.

Data is received by the Cambridge Public Health Department from several sources, including Pro EMS first response services, Cambridge Health Alliance, Mount Auburn Hospital, and the Access Drug User Health Program. The data collection and analysis process is continuously reviewed for improvement opportunities.

Report Highlights

There were 57 confirmed opioid-related overdose deaths among Cambridge residents in 2022 and 2023. There were 76 opioid-related overdose deaths that occurred in Cambridge, regardless of residency status. Forty percent of the people who overdosed in Cambridge in 2022-2023 were residents, according to ambulance data.

While commercial districts in Cambridge had the highest density of opioid-related overdoses from 2022-2023, 22% of people transported by ProEMS ambulance for an opioid-related overdose during that time period were picked up at a private residence.

There were 136 hospital visits during which a Cambridge resident received care at Cambridge Health Alliance (CHA) or Mount Auburn Hospital (MAH) sites for opioid-related overdoses from 2022-2023. This group was predominantly male and white. The majority of patients were between the ages of 35 and 54. Approximately half of the Cambridge residents who received care at CHA or MAH for opioid-related overdoses in 2022-2023 had at least one repeat visit. The total number of unique patients was 91.

The Cambridge Public Health Department partnered with Somerville Health and Human Services on a federal Overdose Data to Action (OD2A) grant program to provide overdose prevention education training to both communities. Instructors from the two cities delivered 43 training sessions for 517 participants from 2022-2023. AIDS Action Committee's Access: Drug User Health Program also received support from this grant and offered 52 OD2A training sessions for 130 participants.

Naloxone was administered a total of 296 recorded times by first responders, bystanders, or other healthcare or public safety professionals to save a life in Cambridge from 2022-2023. 13% of recorded overdose reversals by naloxone were administered by bystanders.

STATE DATA

Fatal Overdoses

The Massachusetts Department of Public Health collects and analyzes data on opioid-related overdose deaths among all Commonwealth residents.

Statewide, there were 2,357 confirmed and estimated opioid-related overdose deaths among Massachusetts residents in 2022, representing a 3.2% increase from confirmed cases in 2021 (2,285 cases).[3] The number of deaths decreased across the state in 2023, with 2,125 confirmed and estimated deaths (9.8% decrease from 2022). This was the first time since 2019 that the number of deaths declined compared to previous years.

Among Cambridge residents, there were 32 confirmed opioid-related overdose deaths in 2022 and 25 in 2023. Forty-five people in 2022 and 31 in 2023 died of an opioid-related overdose in Cambridge, regardless of residency status. Many more lives would have been lost if not for the use of naloxone, a drug that reverses the effects of an opioid overdose.

There is evidence that fentanyl, an illicitly produced synthetic opioid, is fueling the current opioid epidemic in Massachusetts. Fentanyl is a fast-acting drug with 50 to 100 times the potency of morphine, making it deadlier than other opioids. Starting in 2016, the percentage of opioid-related overdose deaths where fentanyl was present began to exceed that of heroin or likely heroin. Of the 2,170 Massachusetts residents who died from an opioid-related overdose in 2022 and received a post-mortem toxicology screening, 2,018 (93%) tested positive for fentanyl. There were 1,971 total post-mortem toxicology screenings in 2023, with 1,774 of them (90%) showing the presence of fentanyl[5]. Of note, post-mortem

toxicology screening results are available for approximately 90% of the Massachusetts residents who died of an opioid-related overdose in 2022 and 2023 based on available sources.

As depicted in **Figure 1**, the opioid overdose-related death rate in Cambridge remained below that of Massachusetts in 2022 and 2023 but surpassed that of Middlesex County in those same years[6]. Rates peaked in Cambridge and in Massachusetts in 2022 but remained more stable in Middlesex County. Rates decreased for all three in 2023.

Figure 1. Opioid-Related Overdose Death Rate in Cambridge, Middlesex County, and Massachusetts, 2014-2023
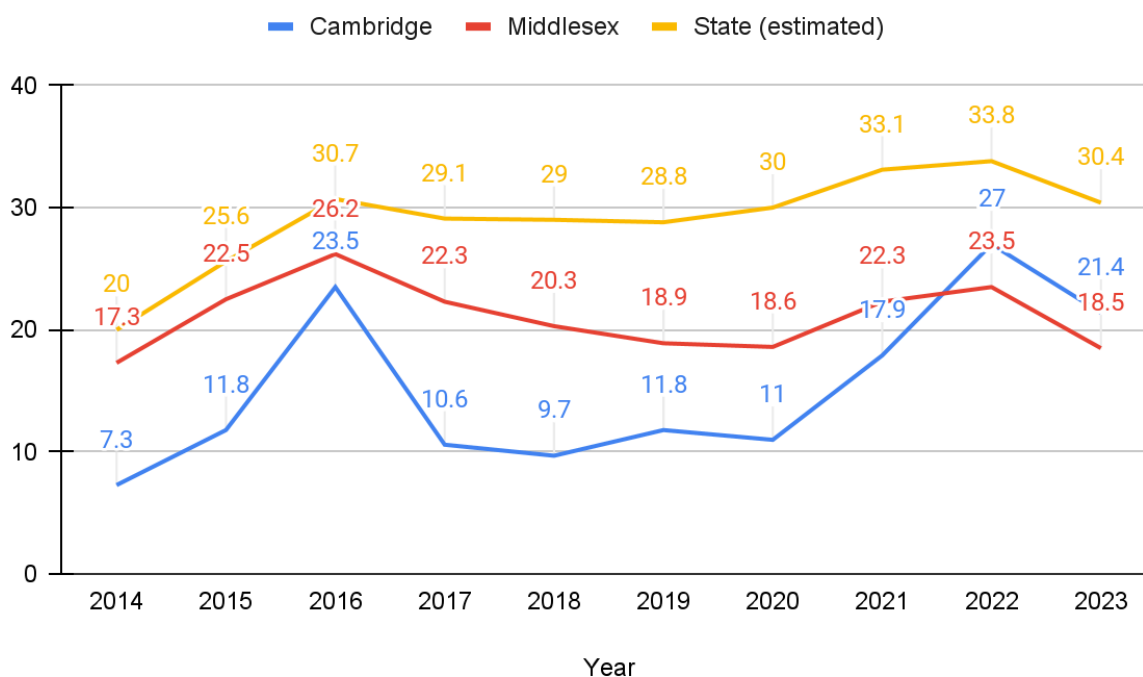
Note: Opioids include heroin, opioid-based prescription drugs, and other unspecified opioids.
Data Source: Massachusetts Department of Public Health

Opioid-Related EMS Incidents

State data also includes information on opioid-related EMS incidents, defined as 911 calls in which opioids are involved, across the state by city and town[7]. Of note, this is a different metric than the EMS data reported within Cambridge. While state data includes all data from EMS services that involve a potential opioid incident (including those that do not involve a clinical overdose), Cambridge reporting only includes those responded to by Pro EMS and involving a suspected overdose. Therefore, data in this

section and that of the subsequent section should not be compared. In Cambridge, there were 579 suspected opioid-related incidents in 2022 and 409 in 2023.

# EMERGENCY MEDICAL SERVICES DATA

Geography of Overdoses

In Cambridge, first responders from Pro EMS ambulance service and the Cambridge Fire Department are often the first emergency personnel to arrive at the site of an overdose. Data from Pro EMS (which includes fire department data) are invaluable for pinpointing where opioid overdoses occur in the city, determining how frequently naloxone is administered, and learning what populations are at greatest risk. From 2022-2023, Pro EMS responded to 380 overdose incidents (219 in 2022 and 161 in 2023). Of note, most of the incidents reported by Pro EMS are nonfatal overdoses, but some incidents reported below include incidents for which the patient is declared dead on arrival (DOA). In such cases, it is imperative to refrain from assuming that the death was caused by the opioid overdose and not from another cause. Deaths from opioid overdose are only confirmed as such in the state-level data.

Figure 2 shows the density of opioid-related overdoses in Cambridge from 2022-2023, based on spatial analysis of Pro EMS data.

[How to read the maps in this report: The heat maps are primarily intended as visual tools, and exact overdose counts should not be estimated from the results. Red areas indicate the highest density of overdose incidents from 2022-2023. Color categories can be interpreted relative to one another, with red areas having more incidents than dark orange, dark orange more than lighter orange, and so on. Yellow areas indicate the lowest density of overdose incidents. Gray areas indicate no reported incidents.]

Figure 2. Opioid-Related Overdoses 2022-2023, Cambridge, MA
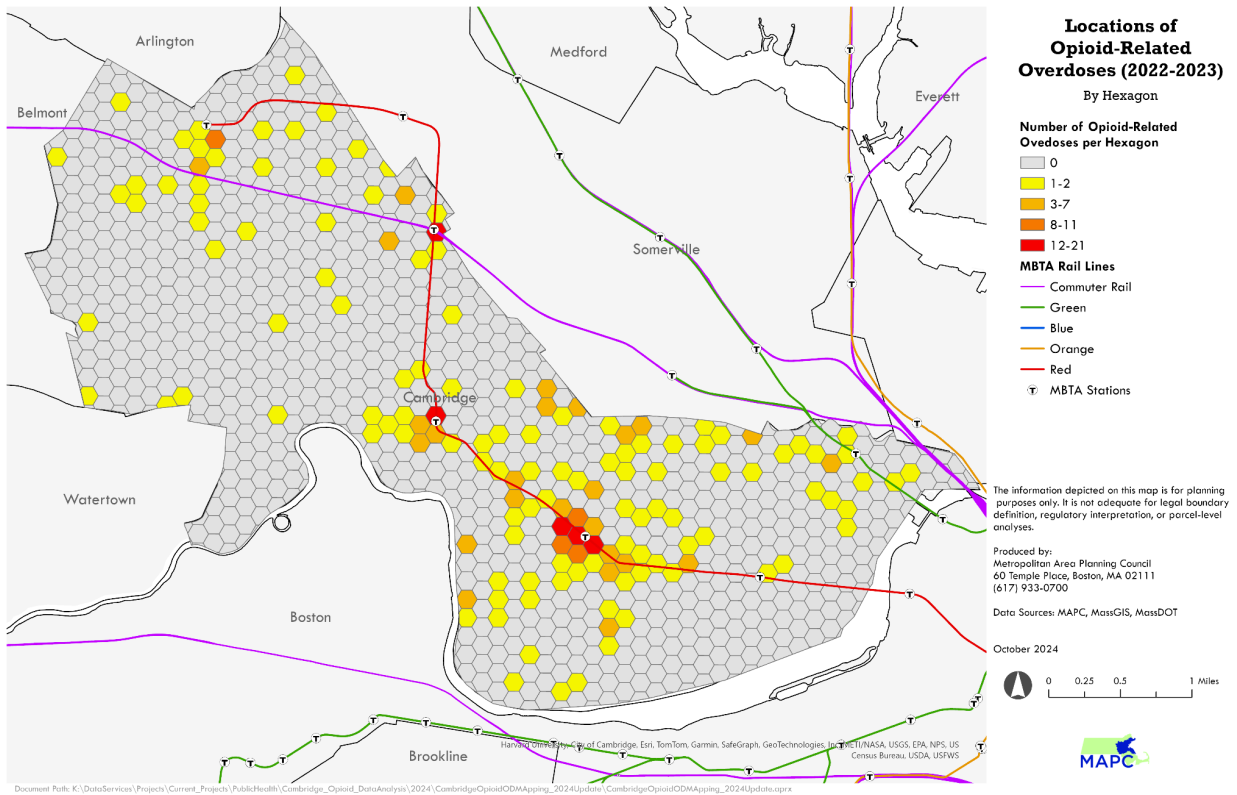
Data Source: Pro EMS Ambulance Service

Commercial districts had the highest density of opioid-related overdoses in Cambridge. These incidents were clustered primarily in Central Square, Harvard Square, Alewife, and Porter Square on the Red Line, and near Lechmere on the Green Line. However, overdose incidents occurred in every neighborhood in Cambridge from 2022-2023.

Figure 3 shows the types of places where opioid-related overdoses occurred in Cambridge from 2022-2023, based on Pro EMS data.

Of the 380 ambulance pickups for opioid-related overdoses from 2022-2023, the majority (69%) occurred in public places, such as on the street, in a public building or park, at a business, or in a T station. About 4% of ambulance pickups were from a shelter.

Private residences made up approximately 22% of ambulance pickups. Whereas opioid-related overdoses in public spaces tended to occur repeatedly in the same locations in Cambridge—such as shelters and commercial squares—overdoses in private residences occurred in homes scattered across the city.

Figure 3. Ambulance Pickups of Suspected Overdoses by Location, 2022-2023

Ambulance Pickups of Suspected Overdoses by Location, 2022-2023
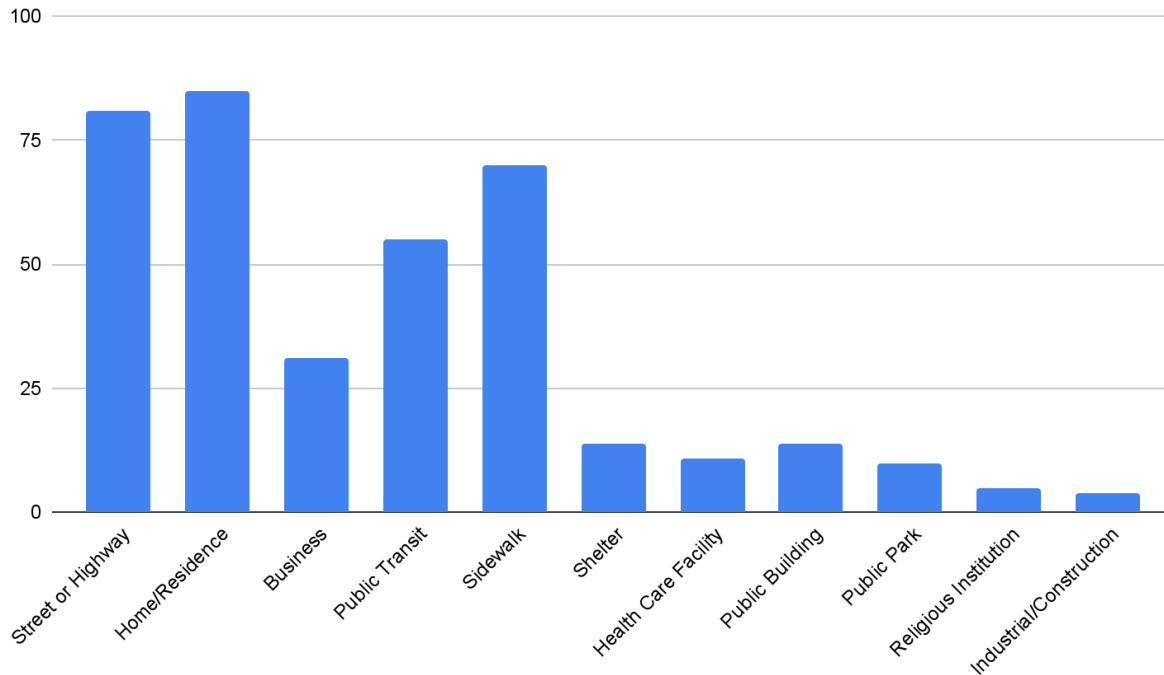
Note: There was a total of 380 ambulance pickups in Cambridge for opioid-related incidents from 2022-2023.
Data Source: Pro EMS Ambulance Service

From 2022-2023, Pro EMS ambulance service transported the majority of opioid-related overdose cases to Cambridge Hospital (67%), followed by Mount Auburn Hospital (20%) and Mass General Hospital (8%). Pro EMS typically transports people who have experienced a suspected overdose to the nearest hospital, unless the person expresses a preference for another facility (**Table 1**).

Table 1: Cambridge Opioid-Related Overdose Cases Transported by Pro EMS by Hospital Destination, 2022-2023

Hospital Destination	Incidents (2022)		Incidents (2023)	
	Number	Percent	Number	Percent
CHA Cambridge Hospital	152	69.4%	103	64.0%
Mount Auburn Hospital	38	17.4%	38	23.6%
Mass General Hospital	14	6.4%	15	9.3%
Other Hospital	5	2.4%	2	1.2%
No Hospital (pt refused or DOA)	10	4.6%	3	1.9%

Note: May not add up to 100% due to rounding.
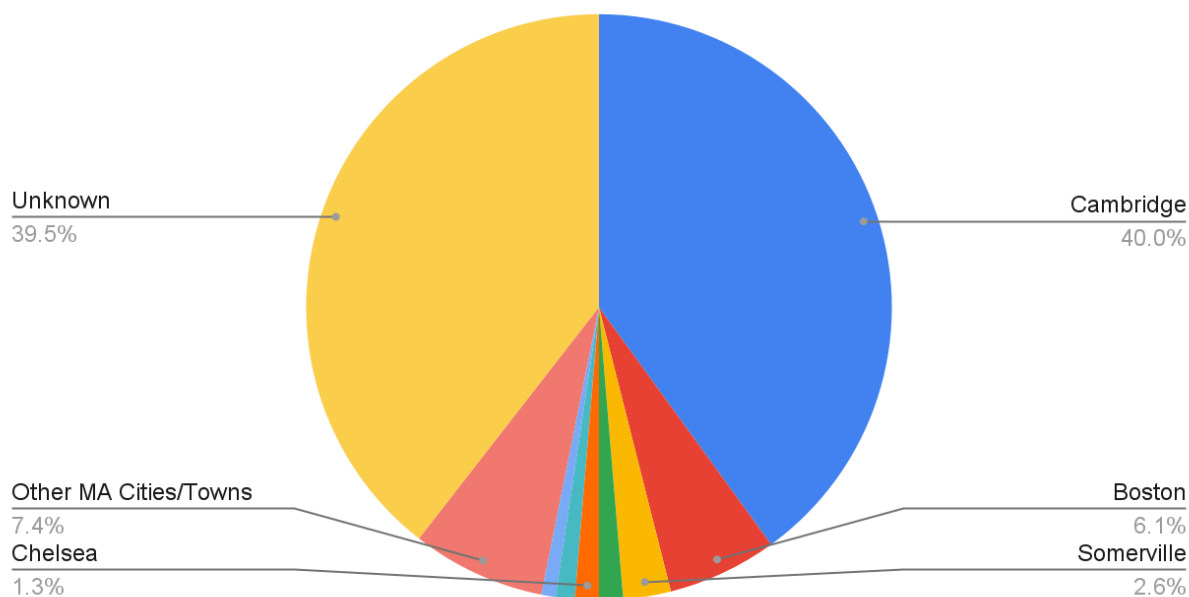
Cambridge Residency

Cambridge residents accounted for 40% of all opioid-related ambulance pickups in Cambridge from 2022-2023 (**Figure 4**).

Figure 4. Opioid-Related Overdoses in Cambridge by Residence, 2022-2023

Opioid-Related Overdoses in Cambridge by Residence, 2022-2023

Opioid-related overdoses occurred among Cambridge residents in every neighborhood in the city from 2022-2023. When comparing heat maps of opioid-related overdoses by Cambridge residency status, ambulance pickups for Cambridge residents covered a broader geography than non-residents (**Figure 5**).

Ambulance pickups for non-residents were more concentrated in and around commercial districts, notably Porter Square, Harvard Square, and Central Square (**Figure 6**). Of note, figures 5 and 6 do not include any overdose incidents for which no data is provided regarding the person's residence.

Figure 5. Opioid-Related Incidents by Cambridge Residency from 2022-2023, Cambridge, MA
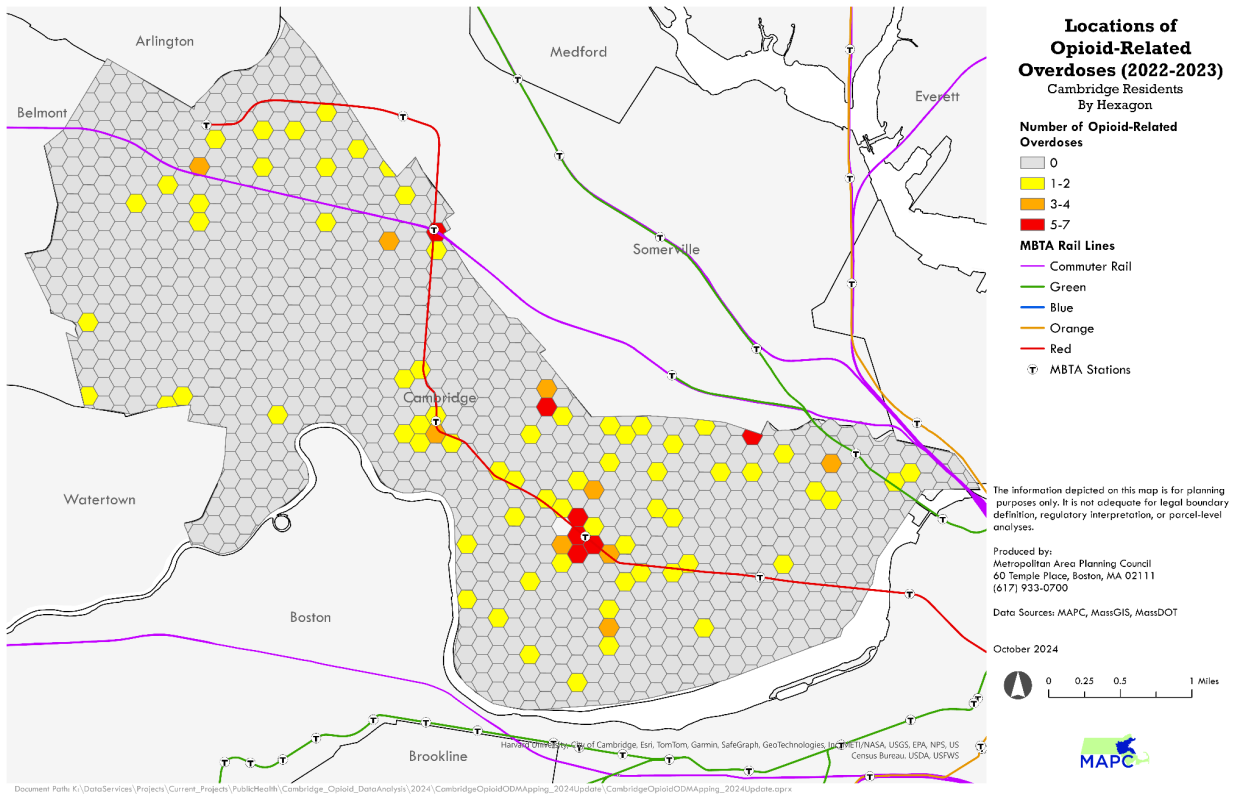
Data Source: Pro EMS Ambulance Service

Figure 6. Opioid-Related Incidents by Non-Cambridge Residency from 2022-2023, Cambridge, MA
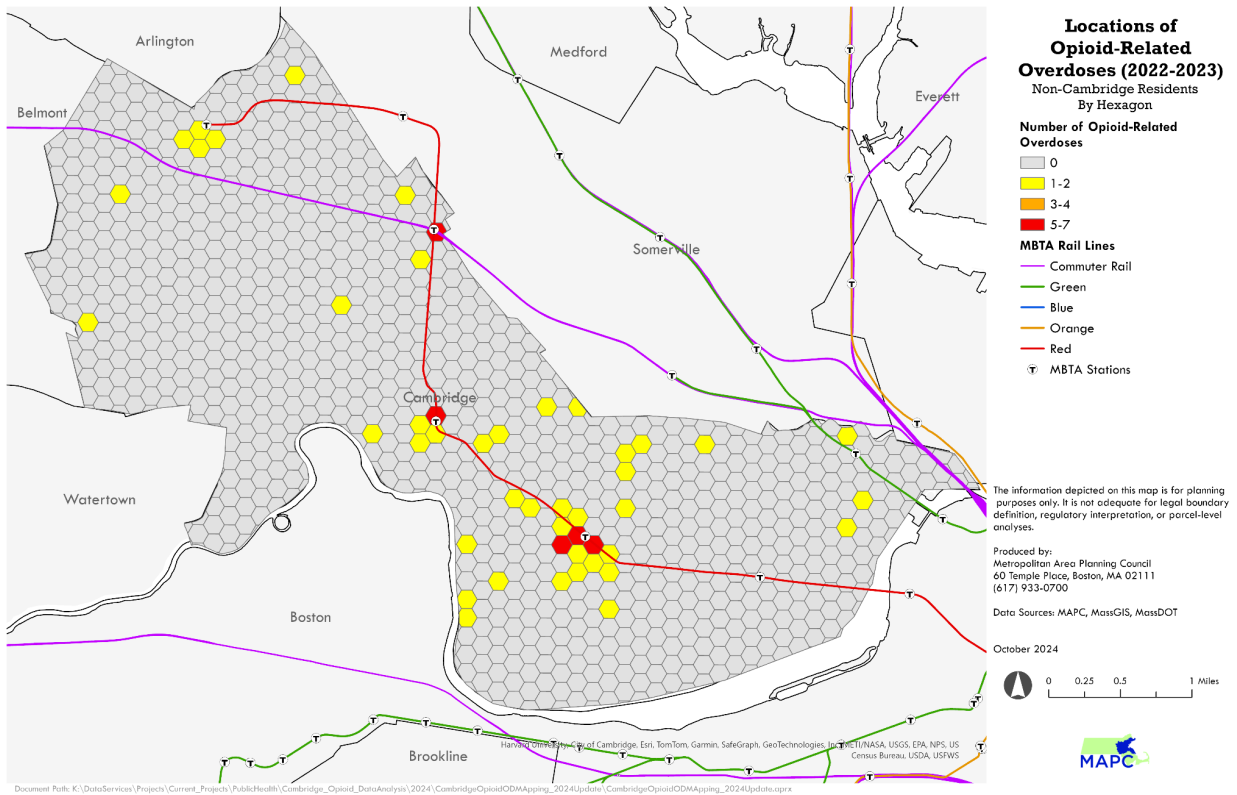
Data Source: Pro EMS Ambulance Service

Seasonality

Time trends for opioid-related pickups (**Figure 7**) show that counts varied by month across 2022 and 2023. There was a peak in opioid-related incidents in December 2022.

Figure 7. Opioid-Related Overdoses in Cambridge by Month, 2022-2023

Opioid-Related Overdoses in Cambridge by Month, 2022-2023
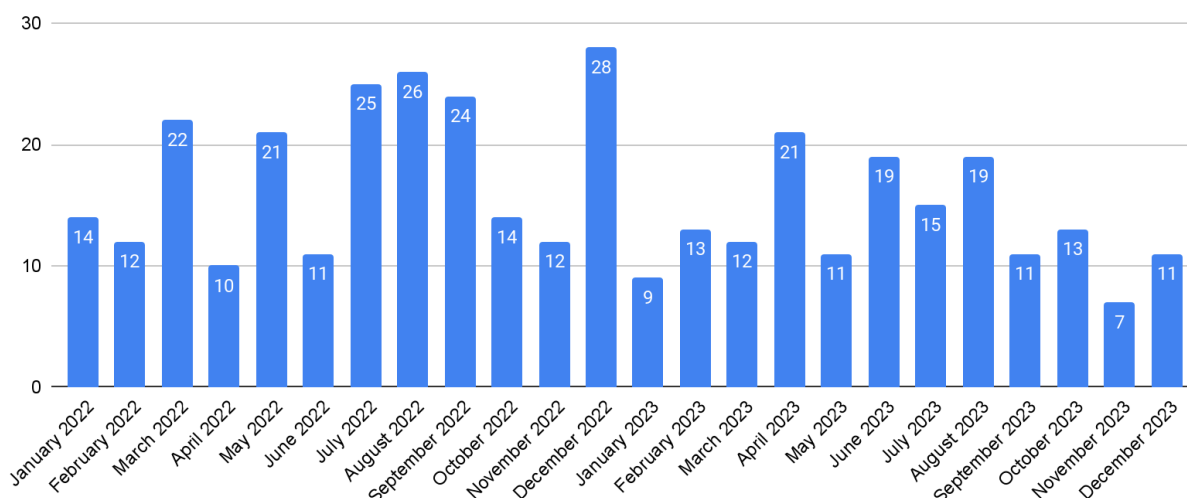
Data Source: Pro EMS Ambulance Service

CAMBRIDGE HEALTH ALLIANCE AND MOUNT AUBURN HOSPITAL DATA

Hospital Visits

Cambridge Health Alliance (CHA) and Mount Auburn Hospital (MAH) are two of the primary health care systems that serve Cambridge. To better understand how the opioid crisis affects Cambridge residents, the health department investigated opioid-related hospital visits at MAH and CHA health care sites in Cambridge. The classification for this category included hospital visits for which a relevant diagnosis code was applied to the encounter for a patient who resided in a Cambridge zip code at the time of the visit. This classification follows the same reporting structure used by the Massachusetts Department of Public Health. As a disclaimer, due to inconsistencies in how hospital encounters are coded between different providers and health care sites, some over- or under-reporting is to be expected, and this report should serve as a snapshot of overdose data in hospital settings in Cambridge.

From 2022-2023, 91 Cambridge-based patients visited CHA or MAH health care sites for opioid-related incidents a total of 136 times (**Table 2**). Approximately 55% of these individuals had at least one repeat visit.

Table 2: Cambridge Health Alliance and Mount Auburn Hospital Encounters for Opioid-Related Overdoses, 2022-2023

	2022	**2023**	**Total**
Total Number of Opioid-Related Overdoses	83	53	136

|			
Total Number of Unique Individuals	61	30	91
Average Number of Overdoses per Individual	1.4	1.8	1.5

Data Sources:

> Cambridge Health Alliance, Business Analytics Unit, 2022-2023
> Mount Auburn Hospital, Business Intelligence Unit, 2022-2023

From 2022-2023, 95% of encounters were discharged directly from the emergency department, 4% were admitted to the hospital as inpatients, and 1% were admitted to the hospital on observation status (**Figure 8**). These percentages fluctuated substantially year-to-year, as illustrated in **Table 3**.

Figure 8. Opioid-Related Overdoses by Encounter Type at CHA/MAH, 2022-2023

Figure 8. Opioid-Related Overdoses by Encounter Type at CHA/MAH, 2022-2023
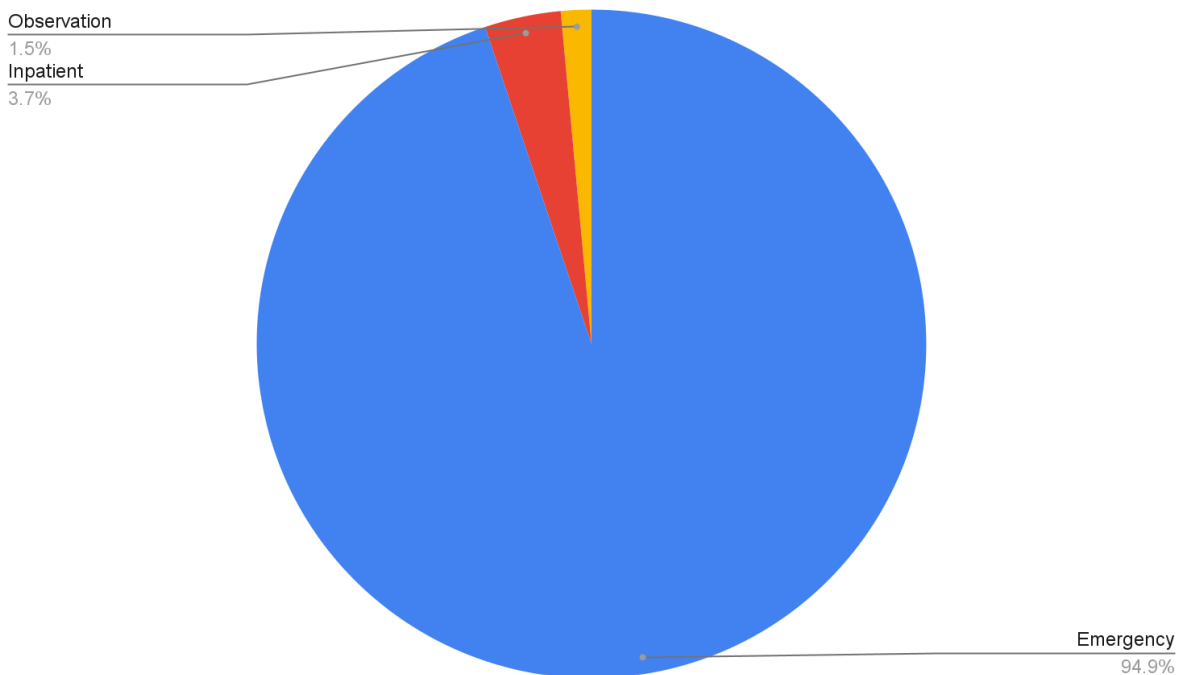
Observation 1.5%
Inpatient 3.7%
Emergency 94.9%

Data Sources:

> Cambridge Health Alliance, Business Analytics Unit, 2022-2023
> Mount Auburn Hospital, Business Intelligence Unit, 2022-2023

Table 3: Opioid-Related Overdoses by Encounter Type at CHA/MAH, 2022-2023

Encounter Type	Percentage (2022)	Percentage (2023)	Percentage (Total)
Emergency	96.39%	92.45%	94.85%
Inpatient	2.41%	5.66%	3.68%

Observation	1.20%	1.89%	1.47%

Following an emergency department visit or hospitalization, most opioid-related visits (83%) resulted in patients being discharged to "home," which generally refers to the patient being properly discharged (in other words, not leaving on their own before being cleared by a medical provider) without being immediately transported to another facility (**Table 4**).

Table 4: Opioid-Related Overdoses by Discharge Location from CHA/MAH, 2022-2023

Discharge Location	Percentage (2022)	Percentage (2023)	Percentage (Total)
Home	81.93%	84.91%	83.09%
Left Against Medical Advice	7.23%	3.77%	5.88%
Left ED Without Being Seen	3.61%	1.89%	2.94%
Patient Death	3.61%	5.66%	4.41%
Transferred/Admitted to Other Facility	2.41%	3.77%	2.94%
Other	1.20%	0%	0.74%

Note: May not add up to 100% due to rounding.

Demographics

From 2022-2023, 136 Cambridge residents received care at CHA and MAH sites for opioid-related overdoses. This group was predominantly male (66.2%) and white (75.7%), and disproportionately represented residents in the 35-54 age category (49.3%). This data is further broken down and compared to similar demographics across all Cambridge residents (using 2020 US Census data) in **Figures 10-17**[6].

White patients were disproportionately represented among the CHA and MAH overdose cases. In 2020, White residents comprised 57.3% of the city's population, but made up 75.7% of the overdose cases in 2022 and 2023. Black residents, who comprise 10.6% of the city's population, accounted for 11% of the cases. Hispanic residents, who comprise 9.1% of the city's population, accounted for 5.9% of the cases.

Figure 10. Opioid-Related Overdoses by Gender at CHA/MAH, 2022-2023

Figure 10. Opioid-Related Overdoses by Gender at CHA/MAH, 2022-2023
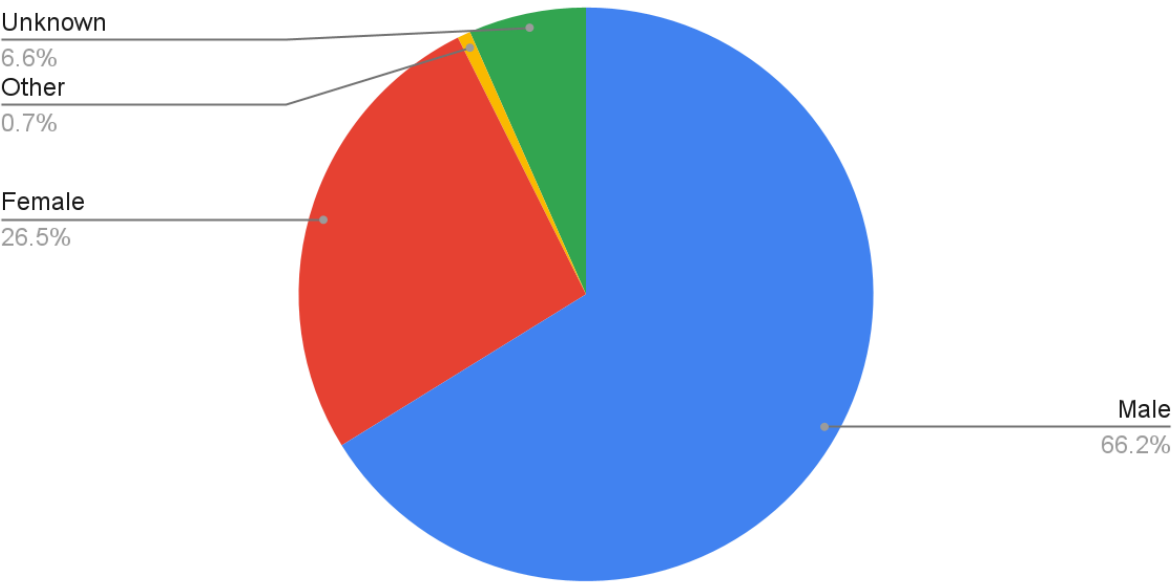
Unknown 6.6%
Other 0.7%
Female 26.5%
Male 66.2%

Data Sources:
      Cambridge Health Alliance, Business Analytics Unit, 2022-2023
      Mount Auburn Hospital, Business Intelligence Unit, 2022-2023

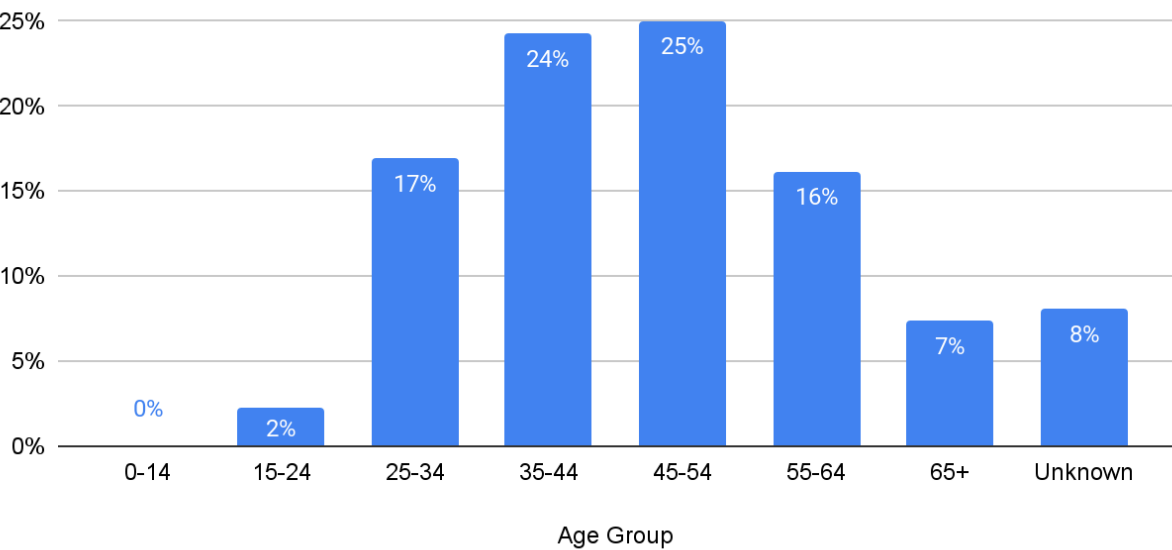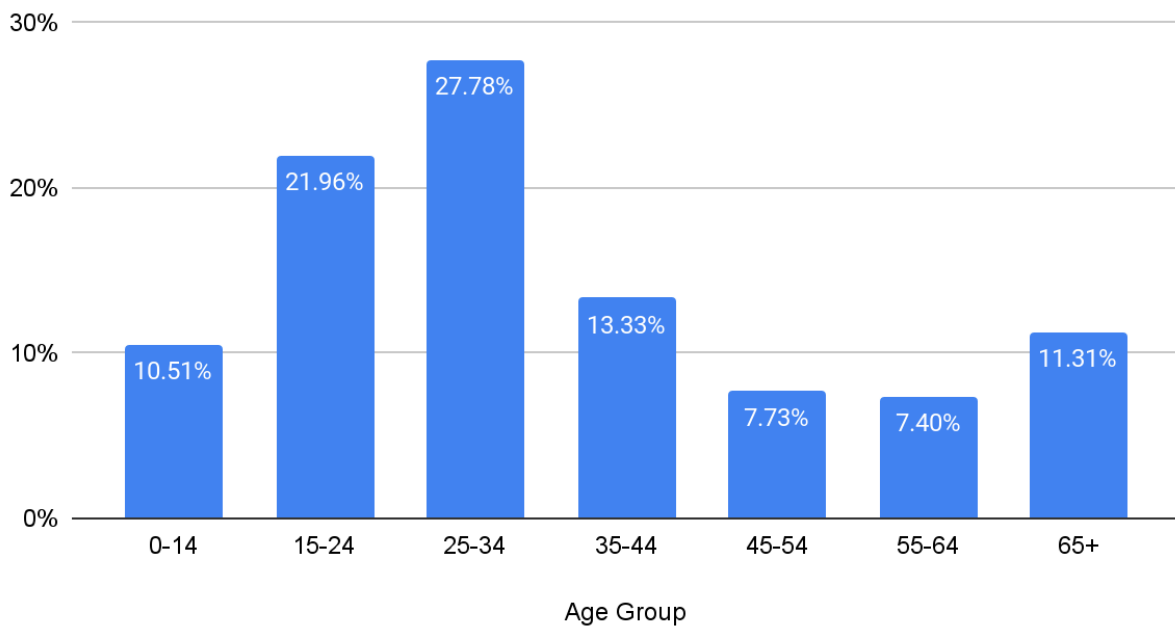Figure 11. Cambridge Residents by Gender, 2020

Figure 11. Cambridge Residents by Gender, 2020

Female
50.0%

Male
50.0%

Note: 49.97% of Cambridge residents are male and 50.03% are female.
Data Source: United States Census, 2020

Figure 12. Opioid-Related Overdoses by Age Group at CHA/MAH, 2022-2023

Figure 12. Opioid-Related Overdoses by Age Group at CHA/MAH, 2022-2023

Age Group

Data Sources:

Figure 13. Cambridge Residents by Age Group, 2020

Figure 13. Cambridge Residents by Age Group, 2020

Age Group	Percentage
0-14	10.51%
15-24	21.96%
25-34	27.78%
35-44	13.33%
45-54	7.73%
55-64	7.40%
65+	11.31%

Data Source: United States Census, 2020

Figure 14. Opioid-Related Overdoses by Race at CHA/MAH, 2022-2023

Figure 14. Opioid-Related Overdoses by Race at CHA/MAH, 2022-2023

Unknown
3.7%

Other
9.6%

Black
11.0%

White
75.7%

Data Sources:

Cambridge Health Alliance, Business Analytics Unit, 2022-2023
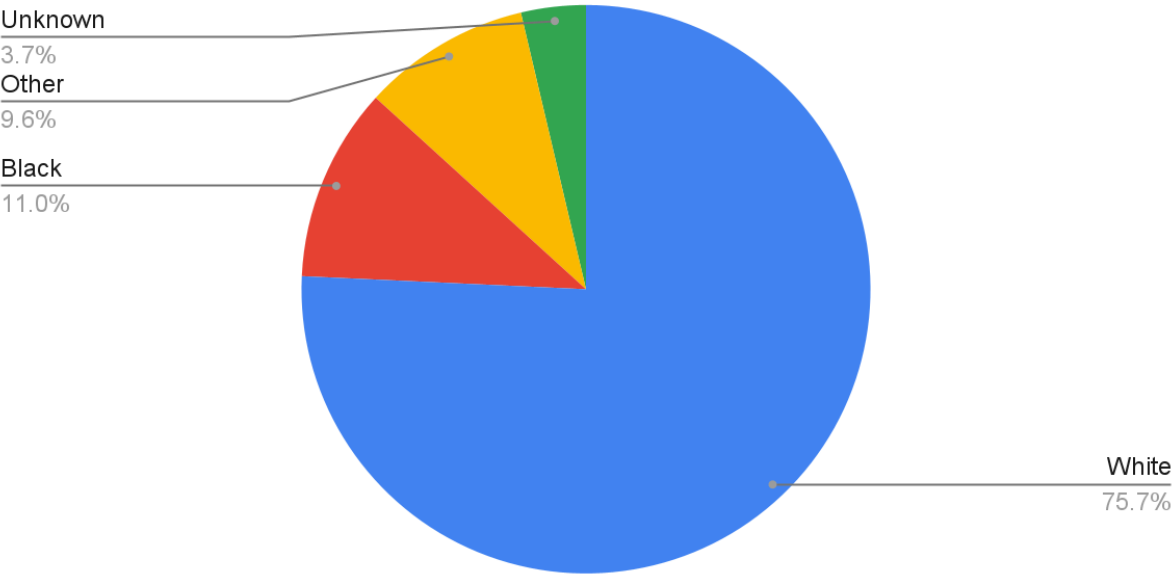Mount Auburn Hospital, Business Intelligence Unit, 2022-2023

Figure 15. Opioid-Related Overdoses by Hispanic Ethnicity at CHA/MAH, 2022-2023
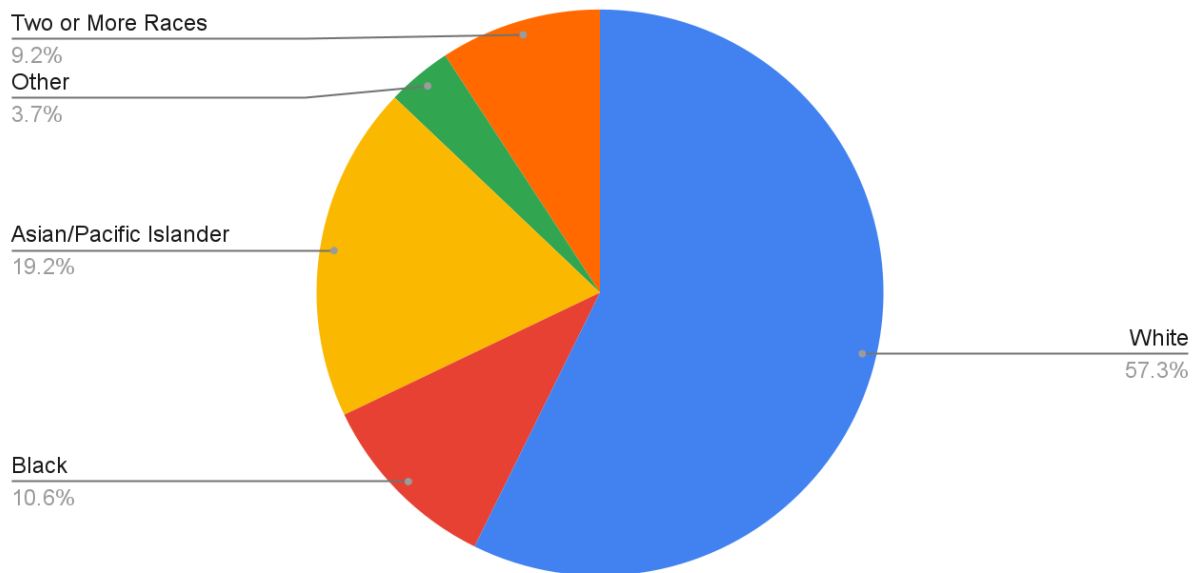
Figure 15. Opioid-Related Overdoses by Hispanic Ethnicity at CHA/MAH, 2022-2023

Yes
5.9%

No
94.1%

Data Sources:

Cambridge Health Alliance, Business Analytics Unit, 2022-2023
Mount Auburn Hospital, Business Intelligence Unit, 2022-2023
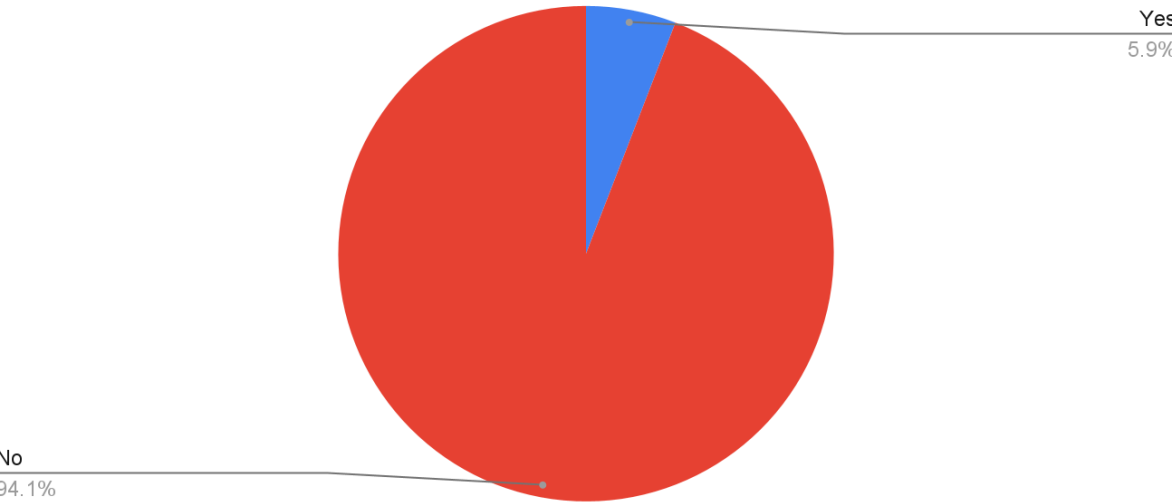
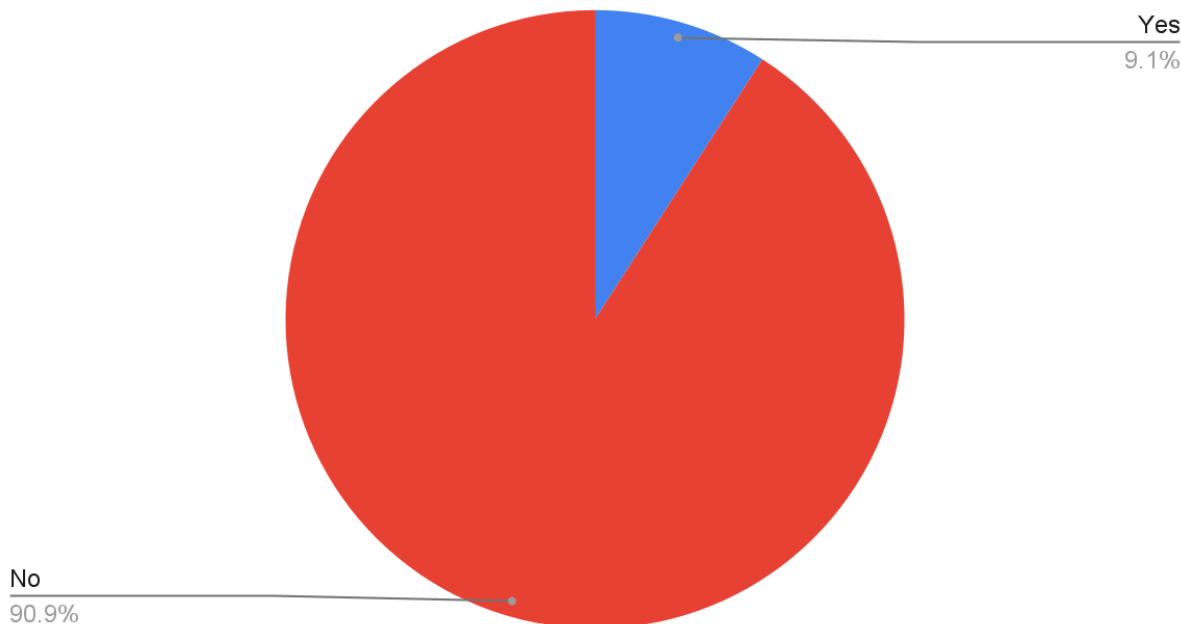Figure 16. Cambridge Residents by Race, 2020

Figure 16. Cambridge Residents by Race, 2020

Data Source: United States Census, 2020

Figure 17. Cambridge Residents by Hispanic Ethnicity, 2020

Figure 17. Cambridge Residents by Hispanic Ethnicity, 2020

Yes
9.1%

No
90.9%

Data Source: United States Census, 2020

MASSACHUSETTS OVERDOSE EDUCATION AND NALOXONE DISTRIBUTION PROGRAM DATA

What is Naloxone? Naloxone (also known by its brand name, Narcan) is a medication that can reverse an opioid overdose. It blocks opioids from attaching to opioid receptors in the brain.

Naloxone is active for about 30 to 90 minutes in the body. If you give someone naloxone to reverse an opioid overdose, it may wear off before the effects of the opioids wear off. The person could overdose again. This depends on several things, including:

- The person's metabolism (how quickly the body processes things).
- How much drug the person used in the first place.
- If the person uses opioids again.

Naloxone cannot be used to get high and cannot be misused. If you give naloxone to someone who is not overdosing, there are no ill effects.

The Cambridge Public Health Department (CPHD) distributes free naloxone to community members at distribution events and upon request. As of January 2023, CPHD is a designated Community Naloxone Program (CNP) organization. The CNP is a program of the Massachusetts Department of Public Health

and provides qualifying partners with subsidized naloxone to distribute within their local communities. In 2023, CPHD distributed 912 doses of CNP-provided naloxone.

Cambridge is fortunate to also have an Overdose Education and Naloxone Distribution (OEND) site. AIDS Action Committee's Access: Drug User Health Program, located in Central Square, offers a variety of services, including harm reduction tools such as naloxone, testing strips, and sterile use supplies; HIV/HCV/STI testing; and overdose response training sessions for individuals who are likely to experience or witness an overdose.

From July 2020 to June 2023, CPHD and Somerville Health and Human Services (HHS) collaborated with Access (as well as the Somerville Homeless Coalition) on expanding overdose prevention education with the support of the federal Overdose Data to Action (OD2A) grant program. Using this grant funding, Access provided training attendees with gift cards and backpacks containing several supplies, including hygiene products, weather-appropriate gear, and portable phone chargers. In 2022 and 2023, Access instructors led 52 overdose prevention training sessions for 130 total participants. Of these 130 participants, 18% received this education for the first time and 82% were repeat participants.

CPHD and Somerville HHS also conduct overdose prevention training across both cities and have committed to providing this service beyond the OD2A grant period. Monthly virtual training sessions are open to the general public and ad hoc sessions can be requested by any Cambridge- or Somerville-based business or organization. In 2022 and 2023, CPHD and Somerville HHS instructors led 43 overdose prevention training sessions for 517 total participants. At in-person training sessions, free naloxone is provided to participants.

Overdose prevention training encourages participants to always contact 911 if they witness someone experiencing an overdose. It is critical that people who have overdosed receive medical attention—even if they have received naloxone—because there is a chance they could re-overdose if the dose of opioid was too strong. The Massachusetts Good Samaritan Law protects people who call 911 to report an overdose from being charged with possession of a controlled substance. Many potentially fatal overdoses can be prevented if the victim receives timely and appropriate medical attention.

For more information, please visit [Stop an Overdose with Naloxone on Mass.gov](#).

Administration of Naloxone

Table 5 lists known naloxone administrations at opioid-related incidents in Cambridge. When responding to a suspected opioid-related incident, Pro EMS records whether naloxone was administered and who administered it. If known, Pro EMS also records whether a bystander administered naloxone to someone experiencing a suspected overdose prior to EMS arrival. In 2022 and 2023, 78% of opioid overdose incidents recorded by Pro EMS included documented use of naloxone.

Table 5: Known Naloxone Administrations for Opioid-Related Overdoses in Cambridge when 911 was called, 2022-2023

Administrator	Total #	% of Total
Pro EMS	174	58.8%
Fire Department	40	13.5%
Other First Responder	38	12.8%
Bystander	39	13.2%
Other Healthcare Professional	4	1.4%
Unknown	1	0.3%
Total	296	

Note: May not add up to 100% due to rounding.
Data Source: Pro EMS Ambulance Service

RESOURCES

Everyone has a role to play when it comes to preventing death from overdose. Depending on your role in the community, there are different ways you can help stem the tide of the opioid epidemic.

The Massachusetts Substance Use Helpline: Provides free, confidential information and referrals to over 600 treatment programs funded or licensed by the state. (800) 327-5050 | helplinema.org

SafeSpot: Teams of trained operators available 24/7 for people in Massachusetts who use drugs to call and have virtual supervision when using alone to help prevent overdose deaths. (800) 972-0590 | safe-spot.me

Learn to Cope: A support group for parents and other family members coping with a loved one addicted to opioids or other drugs. (508) 738-5148 | www.learn2cope.org

Access Drug User Health Program: Free, safe, and confidential space for drug users to access resources and services, including free naloxone. (617) 470-6547 | fenwayhealth.org/aac/programs-services

PAATHS: One-stop shop for information about or access to addiction treatment services. (855) 494-4057 | boston.gov/government/cabinets/boston-public-health-commission/recovery-services/find-your-path-recovery

Cambridge Police Special Investigations Unit: Conducts investigations and assists overdose victims seeking treatment and recovery services. (617) 349-3360

Narcotic Anonymous: Support meetings (866) 624-3578 | nerna.org

Alcoholics Anonymous: Support meetings (617) 426-9444 | aaboston.org

Behavioral Health Treatment Services Locator: Immediate, confidential care for mental health and substance use needs at more than 25 locations in Massachusetts. (833) 773-2445 | mass.gov/community-behavioral-health-centers

SAMHSA National Helpline (800) 662-4357 | findtreatment.gov

988 Lifeline: The 988 Suicide & Crisis Lifeline provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States and its territories. 988 | 988lifeline.org

Cambridge Public Health Department: Free overdose prevention training and harm reduction services, including Narcan and fentanyl test strips | cambridgepublichealth.org/services/opioid-abuse-prevention

METHODS

The Cambridge Public Health Department assessed existing community-level data sources to develop a timelier, more comprehensive overdose surveillance system.

All EMS incidents that were likely related to opioids were pulled from the Pro EMS FirstWatch system. Epidemiologists at the Cambridge Public Health Department used narrative reports for each incident, as well as documented vital signs and naloxone response, to categorize each incident by overdose status. This method of classification was used from January 1, 2017 to May 17, 2017.

Classification Algorithm

From May 17, 2017 to December 2019, a machine learning algorithm was used to classify EMS incidents. Using natural language processing models in the programming language R,[8] the narrative text of new incidents were compared to previously manually classified data. In December 2019, it was discovered that data formatting changes required system revisions, prompting a return to manual labeling until February 2020. From February 2020 to present, the system revisions were completed and automatic reporting resumed on a weekly basis.

A corpus of approximately 1,500 manually classified incidents was used to generate a document matrix to train a Support Vector Machine (SVM), which is a type of supervised learning model.[9] New data were classified using this model. Epidemiologists at the Cambridge Public Health Department verified incidents that were not conclusively labeled. The current algorithm has an accuracy of 87.56%, a sensitivity of 68.75%, and a specificity of 95.04%. For more information, please contact the Division of Epidemiology and Data Services.

MAPC prepared the following deliverables for CPHD:

- A memorandum, which summarizes the project, its deliverables, and methodology, and provides recommendations for data analysis supporting future OSD reports
- Tables with summary data on opioid-related overdoses by primary diagnosis, by type of encounter (emergency, inpatient, and observation), by month, by location (hospital destination, discharge location), by patient residency, and across demographic characteristics (age, race, gender)
- Maps depicting the number of opioid-related overdoses across various geographies (grid cells, Census Blocks, and Cambridge neighborhoods)
- A GitHub code repository with the R scripts used to generate the tabular data

CPHD provided MAPC with data from three local sources: CHA, MAH, and Pro EMS. The data from CHA and MAH arrived as a set of CSVs, one for each hospital and for each calendar year. MAPC added a year field to each CSV and then combined the tables by hospital. The Pro EMS data arrived as a single CSV file containing data for both 2022 and 2023.

Next, MAPC added two fields to each hospital table: a 'hospital' field to identify which hospital the data was from, and an od_count field to count the number of overdoses per person (using the ID field from the CHA data and the PAT_MRN_ID from the MAH data). MAPC then combined the hospital data (CHA and MAH) into a single table, matching fields across both hospitals to ensure standardization across the variables as the two hospitals did not always use the same designations. The Pro EMS dataset, which describes transportation of individuals suffering from opioid-related incidents to hospitals by Pro EMS ambulances, was kept separate to avoid double-counting.

Finally, MAPC filtered the processed data to only those hospital records pertaining to opioid incidents in Cambridge. The combined CHA and MAH dataset was reduced to records with Cambridge-area zip codes (using the zip field). The Pro EMS data set came to MAPC only including opioid incidents that occurred in Cambridge, so no filtering was needed.

Of note, both the hospital and the Pro EMS datasets include records of fatal opioid incidents. In the hospital data, there are six incidents where a patient's discharge status was marked as 'Expired' (one per year at CHA and two per year at MAH). The Pro EMS dataset had two incidents in 2023 marked as "Dead at Scene-Resus Attempt (NoTransport)"; no incidents were flagged with this outcome in 2022. These eight fatal incidents are included in the tables and maps prepared as part of this report. As such, the maps and tables in this report represent all opioid incidents that CHA, MAH, and Pro EMS collected data for, not just non-fatal incidents. MAPC thought it was important to include these instances so that the maps and tables show all readily available data on where opioid incidents are occurring in Cambridge, when they are happening, and who they are happening to. Importantly, this data does not include all opioid-related fatalities in Cambridge.

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ENDNOTES

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