



Somerville Opioid Overdose Data Report 2018

Published November 2019

Somerville, MA



**SOMERVILLE
Public Health**
Prevent. Promote. Protect.





2018

SOMERVILLE OPIOD OVERDOSE DATA REPORT

TABLE OF CONTENTS

Introduction.....	3
Report Highlights.....	3
Data from the Massachusetts Department of Public Health	4
Preliminary 2019 Data.....	4
State and Local Data Trends.....	5
Fentanyl.....	6
City of Somerville Data (Police and Fire Department)	7
Geographical Data.....	8
Demographics	9
Naloxone Administration Data.....	10
Overdose Education and Naloxone Distribution.....	11
What is Naloxone?	11
Overdose Prevention	11
Community, Outreach, Help & Recovery (COHR)	11
Resources	12
Methods	13
Acknowledgments.....	14
Endnotes.....	14



2018

SOMERVILLE OPIOID OVERDOSE DATA REPORT

Introduction

Opioid addiction is a complex disease of the mind and body that can devastate the lives of people who use heroin, prescription painkillers, and other substances. In 2017, 47,600 people in the United States died from an opioid-related overdose, which represents 67.8% of all drug overdose deaths (CDC, 2018).

In 2017, Massachusetts ranked among the top ten states with the highest rates of drug overdose deaths involving opioids (NIH, 2019). Under Governor Charlie Baker's administration, the Commonwealth has mounted a multifaceted response to the opioid crisis which includes enacting ground-breaking legislation to expand overdose education; naloxone distribution; office-based opioid treatment; access to medication-assisted treatment; as well as recovery support services.

Community Partnerships

In Somerville, City and community partners (including MOAR, CHA, etc.) offer a range of services across the continuum of care for substance use disorder prevention, intervention, treatment, and recovery support. These partnerships include the City of Somerville's Health and Human Services Department's Somerville Prevention Services, as well as the Somerville Police Department's Community, Outreach, Help & Recovery (COHR) program. For more information, visit Somerville Prevention Services website at www.somervillema.gov/PreventionServices or COHR's website at <http://somervillepd.com/index.php/en-us/>.

Report Overview

This report is designed to provide residents, first responders, city officials, health professionals, and the media with timely data to better understand how the opioid crisis is impacting Somerville. It is hoped that this report will inform the City's prevention and response strategies and help stakeholders monitor progress in curbing the epidemic.

Key Data Points

- In 2018, there were 7 confirmed opioid-related overdose deaths of Somerville Residents, the lowest number recorded in the City since the epidemic began in 2012.
- In 2018, 8 confirmed opioid-related overdose deaths occurred in Somerville, the lowest number recorded in the City since the epidemic began in 2012.
- Since September 2018, the City's Health and Human Services department trained a total of 274 Somerville residents, businesses, etc. on overdose prevention and naloxone administration while distributing 154 doses of naloxone.

DATA FROM THE MASSACHUSETTS

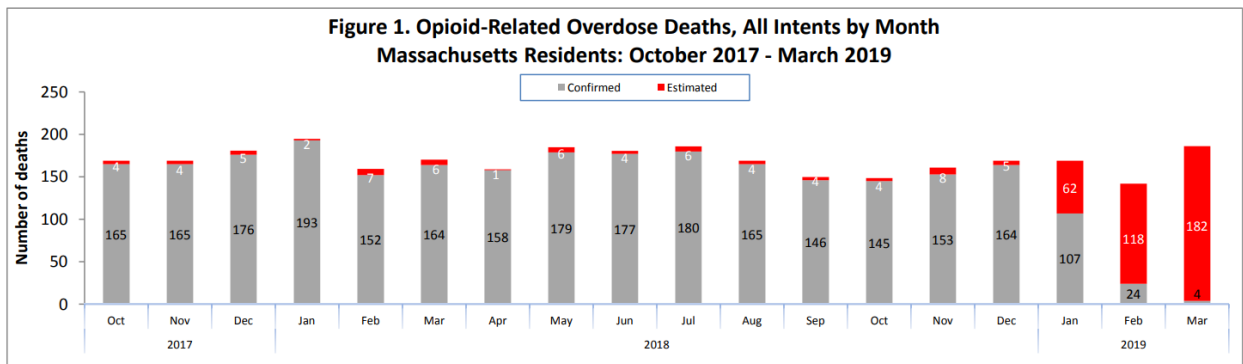
Preliminary Data from 2019

Estimated Opioid-Related Overdoses

The Massachusetts Department of Public Health (DPH) collects and analyzes data on opioid-related overdose deaths among all Commonwealth residents. The graph below shows the month-by-month estimates for fatal opioid-related overdoses for all intents, which includes unintentional/undetermined and suicide, from October 2017 through March 2019. In the first three months of 2019, there have been 135 confirmed opioid-related overdose deaths in Massachusetts and DPH estimates that there will be an additional 325 to 400 deaths (DPH, 2019).

In Somerville, the Somerville Police Department and Somerville Fire Department responded to an estimated 24 opioid-related overdoses (fatal and non-fatal) in the first three months of 2019 during which a **total of 49 known doses of naloxone were administered**.

This report contains both confirmed and estimated data through March 2019.



State and Local Data Trends

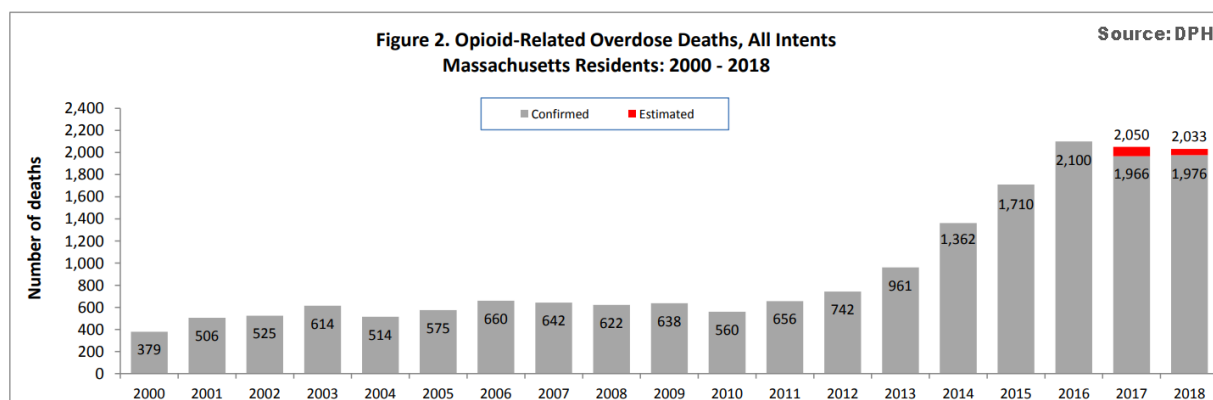
Fatal Overdoses

While the statewide opioid crisis is far from over, there are early signs of progress. DPH estimates a 1% decrease in the rate of opioid-related overdose deaths in 2018 compared to 2017. This follows an estimated 3% decline in 2017 from 2016. The 2018 fatality rate represents an estimated 4% decrease from 2016.

In 2018, there were 7 confirmed opioid-related overdose deaths among *Somerville residents*, the lowest number recorded in the City since the epidemic began in 2012. The decline is attributable to many factors including increased education and awareness, expanding access to treatment, and the use of naloxone, a drug that reverses the effects of an opioid overdose.

State and Local Data Trends Continued

Figure 2 shows the annual number of confirmed and estimated opioid-related overdose deaths of Massachusetts residents for all intents from 2000 to 2018. To obtain the most accurate estimates of the total number of opioid-related overdose deaths in Massachusetts, both confirmed and probable, DPH used predictive modeling techniques for all cases not yet finalized by the Office of the Chief Medical Examiner (OCME). Based on the data available as of April 8, 2019, DPH estimates that there will be an additional 80 to 90 deaths in 2017 and an additional 54 to 60 deaths in 2018, once these cases are finalized (DPH, 2019).



Middlesex County Opioid-Related Deaths

Table 1. Confirmed Opioid-Related Overdose Deaths for All Intents in Middlesex County, 2010-2018.

Table 1.	County of Residence	Year of Death								
		2010	2011	2012	2013	2014	2015	2016	2017	2018
	Middlesex	91	130	118	152	272	337	399	355	325

Somerville Resident Opioid-Related Deaths

Table 2. Confirmed Opioid-Related Overdose Deaths for All Intents for Somerville Residents, 2014-2018.

Table 2.	City of Residence	Year of Death				
		2014	2015	2016	2017	2018
	Somerville	15	18	21	16	7

Opioid-Related Deaths in Somerville

Table 3. Confirmed Opioid-Related Overdose Deaths for All Intents by City/Town of Occurrence, 2014-2018.

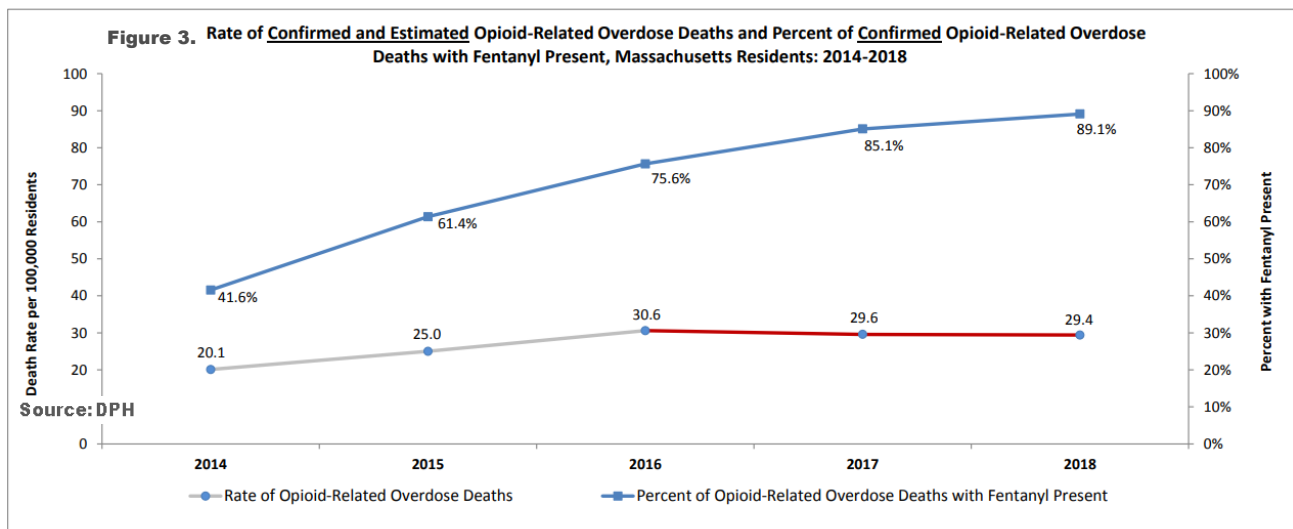
Table 3.	City of Occurrence	Year of Death				
		2014	2015	2016	2017	2018
	Somerville	14	15	19	12	8

(Data from Tables 1—3 sourced from DPH)

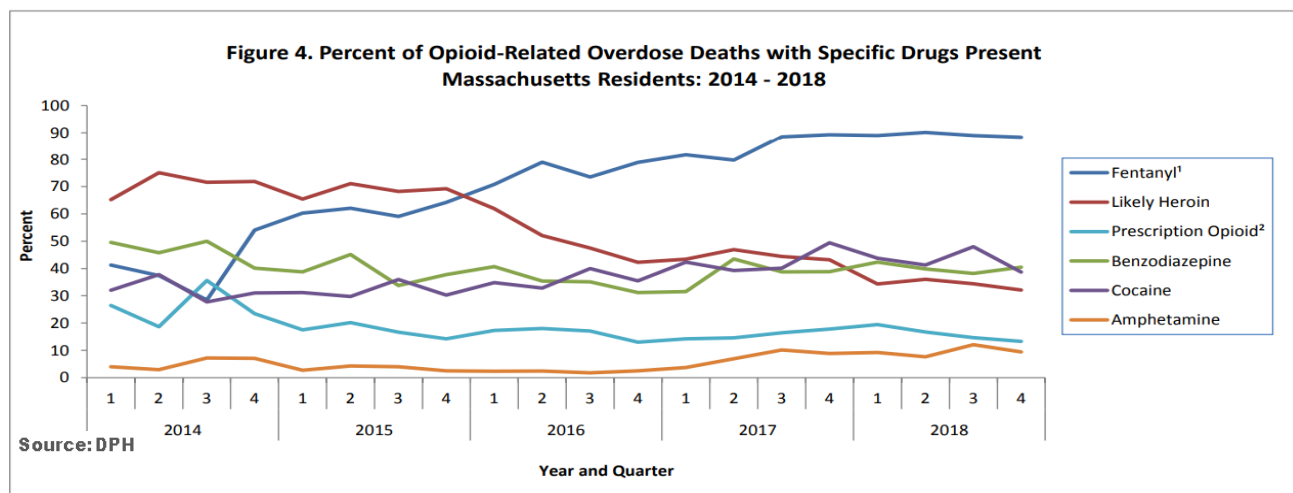
Fentanyl

Fentanyl is a fast-acting synthetic opioid with limited medical use, typically used in surgical settings to treat high levels of pain. It is formulated to be approximately 50 times stronger than heroin and 80 to 100 times stronger than morphine, making it more potent and deadly than other opioids (DEA, 2017).

Figure 3 shows the rate of opioid-related overdose deaths of Massachusetts residents (gray indicates confirmed and red indicates estimated) as well as the percent of opioid-related overdose deaths where fentanyl was present. Although the opioid-related overdose death rate has remained relatively stable since 2016, the presence of fentanyl in overdose deaths continues to rise (DPH, 2019). As such, there is evidence that fentanyl continues to fuel the current opioid epidemic in Massachusetts.



Beginning in 2016, the percentage of opioid-related overdose deaths in Massachusetts where fentanyl was present began to exceed that of heroin (or likely heroin), a trend that continued through 2017 and 2018 as shown in Figure 4 below.



1. This is most likely illicitly produced and sold, **not** prescription fentanyl

2. Prescription opioids include: hydrocodone, hydromorphone, oxycodone, oxymorphone, and tramadol

Please note that previous estimates may change slightly as DPH routinely receives updated toxicology data from the Office of the Chief Medical Examiner and the Massachusetts State Police.

CITY OF SOMERVILLE DATA

First responders from the Somerville Police Department (SPD) and Somerville Fire Department (SFD) are often the first to arrive at the site of an overdose. Incident information they report enables the City to better understand the opioid crisis' impact on Somerville and informs intervention strategy. Figure 5 presents the month-by-month estimated opioid-related overdoses (fatal and non-fatal) that occurred in Somerville in 2018.

Note: The City of Somerville data below represents unintentional overdoses and excludes suicides or suicide attempts. Data includes incidents when SPD or SFD was a first responder and does not include data from Cataldo or hospital emergency departments. Incidents were categorized as opioid-related based on information available to first responders on the scene and have not been confirmed with medical reports. Therefore, these numbers should be considered an estimate.

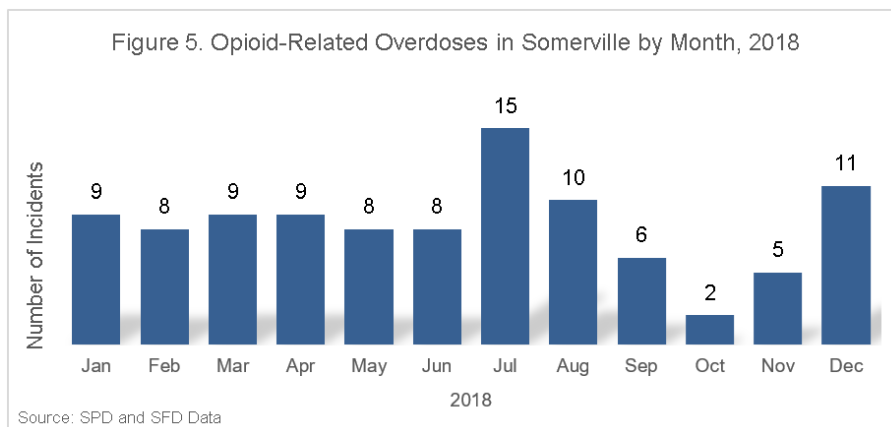
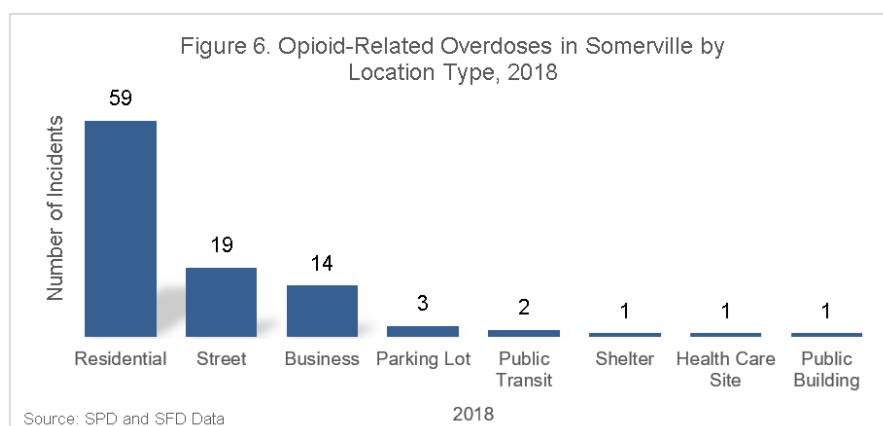


Figure 6 shows the types of locations where opioid-related overdoses (fatal and non-fatal) occurred in Somerville in 2018 based on Somerville Police and Fire Department data.

Of the 100 opioid-related overdoses, approximately 14% occurred in a business or commercial building. Twenty-two percent occurred in publicly owned spaces such as a street, public building, park, or public transit. Overdoses most frequently occurred in residential buildings, which accounted for approximately 59% of all incidents.



Geographical Data

In 2018, opioid-related overdoses affected the vast majority of Somerville neighborhoods. Geographical analysis enables the City to identify areas where opioid-related overdoses are occurring most frequently. Figure 7 is a map of fatal and non-fatal opioid-related overdoses that occurred in the City of Somerville in 2018.

Note: The maps below show a distribution of incidents across the city and do not represent statistically significant findings as sample size did not permit statistical analysis. Instead, any clusters pictured below are visual representations of incident frequency.

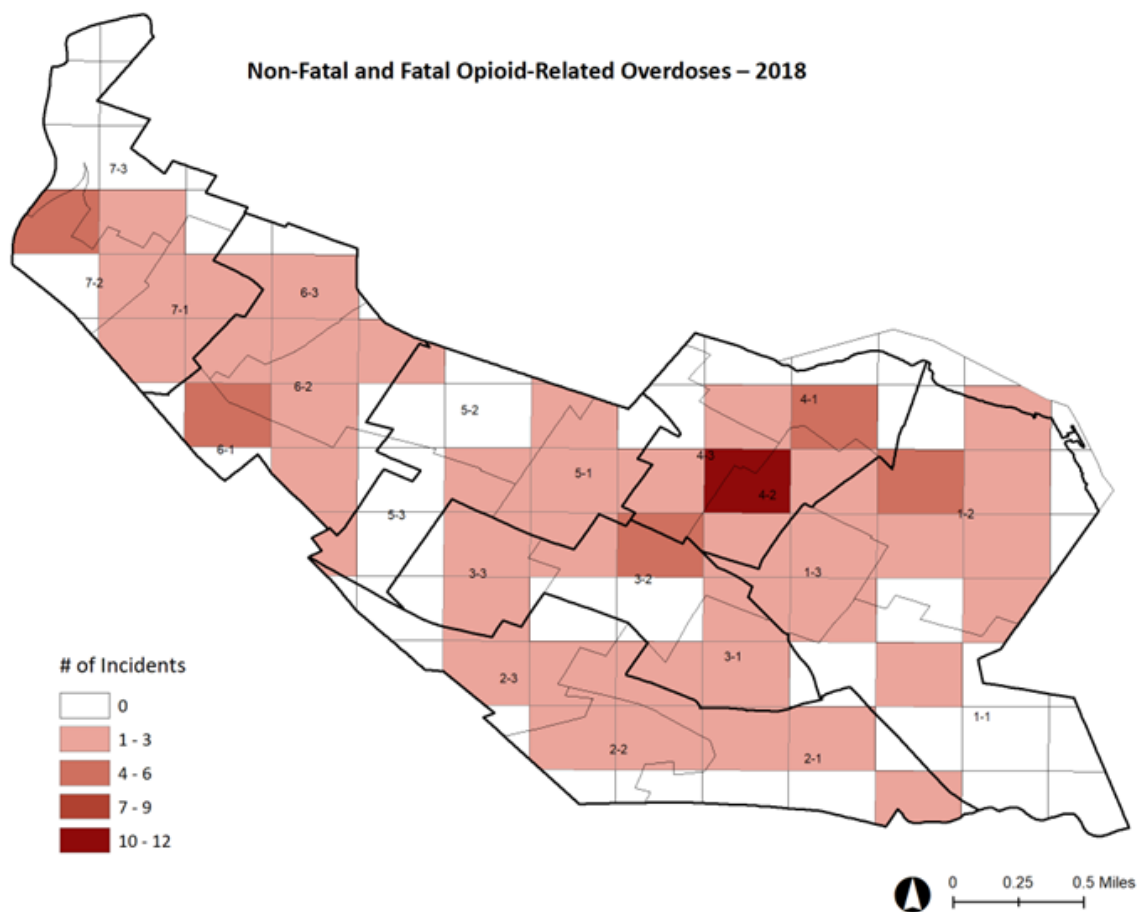
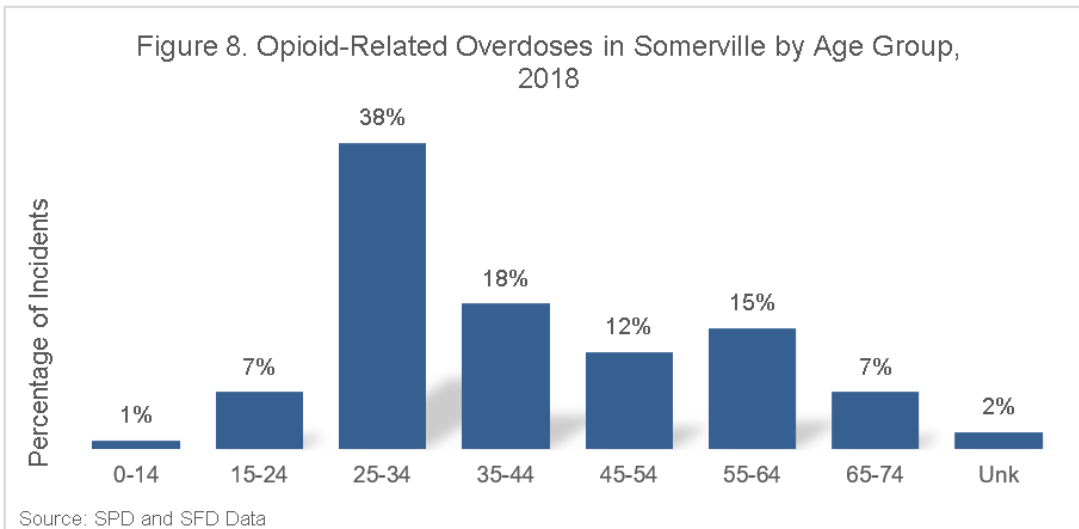


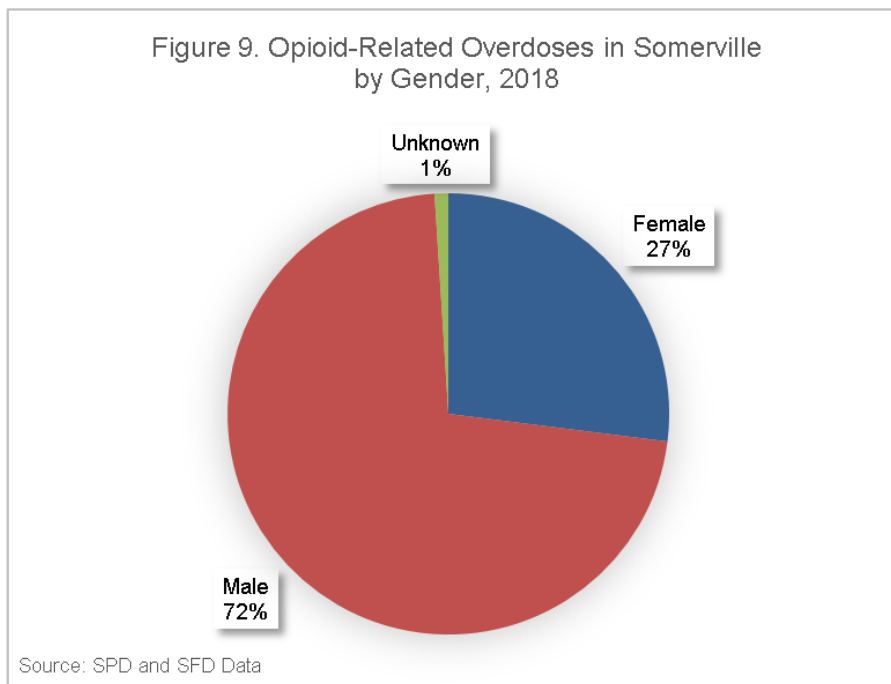
Figure 7. Fatal and Non-Fatal Opioid-Related Overdoses in Somerville, 2018 (SomerStat).

Demographic Data

Individuals who experienced an opioid-related overdose (fatal and non-fatal) in Somerville were primarily in the age range of 25-34 years old, with the lowest percentage of opioid-related overdoses being under the age of 24 and over the age of 65.



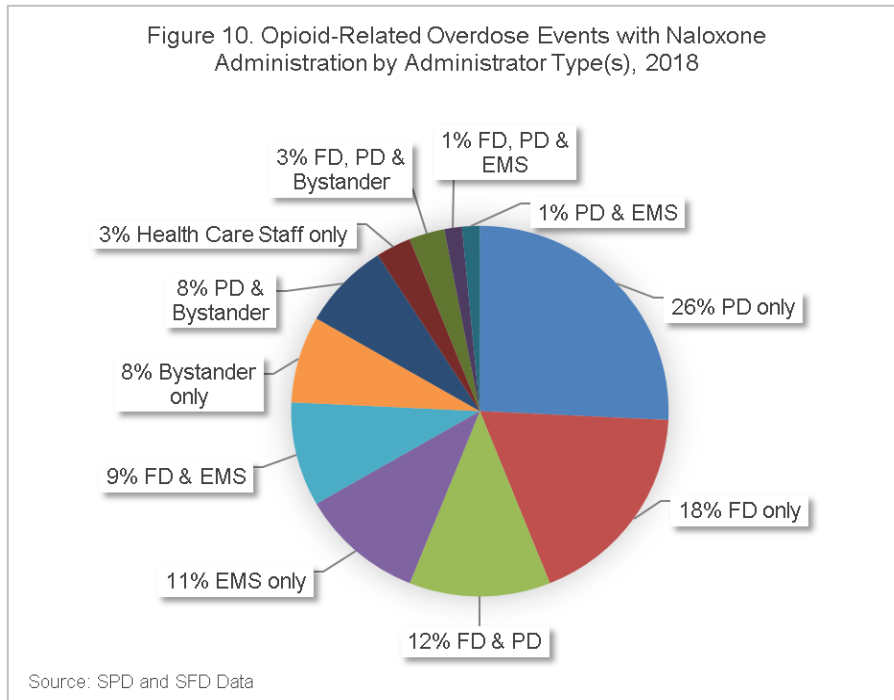
In 2018, the vast majority of individuals who experienced an opioid-related overdose (fatal and non-fatal) in Somerville were male.



Naloxone Administration

2018 Somerville

In 2018 there were **67** opioid-related overdose events with known naloxone administration (Somerville Fire and Police Departments data only). In 35% of the events, naloxone was administered by multiple parties as seen in Figure 10.



In 2018, **183 total known doses of naloxone were administered** in the City of Somerville.

Note: This data does not capture incidents where naloxone was used in non-opioid overdoses, non-overdoses or intentional overdoses. For example, incidents that were later determined to be overdoses due to a non-opioid substance or not be overdoses, as well as instances of attempted suicide by method of overdose.

Table 4. Known Naloxone Administration Following Opioid-Related Overdose Events in Somerville, 2018

Administrator	# of Overdose Events (some overlap between Administrators)	% of All Events with Naloxone Administration	Total # of Doses Administered
Fire Department	29	38%	73
Police Department	34	44%	68
EMS	15	19%	21
Bystander	12	16%	17
Health Care Staff	2	3%	4

Source: SPF and SFD data

OVERDOSE EDUCATION & NALOXONE DISTRIBUTION

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 and remains active for about 30 to 90 minutes in the body. If administered, naloxone may dissipate prior to the opioid, at which point the individual could overdose again. Therefore, it is critical that individuals who have overdosed receive medical attention.

Naloxone is not addictive and cannot be abused. If naloxone is administered to someone not experiencing an overdose, there are no ill effects.

Overdose Prevention

Somerville is fortunate to have access to naloxone, which is carried in every Police and Fire Department vehicle. Somerville Prevention Services, a division of Somerville's Health and Human Services Department, offers FREE overdose prevention and naloxone trainings for Somerville residents and businesses.

This training prepares individuals to understand, recognize, and respond to a potential overdose in the community, particularly the importance of calling 911; how to perform rescue breathing; how to administer naloxone; and the Good Samaritan Law.

Participants are eligible to receive a free naloxone kit, including naloxone doses and a face shield to perform rescue breathing.

Additionally, Massachusetts state law requires pharmacies carry naloxone for purchase by any individual.

COHR

Somerville Police Department's **Community Outreach, Help and Recovery (COHR)** unit is a multi-disciplinary team staffed by clinicians and Recovery Coaches providing urgent and ongoing supports to assist individuals living with addiction and mental illness. COHR provides assessment, care coordination, jail diversion, and training. COHR runs a Crisis Intervention Team (CIT) Training and Technical Assistance Center to inform best practice response for first responders in the Greater Boston Metro Region. Trainings for the community include Recovery Coach Academy; Mental Health First Aid; and Community Forums to share data trends, increase collaboration, and engage in conversations regarding behavioral health.

IMPORTANT NOTE

It is critical that individuals who have overdosed receive medical attention even if naloxone has been administered.

A person can overdose again after receiving naloxone. This depends on several factors, including:

- ⇒ The person's metabolism (how quickly the body processes substances).
- ⇒ How much drug the person originally used.
- ⇒ If the person uses again after receiving naloxone.

NEED TO KNOW

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

RESOURCES

- Find more information about local treatment, support resources, and next steps.
<http://odprevention.org>
- The Massachusetts Substance Abuse Information Helpline: Provides free, confidential information and referrals to over 600 treatment programs.
(800) 327-5050 or <http://helplinema.org/>
- Massachusetts Behavioral Health Access (MABHA): Online tool to locate current detox and residential treatment openings.
<https://www.mabhaccess.com/Home.aspx>
- Community, Outreach, Help & Recovery (COHR):
(617) 625-1600 ext. 7281 or <http://somervillepd.com/index.php/en-us/divisions/cohr>
- Learn to Cope: A facilitated discussion group for parents & loved ones providing peer support and education regarding coping with a person addicted to opioids or other drugs.
(508) 738-5148 or www.learn2cope.org
- Families Anonymous: A 12-step program for the families and friends of individuals living with substance use disorder.
(781) 736-9805 or <https://www.familiesanonymous.org/>
- Grief Recovery After Substance Passing (GRASP): Comfort and healing support group for anyone who has lost a loved one to substances use.
(617) 699-0529, mairin52@gmail.com, or <http://grasphelp.org/>
- ACCESS Drug User Health Program: Free, safe, and confidential space for drug users to access resources and services, including free naloxone. Also, outreach Van Wednesdays in Porter Square, Alewife and Thursdays Davis Sq, Sullivan St.
(617) 661-3040 (Cambridge) or (617) 437-6200 (Boston)
<http://www.aac.org/programs-services/needle-exchange/>
- PAATHS: One-stop shop for information about, or access to, addiction treatment services.
(617) 534-7730 or <http://bit.ly/PAATHS>
- Narcotics Anonymous: Support meetings.
(866) 624-3578 or www.newenglandna.org

METHODS

The City of Somerville assessed three existing community-level data sources to develop a comprehensive opioid impact assessment system.

Key Data Sources	Data Supplied
Somerville Police Department	Geographic information, Naloxone usage, demographic data
Somerville Fire Department	Geographic information, Naloxone usage, demographic data
Massachusetts Department of Public Health	Official state numbers on mortality by residence and overdose occurrence

Crime Analysts at the Somerville Police Department used Somerville Fire Department data in conjunction with Police Department records, such as Computer-Aided-Dispatch calls for service and narrative reports, to categorize each incident by overdose status. Overdoses were also categorized by gender, age, and location type for further analysis.

The map on page 8 was generated by SomerStat Analysts. Location data was geocoded in the program R using the ggmap package and mapped in ArcGIS. To protect individual privacy, the data was aggregated at a $\sim 400\text{m}^2$ area (approximately a square quarter mile).

ACKNOWLEDGMENTS

We'd like to thank the following individuals and groups for their contributions to this project:

City of Somerville, Health and Human Services (HHS)

Doug Kress, MPP — Director

Matthew Mitchell, LSW — Prevention Services Manager

Kate Hartke — Director, Grants Development

Somerville Police Department (SPD)

Meredith Willis — Senior Crime Analyst

Patty Contente, LICSW — Director, COHR

Denise Ortega — IT and Communications

City of Somerville, SomerStat Department

Christine Koh — SomerStat Analyst

Somerville Fire Department (SFD)

John M. Harding — Senior Policy Analyst

End Notes

- ⇒ Centers for Disease Control and Prevention. Drug and Opioid-Involved Overdose Deaths—United States, 2013-2017. Retrieved July 18, 2019. https://www.cdc.gov/mmwr/volumes/67/wr/mm675152e1.htm?s_cid=mm675152e1_w
- ⇒ National Institute on Drug Abuse. Opioid-Involved Overdose Deaths. Retrieved July 18, 2019. <https://www.drugabuse.gov/opioid-summaries-by-state/massachusetts-opioid-summary>
- ⇒ Baker-Polito Administration Further Expands Access to Opioid Reversal Medication. (October 2018). Retrieved July, 18, 2019. <https://www.mass.gov/news/baker-polito-administration-further-expands-access-to-opioid-reversal-medication>
- ⇒ Massachusetts Department of Public Health. (May 2019). Data Brief: Opioid-related Overdose Deaths Among Massachusetts Resident. Retrieved July 18, 2019. <https://www.mass.gov/files/documents/2019/05/15/Opioid-related-Overdose-Deaths-among-MA-Residents-May-2019.pdf>
- ⇒ Massachusetts Department of Public Health. (May 2019). Data Brief: Opioid-related Overdose Deaths By County—May 2019. Retrieved July 18, 2019. <https://www.mass.gov/files/documents/2019/05/15/Opioid-related-Overdose-Deaths-by-County-May-2019.pdf>
- ⇒ Massachusetts Department of Public Health. (May 2019). Data Brief: Opioid-related Overdose Deaths By City/Town—May 2019. Retrieved July 18, 2019. <https://www.mass.gov/files/documents/2019/05/15/Opioid-related-Overdose-Deaths-by-City-Town-May-2019.pdf>
- ⇒ United States. Drug Enforcement Administration. (June 2017). Drugs of Abuse, a DEA Resource Guide: 2017 Edition. Retrieved October 22, 2019. https://www.dea.gov/sites/default/files/sites/getsmartaboutdrugs.com/files/publications/DoA_2017Ed_Updated_6.16.17.pdf#page=40