

POSTED: MAY 2018

Massachusetts Department of Public Health

**MA Opioid-Related EMS Incidents 2013-2017**

# Enhancement of Opioid Overdose Surveillance

MATRIS, the Massachusetts Ambulance Trip Reporting Information System, is a statewide database for collecting emergency medical service (EMS) data from licensed ambulance services. It was not specifically designed to track opioid overdose incidents. DPH is currently working with all EMS providers to improve the quality and completeness of these data especially with respect to opioid overdose incidents. To more accurately identify ambulance trips that are opioid-related, several pieces of information from MATRIS are combined such as: a notation that a trip was listed as a poisoning, that there was an administration of naloxone, or that the patient admitted to drug use. In combination, this information allows DPH to more accurately count opioid overdose incidents. Data for Boston came from applying this algorithm to events identified by Boston EMS as “Narcotic Related Incidents” (NRI). Not all ambulance services have reported their most recent data at the time this report was generated, and therefore the numbers cited here may be underestimates. Counts will be updated on a quarterly basis. Beginning with the August 2017 report, incidents are only among people ages 11 and above.

# Results

Since 2013, there has been an overall increasing trend in the percentage of EMS incidents that are considered opioid-related (Figure 1) and the number of all EMS incidents involving naloxone administration (Figure 2). In 2017, the greatest number of suspected opioid-related overdoses treated by EMS is among males aged 25-34, accounting for 27% of opioid-related overdose incidents with a known age and gender.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **All Suspected Opioid Related Incidents: 2017 (Quarter 1)** | | | | | | | | |
|  | **11-14** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | <7 | 325 | 1286 | 641 | 430 | 256 | 101 | 3039 |
| Female | <7 | 212 | 571 | 296 | 218 | 145 | 72 | 1514 |
| Total | <7 | 537 | 1857 | 937 | 648 | 401 | 173 | 4553 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **All Suspected Opioid Related Incidents: 2017 (Quarter 2)** | | | | | | | | |
|  | **11-14** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | 0 | 374 | 1396 | 867 | 573 | 320 | 82 | 3612 |
| Female | 0 | 226 | 708 | 402 | 258 | 159 | 71 | 1824 |
| Total | 0 | 600 | 2104 | 1269 | 831 | 479 | 153 | 5436 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **All Suspected Opioid Related Incidents: 2017 (Quarter 3)** | | | | | | | | |
|  | **11-14** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | <7 | 452 | 1776 | 1115 | 730 | 372 | 124 | 4569 |
| Female | <7 | 243 | 798 | 536 | 281 | 185 | 76 | 2119 |
| Total | <7 | 695 | 2574 | 1651 | 1011 | 557 | 200 | 6688 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **All Suspected Opioid Related Incidents: 2017 (Quarter 4)** | | | | | | | | |
|  | **11-14** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | <7 | 302 | 1399 | 788 | 581 | 299 | 108 | 3477 |
| Female | <7 | 193 | 606 | 390 | 239 | 153 | 79 | 1660 |
| Total | <7 | 495 | 2005 | 1178 | 820 | 452 | 187 | 5137 |

**Figure 1: Percent of Opioid-Related Overdoses**

**Among All EMS Incidents, MA: 2013-2017**

3.5

3

2.5 Opioid-

Related

2 Overdoses

EMS Incidents

1.5

Trend line

1

0.5

0

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4

2013 2014

2015

**Year and Quarter**

2016

2017

**Figure 2: Count of All EMS Incidents Involving**

**Naloxone Administration, MA: 2013-2017**

6000

5000

4000

Naloxone

Administered EMS Incidents

3000

Trend line

2000

1000

0

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1

2013 2014

2015

**Year and Quarter**

2016

Q2 Q3 Q4

2017

**Count**

**Percent**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Abington | 12 | 9 | 12 | 9 | **42** | 14 | 9 | 10 | 12 | **45** |
| Acton | <7 | <7 | <7 | <7 | **21** | <7 | 7 | <7 | <7 | **19** |
| Acushnet | † | <7 | <7 | <7 | **12** | 7 | 7 | <7 | <7 | **25** |
| Adams | † | † | † | † | **†** | <7 | <7 | <7 | 10 | **19** |
| Agawam | 18 | 8 | 16 | 12 | **54** | 9 | 10 | 13 | 11 | **43** |
| Alford | † | † | † | † | **†** | † | † | † | † | **†** |
| Amesbury | 16 | 24 | 13 | 16 | **69** | 11 | 15 | 14 | 12 | **52** |
| Amherst | 8 | <7 | <7 | <7 | **20** | 8 | <7 | 8 | \* | **29** |
| Andover | <7 | <7 | 11 | 12 | **32** | 7 | 11 | 12 | 14 | **44** |
| Aquinnah | † | † | † | † | **†** | † | † | † | † | **†** |
| Arlington | 18 | 16 | 16 | 8 | **58** | 11 | 14 | 19 | 23 | **67** |
| Ashburnham | <7 | <7 | <7 | † | **9** | <7 | <7 | † | † | **<7** |
| Ashby | <7 | † | <7 | <7 | **8** | † | <7 | <7 | <7 | **12** |
| Ashfield | † | † | † | <7 | **<7** | † | † | † | † | **†** |
| Ashland | <7 | \* | 7 | 8 | **25** | <7 | 9 | 7 | <7 | **26** |
| Athol | <7 | \* | 9 | 16 | **38** | \* | 15 | 12 | <7 | **37** |
| Attleboro | 21 | 39 | 38 | 40 | **138** | 36 | 31 | 46 | 31 | **144** |
| Auburn | <7 | <7 | 11 | 7 | **27** | <7 | 11 | 7 | <7 | **30** |
| Avon | <7 | <7 | <7 | 7 | **20** | <7 | <7 | <7 | † | **7** |
| Ayer | <7 | <7 | <7 | 7 | **18** | <7 | <7 | <7 | † | **7** |
| Barnstable | 44 | 54 | 62 | 59 | **219** | 63 | 48 | 89 | 44 | **244** |
| Barre | † | <7 | <7 | <7 | **8** | <7 | <7 | <7 | <7 | **13** |
| Becket | † | <7 | † | † | **<7** | <7 | <7 | † | <7 | **<7** |
| Bedford | <7 | 8 | 9 | <7 | **28** | <7 | 8 | 8 | <7 | **23** |
| Belchertown | <7 | † | † | <7 | **<7** | <7 | 7 | <7 | <7 | **21** |
| Bellingham | 7 | 11 | 11 | 13 | **42** | 11 | 14 | <7 | \* | **40** |
| Belmont | 10 | 11 | \* | <7 | **33** | <7 | <7 | 12 | 7 | **27** |
| Berkley | <7 | <7 | <7 | <7 | **11** | <7 | <7 | <7 | <7 | **9** |
| Berlin | <7 | <7 | † | <7 | **7** | <7 | † | <7 | † | **<7** |
| Bernardston | † | † | † | † | **†** | † | † | † | † | **†** |
| Beverly | 24 | 31 | 24 | 31 | **110** | 25 | 35 | 23 | 23 | **106** |
| Billerica | 19 | 12 | 30 | 13 | **74** | 20 | 15 | 42 | 20 | **97** |
| Blackstone | <7 | <7 | <7 | <7 | **7** | <7 | 9 | 12 | \* | **30** |
| Blandford | † | † | † | † | **†** | † | † | † | † | **†** |
| Bolton | <7 | <7 | <7 | <7 | **7** | † | † | <7 | † | **<7** |
| Boston | 423 | 674 | 706 | 434 | **2237** | 433 | 635 | 891 | 687 | **2646** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Bourne | 18 | 28 | 32 | 12 | **90** | 15 | 30 | 17 | 12 | **74** |
| Boxborough | <7 | <7 | <7 | 7 | **18** | † | <7 | <7 | <7 | **7** |
| Boxford | † | <7 | <7 | <7 | **7** | <7 | <7 | † | † | **<7** |
| Boylston | † | <7 | <7 | <7 | **9** | † | † | <7 | † | **<7** |
| Braintree | 23 | 33 | 28 | 43 | **127** | 25 | 35 | 39 | 16 | **115** |
| Brewster | <7 | <7 | † | <7 | **<7** | † | 7 | <7 | <7 | **12** |
| Bridgewater | <7 | <7 | † | <7 | **9** | <7 | <7 | <7 | <7 | **8** |
| Brimfield | † | † | † | † | **†** | † | † | † | † | **†** |
| Brockton | 191 | 261 | 256 | 180 | **888** | 186 | 164 | 253 | 91 | **694** |
| Brookfield | † | <7 | † | <7 | **<7** | <7 | <7 | <7 | <7 | **7** |
| Brookline | 9 | \* | <7 | 11 | **33** | 12 | 18 | 10 | 13 | **53** |
| Buckland | † | † | † | † | **†** | † | † | † | † | **†** |
| Burlington | <7 | <7 | 14 | 11 | **33** | 9 | 13 | 21 | 15 | **58** |
| Cambridge | 93 | 162 | 128 | 94 | **477** | 81 | 92 | 107 | 73 | **353** |
| Canton | <7 | 13 | \* | 10 | **34** | 7 | 7 | 9 | 14 | **37** |
| Carlisle | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Carver | 13 | 12 | 15 | 13 | **53** | 11 | 12 | 11 | 9 | **43** |
| Charlemont | † | † | † | † | **†** | † | † | † | † | **†** |
| Charlton | <7 | † | † | <7 | **<7** | <7 | <7 | <7 | <7 | **11** |
| Chatham | <7 | <7 | <7 | <7 | **7** | <7 | <7 | <7 | <7 | **9** |
| Chelmsford | 19 | 17 | 11 | 10 | **57** | 19 | 12 | 13 | 12 | **56** |
| Chelsea | 59 | 73 | 84 | 42 | **258** | 49 | 83 | 91 | 43 | **266** |
| Cheshire | <7 | † | <7 | <7 | **<7** | <7 | <7 | † | † | **<7** |
| Chester | † | <7 | † | † | **<7** | <7 | † | <7 | † | **<7** |
| Chesterfield | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Chicopee | 78 | 61 | 49 | 54 | **242** | 46 | 59 | 66 | 76 | **247** |
| Chilmark | <7 | † | <7 | † | **<7** | † | † | † | <7 | **<7** |
| Clarksburg | † | † | † | † | **†** | † | † | † | † | **†** |
| Clinton | <7 | 13 | \* | 28 | **55** | <7 | \* | 14 | 17 | **49** |
| Cohasset | † | † | <7 | <7 | **<7** | † | <7 | <7 | <7 | **9** |
| Colrain | † | † | † | † | **†** | † | † | † | † | **†** |
| Concord | <7 | 7 | <7 | <7 | **18** | <7 | <7 | <7 | <7 | **9** |
| Conway | <7 | † | † | † | **<7** | † | † | † | † | **†** |
| Cummington | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Dalton | <7 | <7 | <7 | <7 | **12** | <7 | † | <7 | † | **<7** |
| Danvers | 30 | 45 | 39 | 22 | **136** | 30 | 41 | 36 | 35 | **142** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Dartmouth | 18 | 25 | 25 | 24 | **92** | 19 | 27 | \* | <7 | **66** |
| Dedham | 13 | 26 | \* | <7 | **57** | 16 | 15 | 21 | 15 | **67** |
| Deerfield | <7 | <7 | † | † | **<7** | † | <7 | † | <7 | **7** |
| Dennis | <7 | <7 | 9 | \* | **18** | 11 | 11 | 20 | 14 | **56** |
| Dighton | <7 | <7 | † | † | **7** | <7 | <7 | † | † | **<7** |
| Douglas | <7 | <7 | † | † | **<7** | † | † | † | † | **†** |
| Dover | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Dracut | 16 | 10 | 22 | 14 | **62** | 11 | 17 | 26 | 13 | **67** |
| Dudley | † | <7 | 9 | \* | **19** | <7 | 7 | <7 | 7 | **23** |
| Dunstable | † | † | <7 | † | **<7** | <7 | † | <7 | <7 | **<7** |
| Duxbury | <7 | <7 | <7 | <7 | **19** | <7 | <7 | <7 | <7 | **10** |
| East  Bridgewater | <7 | 15 | 9 | \* | **37** | <7 | <7 | <7 | 9 | **24** |
| East Brookfield | † | † | † | <7 | **<7** | † | † | † | † | **†** |
| East  Longmeadow | <7 | 8 | <7 | 9 | **23** | 7 | <7 | <7 | <7 | **19** |
| Eastham | <7 | <7 | <7 | <7 | **9** | <7 | <7 | <7 | † | **8** |
| Easthampton | 7 | 7 | 7 | 7 | **28** | <7 | <7 | 10 | <7 | **23** |
| Easton | <7 | <7 | <7 | † | **9** | <7 | <7 | 7 | 13 | **23** |
| Edgartown | <7 | <7 | <7 | <7 | **7** | <7 | <7 | <7 | † | **<7** |
| Egremont | † | † | <7 | † | **<7** | † | † | † | † | **†** |
| Erving | † | † | † | <7 | **<7** | <7 | † | † | <7 | **<7** |
| Essex | <7 | <7 | † | <7 | **<7** | <7 | <7 | <7 | <7 | **<7** |
| Everett | 36 | 57 | 49 | 41 | **183** | 39 | 43 | 49 | 39 | **170** |
| Fairhaven | 26 | 24 | 19 | 15 | **84** | 11 | 13 | 11 | 12 | **47** |
| Fall River | 151 | 156 | 299 | 228 | **834** | 195 | 169 | 246 | 245 | **855** |
| Falmouth | 23 | 55 | 46 | 45 | **169** | 40 | 48 | 28 | 30 | **146** |
| Fitchburg | 70 | 80 | 113 | 90 | **353** | 75 | 80 | 105 | 81 | **341** |
| Florida | † | † | † | † | **†** | † | † | † | † | **†** |
| Foxborough | <7 | <7 | 12 | 16 | **34** | 11 | 7 | 9 | 7 | **34** |
| Framingham | 32 | 60 | 66 | 55 | **213** | 44 | 34 | 48 | 54 | **180** |
| Franklin | <7 | 17 | 16 | <7 | **44** | 16 | 15 | \* | <7 | **46** |
| Freetown | <7 | <7 | 7 | 8 | **24** | <7 | <7 | <7 | <7 | **11** |
| Gardner | 14 | 28 | 24 | 12 | **78** | 22 | 13 | 20 | 13 | **68** |
| Georgetown | <7 | <7 | <7 | <7 | **11** | <7 | <7 | † | <7 | **7** |
| Gill | <7 | <7 | † | <7 | **<7** | † | † | † | † | **†** |
| Gloucester | 39 | 33 | 29 | 15 | **116** | 17 | 27 | 32 | 30 | **106** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Goshen | † | † | <7 | † | **<7** | † | † | † | † | **†** |
| Gosnold | † | † | † | † | **†** | † | † | † | † | **†** |
| Grafton | <7 | <7 | <7 | <7 | **15** | <7 | 7 | 10 | <7 | **25** |
| Granby | <7 | <7 | <7 | <7 | **9** | <7 | † | <7 | 8 | **13** |
| Granville | <7 | † | † | † | **<7** | † | † | † | † | **†** |
| Great  Barrington | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **10** |
| Greenfield | 10 | 8 | 23 | 9 | **50** | 11 | 15 | 20 | 7 | **53** |
| Groton | <7 | † | † | <7 | **<7** | † | <7 | † | † | **<7** |
| Groveland | <7 | <7 | <7 | <7 | **<7** | <7 | <7 | † | <7 | **<7** |
| Hadley | 7 | <7 | <7 | <7 | **19** | <7 | <7 | 7 | <7 | **15** |
| Halifax | 10 | 22 | <7 | \* | **45** | <7 | <7 | 7 | 11 | **25** |
| Hamilton | <7 | <7 | † | † | **<7** | <7 | <7 | <7 | <7 | **<7** |
| Hampden | † | <7 | † | <7 | **<7** | <7 | <7 | <7 | † | **<7** |
| Hancock | † | † | † | † | **†** | † | <7 | † | † | **<7** |
| Hanover | <7 | <7 | <7 | <7 | **18** | <7 | <7 | <7 | <7 | **17** |
| Hanson | 8 | <7 | 9 | <7 | **28** | <7 | 9 | <7 | <7 | **21** |
| Hardwick | <7 | † | † | <7 | **<7** | <7 | † | † | † | **<7** |
| Harvard | <7 | † | † | <7 | **<7** | <7 | † | † | <7 | **<7** |
| Harwich | <7 | 7 | <7 | <7 | **19** | 11 | <7 | 11 | \* | **36** |
| Hatfield | <7 | † | † | <7 | **<7** | † | <7 | <7 | † | **<7** |
| Haverhill | 92 | 90 | 77 | 105 | **364** | 87 | 85 | 121 | 77 | **370** |
| Hawley | † | † | † | † | **†** | † | † | † | † | **†** |
| Heath | † | † | † | † | **†** | <7 | † | † | <7 | **<7** |
| Hingham | <7 | <7 | <7 | 14 | **25** | <7 | <7 | <7 | <7 | **15** |
| Hinsdale | † | <7 | † | † | **<7** | † | † | † | † | **†** |
| Holbrook | 16 | 17 | 21 | 18 | **72** | 17 | 18 | \* | <7 | **54** |
| Holden | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **11** |
| Holland | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Holliston | † | † | † | † | **†** | <7 | <7 | <7 | <7 | **14** |
| Holyoke | 79 | 86 | 62 | 74 | **301** | 55 | 49 | 65 | 57 | **226** |
| Hopedale | † | † | † | <7 | **<7** | <7 | <7 | <7 | <7 | **7** |
| Hopkinton | <7 | <7 | <7 | † | **10** | <7 | <7 | <7 | <7 | **13** |
| Hubbardston | † | <7 | <7 | † | **<7** | <7 | <7 | <7 | † | **7** |
| Hudson | 11 | \* | 13 | <7 | **36** | <7 | <7 | 7 | 9 | **24** |
| Hull | 11 | <7 | <7 | † | **18** | <7 | <7 | <7 | † | **8** |
| Huntington | † | † | <7 | † | **<7** | † | † | <7 | † | **<7** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Ipswich | 7 | <7 | <7 | <7 | **22** | 8 | 7 | <7 | <7 | **22** |
| Kingston | <7 | <7 | <7 | 9 | **20** | <7 | <7 | 9 | <7 | **24** |
| Lakeville | <7 | \* | 31 | 14 | **56** | 21 | 15 | 22 | 14 | **72** |
| Lancaster | <7 | <7 | <7 | <7 | **8** | † | <7 | <7 | <7 | **<7** |
| Lanesborough | † | † | † | <7 | **<7** | † | <7 | <7 | † | **<7** |
| Lawrence | 197 | 100 | 171 | 180 | **648** | 150 | 178 | 242 | 208 | **778** |
| Lee | <7 | <7 | <7 | <7 | **7** | <7 | <7 | <7 | <7 | **11** |
| Leicester | <7 | <7 | <7 | 10 | **25** | 9 | <7 | <7 | <7 | **25** |
| Lenox | † | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **16** |
| Leominster | 50 | 67 | 113 | 63 | **293** | 68 | 56 | 70 | 56 | **250** |
| Leverett | † | † | † | † | **†** | <7 | † | † | † | **<7** |
| Lexington | <7 | <7 | 8 | <7 | **16** | <7 | <7 | <7 | <7 | **16** |
| Leyden | † | † | † | † | **†** | † | † | † | † | **†** |
| Lincoln | <7 | † | <7 | † | **<7** | † | <7 | <7 | <7 | **8** |
| Littleton | <7 | <7 | <7 | <7 | **15** | <7 | <7 | <7 | <7 | **9** |
| Longmeadow | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **10** |
| Lowell | 193 | 187 | 216 | 241 | **837** | 269 | 309 | 322 | 237 | **1137** |
| Ludlow | \* | 14 | <7 | 13 | **44** | 10 | <7 | 13 | \* | **39** |
| Lunenburg | <7 | 7 | 9 | <7 | **23** | <7 | † | <7 | <7 | **<7** |
| Lynn | 97 | 113 | 137 | 123 | **470** | 117 | 147 | 172 | 150 | **586** |
| Lynnfield | <7 | <7 | <7 | <7 | **9** | <7 | <7 | <7 | <7 | **11** |
| Malden | 37 | 61 | 62 | 42 | **202** | 31 | 55 | 76 | 42 | **204** |
| Manchester | † | <7 | <7 | † | **<7** | <7 | <7 | † | <7 | **<7** |
| Mansfield | <7 | 9 | 10 | <7 | **28** | \* | 9 | <7 | 17 | **39** |
| Marblehead | <7 | \* | 15 | 8 | **36** | 9 | <7 | <7 | 10 | **28** |
| Marion | <7 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **9** |
| Marlborough | 21 | 13 | 19 | 13 | **66** | <7 | \* | 16 | 17 | **44** |
| Marshfield | 8 | 16 | 12 | 7 | **43** | 8 | 7 | 12 | 16 | **43** |
| Mashpee | <7 | 12 | 17 | \* | **42** | 16 | 8 | † | 10 | **34** |
| Mattapoisett | <7 | 7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **15** |
| Maynard | <7 | <7 | <7 | <7 | **12** | 9 | 9 | <7 | <7 | **23** |
| Medfield | <7 | <7 | <7 | <7 | **8** | <7 | <7 | <7 | <7 | **9** |
| Medford | 41 | 42 | 34 | 21 | **138** | 14 | 24 | 27 | 27 | **92** |
| Medway | <7 | <7 | <7 | 8 | **19** | \* | 8 | 17 | <7 | **35** |
| Melrose | 16 | 17 | 17 | 9 | **59** | \* | <7 | 15 | 7 | **33** |
| Mendon | † | † | † | <7 | **<7** | <7 | <7 | † | <7 | **7** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Merrimac | <7 | † | <7 | <7 | **<7** | <7 | <7 | 7 | <7 | **15** |
| Methuen | 47 | 53 | 62 | 51 | **213** | 29 | 49 | 60 | 55 | **193** |
| Middleborough | \* | 20 | <7 | † | **35** | <7 | <7 | <7 | <7 | **8** |
| Middlefield | † | † | <7 | † | **<7** | † | <7 | † | † | **<7** |
| Middleton | <7 | <7 | <7 | † | **12** | <7 | <7 | <7 | 7 | **19** |
| Milford | <7 | 14 | 23 | \* | **56** | 13 | 24 | 12 | 16 | **65** |
| Millbury | 7 | 19 | 17 | 8 | **51** | 8 | 12 | 10 | 14 | **44** |
| Millis | <7 | <7 | <7 | 8 | **18** | <7 | <7 | <7 | <7 | **15** |
| Millville | <7 | <7 | † | <7 | **7** | † | † | <7 | <7 | **<7** |
| Milton | 7 | 12 | 9 | 8 | **36** | \* | 9 | 9 | <7 | **32** |
| Monroe | † | † | † | † | **†** | † | † | † | † | **†** |
| Monson | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **14** |
| Montague | \* | 10 | 8 | <7 | **29** | <7 | <7 | 8 | <7 | **23** |
| Monterey | † | † | † | † | **†** | † | † | † | † | **†** |
| Montgomery | † | † | † | † | **†** | † | † | † | † | **†** |
| Mount  Washington | † | † | † | † | **†** | † | † | † | † | **†** |
| Nahant | <7 | <7 | † | <7 | **<7** | † | <7 | <7 | † | **<7** |
| Nantucket | <7 | <7 | 9 | <7 | **18** | <7 | <7 | <7 | <7 | **10** |
| Natick | <7 | 9 | \* | 10 | **33** | \* | <7 | 8 | 9 | **30** |
| Needham | <7 | <7 | <7 | <7 | **15** | <7 | † | <7 | <7 | **7** |
| New Ashford | † | † | † | † | **†** | † | † | † | † | **†** |
| New Bedford | 116 | 153 | 221 | 216 | **706** | 118 | 199 | 229 | 128 | **674** |
| New Braintree | † | † | † | <7 | **<7** | † | <7 | † | † | **<7** |
| New  Marlborough | † | † | † | † | **†** | † | <7 | † | † | **<7** |
| New Salem | † | † | † | † | **†** | † | <7 | † | † | **<7** |
| Newbury | <7 | † | † | † | **<7** | <7 | <7 | † | <7 | **<7** |
| Newburyport | <7 | 9 | <7 | 11 | **24** | <7 | <7 | 8 | <7 | **16** |
| Newton | 11 | 13 | 15 | 16 | **55** | 17 | 16 | 15 | 17 | **65** |
| Norfolk | 7 | <7 | <7 | <7 | **18** | <7 | <7 | <7 | <7 | **<7** |
| North Adams | 11 | 27 | 23 | 14 | **75** | 9 | 9 | 17 | 13 | **48** |
| North Andover | 12 | 11 | 19 | 15 | **57** | 18 | 12 | 18 | 24 | **72** |
| North Attleboro | 13 | 21 | 18 | 16 | **68** | 11 | 25 | 21 | 22 | **79** |
| North  Brookfield | † | † | <7 | <7 | **<7** | † | † | † | <7 | **<7** |
| North Reading | <7 | <7 | 9 | <7 | **21** | <7 | 9 | <7 | <7 | **17** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Northampton | 26 | \* | <7 | 22 | **71** | 26 | 20 | 16 | 20 | **82** |
| Northborough | 7 | <7 | 10 | <7 | **24** | <7 | <7 | <7 | <7 | **12** |
| Northbridge | <7 | 7 | 7 | <7 | **22** | <7 | <7 | 9 | <7 | **25** |
| Northfield | † | † | † | † | **†** | † | † | <7 | <7 | **<7** |
| Norton | † | \* | <7 | 11 | **26** | 9 | <7 | 8 | <7 | **23** |
| Norwell | <7 | 7 | <7 | <7 | **19** | <7 | 7 | <7 | † | **14** |
| Norwood | <7 | † | <7 | 11 | **18** | 13 | 13 | 15 | 12 | **53** |
| Oak Bluffs | <7 | <7 | <7 | <7 | **14** | <7 | † | <7 | <7 | **<7** |
| Oakham | † | <7 | <7 | † | **<7** | <7 | † | <7 | † | **<7** |
| Orange | <7 | <7 | <7 | 7 | **11** | 8 | <7 | <7 | <7 | **18** |
| Orleans | † | † | † | † | **†** | <7 | <7 | <7 | † | **9** |
| Otis | † | † | † | † | **†** | † | † | <7 | † | **<7** |
| Oxford | <7 | 10 | 22 | <7 | **40** | 11 | \* | <7 | 11 | **34** |
| Palmer | † | <7 | † | <7 | **<7** | <7 | 8 | \* | 8 | **27** |
| Paxton | <7 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | † | **<7** |
| Peabody | 34 | 44 | 42 | 43 | **163** | 34 | 37 | 51 | 41 | **163** |
| Pelham | † | † | † | † | **†** | † | † | † | † | **†** |
| Pembroke | 9 | 9 | 8 | 17 | **43** | 12 | 8 | \* | <7 | **29** |
| Pepperell | <7 | <7 | 9 | <7 | **20** | <7 | † | 7 | <7 | **14** |
| Peru | † | † | † | † | **†** | † | † | † | † | **†** |
| Petersham | † | <7 | † | <7 | **<7** | † | † | † | † | **†** |
| Phillipston | † | † | <7 | † | **<7** | † | † | † | † | **†** |
| Pittsfield | 38 | 40 | 30 | 40 | **148** | 35 | 29 | 57 | 37 | **158** |
| Plainfield | † | † | † | † | **†** | † | <7 | <7 | † | **<7** |
| Plainville | <7 | <7 | <7 | 11 | **23** | 7 | <7 | <7 | <7 | **23** |
| Plymouth | 38 | 60 | 49 | 43 | **190** | 50 | 58 | 69 | 42 | **219** |
| Plympton | † | <7 | <7 | <7 | **<7** | <7 | <7 | † | † | **<7** |
| Princeton | † | † | † | † | **†** | † | <7 | <7 | <7 | **<7** |
| Provincetown | <7 | <7 | <7 | <7 | **11** | <7 | <7 | <7 | † | **9** |
| Quincy | 57 | 123 | 131 | 122 | **433** | 89 | 101 | 164 | 42 | **396** |
| Randolph | 30 | 30 | 16 | 24 | **100** | 20 | 13 | 21 | 24 | **78** |
| Raynham | <7 | <7 | 7 | 13 | **32** | <7 | 10 | 12 | \* | **37** |
| Reading | <7 | <7 | 7 | 7 | **26** | <7 | <7 | <7 | <7 | **13** |
| Rehoboth | † | † | † | † | **†** | <7 | <7 | <7 | <7 | **8** |
| Revere | 52 | 81 | 92 | 76 | **301** | 52 | 69 | 82 | 54 | **257** |
| Richmond | † | † | † | † | **†** | † | † | † | † | **†** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Rochester | <7 | <7 | <7 | <7 | **8** | <7 | † | <7 | <7 | **7** |
| Rockland | 42 | 28 | 24 | 22 | **116** | 17 | 19 | 23 | 20 | **79** |
| Rockport | † | † | <7 | <7 | **<7** | <7 | <7 | † | <7 | **13** |
| Rowe | † | † | † | † | **†** | † | † | † | † | **†** |
| Rowley | <7 | <7 | <7 | <7 | **8** | † | <7 | † | † | **<7** |
| Royalston | <7 | <7 | <7 | † | **<7** | <7 | † | † | <7 | **<7** |
| Russell | † | † | † | <7 | **<7** | † | <7 | † | † | **<7** |
| Rutland | † | <7 | <7 | <7 | **10** | <7 | <7 | <7 | <7 | **13** |
| Salem | 47 | 62 | 78 | 60 | **247** | 54 | 56 | 78 | 44 | **232** |
| Salisbury | 25 | 33 | 33 | 17 | **108** | 19 | 25 | 34 | 29 | **107** |
| Sandisfield | † | <7 | † | † | **<7** | <7 | † | † | † | **<7** |
| Sandwich | † | † | \* | <7 | **8** | <7 | † | † | † | **<7** |
| Saugus | 26 | 37 | 38 | 28 | **129** | 25 | 31 | 32 | 28 | **116** |
| Savoy | † | † | † | † | **†** | † | † | † | † | **†** |
| Scituate | <7 | <7 | 9 | <7 | **21** | <7 | <7 | <7 | <7 | **13** |
| Seekonk | <7 | 7 | 10 | <7 | **26** | <7 | 10 | 8 | \* | **29** |
| Sharon | † | <7 | 8 | <7 | **12** | <7 | <7 | <7 | 7 | **16** |
| Sheffield | <7 | † | <7 | † | **<7** | † | <7 | <7 | <7 | **7** |
| Shelburne | <7 | † | † | <7 | **<7** | <7 | † | <7 | † | **<7** |
| Sherborn | † | † | † | <7 | **<7** | † | † | † | <7 | **<7** |
| Shirley | <7 | <7 | 9 | † | **13** | <7 | <7 | 7 | <7 | **21** |
| Shrewsbury | 10 | 19 | 11 | 11 | **51** | 7 | 16 | 13 | 18 | **54** |
| Shutesbury | † | † | † | † | **†** | † | † | † | † | **†** |
| Somerset | 13 | 17 | 11 | 9 | **50** | 8 | 10 | 14 | 15 | **47** |
| Somerville | 39 | 52 | 56 | 50 | **197** | 27 | 39 | 43 | 24 | **133** |
| South Hadley | † | <7 | † | <7 | **<7** | † | † | <7 | <7 | **<7** |
| Southampton | † | <7 | <7 | <7 | **<7** | <7 | <7 | † | <7 | **<7** |
| Southborough | <7 | <7 | <7 | <7 | **<7** | † | † | <7 | <7 | **<7** |
| Southbridge | 11 | 26 | 22 | 37 | **96** | \* | 14 | 20 | <7 | **48** |
| Southwick | 11 | 11 | \* | <7 | **34** | 8 | <7 | <7 | 8 | **23** |
| Spencer | <7 | <7 | <7 | <7 | **12** | <7 | <7 | 7 | 10 | **24** |
| Springfield | 182 | 198 | 164 | 177 | **721** | 115 | 172 | 205 | 154 | **646** |
| Sterling | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **8** |
| Stockbridge | † | † | † | † | **†** | <7 | † | † | <7 | **<7** |
| Stoneham | <7 | 23 | \* | 12 | **52** | 9 | <7 | 18 | <7 | **39** |
| Stoughton | 10 | 21 | 12 | 11 | **54** | 14 | 16 | 16 | 13 | **59** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Stow | † | <7 | <7 | † | **<7** | <7 | <7 | <7 | <7 | **13** |
| Sturbridge | <7 | 11 | <7 | <7 | **25** | <7 | <7 | <7 | 8 | **17** |
| Sudbury | † | <7 | † | <7 | **<7** | <7 | † | <7 | <7 | **<7** |
| Sunderland | <7 | <7 | <7 | <7 | **<7** | † | <7 | † | † | **<7** |
| Sutton | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **12** |
| Swampscott | <7 | 9 | <7 | <7 | **25** | <7 | <7 | <7 | <7 | **15** |
| Swansea | 8 | 13 | 13 | 15 | **49** | 10 | <7 | 17 | <7 | **34** |
| Taunton | 75 | 117 | 73 | 59 | **324** | 39 | 75 | 90 | 41 | **245** |
| Templeton | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **15** |
| Tewksbury | 12 | 24 | 21 | 24 | **81** | 37 | 41 | 29 | 20 | **127** |
| Tisbury | † | <7 | † | <7 | **<7** | <7 | <7 | <7 | † | **7** |
| Tolland | † | † | † | † | **†** | † | † | † | † | **†** |
| Topsfield | † | † | <7 | † | **<7** | <7 | <7 | † | <7 | **8** |
| Townsend | <7 | <7 | <7 | <7 | **15** | <7 | <7 | † | <7 | **10** |
| Truro | † | <7 | † | † | **<7** | † | † | † | <7 | **<7** |
| Tyngsborough | <7 | <7 | <7 | 7 | **19** | <7 | <7 | <7 | <7 | **19** |
| Tyringham | † | † | † | † | **†** | † | † | † | † | **†** |
| Upton | <7 | <7 | <7 | <7 | **<7** | † | <7 | <7 | <7 | **10** |
| Uxbridge | 9 | <7 | 11 | <7 | **29** | <7 | <7 | 7 | <7 | **22** |
| Wakefield | 10 | 11 | 18 | 15 | **54** | 10 | 17 | 18 | 13 | **58** |
| Wales | † | † | † | † | **†** | † | † | <7 | <7 | **<7** |
| Walpole | <7 | 10 | \* | 12 | **37** | 9 | 8 | \* | <7 | **29** |
| Waltham | 38 | 36 | 40 | 30 | **144** | 20 | 35 | 45 | 25 | **125** |
| Ware | 9 | <7 | <7 | <7 | **23** | <7 | <7 | 11 | <7 | **21** |
| Wareham | 28 | 33 | 40 | 32 | **133** | 39 | 36 | 47 | 50 | **172** |
| Warren | <7 | <7 | † | <7 | **9** | <7 | <7 | <7 | † | **13** |
| Warwick | † | † | † | † | **†** | † | <7 | † | † | **<7** |
| Washington | † | † | † | † | **†** | † | † | † | <7 | **<7** |
| Watertown | 28 | 23 | 7 | 22 | **80** | <7 | \* | 15 | 13 | **44** |
| Wayland | † | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | † | **<7** |
| Webster | 16 | 14 | 20 | 22 | **72** | 13 | 18 | 23 | 17 | **71** |
| Wellesley | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **14** |
| Wellfleet | <7 | <7 | <7 | <7 | **9** | † | <7 | <7 | <7 | **10** |
| Wendell | † | † | † | † | **†** | † | † | † | † | **†** |
| Wenham | <7 | <7 | † | † | **<7** | <7 | † | <7 | <7 | **<7** |
| West Boylston | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **16** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2016** | | | | | **2017** | | | | |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| West  Bridgewater | 7 | <7 | <7 | † | **15** | <7 | <7 | <7 | 10 | **22** |
| West Brookfield | † | † | † | † | **†** | <7 | <7 | <7 | <7 | **9** |
| West Newbury | <7 | <7 | † | <7 | **<7** | † | † | <7 | † | **<7** |
| West Springfield | 30 | 29 | 19 | 29 | **107** | 11 | 15 | 40 | 23 | **89** |
| West  Stockbridge | † | † | † | † | **†** | <7 | † | † | † | **<7** |
| West Tisbury | <7 | <7 | † | † | **<7** | † | <7 | <7 | † | **<7** |
| Westborough | 14 | 26 | 25 | 22 | **87** | 14 | 26 | 15 | 11 | **66** |
| Westfield | 28 | 15 | 16 | 21 | **80** | 11 | 14 | 15 | 20 | **60** |
| Westford | 8 | <7 | <7 | <7 | **21** | <7 | 9 | <7 | <7 | **25** |
| Westhampton | † | † | † | † | **†** | <7 | † | † | † | **<7** |
| Westminster | <7 | <7 | † | <7 | **7** | <7 | <7 | <7 | 8 | **19** |
| Weston | <7 | <7 | † | <7 | **<7** | \* | <7 | <7 | † | **11** |
| Westport | <7 | 9 | <7 | 10 | **28** | 7 | 8 | <7 | <7 | **26** |
| Westwood | <7 | <7 | <7 | <7 | **14** | <7 | <7 | <7 | <7 | **13** |
| Weymouth | 35 | 61 | 81 | 37 | **214** | 50 | 57 | 70 | 62 | **239** |
| Whately | † | † | † | † | **†** | <7 | <7 | † | <7 | **<7** |
| Whitman | 7 | 7 | 10 | 18 | **42** | 9 | <7 | 19 | \* | **43** |
| Wilbraham | <7 | 7 | <7 | <7 | **17** | <7 | <7 | <7 | <7 | **20** |
| Williamsburg | † | <7 | † | † | **<7** | <7 | <7 | <7 | † | **<7** |
| Williamstown | <7 | <7 | <7 | <7 | **9** | † | <7 | <7 | † | **<7** |
| Wilmington | 17 | 10 | \* | <7 | **40** | <7 | \* | 16 | 20 | **53** |
| Winchendon | <7 | <7 | <7 | <7 | **17** | † | <7 | <7 | <7 | **16** |
| Winchester | <7 | <7 | <7 | 7 | **18** | <7 | † | <7 | <7 | **7** |
| Windsor | † | † | † | <7 | **<7** | † | † | † | † | **†** |
| Winthrop | 13 | 18 | 21 | 8 | **60** | <7 | \* | 9 | 9 | **30** |
| Woburn | 42 | 38 | 37 | 28 | **145** | 43 | 36 | 45 | 28 | **152** |
| Worcester | 327 | 396 | 480 | 408 | **1611** | 262 | 361 | 448 | 432 | **1503** |
| Worthington | † | † | <7 | † | **<7** | † | † | † | † | **†** |
| Wrentham | \* | 12 | 11 | <7 | **35** | <7 | <7 | 7 | <7 | **25** |
| Yarmouth | 15 | 31 | 20 | 26 | **92** | 16 | 29 | 35 | 17 | **97** |
| Unknown | 65 | 116 | 109 | 72 | **362** | 51 | 50 | 62 | 48 | **211** |
| **Grand Total** | **4742** | **5955** | **6326** | **5384** | **22417** | **4619** | **5500** | **6790** | **5198** | **22107** |

# Technical Notes

Suspected opioid related incidents for all cities/towns except for Boston are identified using an algorithm that DPH developed with CDC using multiple fields in the MATRIS system. In Boston, this algorithm was applied to a subset of incidents that were reported in their internal “Narcotic Related Incidents” database. This data brief was supported by funds made available from the Centers for Disease Control and Prevention, Office for State, Tribal, Local and Territorial Support, under B01OT009024 and NU17CE924877. The findings of this data brief are those of the authors and do not necessarily represent the official position of or endorsement by the Centers for Disease Control and Prevention.