POSTED: MAY 2017

Massachusetts Department of Public Health

**Opioid-Related EMS Incidents Massachusetts Residents: 2013-2016**

# Enhancement of Opioid Overdose Surveillance

MATRIS, the Massachusetts Ambulance Trip Reporting Information System, is a statewide database for collecting emergency medical service data from licensed ambulance services. It was not specifically designed to track opioid overdose incidents. DPH is currently working with all Emergency Medical Services (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 services have reported their 2016 Q1-Q4 data yet so the numbers cited here are underestimates. Counts will be updated on a quarterly basis.

# Results

Since 2013, there has been an increasing trend in the percentage of EMS incidents that are considered opioid- related. In 2016 EMS services reported an opioid-related incident in 301 of the 351 MA cities and towns (86%). Overall, there was a 22% increase in the number of opioid-related EMS transport incidents compared with 2015.

In 2016, the greatest number of suspected opioid overdose incidents was among males aged 25-34 (25% of opioid-related incidents). There is an increasing trend in the quantity of Naloxone being dispensed during each opioid-related incident. On average, EMS administered Naloxone 1.4 times per opioid-related incident in the 2016. Almost one third of opioid-related incidents required more than one dose of Naloxone.

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| **All Suspected Opioid Related Incidents: 2016 (Quarter 1)** |
|  | **<15** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | 10 | 400 | 1305 | 774 | 505 | 320 | 140 | 3454 |
| Female | 8 | 243 | 575 | 320 | 244 | 166 | 116 | 1672 |
| **Total** | **18** | **643** | **1880** | **1094** | **749** | **486** | **256** | **5126** |

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| **All Suspected Opioid Related Incidents: 2016 (Quarter 2)** |
|  | **<15** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | <7 | 383 | 1178 | 625 | 460 | 250 | 130 | 3026 |
| Female | <7 | 255 | 579 | 282 | 258 | 135 | 112 | 1621 |
| **Total** | **7** | **638** | **1757** | **907** | **718** | **385** | **242** | **4647** |

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| **All Suspected Opioid Related Incidents: 2016 (Quarter 3)** |
|  | **<15** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | 8 | 518 | 1600 | 973 | 628 | 399 | 200 | 4326 |
| Female | 15 | 290 | 865 | 451 | 304 | 199 | 125 | 2249 |
| **Total** | **--** | **808** | **2465** | **1424** | **932** | **598** | **325** | **6575** |

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| **All Suspected Opioid Related Incidents: 2016 (Quarter 4)** |
|  | **<15** | **15-24** | **25-34** | **35-44** | **45-54** | **55-64** | **65+** | **Total** |
| Male | 12 | 391 | 1297 | 695 | 486 | 310 | 148 | 3339 |
| Female | 8 | 250 | 629 | 357 | 254 | 154 | 116 | 1768 |
| **Total** | **--** | **641** | **1926** | **1052** | **740** | **464** | **264** | **5107** |





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|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Abington | \* | 17 | <7 | 0 | **32** | 13 | 10 | 12 | 12 | **47** |
| Acton | 10 | <7 | 8 | \* | **28** | <7 | 7 | <7 | <7 | **24** |
| Acushnet | <7 | 0 | 0 | 0 | **<7** | 0 | <7 | 0 | 0 | **<7** |
| Adams | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Agawam | <7 | <7 | <7 | 22 | **30** | 19 | 8 | 19 | 14 | **60** |
| Alford | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Amesbury | <7 | 14 | \* | 9 | **36** | 20 | 27 | 15 | 17 | **79** |
| Amherst | 0 | 0 | 0 | 0 | **0** | <7 | 0 | 0 | 0 | **<7** |
| Andover | 10 | 11 | \* | <7 | **33** | <7 | 8 | 13 | \* | **32** |
| Aquinnah | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Arlington | 17 | 20 | 36 | 24 | **97** | 19 | 24 | 17 | 9 | **69** |
| Ashburnham | 0 | 0 | 0 | 0 | **0** | 0 | <7 | 0 | 0 | **<7** |
| Ashby | 0 | 0 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **12** |
| Ashfield | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Ashland | <7 | <7 | <7 | <7 | **11** | <7 | \* | 7 | 8 | **25** |
| Athol | <7 | 11 | \* | 15 | **41** | <7 | \* | 13 | 19 | **46** |
| Attleboro | 33 | 23 | 32 | 22 | **110** | 26 | 43 | 39 | 43 | **151** |
| Auburn | <7 | 0 | <7 | 10 | **16** | <7 | <7 | 12 | 9 | **33** |
| Avon | <7 | <7 | <7 | <7 | **18** | <7 | <7 | <7 | 7 | **22** |
| Ayer | 0 | <7 | 0 | 0 | **<7** | 10 | <7 | <7 | 11 | **29** |
| Barnstable | 108 | 68 | 80 | 58 | **314** | 53 | 63 | 68 | 68 | **252** |
| Barre | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **9** |
| Becket | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Bedford | <7 | 8 | <7 | <7 | **18** | \* | 10 | 9 | <7 | **32** |
| Belchertown | <7 | 0 | <7 | <7 | **<7** | <7 | 0 | 0 | <7 | **<7** |
| Bellingham | 12 | <7 | \* | 11 | **36** | 9 | 12 | 12 | 13 | **46** |
| Belmont | 7 | 8 | <7 | <7 | **22** | 10 | 13 | 7 | 7 | **37** |
| Berkley | <7 | 0 | <7 | <7 | **8** | <7 | <7 | <7 | <7 | **12** |
| Berlin | <7 | <7 | <7 | <7 | **<7** | <7 | <7 | 0 | <7 | **7** |
| Bernardston | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | <7 | **<7** |
| Beverly | 24 | 28 | 36 | 23 | **111** | 28 | 37 | 30 | 34 | **129** |
| Billerica | 7 | 10 | 7 | 0 | **24** | 21 | 12 | 33 | 15 | **81** |
| Blackstone | <7 | <7 | <7 | <7 | **11** | <7 | <7 | <7 | <7 | **7** |
| Blandford | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Bolton | <7 | <7 | <7 | <7 | **12** | <7 | <7 | <7 | <7 | **12** |
| Boston | 488 | 464 | 523 | 495 | **1970** | 419 | 652 | 695 | 26 | **1792** |

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|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Bourne | <7 | \* | 25 | 20 | **57** | 20 | 30 | 42 | 17 | **109** |
| Boxborough | <7 | 0 | <7 | 0 | **<7** | <7 | <7 | <7 | 7 | **19** |
| Boxford | <7 | <7 | <7 | <7 | **<7** | 0 | <7 | <7 | <7 | **8** |
| Boylston | 0 | 0 | <7 | <7 | **<7** | 0 | <7 | <7 | <7 | **9** |
| Braintree | 32 | 19 | 19 | 32 | **102** | 30 | 37 | 34 | 47 | **148** |
| Brewster | 13 | <7 | 8 | <7 | **29** | <7 | <7 | <7 | <7 | **9** |
| Bridgewater | <7 | <7 | <7 | <7 | **9** | <7 | 7 | 0 | <7 | **10** |
| Brimfield | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Brockton | 233 | 185 | 101 | 198 | **717** | 203 | 287 | 288 | 213 | **991** |
| Brookfield | <7 | <7 | 0 | <7 | **<7** | <7 | <7 | 0 | <7 | **8** |
| Brookline | 11 | 14 | 7 | 8 | **40** | 13 | \* | 9 | <7 | **33** |
| Buckland | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Burlington | 13 | <7 | <7 | 8 | **29** | \* | <7 | 15 | 17 | **44** |
| Cambridge | 77 | 100 | 100 | 91 | **368** | 99 | 187 | 146 | 110 | **542** |
| Canton | <7 | <7 | <7 | <7 | **11** | <7 | 14 | \* | 12 | **38** |
| Carlisle | <7 | 0 | 0 | 0 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Carver | 7 | <7 | \* | 10 | **28** | 13 | 12 | 16 | 15 | **56** |
| Charlemont | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Charlton | 0 | 0 | 0 | 0 | **0** | <7 | 0 | 0 | <7 | **<7** |
| Chatham | <7 | 0 | 0 | 0 | **<7** | <7 | <7 | <7 | <7 | **11** |
| Chelmsford | 7 | 14 | 21 | 10 | **52** | 19 | 17 | 10 | 11 | **57** |
| Chelsea | 36 | 72 | 90 | 82 | **280** | 66 | 84 | 97 | 50 | **297** |
| Cheshire | 0 | 0 | 0 | <7 | **<7** | <7 | 0 | <7 | <7 | **<7** |
| Chester | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Chesterfield | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Chicopee | 27 | 49 | 32 | 51 | **159** | 50 | 36 | 37 | 35 | **158** |
| Chilmark | 0 | 0 | <7 | 0 | **<7** | <7 | 0 | <7 | 0 | **<7** |
| Clarksburg | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Clinton | 10 | 13 | 14 | 9 | **46** | <7 | 13 | \* | 31 | **62** |
| Cohasset | <7 | <7 | <7 | <7 | **7** | <7 | <7 | <7 | <7 | **11** |
| Colrain | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Concord | <7 | 8 | <7 | <7 | **24** | <7 | 8 | 7 | <7 | **24** |
| Conway | 0 | 0 | 0 | 0 | **0** | <7 | 0 | 0 | 0 | **<7** |
| Cummington | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Dalton | <7 | <7 | 0 | <7 | **8** | <7 | <7 | <7 | <7 | **10** |
| Danvers | 45 | 24 | 48 | 39 | **156** | 38 | 53 | 49 | 27 | **167** |

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|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Dartmouth | 14 | 22 | 19 | 20 | **75** | 20 | 26 | 25 | 25 | **96** |
| Dedham | 18 | 15 | 7 | 9 | **49** | 14 | 26 | 15 | 0 | **55** |
| Deerfield | <7 | <7 | <7 | 0 | **9** | <7 | <7 | 0 | 0 | **<7** |
| Dennis | 16 | \* | 10 | <7 | **39** | <7 | <7 | 11 | \* | **23** |
| Dighton | <7 | <7 | <7 | <7 | **12** | <7 | 7 | <7 | 0 | **10** |
| Douglas | <7 | 0 | <7 | 0 | **<7** | <7 | <7 | 0 | 0 | **9** |
| Dover | 0 | <7 | 0 | 0 | **<7** | 0 | <7 | <7 | 0 | **<7** |
| Dracut | 12 | 15 | 16 | 22 | **65** | 14 | 11 | 14 | 12 | **51** |
| Dudley | 0 | 12 | <7 | <7 | **17** | 0 | <7 | 9 | \* | **19** |
| Dunstable | 0 | 0 | <7 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Duxbury | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **18** |
| EastBridgewater | 22 | <7 | \* | 13 | **50** | 9 | 19 | 10 | 9 | **47** |
| East Brookfield | 0 | <7 | 0 | <7 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| EastLongmeadow | <7 | <7 | <7 | 8 | **19** | <7 | 8 | <7 | 10 | **24** |
| Eastham | <7 | <7 | <7 | <7 | **16** | <7 | <7 | <7 | <7 | **12** |
| Easthampton | <7 | <7 | <7 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Easton | 7 | 0 | <7 | <7 | **14** | <7 | <7 | <7 | 0 | **10** |
| Edgartown | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **9** |
| Egremont | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Erving | <7 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Essex | <7 | 0 | <7 | 0 | **<7** | <7 | <7 | <7 | <7 | **<7** |
| Everett | 41 | 29 | 41 | 34 | **145** | 40 | 62 | 55 | 48 | **205** |
| Fairhaven | 13 | 24 | 24 | 18 | **79** | 27 | 29 | 22 | 16 | **94** |
| Fall River | 20 | 71 | 166 | 198 | **455** | 166 | 168 | 314 | 243 | **891** |
| Falmouth | 35 | 39 | 28 | 17 | **119** | 31 | 61 | 53 | 47 | **192** |
| Fitchburg | 53 | 54 | 61 | 74 | **242** | 77 | 89 | 102 | 74 | **342** |
| Florida | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Foxborough | <7 | 0 | <7 | 0 | **9** | <7 | <7 | 13 | 16 | **35** |
| Framingham | 44 | 64 | 49 | 40 | **197** | 34 | 67 | 69 | 61 | **231** |
| Franklin | 9 | <7 | 10 | \* | **32** | <7 | <7 | <7 | 0 | **<7** |
| Freetown | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Gardner | 24 | 22 | 30 | 27 | **103** | 14 | 29 | 24 | 18 | **85** |
| Georgetown | <7 | <7 | <7 | 9 | **21** | 7 | <7 | <7 | 7 | **20** |
| Gill | 0 | 0 | 0 | 0 | **0** | <7 | <7 | 0 | <7 | **<7** |
| Gloucester | 30 | 31 | 35 | 30 | **126** | 44 | 36 | 35 | 11 | **126** |

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|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Goshen | 0 | 0 | 0 | 0 | **0** | 0 | <7 | <7 | 0 | **<7** |
| Gosnold | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Grafton | <7 | 9 | 10 | <7 | **26** | <7 | <7 | <7 | <7 | **17** |
| Granby | <7 | <7 | <7 | <7 | **10** | <7 | 7 | <7 | <7 | **11** |
| Granville | 0 | <7 | <7 | <7 | **<7** | <7 | 0 | 0 | <7 | **<7** |
| GreatBarrington | <7 | 0 | 0 | <7 | **<7** | <7 | <7 | <7 | <7 | **15** |
| Greenfield | <7 | 10 | \* | 13 | **36** | 15 | 12 | 30 | 12 | **69** |
| Groton | 0 | 0 | 0 | <7 | **<7** | <7 | 0 | 0 | <7 | **7** |
| Groveland | <7 | 0 | <7 | 0 | **<7** | <7 | <7 | <7 | <7 | **<7** |
| Hadley | <7 | <7 | <7 | 8 | **16** | 7 | <7 | <7 | <7 | **15** |
| Halifax | <7 | 0 | 9 | <7 | **17** | <7 | 7 | <7 | 11 | **24** |
| Hamilton | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | 0 | 0 | **<7** |
| Hampden | <7 | <7 | 0 | 0 | **<7** | 0 | <7 | 0 | <7 | **<7** |
| Hancock | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Hanover | <7 | 0 | <7 | 0 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Hanson | 17 | 16 | 11 | 10 | **54** | 8 | \* | 9 | <7 | **31** |
| Hardwick | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Harvard | <7 | <7 | <7 | 0 | **<7** | <7 | 0 | <7 | 0 | **<7** |
| Harwich | 10 | <7 | \* | 13 | **34** | <7 | \* | 10 | 8 | **26** |
| Hatfield | <7 | 0 | <7 | 0 | **<7** | 0 | <7 | 0 | <7 | **<7** |
| Haverhill | 78 | 91 | 98 | 105 | **372** | 96 | 96 | 82 | 111 | **385** |
| Hawley | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Heath | 0 | <7 | 0 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Hingham | <7 | <7 | <7 | 7 | **20** | <7 | 7 | <7 | 17 | **36** |
| Hinsdale | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Holbrook | 0 | 0 | \* | <7 | **19** | 18 | 15 | 23 | 14 | **70** |
| Holden | <7 | 7 | <7 | <7 | **19** | <7 | <7 | <7 | <7 | **16** |
| Holland | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Holliston | 0 | 0 | <7 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Holyoke | 58 | 61 | 60 | 94 | **273** | 85 | 92 | 67 | 81 | **325** |
| Hopedale | <7 | <7 | <7 | <7 | **13** | 0 | 0 | 0 | <7 | **<7** |
| Hopkinton | <7 | <7 | <7 | 0 | **<7** | 0 | <7 | 0 | 0 | **<7** |
| Hubbardston | <7 | <7 | 0 | 0 | **<7** | <7 | <7 | <7 | 0 | **9** |
| Hudson | <7 | \* | 19 | 7 | **38** | 12 | 12 | 7 | 0 | **31** |
| Hull | <7 | 0 | \* | 0 | **10** | 13 | <7 | <7 | <7 | **21** |
| Huntington | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |

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| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Ipswich | <7 | <7 | <7 | <7 | **17** | 8 | <7 | 8 | <7 | **26** |
| Kingston | 10 | <7 | 9 | <7 | **29** | <7 | <7 | <7 | <7 | **12** |
| Lakeville | <7 | 0 | <7 | <7 | **16** | <7 | \* | 33 | 19 | **67** |
| Lancaster | <7 | <7 | <7 | <7 | **10** | <7 | <7 | <7 | <7 | **11** |
| Lanesborough | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | <7 | **<7** |
| Lawrence | 137 | 92 | 117 | 104 | **450** | 206 | 108 | 171 | 185 | **670** |
| Lee | 0 | <7 | <7 | 0 | **<7** | <7 | <7 | <7 | <7 | **10** |
| Leicester | 0 | 0 | 0 | 0 | **0** | <7 | 0 | 0 | 0 | **<7** |
| Lenox | <7 | 0 | 0 | <7 | **<7** | 0 | <7 | <7 | 0 | **<7** |
| Leominster | 34 | 45 | 67 | 41 | **187** | 55 | 75 | 128 | 69 | **327** |
| Leverett | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Lexington | <7 | 10 | <7 | <7 | **22** | <7 | <7 | 11 | <7 | **21** |
| Leyden | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Lincoln | <7 | 0 | 0 | 0 | **<7** | <7 | 0 | <7 | <7 | **<7** |
| Littleton | 0 | <7 | <7 | <7 | **7** | <7 | 7 | <7 | <7 | **17** |
| Longmeadow | <7 | <7 | <7 | 7 | **18** | <7 | <7 | <7 | <7 | **16** |
| Lowell | 131 | 157 | 191 | 151 | **630** | 188 | 184 | 206 | 233 | **811** |
| Ludlow | 10 | 9 | 16 | 21 | **56** | 14 | 15 | 9 | 0 | **38** |
| Lunenburg | <7 | 7 | <7 | <7 | **19** | <7 | <7 | <7 | <7 | **13** |
| Lynn | 58 | 98 | 69 | 78 | **303** | 105 | 123 | 151 | 142 | **521** |
| Lynnfield | <7 | <7 | <7 | 7 | **20** | <7 | <7 | <7 | <7 | **12** |
| Malden | 26 | 86 | 56 | 39 | **207** | 42 | 69 | 69 | 50 | **230** |
| Manchester | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Mansfield | <7 | <7 | <7 | 0 | **<7** | <7 | 14 | 16 | \* | **45** |
| Marblehead | <7 | <7 | <7 | <7 | **15** | <7 | \* | 17 | 13 | **47** |
| Marion | <7 | <7 | <7 | <7 | **10** | <7 | <7 | <7 | <7 | **10** |
| Marlborough | 15 | 19 | 18 | 15 | **67** | 23 | 17 | 13 | 0 | **53** |
| Marshfield | <7 | <7 | <7 | 0 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| Mashpee | 17 | 20 | 13 | 8 | **58** | <7 | 15 | 21 | \* | **52** |
| Mattapoisett | <7 | <7 | <7 | <7 | **15** | <7 | 8 | <7 | <7 | **17** |
| Maynard | 9 | <7 | <7 | <7 | **21** | <7 | <7 | 7 | <7 | **21** |
| Medfield | 0 | <7 | <7 | 0 | **<7** | <7 | <7 | <7 | <7 | **8** |
| Medford | 33 | 37 | 51 | 36 | **157** | 49 | 50 | 37 | 29 | **165** |
| Medway | <7 | 0 | <7 | <7 | **8** | <7 | <7 | <7 | <7 | **11** |
| Melrose | 8 | <7 | 15 | <7 | **32** | 16 | 16 | 15 | 10 | **57** |
| Mendon | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | <7 | **<7** |

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| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Merrimac | <7 | <7 | <7 | <7 | **16** | <7 | 0 | <7 | <7 | **10** |
| Methuen | 78 | 29 | 32 | 53 | **192** | 48 | 57 | 63 | 52 | **220** |
| Middleborough | 23 | 7 | 10 | 11 | **51** | \* | 22 | <7 | 0 | **38** |
| Middlefield | 0 | 0 | 0 | 0 | **0** | 0 | 0 | <7 | <7 | **<7** |
| Middleton | <7 | <7 | <7 | <7 | **8** | <7 | 9 | 7 | <7 | **20** |
| Milford | 9 | 11 | 18 | 14 | **52** | 8 | 19 | 27 | 16 | **70** |
| Millbury | 17 | 10 | 15 | 13 | **55** | 11 | 23 | 18 | 9 | **61** |
| Millis | 0 | 0 | <7 | <7 | **<7** | <7 | <7 | <7 | 9 | **19** |
| Millville | <7 | <7 | 0 | <7 | **<7** | <7 | <7 | 0 | <7 | **8** |
| Milton | <7 | 11 | 15 | \* | **39** | 7 | 8 | 10 | 0 | **25** |
| Monroe | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Monson | <7 | <7 | <7 | 8 | **15** | <7 | <7 | <7 | <7 | **16** |
| Montague | <7 | <7 | <7 | <7 | **18** | 11 | 12 | \* | <7 | **38** |
| Monterey | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Montgomery | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| MountWashington | 0 | 0 | 0 | 0 | **0** | 0 | 0 | <7 | 0 | **<7** |
| Nahant | <7 | <7 | 0 | <7 | **7** | <7 | <7 | 0 | <7 | **7** |
| Nantucket | <7 | <7 | 0 | <7 | **12** | <7 | <7 | 10 | <7 | **19** |
| Natick | \* | <7 | 10 | 11 | **35** | 9 | 11 | 10 | 10 | **40** |
| Needham | 7 | <7 | <7 | <7 | **16** | <7 | <7 | <7 | <7 | **20** |
| New Ashford | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| New Bedford | 163 | 183 | 226 | 158 | **730** | 128 | 166 | 59 | 27 | **380** |
| New Braintree | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| NewMarlborough | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| New Salem | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Newbury | <7 | <7 | 0 | 0 | **7** | <7 | 0 | 0 | 0 | **<7** |
| Newburyport | <7 | 7 | <7 | <7 | **21** | <7 | 12 | <7 | 16 | **35** |
| Newton | 7 | 24 | 12 | 14 | **57** | 16 | 18 | 20 | 21 | **75** |
| Norfolk | <7 | <7 | <7 | <7 | **11** | 9 | <7 | <7 | 8 | **26** |
| North Adams | <7 | \* | 11 | 14 | **38** | 11 | 29 | 23 | 16 | **79** |
| North Andover | 11 | 7 | <7 | <7 | **25** | 13 | 12 | 19 | 15 | **59** |
| North Attleboro | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| NorthBrookfield | 0 | 0 | <7 | <7 | **<7** | 0 | <7 | <7 | <7 | **<7** |
| North Reading | <7 | 11 | <7 | <7 | **24** | 8 | <7 | 12 | <7 | **29** |

|  |  |  |
| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Northampton | <7 | 8 | 22 | <7 | **35** | 29 | 25 | <7 | \* | **81** |
| Northborough | <7 | 0 | <7 | <7 | **<7** | 8 | <7 | 13 | <7 | **30** |
| Northbridge | <7 | 8 | 8 | \* | **27** | 7 | \* | 9 | <7 | **26** |
| Northfield | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Norton | <7 | 0 | <7 | 0 | **<7** | 0 | 10 | 7 | 13 | **30** |
| Norwell | <7 | 10 | 12 | <7 | **30** | <7 | 8 | <7 | <7 | **22** |
| Norwood | <7 | 0 | <7 | <7 | **7** | <7 | 0 | <7 | 12 | **19** |
| Oak Bluffs | <7 | <7 | <7 | <7 | **18** | <7 | <7 | <7 | <7 | **14** |
| Oakham | 0 | <7 | 0 | 0 | **<7** | 0 | <7 | <7 | 0 | **<7** |
| Orange | 0 | 0 | <7 | <7 | **<7** | <7 | <7 | <7 | 7 | **12** |
| Orleans | <7 | 0 | <7 | 0 | **<7** | 0 | 0 | <7 | <7 | **<7** |
| Otis | 0 | 0 | 0 | 0 | **0** | 0 | 0 | <7 | 0 | **<7** |
| Oxford | 10 | <7 | 15 | \* | **40** | <7 | 12 | 25 | <7 | **45** |
| Palmer | <7 | <7 | <7 | <7 | **20** | 0 | <7 | 0 | <7 | **<7** |
| Paxton | <7 | 0 | <7 | 0 | **<7** | <7 | <7 | <7 | <7 | **7** |
| Peabody | 41 | 30 | 32 | 30 | **133** | 41 | 52 | 52 | 50 | **195** |
| Pelham | 9 | <7 | <7 | 10 | **28** | 10 | <7 | <7 | <7 | **18** |
| Pembroke | <7 | 15 | 12 | \* | **41** | 10 | 12 | 8 | 22 | **52** |
| Pepperell | <7 | <7 | 7 | <7 | **15** | <7 | <7 | 7 | <7 | **19** |
| Peru | 0 | 0 | 0 | 0 | **0** | 0 | <7 | 0 | 0 | **<7** |
| Petersham | 0 | <7 | 0 | 0 | **<7** | 0 | <7 | 0 | <7 | **<7** |
| Phillipston | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Pittsfield | 31 | 24 | 39 | 60 | **154** | 36 | 31 | 28 | 37 | **132** |
| Plainfield | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Plainville | 7 | <7 | <7 | 10 | **26** | <7 | 7 | <7 | 12 | **27** |
| Plymouth | 60 | 50 | 38 | 52 | **200** | 39 | 64 | 61 | 56 | **220** |
| Plympton | <7 | <7 | <7 | 0 | **<7** | 0 | <7 | <7 | <7 | **7** |
| Princeton | 0 | 0 | 0 | <7 | **<7** | <7 | 0 | 0 | 0 | **<7** |
| Provincetown | <7 | 7 | 11 | <7 | **21** | <7 | <7 | <7 | <7 | **14** |
| Quincy | 109 | 108 | 50 | 94 | **361** | 61 | 136 | 152 | 139 | **488** |
| Randolph | <7 | <7 | 21 | 10 | **39** | 34 | 34 | 19 | 28 | **115** |
| Raynham | 7 | <7 | 20 | \* | **40** | \* | <7 | 9 | 14 | **36** |
| Reading | 7 | <7 | <7 | <7 | **18** | 8 | 8 | 9 | 7 | **32** |
| Rehoboth | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Revere | 46 | 67 | 88 | 64 | **265** | 58 | 88 | 100 | 85 | **331** |
| Richmond | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |

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| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Rochester | 0 | <7 | 0 | 0 | **<7** | <7 | <7 | 0 | 0 | **<7** |
| Rockland | 12 | 7 | 19 | 14 | **52** | 43 | 30 | 30 | 28 | **131** |
| Rockport | <7 | 0 | <7 | <7 | **9** | <7 | 0 | <7 | <7 | **8** |
| Rowe | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Rowley | 0 | <7 | 0 | <7 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| Royalston | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| Russell | 0 | <7 | <7 | 0 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| Rutland | <7 | <7 | <7 | 0 | **8** | 0 | <7 | <7 | <7 | **10** |
| Salem | 38 | 64 | 43 | 38 | **183** | 52 | 72 | 85 | 64 | **273** |
| Salisbury | 17 | 19 | 11 | 15 | **62** | 28 | 35 | 35 | 19 | **117** |
| Sandisfield | 0 | 0 | 0 | 0 | **0** | 0 | <7 | 0 | 0 | **<7** |
| Sandwich | 0 | 0 | <7 | 0 | **<7** | 0 | 0 | \* | <7 | **13** |
| Saugus | 32 | 31 | 30 | 21 | **114** | 31 | 38 | 39 | 33 | **141** |
| Savoy | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Scituate | <7 | 7 | 9 | <7 | **27** | <7 | <7 | 8 | <7 | **23** |
| Seekonk | <7 | 0 | <7 | 18 | **24** | 7 | 0 | 0 | 0 | **7** |
| Sharon | <7 | 0 | 0 | 0 | **<7** | 0 | <7 | 8 | <7 | **15** |
| Sheffield | 0 | 0 | <7 | <7 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Shelburne | 0 | <7 | 0 | <7 | **<7** | <7 | <7 | 0 | <7 | **<7** |
| Sherborn | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Shirley | <7 | <7 | <7 | <7 | **11** | <7 | <7 | 10 | <7 | **15** |
| Shrewsbury | <7 | <7 | <7 | 7 | **15** | <7 | <7 | <7 | <7 | **11** |
| Shutesbury | <7 | 0 | 0 | 0 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Somerset | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| Somerville | 20 | 45 | 45 | 48 | **158** | 45 | 60 | 68 | 54 | **227** |
| South Hadley | <7 | 0 | 0 | <7 | **<7** | 0 | <7 | 0 | <7 | **<7** |
| Southampton | 0 | <7 | <7 | <7 | **<7** | 0 | <7 | <7 | <7 | **7** |
| Southborough | <7 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **9** |
| Southbridge | 14 | 15 | 12 | 11 | **52** | <7 | 0 | 0 | <7 | **<7** |
| Southwick | <7 | <7 | <7 | <7 | **12** | 11 | 12 | \* | <7 | **37** |
| Spencer | <7 | 0 | <7 | <7 | **9** | <7 | <7 | <7 | <7 | **12** |
| Springfield | 131 | 181 | 172 | 276 | **760** | 226 | 238 | 192 | 223 | **879** |
| Sterling | <7 | 0 | <7 | <7 | **8** | <7 | 7 | <7 | <7 | **15** |
| Stockbridge | 0 | 0 | <7 | 0 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Stoneham | 16 | 17 | 11 | 20 | **64** | 9 | 26 | 10 | 14 | **59** |
| Stoughton | 11 | 12 | 20 | 14 | **57** | 11 | 23 | 15 | 15 | **64** |

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| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| Stow | <7 | <7 | <7 | <7 | **8** | 0 | <7 | <7 | 0 | **7** |
| Sturbridge | 0 | <7 | <7 | <7 | **7** | <7 | 12 | <7 | <7 | **28** |
| Sudbury | <7 | <7 | <7 | <7 | **15** | 0 | <7 | 0 | <7 | **7** |
| Sunderland | <7 | 0 | 0 | <7 | **<7** | <7 | <7 | <7 | <7 | **8** |
| Sutton | <7 | <7 | <7 | <7 | **14** | <7 | <7 | <7 | <7 | **17** |
| Swampscott | <7 | <7 | <7 | <7 | **11** | <7 | 9 | <7 | 8 | **28** |
| Swansea | <7 | 0 | <7 | <7 | **9** | 10 | 15 | 13 | 16 | **54** |
| Taunton | 82 | 81 | 87 | 82 | **332** | 76 | 123 | 81 | 68 | **348** |
| Templeton | <7 | 11 | <7 | <7 | **27** | 7 | <7 | 7 | <7 | **17** |
| Tewksbury | 0 | <7 | \* | 10 | **21** | 12 | 24 | 20 | 25 | **81** |
| Tisbury | <7 | <7 | 0 | <7 | **<7** | 0 | <7 | <7 | <7 | **<7** |
| Tolland | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Topsfield | <7 | <7 | <7 | <7 | **14** | 0 | <7 | \* | 0 | **9** |
| Townsend | 7 | <7 | <7 | <7 | **18** | 10 | <7 | <7 | <7 | **23** |
| Truro | <7 | 0 | <7 | 0 | **<7** | 0 | <7 | 0 | 0 | **<7** |
| Tyngsborough | 0 | <7 | 0 | <7 | **<7** | <7 | <7 | 7 | <7 | **19** |
| Tyringham | 0 | 0 | 0 | <7 | **<7** | 0 | 0 | 0 | 0 | **0** |
| Upton | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **8** |
| Uxbridge | <7 | 14 | 12 | \* | **39** | 9 | \* | 12 | <7 | **32** |
| Wakefield | 18 | 9 | 16 | 14 | **57** | 12 | 13 | 19 | 20 | **64** |
| Wales | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Walpole | 14 | <7 | <7 | 11 | **37** | 7 | 11 | 11 | 15 | **44** |
| Waltham | 27 | 42 | 29 | 37 | **135** | 47 | 46 | 46 | 37 | **176** |
| Ware | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Wareham | 32 | 38 | 51 | 27 | **148** | 33 | 38 | 44 | 35 | **150** |
| Warren | <7 | 0 | <7 | <7 | **<7** | <7 | <7 | 0 | <7 | **7** |
| Warwick | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Washington | 0 | <7 | 0 | 0 | **<7** | 0 | <7 | 0 | 0 | **<7** |
| Watertown | 28 | 30 | 15 | 13 | **86** | 30 | 26 | 9 | 23 | **88** |
| Wayland | <7 | <7 | <7 | <7 | **7** | <7 | <7 | <7 | <7 | **7** |
| Webster | 26 | 9 | 14 | 14 | **63** | 18 | 18 | 26 | 28 | **90** |
| Wellesley | <7 | <7 | <7 | <7 | **16** | <7 | <7 | <7 | 7 | **15** |
| Wellfleet | 0 | <7 | <7 | <7 | **<7** | <7 | <7 | <7 | <7 | **12** |
| Wendell | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Wenham | 0 | 0 | 0 | <7 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| West Boylston | <7 | <7 | <7 | <7 | **13** | <7 | <7 | <7 | <7 | **13** |

|  |  |  |
| --- | --- | --- |
|  | **2015** | **2016** |
| City/Town | Q1 | Q2 | Q3 | Q4 | **Total** | Q1 | Q2 | Q3 | Q4 | **Total** |
| WestBridgewater | <7 | <7 | 7 | <7 | **18** | 11 | <7 | <7 | 0 | **20** |
| West Brookfield | 0 | <7 | 0 | 0 | **<7** | 0 | 0 | 0 | <7 | **<7** |
| West Newbury | <7 | 0 | 0 | 0 | **<7** | <7 | <7 | 0 | <7 | **<7** |
| WestSpringfield | 0 | 0 | 0 | 0 | **0** | <7 | 0 | 0 | 0 | **<7** |
| WestStockbridge | <7 | 0 | 0 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| West Tisbury | 0 | 0 | <7 | 0 | **<7** | <7 | <7 | <7 | 0 | **<7** |
| Westborough | 11 | <7 | <7 | 13 | **35** | 7 | 14 | 13 | 11 | **45** |
| Westfield | 10 | 15 | 12 | 36 | **73** | 32 | 18 | 19 | 23 | **92** |
| Westford | 0 | 0 | <7 | <7 | **8** | 8 | <7 | <7 | <7 | **23** |
| Westhampton | 0 | <7 | \* | 11 | **19** | 7 | 11 | 8 | 8 | **34** |
| Westminster | <7 | <7 | <7 | 0 | **10** | <7 | <7 | <7 | <7 | **10** |
| Weston | <7 | <7 | <7 | 0 | **<7** | <7 | <7 | 0 | <7 | **<7** |
| Westport | <7 | 0 | <7 | 0 | **<7** | <7 | 12 | \* | 12 | **33** |
| Westwood | <7 | <7 | 0 | <7 | **<7** | <7 | <7 | <7 | <7 | **15** |
| Weymouth | 67 | 56 | 59 | 33 | **215** | 45 | 54 | 86 | 11 | **196** |
| Whately | 0 | <7 | <7 | 0 | **<7** | 0 | 0 | <7 | 0 | **<7** |
| Whitman | 0 | <7 | 10 | <7 | **16** | 7 | 11 | 10 | 18 | **46** |
| Wilbraham | <7 | <7 | <7 | 8 | **21** | <7 | 10 | <7 | 7 | **24** |
| Williamsburg | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Williamstown | <7 | <7 | 0 | <7 | **9** | <7 | <7 | <7 | 0 | **<7** |
| Wilmington | 12 | 18 | 17 | 7 | **54** | 13 | \* | 11 | <7 | **39** |
| Winchendon | <7 | 0 | <7 | <7 | **<7** | <7 | <7 | 10 | <7 | **20** |
| Winchester | <7 | <7 | <7 | <7 | **12** | 7 | <7 | <7 | 11 | **23** |
| Windsor | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | <7 | **<7** |
| Winthrop | 7 | 9 | 7 | 12 | **35** | 13 | 20 | 23 | 9 | **65** |
| Woburn | 37 | 29 | 21 | 28 | **115** | 46 | 44 | 46 | 35 | **171** |
| Worcester | 272 | 259 | 371 | 302 | **1204** | 283 | 334 | 388 | 317 | **1322** |
| Worthington | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | **0** |
| Wrentham | <7 | <7 | <7 | <7 | **7** | 9 | 13 | 12 | 7 | **41** |
| Yarmouth | 38 | 25 | 18 | 27 | **108** | 17 | 36 | 23 | 30 | **106** |
| Unknown | 308 | 307 | 395 | 329 | **1339** | 283 | 396 | 403 | 340 | **1422** |
| **Grand Total** | **4561** | **4719** | **5236** | **5056** | **19572** | **5181** | **6468** | **6675** | **5175** | **23499** |

\*Complementary suppression of the next smallest count was applied if only one count was < 7

# 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. Due to differences in reporting by EMS services, these numbers are likely an undercount of true opioid-related incidents.

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