

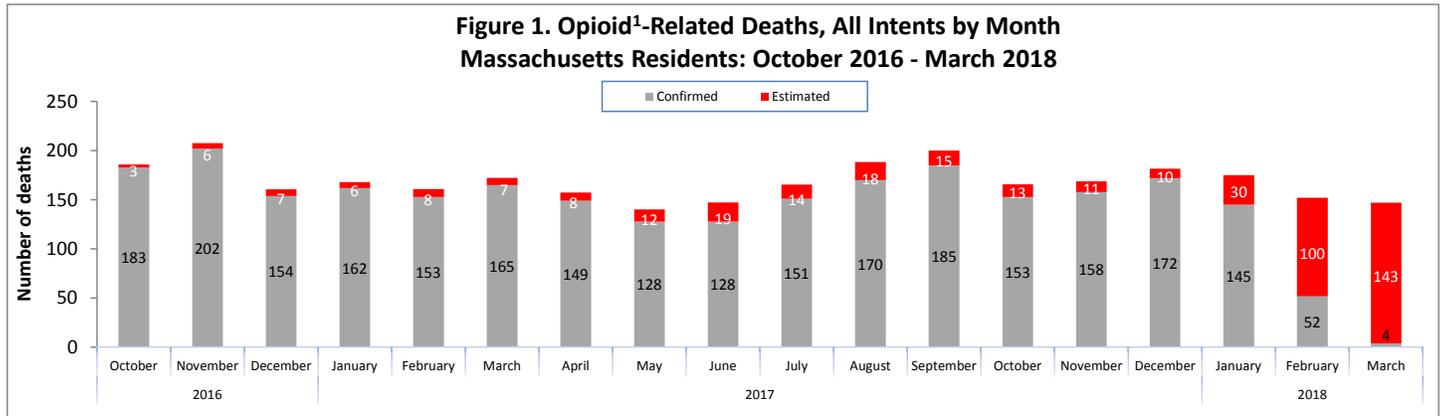


Data Brief: Opioid¹-Related Overdose Deaths Among Massachusetts Residents

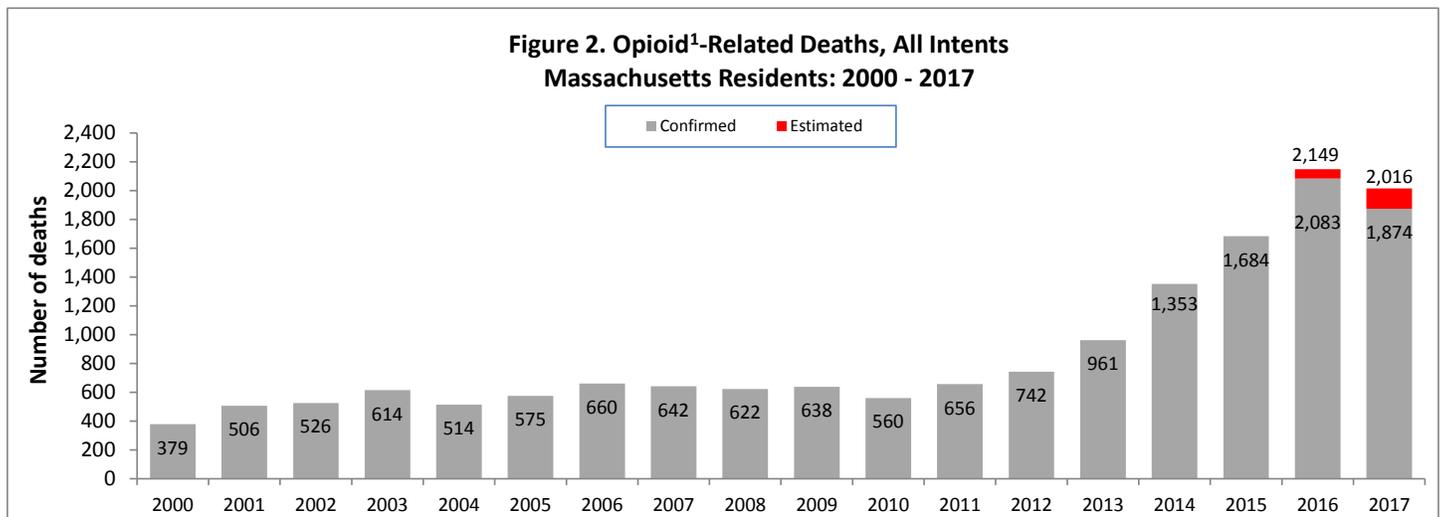
Massachusetts Department of Public Health

POSTED: MAY 2018

This report contains both confirmed and estimated data through March 2018.



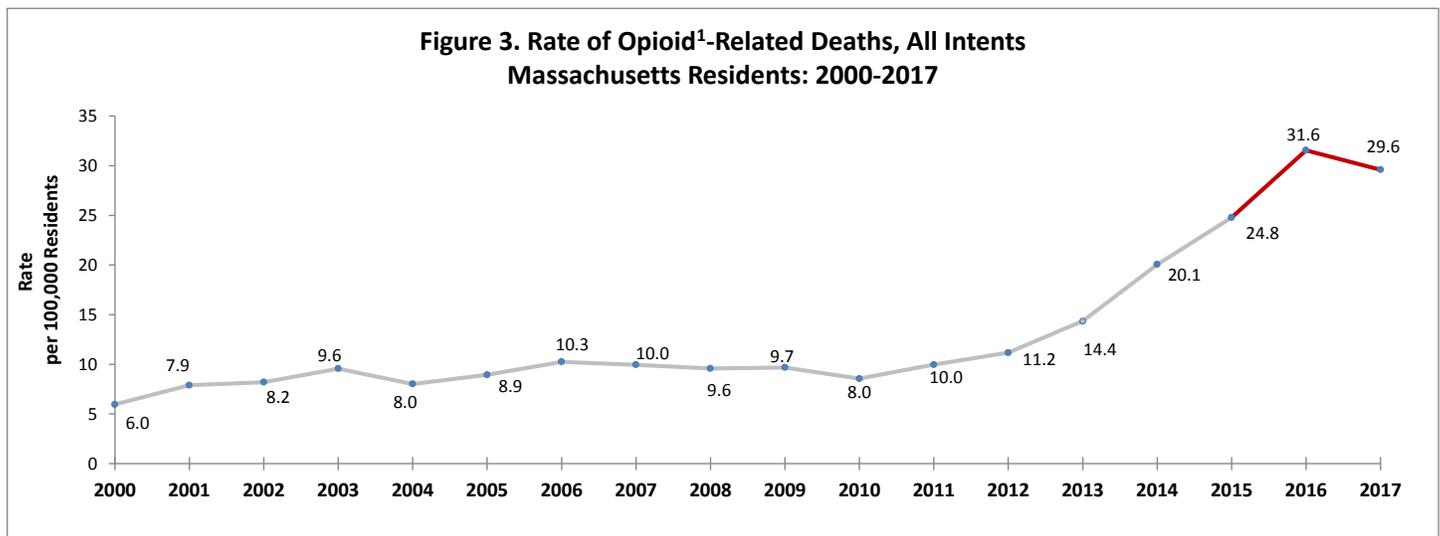
The chart above shows month-by-month estimates for fatal opioid-related overdoses for all intents from October 2016 through March 2018. For the first 3 months of 2018, there are 201 confirmed opioid-related overdose deaths and DPH estimates that there will be an additional 240 to 305 deaths.



The figure above shows the number of confirmed and estimated cases of opioid-related overdose deaths for all intents in 2017 (n=2,016). This represents a 6% decrease from 2016's total confirmed and estimated cases (n=2,149). Updated number of confirmed cases for 2016 (n=2,083) shows a 24% increase over confirmed cases in 2015 (n=1,684) and a 54% increase over 2014 (n=1,353). In order to obtain timelier estimates of the total number of opioid-related overdose deaths in Massachusetts - 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 20, 2018, DPH estimates that there will be an additional 62 to 70 deaths in 2016, and an additional 129 to 155 deaths in 2017, once these cases are finalized.

Opioid-Related Overdose Death Rates, All Intent

For the first time in seven years, the death rate is decreasing. In 2017, there was a 6% decrease from 2016.



¹Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids.

Technical Notes

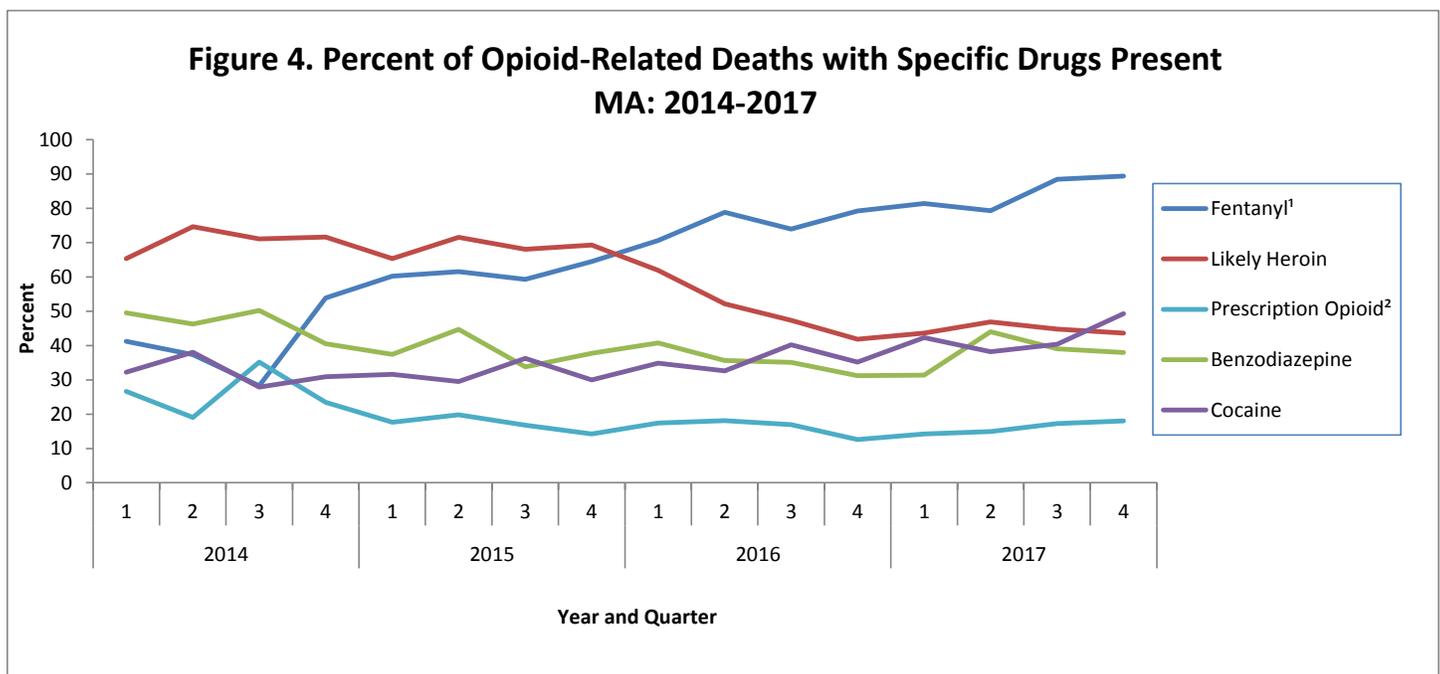
Beginning with the May 2017 report, DPH started reporting opioid-related deaths for all intents, which includes unintentional/undetermined and suicide. This report tracks opioid-related overdoses due to difficulties in identifying heroin and prescription opioids separately. The Department regularly reviews projections as more information becomes available. Information from the Office of the Chief Medical Examiner and the Massachusetts State Police are now incorporated into the predictive model. This additional information has improved the accuracy of the models that predict the likelihood that the cause of death for any person was an opioid-related overdose. DPH applied this model to death records for which no official cause of death was listed by the OCME. The model includes information from the death certificate, Medical Examiner's notes, and the determination by the State Police of a suspected heroin death. DPH added this estimate to the number of confirmed cases in order to compute the total number of opioid-related overdoses. Should new information become available that changes the estimates to any significant degree, updates will be posted. Estimated opioid-related overdose death numbers were not produced for 2015 since the death file has been closed.

Toxicology Analysis: Fentanyl and Other Drugs

Fentanyl is a synthetic opioid that has effects similar to heroin. It can be prescribed for severe pain. According to the U.S. Department of Justice, Drug Enforcement Administration's 2015 Investigative Reporting, while pharmaceutical fentanyl (from transdermal patches or lozenges) is diverted for abuse in the United States at small levels, much of the fentanyl in Massachusetts is due to illicitly-produced fentanyl, not diverted pharmaceutical fentanyl.

The standard toxicology screen ordered by the Office of the Chief Medical Examiner includes a test for the presence of fentanyl. Among the 1,775 individuals whose deaths were opioid-related in 2017 where a toxicology screen was also available, 1,507 of them (85%) had a positive screen result for fentanyl. In the fourth quarter of 2017, heroin or likely heroin was present in approximately 44% of opioid-related deaths that had a toxicology screen. Cocaine was present in approximately 49% of these deaths; and benzodiazepines were present in approximately 38%.

While screening tests can be used to note the rate at which certain drugs are detected in toxicology reports, they are insufficient to determine the final cause of death without additional information. The cause of death is a clinical judgement made within the Office of the Chief Medical Examiner.



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.

The percentage of opioid-related overdose deaths where prescription drugs were present has trended downward since the beginning of 2014, when approximately a quarter of deaths with a toxicology screen showed evidence of a prescription opioid. In 2017, prescription opioids present in toxicology screens remained flat relative to 2016. Also notable, the rate of heroin or likely heroin present in opioid-related deaths has been decreasing while the presence of fentanyl is still trending upward.