

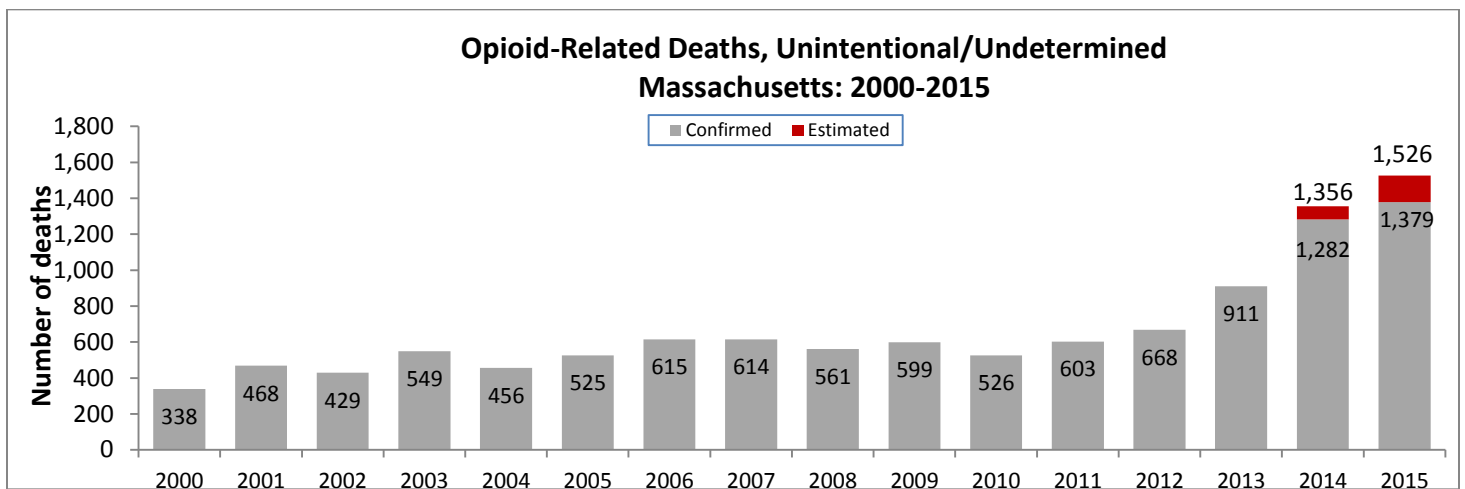


Data Brief: Opioid-related Overdose Deaths Among Massachusetts Residents

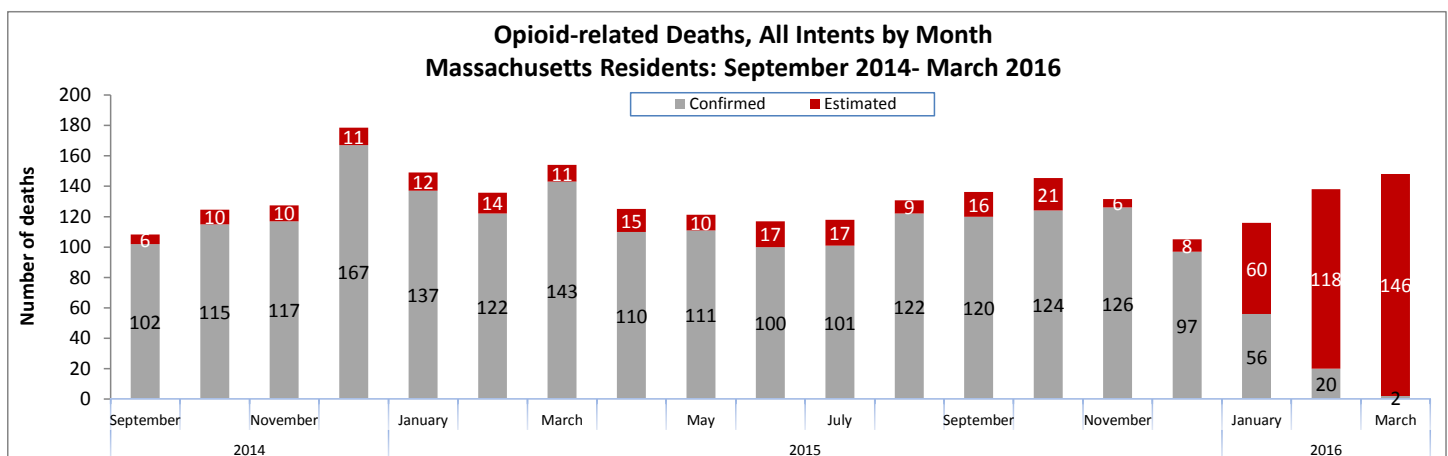
Massachusetts Department of Public Health

POSTED: MAY 2016

This report contains both confirmed and estimated data through March 2016. The number of confirmed cases of unintentional opioid overdose deaths for 2015¹ (n=1379) represents an 8% increase over 2014¹ (n=1282), and the 2014 number (n=1282) is a 41% increase over cases for 2013 (n=911). In order to obtain timelier estimates of the total number of opioid overdose deaths in Massachusetts - confirmed and probable - the Department of Public Health (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 March 31, 2016, DPH estimates that there will be an additional 63 to 85 deaths in 2014 and 118 to 179 deaths in 2015, once these cases are finalized.



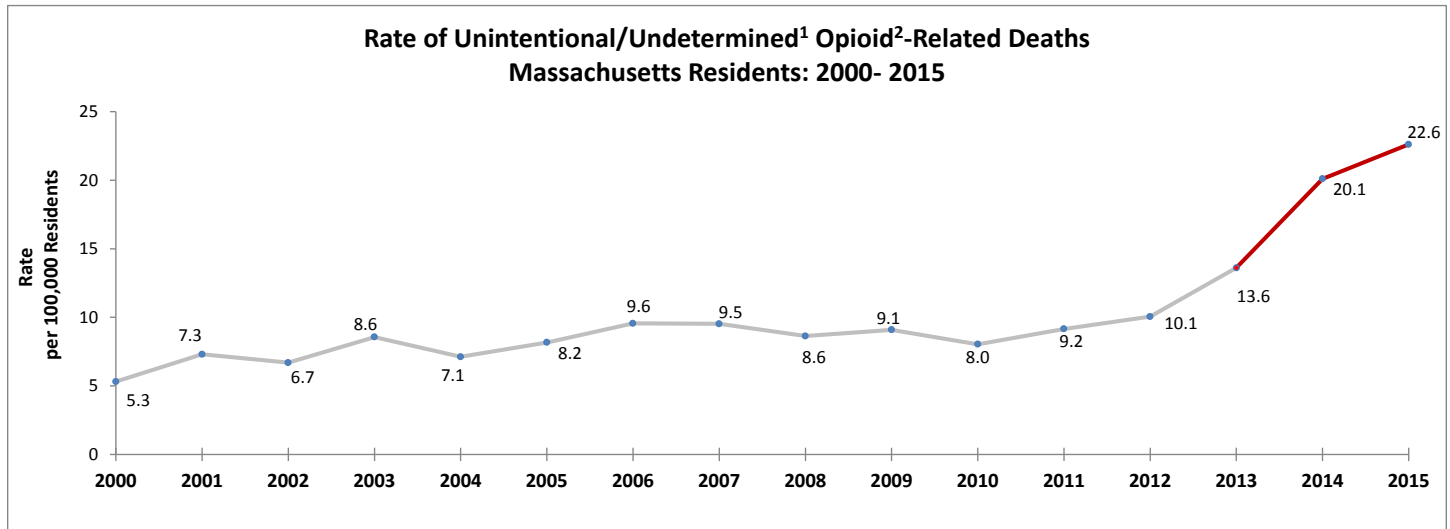
Note: Counts for 2000 – 2013 are complete as of the date that the state’s statistical file was closed. Each year, a small number of cases receive a cause of death after the file is closed. We are currently reviewing these cases. The 2014 and 2015 numbers are higher than previously reported following a review of toxicology data and cause of death for previously “undetermined” cases. These cases were excluded in the last report but included in this report as confirmed opioid-related cases. DPH has also made month-by-month estimates for all intents (unintentional/undetermined and intentional deaths) from September 2014 through March 2016. By combining data from the OCME and the Massachusetts State Police, DPH is now able to estimate opioid-related deaths much closer to real-time than was previously possible.



Rate of Unintentional Opioid Deaths

¹ Note: The 2014 and 2015 numbers are higher than previously reported following a review of toxicology data and cause of death for previously “undetermined” cases.

In 2015, the estimated rate of unintentional opioid-related overdose deaths was 22.6 deaths per 100,000 residents. This represents a 12.4% increase from the rate of 20.1 deaths per 100,000 residents in 2014.



¹Unintentional poisoning/overdose deaths combine unintentional and undetermined intents to account for a change in death coding that occurred in 2005. Suicides are excluded from this analysis.

²Opioids include heroin, opioid-based prescription painkillers, and other unspecified opioids. This report tracks opioid-related overdoses due to difficulties in identifying heroin and prescription opioids separately.

Toxicology Analysis: Fentanyl

Fentanyl is a synthetic opioid that has effects similar to heroin. It can be prescribed for severe pain.

The standard toxicology screen ordered by the Office of the Chief medical Examiner includes a test for the presence of fentanyl. Among the 1,319 individuals whose deaths were opioid-related in 2015 where a toxicology screen was also available, 754 of them had a positive screen result for fentanyl. 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.

Technical Notes

The figures cited here for 2014 and 2015 are based on confirmed and estimated data. DPH regularly reviews projections as more information becomes available. Information from the OCME 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. Due to missing information on intent in the open files, the models predict the total number of fatal opioid-related overdoses. In order to estimate the numbers that are considered unintentional, the Department applied the average percentage of total opioid-overdose deaths that were considered unintentional for the previous 5-year period (94%) to the total estimate. Should new information become available that changes the estimates to any significant degree, updates will be posted.