

BY THE NUMBERS

Opioid Deaths Continue to Surge in New York State

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Institute of Government



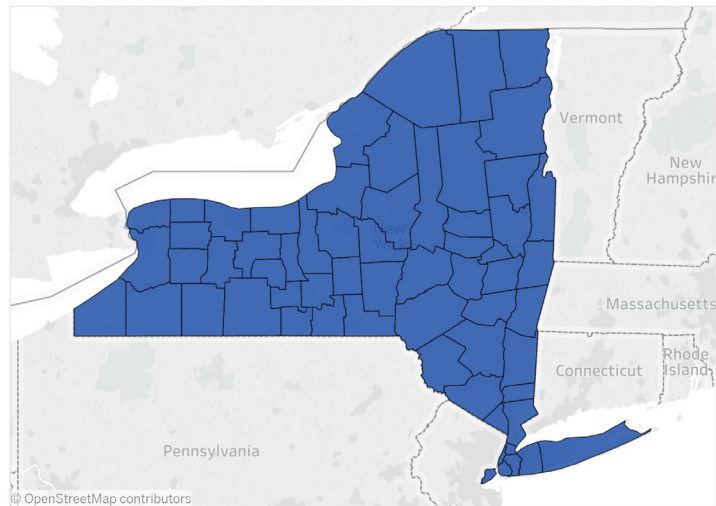
ABOUT THE AUTHOR

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The opioid epidemic continues to ravage the nation.¹ The sad fact is no matter the region of the country, there are people struggling with opioid addiction. Not only is every region touched, no group — rich or poor, rural or urban, black or white, men or women — is immune from the epidemic’s devastating effects. But, as we will describe below, some groups are disproportionately affected.

In April 2017, the Rockefeller Institute of Government released a report finding a 71 percent increase in drug deaths in New York State (NYS) from 2010-15.² In later reports and using online interactive maps to track drug overdoses and deaths, we found that use of deadly drugs, like heroin and fentanyl, were rapidly growing.³ For example, using provisional New York State Department of Health data, we found a 54 percent increase in heroin deaths and a 50 percent increase in emergency room visits due to heroin overdoses, and a 45 percent increase in the use of life-saving overdose medication, like Naloxone, in one year alone (2014-15).⁴

Interactive Map for Heroin Emergency rooms, Hospitalizations, deaths by county 2014-2016



To see the map and for sources visit: <http://rockinst.org/blog/using-data-combat-opioid-crisis/>.

Policymakers across the nation have grappled with how to address the epidemic. The solutions have varied from the president of the United States declaring the problem a national public health emergency⁵ to once unthinkable solutions in many communities, like safe injection sites.⁶

- 1 Katie Zuber and Patricia Strach, “Stories from Sullivan, Part 1: Pathways to Addiction” Rockefeller Institute of Government Blog Post, March 8, 2018, <http://rockinst.org/blog/stories-sullivan-pathways-addiction/>.
- 2 Jim Malatras, By The Numbers: The Growing Drug Epidemic in New York, (Albany: Rockefeller Institute of Government, April 2017): 7, http://rockinst.org/wp-content/uploads/2017/11/2017-04-20-By_numbers_brief_no8-min.pdf. By drug deaths we are using the Center for Disease Control definition, which includes all deaths for which drugs are the underlying cause (1) including those attributable to acute poisoning by drugs (drug overdoses) and (2) deaths from chronic drug use. A drug includes illicit or street drugs (e.g., heroin and cocaine), as well as legal prescription and over-the-counter drugs; alcohol is not included.
- 3 See Jim Malatras, “As Opioid Deaths Rise, a National Public Health Emergency to be Declared: So Now What?,” Rockefeller Institute of Government Blog Post, October 26, 2017, <http://rockinst.org/blog/opioid-deaths-rise-national-public-health-emergency-declared-now/> and Jim Malatras, “As Heroin Overdoses and Deaths Rise, Is More Legislative Action on the Horizon in New York?,” Rockefeller Institute of Government Blog Post, June 19, 2017, <http://rockinst.org/blog/heroin-overdoses-deaths-rise-legislative-action-horizon-new-york/>.
- 4 Jim Malatras, “As Heroin Overdoses and Deaths Rise, Is More Legislative Action on the Horizon in New York?” Rockefeller Institute of Government Blog Post, June 19, 2017, <http://rockinst.org/blog/heroin-overdoses-deaths-rise-legislative-action-horizon-new-york/>.
- 5 Greg Allen and Amita Kelly, “Trump Administration Declares Opioid Crisis a Public Health Emergency,” National Public Radio, October 26, 2017, <https://www.npr.org/2017/10/26/560083795/president-trump-may-declare-opioid-epidemic-national-emergency>.
- 6 Editorial Board, “Let Cities Open Safe Injection Sites,” *New York Times*, February 24, 2018, <https://www.nytimes.com/2018/02/24/opinion/sunday/drugs-safe-injection-sites.html>.



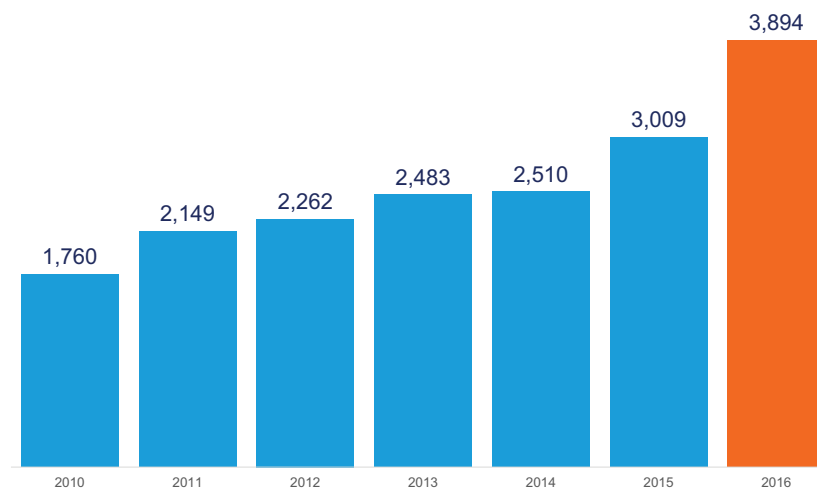
Key Findings

- Far from slowing, drug deaths increased 29 percent which was the largest annual increase in the number of deaths between 2010 and 2016.
- In a reverse from earlier data which showed a greater increase outside of NYC, drug deaths increased 39 percent in NYC and 23 percent in the rest of the state between 2015-2016.
- The drug death rate in New York was 15.2 per every 100,000 people in 2015. In 2016, the rate was 19.7 per every 100,000 people.
- There was a 31 percent increase in drug deaths among men and a 24 percent increase among women from 2015 to 2016.
- Total opioid-related deaths among blacks increased 57 percent from 2015-2016 compared to 26 percent for whites.
- Over a year, from 2015 to 2016, New York's drug death rate went from 34th to 27th in the nation—meaning NY got worse overall.

But given all the policies implemented and funding provided to battle the opioid epidemic, could the tide be turning? Recent reports suggest that some county officials are forecasting a decrease in the number of drug deaths in the coming months.⁷ It is too early to tell if that is a larger trend. Given this potential change, using the most recent Center for Disease Control data from 2016, we have updated our findings from April 2017 and found that opioid deaths continue to mount. In fact, from 2015 to 2016, New York saw the single greatest annual increase in drug-related deaths in six years.

FIGURE 1. Total Drug Overdose and Chronic Drug Abuse Deaths in New York State 2010-16

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 12, 2018 2:58:51 PM.

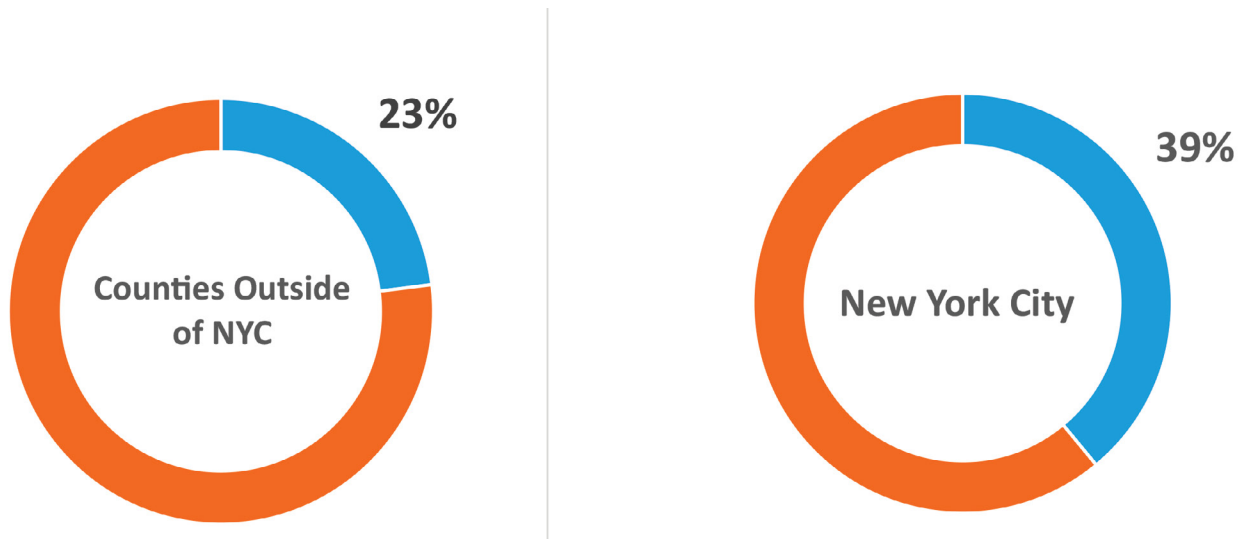


⁷ See Sandra Tan, "Light at the end of the tunnel': Opioid deaths in Erie County decrease," Buffalo News, February 27, 2018, <http://buffalonews.com/2018/02/27/erie-county-opioid-death-rate-starting-to-fall/>.

In One Year, Opioid Deaths Increased 29 Percent in New York State

We found that drug deaths continue to surge in New York State. In one year, from 2015 to 2016, drug deaths increased 29 percent — from 3,009 total deaths to 3,894. In fact, it was the single largest annual increase in the number of deaths we examined going back to 2010. Overall, as [Figure 1](#) illustrates, from 2010-16 there has been a 121 percent increase in the number of deaths in New York State.

FIGURE 2. Annual Increase in Opioid Deaths: New York City vs. Rest of State (2015 to 2016)



Note: Thirty-two of the non-New York City counties had nonsuppressed number of deaths data for both 2015 and 2016. Therefore, those counties were factored into the analysis. The worksheet can be found in [Appendix B](#).

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 13, 2018 12:25:21 PM.

Unlike Previous Findings, Drug Deaths Grew More Rapidly in New York City

In our April 2017 report, we found that from 2010-15 the percentage of drug deaths was greater in upstate and suburban counties outside of New York City (NYC). However, in the latest data, the trend is reversed. From 2015 to 2016, drug deaths increased 39 percent in New York City and 23 percent in the rest of the state.

Of the thirty-seven counties with available drug death data from the Centers for Disease Control and Prevention (CDC) in 2015 and 2016, all but five experienced increases in the number of drug-related deaths (four saw decreases and one was flat). Of the four that saw annual reductions in the number of drug deaths, three (Clinton, Rensselaer, and Saratoga) were not included in the Rockefeller Institute's 2017 report because of issues with data quality.

TABLE 1. Drug Deaths by County with Available Data (2015 to 2016), Ranked by Growth

| County | 2015 Total Deaths | 2016 Total Deaths | Percent Change | County | 2015 Total Deaths | 2016 Total Deaths | Percent Change |
|--------------|-------------------|-------------------|----------------|-------------|-------------------|-------------------|----------------|
| Ontario | 11 | 23 | 109% | Bronx | 297 | 376 | 27% |
| Broome | 40 | 78 | 95% | Monroe | 105 | 131 | 25% |
| Schenectady | 19 | 35 | 84% | Rockland | 37 | 45 | 22% |
| Ulster | 35 | 63 | 80% | Putnam | 19 | 23 | 21% |
| Jefferson | 15 | 26 | 73% | Greene | 10 | 12 | 20% |
| Chemung | 14 | 23 | 64% | Orange | 75 | 86 | 15% |
| Queens | 183 | 289 | 58% | Oswego | 24 | 27 | 13% |
| Richmond | 90 | 138 | 53% | Cattaraugus | 18 | 20 | 11% |
| Oneida | 41 | 62 | 51% | Erie | 292 | 307 | 5% |
| Tompkins | 16 | 24 | 50% | Dutchess | 65 | 67 | 3% |
| Onondaga | 101 | 151 | 50% | Nassau | 209 | 215 | 3% |
| Chautauqua | 26 | 38 | 46% | Niagara | 53 | 54 | 2% |
| Genesee | 11 | 16 | 45% | Cayuga | 17 | 17 | 0% |
| New York | 215 | 302 | 40% | Sullivan | 20 | 19 | -5% |
| Otsego | 10 | 14 | 40% | Albany | 36 | 32 | -11% |
| Suffolk | 294 | 410 | 39% | Rensselaer | 23 | 15 | -35% |
| St. Lawrence | 13 | 18 | 38% | Clinton | 17 | 11 | -35% |
| Kings | 272 | 371 | 36% | Saratoga | 25 | 14 | -44% |
| Westchester | 117 | 150 | 28% | | | | |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on Mar 13, 2018 12:25:21 PM.

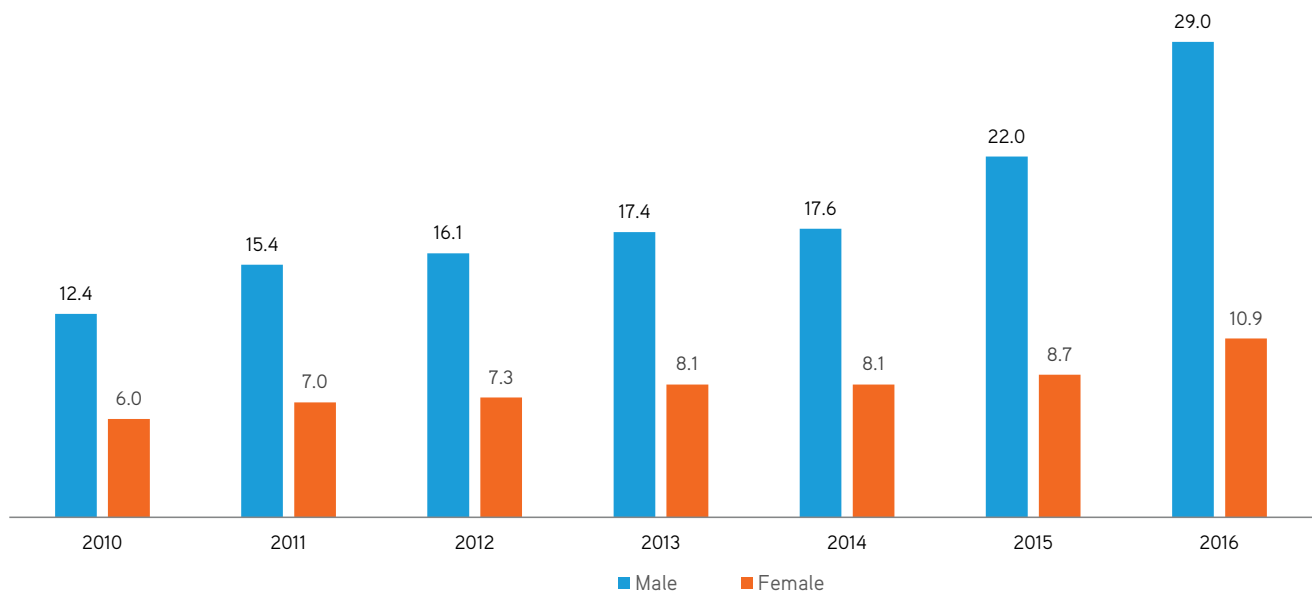
Ontario County had the largest growth in the number of drug-related deaths, increasing more than 109 percent and four other counties (Broome, Schenectady, Ulster, and Jefferson) saw annual drug death increases that exceed 70 percent. Saratoga County fared the best, showing a 44 percent reduction in the overall annual number of drug deaths. Albany County continued to see a decline in the total number of deaths from its high in 2014.⁸

Drug Deaths among Men Continue to Outpace Women

Among men, the number of drug-related deaths increased 31 percent from 2015 to 2016, while it increased 24 percent for women. Far from slowing down, for both men and women it was the single largest year-to-year increase in drug deaths for the time period we reviewed (2010-16). From 2015 to 2016, there were 2,784 drug-related deaths among men, while 1,110 women died.

⁸ See "Table 3. Total Drug Deaths by County Have Increased in New York State" from Jim Malatras, *By The Numbers: The Growing Drug Epidemic in New York*, (Albany: Rockefeller Institute of Government, April 2017): 7, http://rockinst.org/wp-content/uploads/2017/11/2017-04-20-By_numbers_brief_no8-min.pdf.

FIGURE 3. 2010-16 Drug-Related Death Rates by Sex in New York State (per 100K)



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 12, 2018 3:31:34 PM.

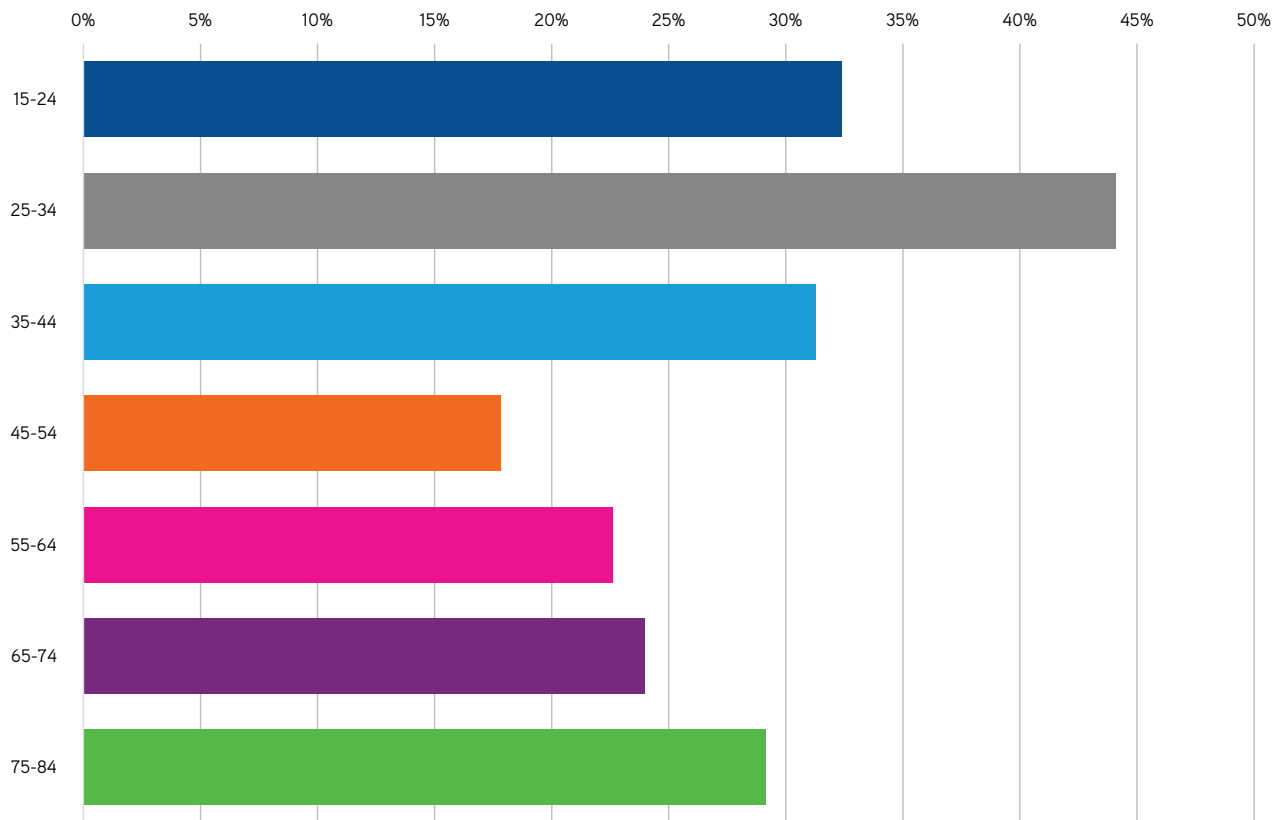
Drug Deaths Grew Faster among the Twenty-Five to Thirty-Four-Year-Old Age Group

As Figure 4 shows, drug-related deaths are up among every age group between fifteen to eighty-four from 2015 to 2016 — all demonstrating double digit increases. There was a 44 percent increase in the number of opioid deaths from 2015 to 2016 in the twenty-five to thirty-four-year-old age group — the largest increase of any group. See [Appendix C](#) for total drug deaths and death rate by age category.

Overall Increase in Drug Deaths Are Higher among Blacks Than Whites

Total opioid-related deaths among blacks increased 57 percent from 2015-16 compared to 26 percent for whites. Overall, the death rate among whites (23 per 100k people) continues to exceed the death rate among blacks (16 per 100k people). For more information see [Appendix D](#).

FIGURE 4. Percent Increase of Annual Drug Deaths from 2015 to 2016, by Age



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 12, 2018 3:31:34 PM

Opioid Deaths Climb in Most States and the District of Columbia

West Virginia continues to lead the nation in drug-related deaths in the United States. (For rankings by overall drug deaths by state see [Appendix A.](#)) From 2015 to 2016, however, the District of Columbia had the largest increase in the nation, going from 19.3 deaths per 100k people to 40.5 deaths per 100k people. Four states (Washington, Arkansas, Kansas, and Montana) either saw no increase or an overall decrease in the number of drug deaths. Overall, New York got worse, going from 34th to 27th in the nation in the rate of drug deaths.

TABLE 2. Increase in Drug Death Rates by State and District of Columbia 2015 to 2016

| State | 2015 | 2016 | Change | State | 2015 | 2016 | Change |
|----------------------|------|------|--------|--------------|------|------|--------|
| District of Columbia | 19.3 | 40.5 | 21.2 | Hawaii | 12.2 | 14.5 | 2.3 |
| Maryland | 22.0 | 34.7 | 12.7 | Oklahoma | 19.2 | 21.4 | 2.2 |
| Pennsylvania | 26.4 | 37.2 | 10.8 | Idaho | 13.5 | 15.4 | 1.9 |
| Ohio | 29.4 | 38.5 | 9.1 | Arizona | 19.8 | 21.6 | 1.8 |
| West Virginia | 40.7 | 49.8 | 9.1 | Minnesota | 11.9 | 13.6 | 1.7 |
| Delaware | 22.0 | 30.3 | 8.3 | Alaska | 17.2 | 18.6 | 1.4 |
| Massachusetts | 27.2 | 34.9 | 7.7 | Nevada | 21.8 | 23.1 | 1.3 |
| Florida | 16.7 | 24.1 | 7.4 | Colorado | 16.4 | 17.6 | 1.2 |
| New Jersey | 16.8 | 23.8 | 7.0 | Rhode Island | 30.1 | 31.2 | 1.1 |
| Maine | 20.9 | 27.7 | 6.8 | Alabama | 16.7 | 17.6 | 0.9 |
| Missouri | 18.0 | 23.3 | 5.3 | Oregon | 15.1 | 15.9 | 0.8 |
| Connecticut | 23.0 | 27.9 | 4.9 | Georgia | 13.4 | 14.2 | 0.8 |
| New Hampshire | 32.5 | 37.1 | 4.6 | Wyoming | 16.9 | 17.6 | 0.7 |
| Illinois | 14.6 | 19.2 | 4.6 | Texas | 9.9 | 10.6 | 0.7 |
| New York | 15.2 | 19.7 | 4.5 | New Mexico | 24.7 | 25.2 | 0.5 |
| Virginia | 12.8 | 17.2 | 4.4 | Nebraska | 7.3 | 7.7 | 0.4 |
| Kentucky | 30.1 | 34.4 | 4.3 | South Dakota | 8.4 | 8.7 | 0.3 |
| Indiana | 19.8 | 23.7 | 3.9 | Iowa | 10.6 | 10.8 | 0.2 |
| Michigan | 23.3 | 27.2 | 3.9 | California | 12.8 | 13.0 | 0.2 |
| North Carolina | 16.3 | 20.1 | 3.8 | Mississippi | 12.3 | 12.5 | 0.2 |
| Wisconsin | 15.5 | 19.1 | 3.6 | Utah | 22.3 | 22.5 | 0.2 |
| Vermont | 17.7 | 21.0 | 3.3 | Washington | 16.6 | 16.6 | 0.0 |
| Louisiana | 19.3 | 22.1 | 2.8 | Arkansas | 14.3 | 14.2 | -0.1 |
| Tennessee | 23.4 | 26.2 | 2.8 | Kansas | 12.0 | 11.5 | -0.5 |
| North Dakota | 8.6 | 11.3 | 2.7 | Montana | 14.7 | 13.0 | -1.7 |
| South Carolina | 16.2 | 18.7 | 2.5 | | | | |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 12, 2018 2:48:35 PM



Conclusion

Recent reports have suggested the opioid deaths may be slowing in some parts of New York State. While we found several instances of overall decreases in annual deaths by county, New York had the single largest increase in the number of drug deaths in a year in the period examined (2010-16).

Why the nation continues to struggle to slow the drug epidemic is a question that the Rockefeller Institute of Government is taking on. We're examining problems with the data⁹ (which is critical to help fully understand the problem), as well as the policy disconnect between local responders on the ground and local, state, and federal lawmakers.

Specifically, the Rockefeller Institute of Government is taking a deep dive into the opioid crisis in an upstate rural community. Called Stories from Sullivan, it will shed light on why the problem continues to grow and disconnects between the problems and policy solutions. Follow the project — what we call research in real time — at <http://rockinst.org/stories-from-sullivan/> or on social media at [#StoriesfromSullivan](https://twitter.com/StoriesfromSullivan).

9 There are issues in how the data are counted and reported. For a general overview see: Urska Klancnik and Jim Malatras, "An Update on State Heroin and Other Opioid Reporting Data," Rockefeller Institute of Government Blog Post, November 10, 2017, at <http://rockinst.org/blog/using-data-combat-opioid-crisis/>. In many cases in New York, reporting is done by local elected coroners who may not have the expertise to provide more comprehensive data. For instance, see Erika Martin, Christine Bozlak, and Young Joo Park, "Ballot Watch: Getting Out the Vote for ... Coroners?," Rockefeller Institute of Government Blog Post, October 7, 2017, at <http://rockinst.org/blog/ballot-watch-getting-vote-coroners/>. Finally, there have been recent issues reported with the federal data. See Charles Ornstein, "Measuring the Toll of the Opioid Epidemic Is Tougher Than It Seems," ProPublica, March 13, 2018, <https://www.propublica.org/article/measuring-the-toll-of-the-opioid-epidemic-is-tougher-than-it-seems>.

Appendix A

Drug Death Rate Ranked by State and District of Columbia (2015-16)

| State | 2015 | 2016 | Change | State | 2015 | 2016 | Change |
|----------------------|------|------|--------|----------------|------|------|--------|
| West Virginia | 40.7 | 49.8 | 9.1 | New York | 15.2 | 19.7 | 4.5 |
| District of Columbia | 19.3 | 40.5 | 21.2 | Illinois | 14.6 | 19.2 | 4.6 |
| Ohio | 29.4 | 38.5 | 9.1 | Wisconsin | 15.5 | 19.1 | 3.6 |
| Pennsylvania | 26.4 | 37.2 | 10.8 | South Carolina | 16.2 | 18.7 | 2.5 |
| New Hampshire | 32.5 | 37.1 | 4.6 | Alaska | 17.2 | 18.6 | 1.4 |
| Massachusetts | 27.2 | 34.9 | 7.7 | Colorado | 16.4 | 17.6 | 1.2 |
| Maryland | 22.0 | 34.7 | 12.7 | Alabama | 16.7 | 17.6 | 0.9 |
| Kentucky | 30.1 | 34.4 | 4.3 | Wyoming | 16.9 | 17.6 | 0.7 |
| Rhode Island | 30.1 | 31.2 | 1.1 | Virginia | 12.8 | 17.2 | 4.4 |
| Delaware | 22.0 | 30.3 | 8.3 | Washington | 16.6 | 16.6 | 0.0 |
| Connecticut | 23.0 | 27.9 | 4.9 | Oregon | 15.1 | 15.9 | 0.8 |
| Maine | 20.9 | 27.7 | 6.8 | Idaho | 13.5 | 15.4 | 1.9 |
| Michigan | 23.3 | 27.2 | 3.9 | Hawaii | 12.2 | 14.5 | 2.3 |
| Tennessee | 23.4 | 26.2 | 2.8 | Georgia | 13.4 | 14.2 | 0.8 |
| New Mexico | 24.7 | 25.2 | 0.5 | Arkansas | 14.3 | 14.2 | -0.1 |
| Florida | 16.7 | 24.1 | 7.4 | Minnesota | 11.9 | 13.6 | 1.7 |
| New Jersey | 16.8 | 23.8 | 7.0 | California | 12.8 | 13.0 | 0.2 |
| Indiana | 19.8 | 23.7 | 3.9 | Montana | 14.7 | 13.0 | -1.7 |
| Missouri | 18.0 | 23.3 | 5.3 | Mississippi | 12.3 | 12.5 | 0.2 |
| Nevada | 21.8 | 23.1 | 1.3 | Kansas | 12.0 | 11.5 | -0.5 |
| Utah | 22.3 | 22.5 | 0.2 | North Dakota | 8.6 | 11.3 | 2.7 |
| Louisiana | 19.3 | 22.1 | 2.8 | Iowa | 10.6 | 10.8 | 0.2 |
| Arizona | 19.8 | 21.6 | 1.8 | Texas | 9.9 | 10.6 | 0.7 |
| Oklahoma | 19.2 | 21.4 | 2.2 | South Dakota | 8.4 | 8.7 | 0.3 |
| Vermont | 17.7 | 21.0 | 3.3 | Nebraska | 7.3 | 7.7 | 0.4 |
| North Carolina | 16.3 | 20.1 | 3.8 | | | | |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 12,

Appendix B

2015 to 2016 Drugs Deaths, by New York State County

| County | 2015 Total Deaths | 2016 Total Deaths | County | 2015 Total Deaths | 2016 Total Deaths |
|-------------|----------------------|----------------------|--------------|----------------------|----------------------|
| Albany | 36 | 32 | Niagara | 53 | 54 |
| Allegany | Suppressed | Suppressed | Oneida | 41 | 62 |
| Bronx | 297 | 376 | Onondaga | 101 | 151 |
| Broome | 40 | 78 | Ontario | 11 | 23 |
| Cattaraugus | 18 | 20 | Orange | 75 | 86 |
| Cayuga | 17 | 17 | Orleans | Suppressed | Suppressed |
| Chautauqua | 26 | 38 | Oswego | 24 | 27 |
| Chemung | 14 | 23 | Otsego | 10 | 14 |
| Chenango | Suppressed | Suppressed | Putnam | 19 | 23 |
| Clinton | 17 | 11 | Queens | 183 | 289 |
| Columbia | Suppressed | Suppressed | Rensselaer | 23 | 15 |
| Cortland | Suppressed | Suppressed | Richmond | 90 | 138 |
| Delaware | Suppressed | Suppressed | Rockland | 37 | 45 |
| Dutchess | 65 | 67 | St. Lawrence | 13 | 18 |
| Erie | 292 | 307 | Saratoga | 25 | 14 |
| Essex | Suppressed | Suppressed | Schenectady | 19 | 35 |
| Franklin | Suppressed | Suppressed | Schoharie | Suppressed | Suppressed |
| Fulton | Suppressed | Suppressed | Schuyler | Suppressed | Suppressed |
| Genesee | 11 | 16 | Seneca | Suppressed | Suppressed |
| Greene | 10 | 12 | Steuben | Suppressed | Suppressed |
| Hamilton | Suppressed | Suppressed | Suffolk | 294 | 410 |
| Herkimer | Suppressed | Suppressed | Sullivan | 20 | 19 |
| Jefferson | 15 | 26 | Tioga | Suppressed | Suppressed |
| Kings | 272 | 371 | Tompkins | 16 | 24 |
| Lewis | Suppressed | Suppressed | Ulster | 35 | 63 |
| Livingston | Suppressed | Suppressed | Warren | Suppressed | Suppressed |
| Madison | Suppressed | Suppressed | Washington | Suppressed | Suppressed |
| Monroe | 105 | 131 | Wayne | Suppressed | Suppressed |
| Montgomery | Suppressed | Suppressed | Westchester | 117 | 150 |
| Nassau | 209 | 215 | Wyoming | Suppressed | Suppressed |
| New York | 215 | 302 | Yates | Suppressed | Suppressed |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 13, 2018 12:25:21 PM.

Appendix C

Drug Deaths by Age Category in New York State

| Age Range | 2015 Deaths | Per 100k | 2016 Deaths | Per 100k |
|-----------|-------------|----------|-------------|----------|
| 15-24 | 281 | 10.5 | 372 | 14.1 |
| 25-34 | 703 | 24.4 | 1,013 | 35.0 |
| 35-44 | 588 | 23.6 | 772 | 31.3 |
| 45-54 | 757 | 27.4 | 892 | 33.0 |
| 55-64 | 517 | 20.3 | 634 | 24.7 |
| 65-74 | 125 | 7.5 | 155 | 9.0 |
| 75-84 | 24 | 2.8 | 31 | 3.5 |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on Mar 13, 2018 2:23:26 PM.

Appendix D

Drug Deaths by Race (2015 to 2016)

| Race | 2015 Total Deaths | 2015 Death Rate | 2016 Total Deaths | 2016 Death Rate | Change Total Deaths |
|----------------------------------|-------------------|-----------------|-------------------|-----------------|---------------------|
| American Indian or Alaska Native | 10 | Unreliable | 21 | 9.3 | 110% |
| Asian or Pacific Islander | 44 | 2.4 | 42 | 2.3 | -5% |
| Black or African American | 367 | 10 | 577 | 15.7 | 57% |
| White | 2,588 | 18.4 | 3,254 | 23.2 | 26% |

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2016 on CDC WONDER Online Database, released December, 2017. Data are from the Multiple Cause of Death Files, 1999-2016, as compiled from data provided by the fifty-seven vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on March 13, 2018 3:43:44 PM.



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