

## Conclusion

The Public Health Analysis conducted on opioid overdose death data as well as prescriber and prescription data delivered numerous significant takeaways. Some of the more general conclusions reached include:

- The death count as well as the death to population ratio increased by 300% in the United States from 1999 to 2014. The amount of prescriptions dispensed during this time increased by 90%. However, the United States population only increased by 15%.
- In regard to the states with the highest average number of prescriptions per provider, as well as prescriptions per population, there was a strong geographical correlation. Nearly all states in the Southeast region of the U.S. made up the top instances, as well as half of the Midwest region.

The findings pertaining to specific states were also worthy of attention. States showing a greater prevalence of opioid overdose deaths, opioid prescriptions, or both, include:

- **West Virginia.** The most notable state in this analysis. It was the state with the greatest increase in percentage of deaths over the 15 year period, at 14,653%. It also had the highest death to population ratio in 2014, as well as the most repeat high death rates over the 15 year period. It placed in the top 20 instances of high rates of prescriptions per provider, as well as high rates of prescriptions per population.
- **Florida.** This state had the second to highest death count in 2014, had 5 providers in the top 20 providers with most prescriptions in 2014 (more than any other state), and placed in the top 20 instances of both high rates of prescriptions per provider as well as prescriptions per population.
- **Nevada.** This state placed in the top 20 for highest death count, placed in the top 15 for death to population ratio, appeared 3 times in instances of high death rates over the 15 year period, and appeared at rank 7 for average prescriptions per provider.
- **Kentucky.** Placed in the top 20 for highest death count, appeared at rank 6 for death to population ratio, placed at rank 6 for death rates in 2014, placed in the top 20 instances of both high rates of prescriptions per provider as well as prescriptions per population.

Lastly, a few particular concerns of mine that I would look into if I were a public health official in 2014:

- The Family Practice M.D. in Mississippi, who placed 7 on a list of 13,000 providers for total prescriptions prescribed in 2014. He prescribed 5,051 opioid prescriptions that year.
- The FNP in North Carolina, who placed 14 on the same list of 13,000. He prescribed 3,893 opioid prescriptions that year.

- The ARNP in Washington, who placed 18 on the same list of 13,000. She prescribed 3,717 opioid prescriptions that year.
- The physician assistant in New York, who placed 19 on the same list of 13,000. He prescribed 3,645 opioid prescriptions that year.
- The high instance of opioid prescriptions per population ratio in Maine. As the first time Maine was on the radar for this project, it's a considerable instance.
- The states with the lowest rates of prescriptions per providers, prescriptions per population, death counts, death ratios, etc. There may be something to be learned from the way they operate in their healthcare practices and pharmacies.