

Health Care Costs from Opioid Abuse: A State-by-State Analysis


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The Centers for Disease Control has called prescription painkiller abuse an epidemic. U.S. health care costs attributable to the abuse of prescription painkillers (otherwise known as opioids) totaled an estimated \$25 billion in 2007. Given the substantial differences among states in the level of opioid abuse, population size, and the cost of health care services, state-level cost estimates of the impact of opioid abuse are important for understanding and addressing the epidemic. Furthermore, given that many effective strategies for tackling this epidemic may be locally devised and implemented, state-specific estimates are essential for policymakers. The analysis presented here offers the first such estimates.

This analysis allocates the national estimate of the health care cost of opioid abuse among the 50 states and the District of Columbia, taking into account variations in state population, abuse rates, and cost of care. The analysis offers estimates of total health care spending from opioid abuse within a state as well as per-capita health care spending. For a summary of results for every state, see the Appendix.



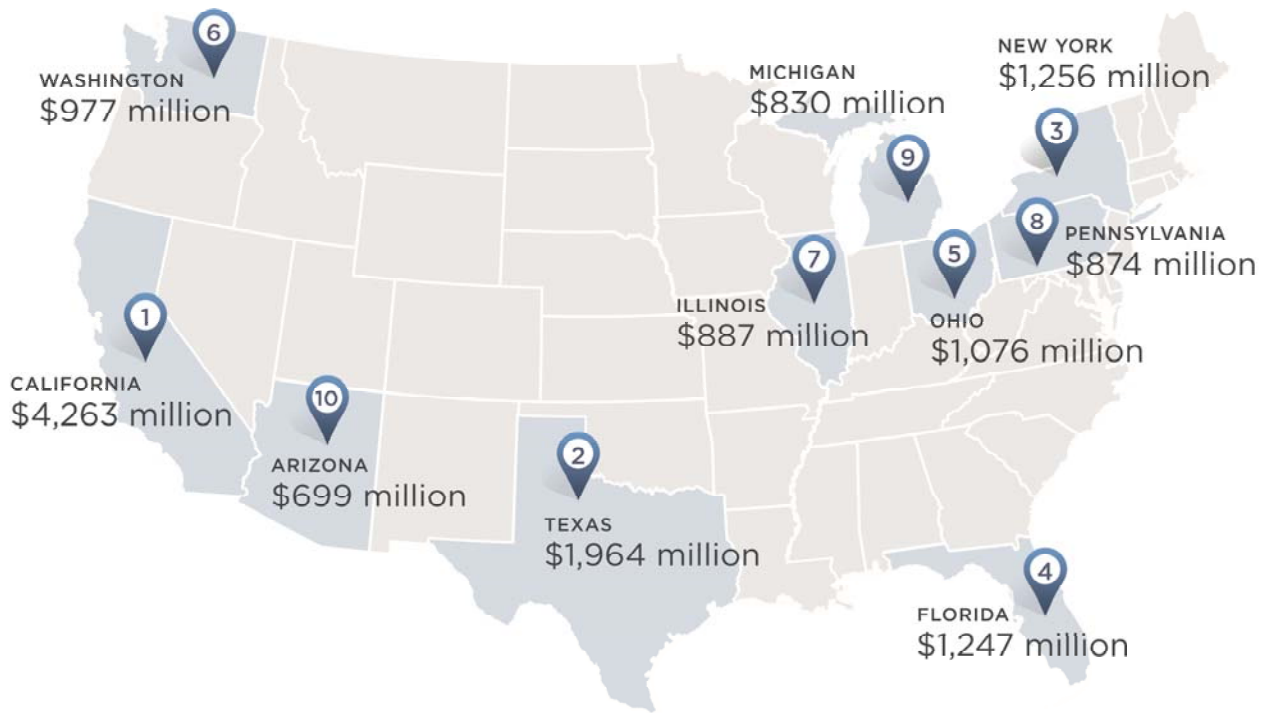
2.1 million Americans have a substance abuse disorder involving prescription opioids.

STATES WITH HIGHEST OPIOID ABUSE RATES
(2010-2011)

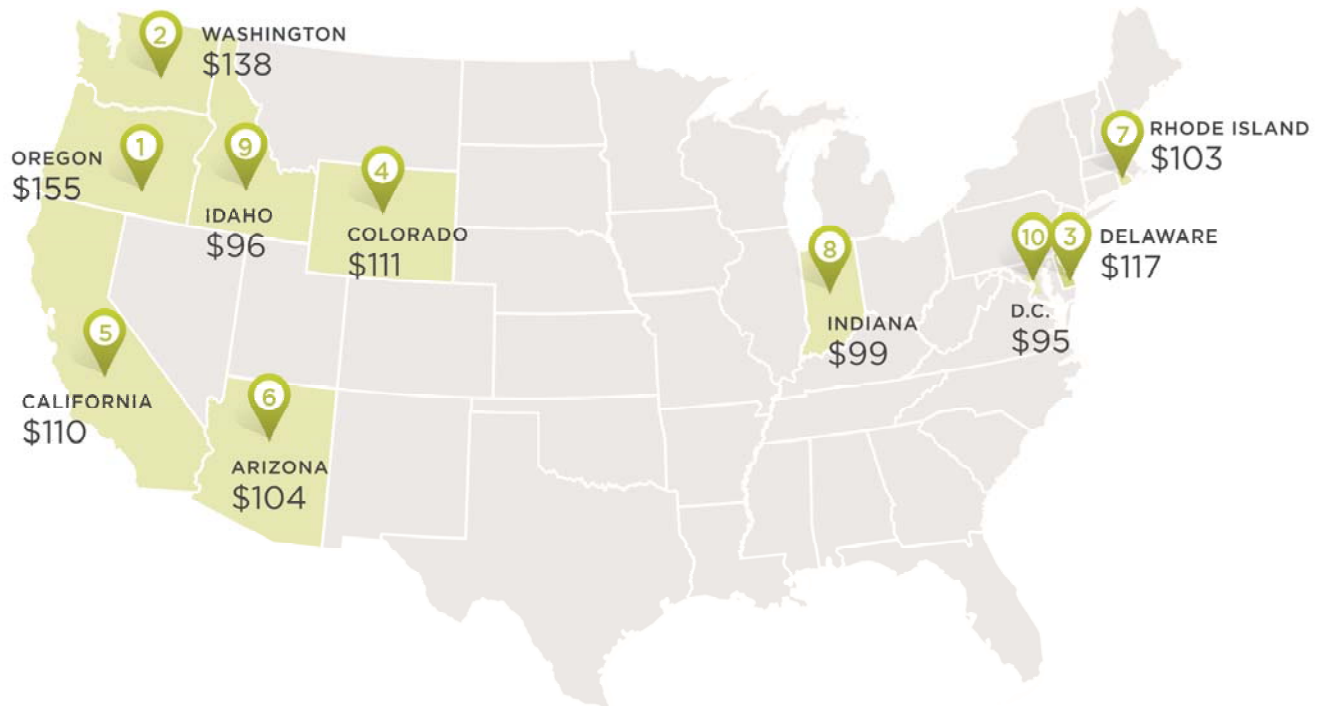


Source: SAMHSA 2013.

TOP 10 STATES: TOTAL HEALTH CARE COSTS FROM OPIOID ABUSE



TOP 10 STATES: PER-CAPITA HEALTH CARE COSTS FROM OPIOID ABUSE

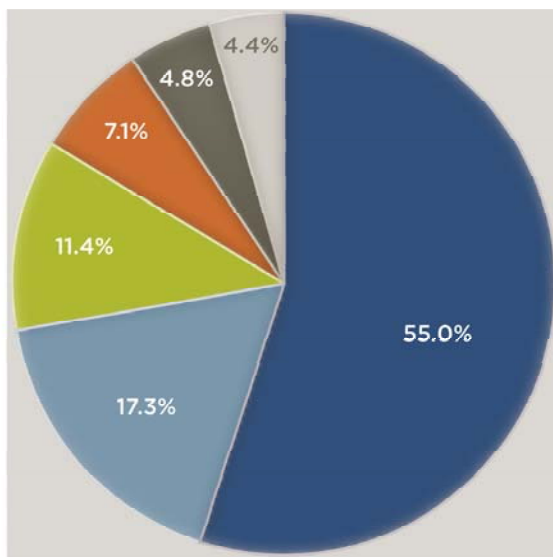


BACKGROUND

Opioid abuse is at the pinnacle of prescription drug abuse in the United States. According to the National Institute on Drug Abuse, 2.1 million Americans had a substance abuse disorder involving prescription opioids in 2012; opioid overdose deaths more than tripled between 1990 and 2010; and between 2004 and 2008, emergency room visits related to opioid abuse more than doubled (Volkow 2014).

The majority of people who abuse opioids (55 percent) are given them by a friend or relative (CDC 2011). See Chart 1 for a breakdown of sources of prescription opioids that end up being abused.

CHART 1: SOURCE OF ABUSED PRESCRIPTION PAINKILLERS



- Obtained free from a friend or relative
- Prescribed by one doctor
- Bought from friend or relative
- Other source
- Took from friend or relative without asking
- Got from drug dealer or stranger

Source: CDC 2011.

DATA AND METHODOLOGY

Recently published research estimates that aggregate health care costs in the United States attributable to opioid abuse totaled \$25 billion in 2007 (Birnbaum et al. 2011). We constructed a model to allocate this estimate by state. To provide an accurate state-by-state breakdown of the total health care cost associated with opioid abuse, it is important to account for three factors that can vary substantially from state to state:

- 1) population,
- 2) cost of health care, and
- 3) the rate of opioid abuse.

In constructing the model, we incorporated state population data from the U.S. Census Bureau (2014). For the cost of health care, we used hospital adjusted expenses per inpatient day (Kaiser Family Foundation 2014). We chose this as a proxy for the cost of health care in a state because the majority of health care spending associated with opioid abuse is attributable to inpatient care (White et al. 2011). Finally, for opioid abuse rates, we used the percentage of nonmedical use of prescription pain relievers by people 12 or older, as reported in the National Survey on Drug Use and Health (SAMHSA 2013).

Incorporating these three factors in the model ensures that the total cost is distributed proportionally across states according to the relevant variations.

It should be noted that the state-by-state estimates are conservative for several reasons. The national estimate of health care costs attributable to opioid abuse is itself conservative, as described by Birnbaum et al. (2011). In addition, this estimate relates to 2007, and the opioid epidemic has worsened substantially since then (Volkow 2014).

DISCUSSION

The \$25 billion estimate on which the state analysis is based represents total health care costs associated with opioid abuse. According to Birnbaum et al. (2011), this cost is almost entirely (approximately 95 percent) attributable to excess medical and drug costs. Substance abuse treatment, prevention, and research account for the remaining 5 percent of the total health care burden.

Beyond health care costs, other significant economic burdens are associated with opioid abuse. These include costs related to criminal justice, estimated at \$5 billion nationally, and lost workplace productivity, estimated at \$25.5 billion (Birnbaum et al. 2011). In total, opioid abuse imposes an estimated \$55 billion in societal costs annually.

SOURCES

Birnbaum, Howard G., Alan G. White, Matt Schiller, Tracy Waldman, Jody M. Cleveland, and Carl L. Roland. 2011. "Societal Costs of Prescription Opioid Abuse, Dependence, and Misuse in the United States," *Pain Medicine* 12, no. 4 (April): 657–67.

Centers for Disease Control (CDC). 2011. "Policy Impact: Prescription Painkiller Overdoses." November.

Kaiser Family Foundation. 2014. State Health Facts: Hospital Adjusted Expenses per Inpatient Day.

Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality. 2013. *The NSDUH Report: State Estimates of Nonmedical Use of Prescription Pain Relievers*. January 8.

U.S. Census Bureau, Population Division. 2014. Table 1. Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2014. December.

Volkow, Nora D. 2014. "America's Addiction to Opioids: Heroin and Prescription Drug Abuse." National Institute on Drug Abuse. Testimony before Senate Caucus on International Narcotics Control. May 14.

White, Alan G., Howard G. Birnbaum, Matt Schiller, Tracy Waldman, Jody M. Cleveland, and Carl L. Roland. 2011. "Economic Impact of Opioid Abuse, Dependence, and Misuse," *American Journal of Managed Care* 3(4): e59–e70.

ABOUT MGA

Matrix Global Advisors is a Washington, DC–based economic policy consulting firm. More information about MGA is available at www.matrixglobaladvisors.com. This report was prepared for Partnership for Drug-Free Kids.



APPENDIX

SUMMARY OF RESULTS: STATE ANALYSIS OF HEALTH CARE COSTS ASSOCIATED WITH OPIOID ABUSE

State	Health Care Costs from Opioid Abuse	% of Abuse-Related Health Care Costs	Per-Capita Health Care Costs from Opioid Abuse
California	\$4,262,705,505	17.1%	\$110
Texas	\$1,963,623,647	7.9%	\$73
New York	\$1,255,668,294	5.0%	\$64
Florida	\$1,246,526,068	5.0%	\$63
Ohio	\$1,075,753,413	4.3%	\$93
Washington	\$976,839,152	3.9%	\$138
Illinois	\$887,402,938	3.5%	\$69
Pennsylvania	\$873,738,730	3.5%	\$68
Michigan	\$829,955,719	3.3%	\$84
Arizona	\$698,537,803	2.8%	\$104
New Jersey	\$683,667,371	2.7%	\$76
Indiana	\$650,271,374	2.6%	\$99
Oregon	\$614,523,965	2.5%	\$155
Colorado	\$593,705,700	2.4%	\$111
Massachusetts	\$584,278,745	2.3%	\$87
North Carolina	\$582,486,663	2.3%	\$59
Virginia	\$546,523,496	2.2%	\$66
Maryland	\$451,018,165	1.8%	\$75
Georgia	\$447,129,259	1.8%	\$44
Missouri	\$440,176,029	1.8%	\$73
Tennessee	\$422,584,957	1.7%	\$65
Wisconsin	\$408,893,103	1.6%	\$71
Minnesota	\$375,689,480	1.5%	\$69
South Carolina	\$323,266,895	1.3%	\$67
Louisiana	\$296,901,908	1.2%	\$64
Connecticut	\$294,149,772	1.2%	\$82
Oklahoma	\$266,976,223	1.1%	\$69
Kentucky	\$262,000,618	1.0%	\$59
Nevada	\$238,241,309	1.0%	\$84
Utah	\$237,756,799	1.0%	\$81
Alabama	\$234,480,306	0.9%	\$48
Arkansas	\$205,529,321	0.8%	\$69
New Mexico	\$192,777,015	0.8%	\$92
Idaho	\$156,577,944	0.6%	\$96
Kansas	\$148,623,448	0.6%	\$51
Mississippi	\$141,709,137	0.6%	\$47
Iowa	\$121,049,678	0.5%	\$39
Delaware	\$109,439,642	0.4%	\$117
Rhode Island	\$108,354,005	0.4%	\$103
New Hampshire	\$107,993,141	0.4%	\$81
West Virginia	\$99,567,256	0.4%	\$54
Nebraska	\$97,527,060	0.4%	\$52
Maine	\$92,736,966	0.4%	\$70
Hawaii	\$84,803,596	0.3%	\$60
Alaska	\$69,448,831	0.3%	\$94
DC	\$62,588,368	0.3%	\$95
Montana	\$49,737,028	0.2%	\$49
Vermont	\$38,109,065	0.2%	\$61
North Dakota	\$33,219,499	0.1%	\$45
South Dakota	\$27,820,116	0.1%	\$33
Wyoming	\$26,915,476	0.1%	\$46
Total	\$25,000,000,000		