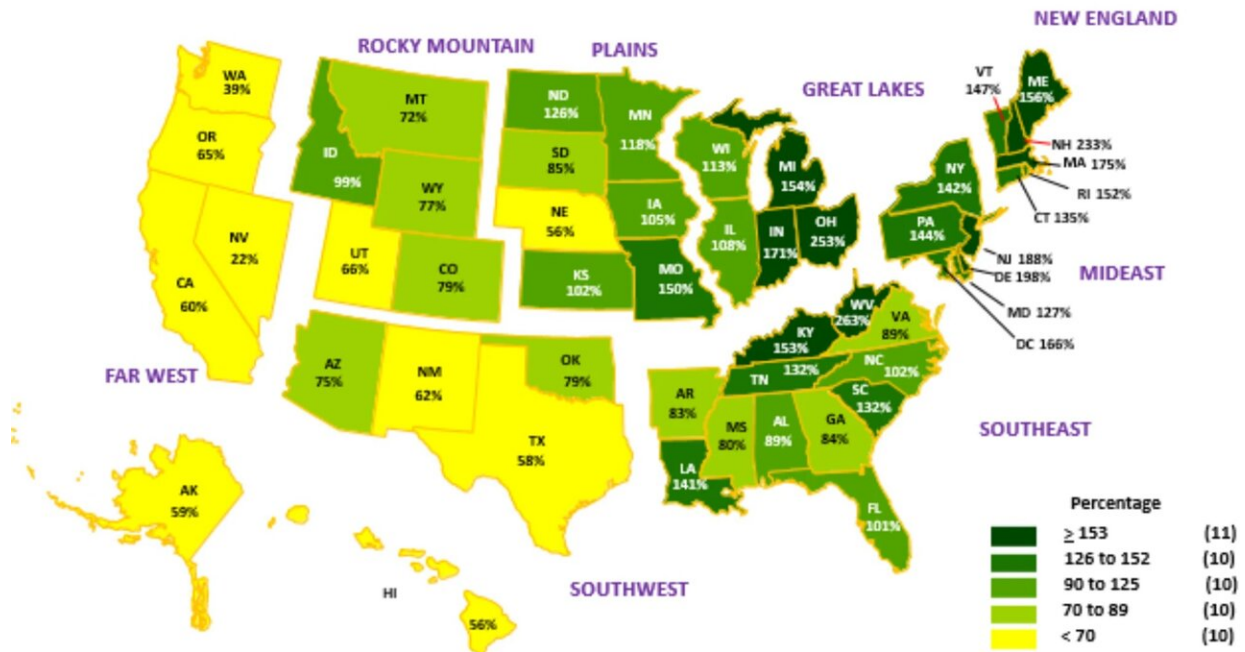


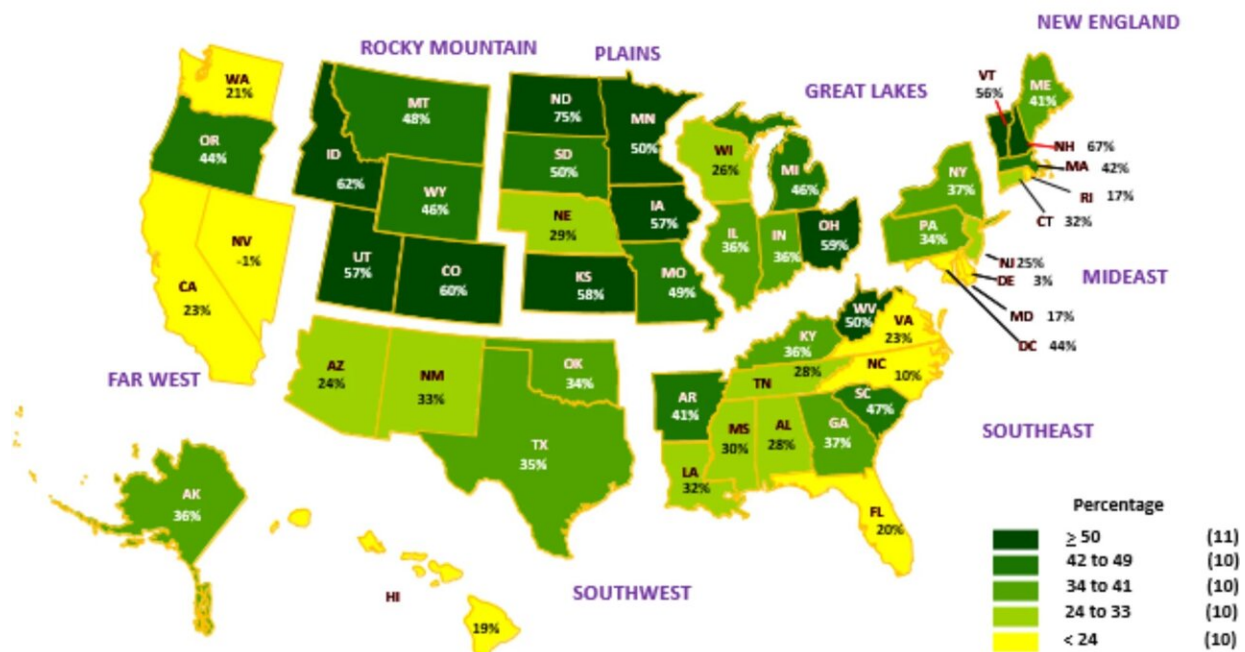
Researchers estimate cost of 'injury deaths of despair,' including suicide, exceeds \$1 trillion annually in the US

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Self Injury Mortality (SIM)



Suicide



Percentage increase in self-injury mortality (SIM) and suicide costs per capita by region and state, 1999/2000—2018/2019. Credit: *BMC Public Health* (2023).

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Self-injury deaths cost the United States more than \$1 trillion a year in medical expenses and work and quality of life losses, according to new West Virginia University research.

West Virginia has by far the highest estimated annual costs for these deaths at \$6,534 per person. These findings are published in *BMC Public Health*.

"Comprising registered suicides and most fatal alcohol, opioid and other drug overdoses, these deaths are predictable and preventable," said Ian Rockett, professor emeritus with the WVU School of Public Health and lead investigator on the study.

"Suicides alone cost society half a trillion dollars each year. Because injury deaths of despair disproportionality impact the young, their implications for the future are catastrophic. They are not only emotionally devastating for families and friends but, collectively, the losses exert adverse effects on all sectors of society."

Rockett's team analyzed data from the U.S. Centers for Disease Control and Prevention and compared changes over a 20-year period from 1999-2000 to 2018-2019. Researchers also utilized the CDC's "Medical and Work Loss Cost Estimation Methods" which considers medical expenditures, lost work productivity and future quality of life loss.

They found that estimated national costs of self-injury mortality rose by 143% from \$0.46 trillion to \$1.12 trillion over the 20-year period. Self-injury mortality includes deaths by suicide as well as most non-homicide opioid- and other drug-intoxication deaths, whether intentional or not.

Estimating the economic costs of self-injury mortality can inform health planning and clinical and [public health interventions](#), Rockett said.

"From a public health perspective, much more attention needs to be paid to [injury prevention](#) and control at national, state and local levels, pertinent policy formulation and implementation, and to mass communication of safe practices in schools, workplaces and among the general public," he added. "Separating suicides from overdose deaths in research and prevention funding greatly impedes the understanding and prevention of both."

Other findings from the study show that total national suicide costs increased 58%—from \$318.6 billion to \$502.7 billion—and that national per capita costs of self-injury mortality doubled from \$1,638 to \$3,413.

West Virginia exhibited the largest per capita cost followed by Delaware.

"Tragically, West Virginia has, by far, the highest estimated annual costs for these deaths at \$6,534 per person," Rockett said.

"West Virginia's increase in per capita costs is staggering at 263%. By contrast, Nevada's increase was 22%. One of our previous studies would suggest that West Virginia desperately needs substantial investment in manufacturing employment to counter the economic shock from the enormous loss of high-paying coal jobs over the past two decades. I hasten to add there are also many other states that would benefit significantly from such investment."

"At the core of our economy, coal jobs and other jobs in the extraction and construction industries are extremely hazardous. Consequently, injury is all too common among people working in them. The injured, and also other vulnerable sub-populations in West Virginia, like the young, became easy targets for Big Pharma, opioid pill mills and other unscrupulous providers—and more recently, for dealers of illicit alternatives, most notably heroin and fentanyl-related drugs."

WVU-connected researchers joining Rockett on the study were Judith Feinberg, professor at the School of Medicine; Amanda Stover, a School of Pharmacy graduate; and Lynne Cossman, former chair of the Department of Sociology and Anthropology.

The study is the final of a series of three by Rockett examining fatal self-injury. The first traced the rapid geographic growth of fatal self-injury across the country during the current century.

The second study identified various predictors, which included the underutilization of labor and manufacturing employment. Rockett said that study also indicated states with a centralized medical examiner [death](#) investigation system, such as West Virginia, do a better job than states with coroner or mixed systems in detecting drug overdose deaths.

"The cost study is a logical extension of these prior studies since cost is the bottom line in characterizing the burden of injury deaths of despair to the country and individual states," he said.

"Documentation of the extraordinary losses is essential for informing [health planning](#) and public health and clinical interventions.

Furthermore, costs have likely continued to mushroom since the onset of the COVID-19 pandemic. Federal and state prevention and intervention programs should be financed with a clear understanding of the total costs—fiscal, social and personal—incurred by deaths due to self-injurious behaviors."

More information: Ian R.H. Rockett et al, Escalating costs of self-injury mortality in the 21st century United States: an interstate observational study, *BMC Public Health* (2023). [DOI: 10.1186/s12889-023-15188-8](https://doi.org/10.1186/s12889-023-15188-8)

Provided by West Virginia University

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