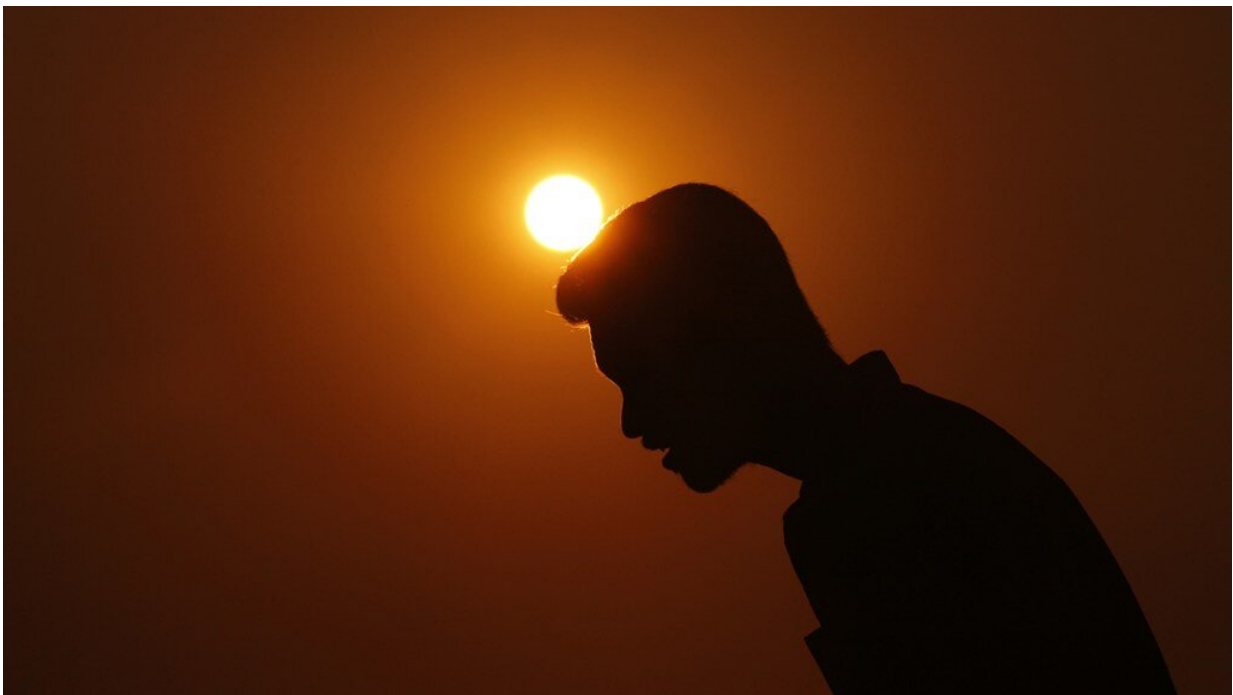


# Suicide rates could increase by up to 1,660 cases annually, depending on how much the climate changes

August 8 2022, by Alexandra K. Scammell

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Warming of 1°C–6°C could lead to 283–1,660 more suicides each year in the United States. Credit: pxhere.com, CC0, Public Domain

As of 2019, around one fifth of the U.S. population has been diagnosed with a mental illness or disorder. Changes to the climate are known to affect mental health—for example, more frequent [heat waves and](#)

[storms](#) can lead people to stay indoors, get less exercise, and become more stressed. In severe cases, poor mental health can lead to suicide. It is therefore important to better understand the relationship between climate change and mental health outcomes, like [suicide prevalence](#) and its monetized impact.

To quantify changes in suicide incidence in the continental United States, Anna Belova and colleagues created an integrated health impact assessment model. They combined this model with suicide incidence data, projections from six climate models, and county-scale population projections. They found that warming of 1°C–6°C (relative to a 1986–2005 climate baseline) could contribute to 283–1,660 more suicides each year, up to a 4% increase from 2015. The authors discovered that the Midwest, North and South Central, and Southeast regions of the country could see the greatest impacts, whereas the Northeast could see the fewest.

In their study published in *GeoHealth*, Belova and colleagues also looked at the monetized impact of [climate change](#) on suicide incidence. They determined that on the basis of 2015 population and income levels, the economic value of avoiding these additional suicides, such as the costs associated with [mental health](#) care, would range from \$2.1 billion to \$3.06 billion.

Further research is needed to shed light on climate change's impacts on suicide incidence, as well as anxiety and depressive disorders, in vulnerable populations, such as children, [older adults](#), and groups including people of color and low-income communities that are known to be afflicted with inequitable health risks.

**More information:** Anna Belova et al, Projecting the Suicide Burden of Climate Change in the United States, *GeoHealth* (2022). [DOI: 10.1029/2021GH000580](https://doi.org/10.1029/2021GH000580)

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