

## Deaths of despair redux: a response to Christopher Ruhm

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In his working paper, “Deaths of Despair or Drug Problems?” NBER Working Paper 24188, Christopher Ruhm argues that the midlife mortality crisis we face is, at its core, a drug crisis, caused by a change in what he calls “the drug environment,” by which he means the availability and cost of drugs. He contrasts this with “‘deaths of despair,’ measured by deterioration in medium-run economic conditions”, an explanation which he attributes to us and which he rejects using county level data.

In Case and Deaton (2017), <https://www.brookings.edu/bpea-articles/mortality-and-morbidity-in-the-21st-century/>, we explicitly test and *reject* this interpretation, using not only data from the US, but also from Europe. Ruhm is confirming our results using different data, not contradicting them. His interpretation of “deaths of despair” as deaths from medium-run economic conditions is his construction, and is completely contrary to what we write in Sections 2 and 3 of our paper. So his rejection of his interpretation is no rejection of ours.

To rehearse, we looked at the economic conditions and mortality in the US from 1999 to 2015, the same window that Ruhm examines. We note that deaths of despair—which we *define* as deaths from suicide, alcohol-related liver diseases, and drug overdoses, *not* by any putative cause—rose straight through the Great Recession and were not affected by the patterns of income associated with it. We also show that the different patterns of income change for different age and ethnic groups are inconsistent with an economic explanation of their different paths of mortality. The patterns of economic distress during the Great Recession were widely different in different European countries, and are once again, unrelated to mortality patterns. Like Ruhm, we directly contradict the idea that deaths are related to economic conditions from 1999 to 2015; indeed, we went to great pains to show that this

was *not* the case. Ruhm cites this work, but doesn't seem to understand that when he looks at the impact (or lack of impact) of changes in economic conditions between 1999 and 2015 on mortality between 1999 and 2015, and finds none, he is simply repeating what we found, albeit at the county level.

What then is our story, and how does it contrast with Ruhm's? When we proposed the term "deaths of despair," we were choosing a label, not an explanation, and certainly not a purely economic one that Ruhm is adopting. Deaths of despair are suicides, deaths from alcohol-related liver diseases, and deaths from drug overdose. We are also amenable to the possibility that obesity and over-eating are in part responsible for the reversal in the decline of deaths from heart disease. We also suggested a tentative account, which is echoed in the term "deaths of despair." We think of all of these deaths as suicides, by a very broad definition, and we attribute them to a broad deterioration in the lives of Americans without a college degree who entered adulthood after 1970.

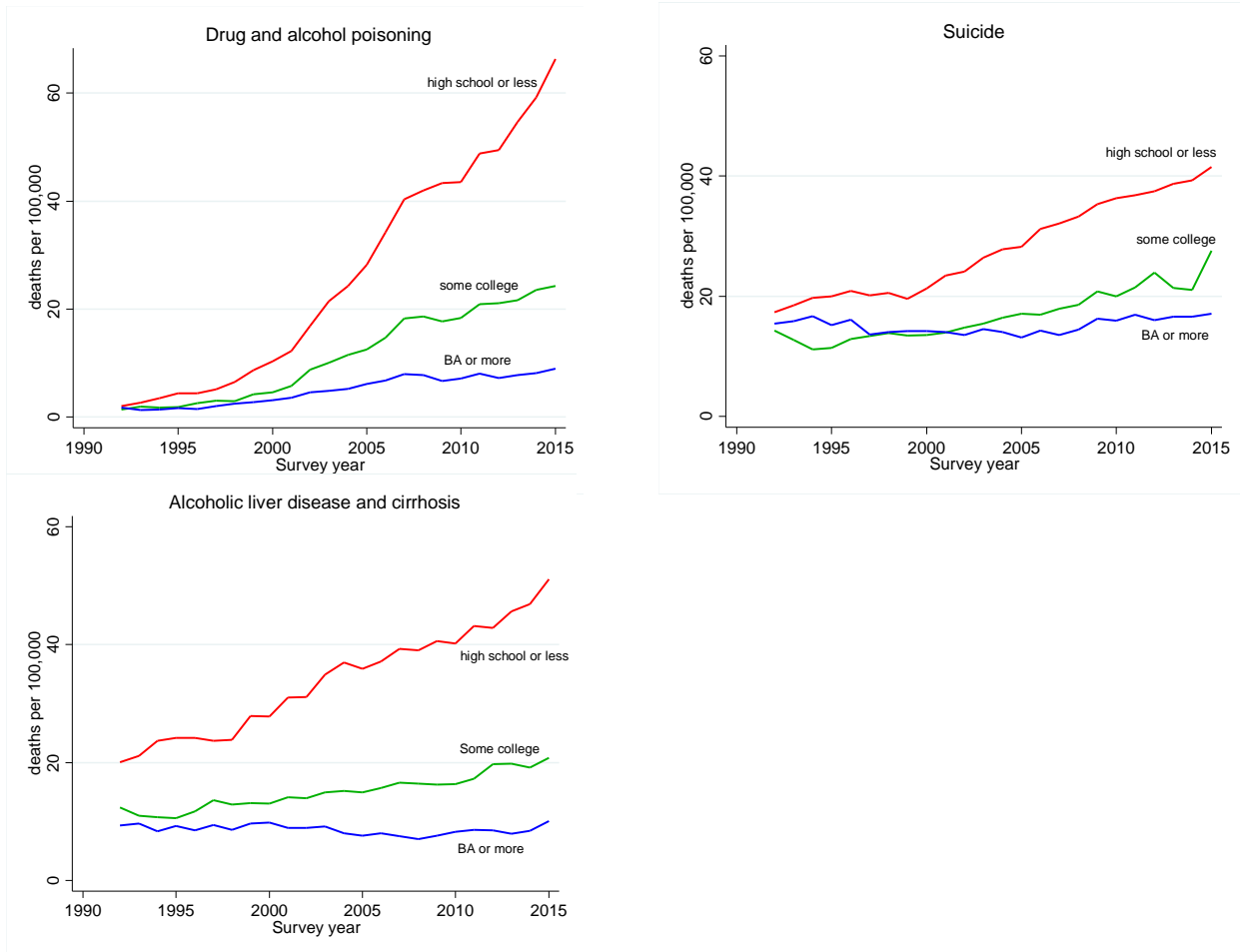
This is about *much more* than economic circumstances and goes back *much* further than 1999. In our paper, we talk about morbidity as well as mortality, and while we recognize the deterioration in wages for those without a BA, we also focus on the decline in labor force participation, the decline in marriage rates, the rise of cohabitation, the rise in out of wedlock births, and of parents living apart from children that they barely know. We discuss the decline in the quality of jobs, the increasing lack of opportunity for people without a BA, as well as changing religious practices. We discuss the decline of unions, and the consequent loss of local, national, and workplace voice that workers once had. We discuss that many less-educated people have lives that are economically and socially inferior to those of their parents. Of course, economic decline is part of this story, but the characterization of our work by the change in economic circumstances from 1999 to 2015 is a caricature that should be rejected out of hand, as it is in the data.

Ruhm focuses his paper as an explanation based on the availability and cost of drugs. We do not discount the importance of the opioid epidemic, but we regard it as having added fuel to an already bad situation, and certainly not the only cause of increasing mortality. As we wrote in our Brookings article, the availability and cost of drugs are certainly important proximate causes of increased mortality. But it is not true that suicide and alcohol-related liver mortality have not increased. For white non-Hispanics, ages 25-64, age-adjusted mortality from suicide increased in the every state between 1999 and 2015. In the same population, age-adjusted mortality from alcoholic liver disease and cirrhosis increased in every state but two (Maryland and New Jersey, where the numbers are constant). These data come straight from CDC Wonder online, and they surely should not be in dispute.

The figure below, drawn from our Brookings paper, shows the three causes of death from 1992 to 2015 for one of the groups we focus on, white non-Hispanics aged 50–54. All three causes are rising and, for those without a BA in 2015, deaths from drug overdose are indeed larger than either suicides or alcohol-related liver mortality, but are smaller than the two taken together. Ruhm classifies suicides carried out with drugs as drug overdoses, although there is no way to know whether drugs were the cause or simply the instrument of choice; we should note that drugs have long been involved in suicides, particularly of women, long before the opioid epidemic. So while some our suicides may indeed be drug overdoses, many of Ruhm’s drug overdoses are suicides.

Ruhm also omits from alcohol-related liver mortality the category “unspecified cirrhosis of the liver,” which is the largest category of liver deaths, and is closely linked to alcoholism. For both suicides and alcohol-related liver diseases, Ruhm is making data choices that, in our judgment, as well as that of the coroners, artificially inflate drug overdoses at the expense of suicides and alcohol-related liver mortality. The opioid epidemic is bad enough, and requires no exaggeration. We also note that an important contributor to the rise in midlife mortality is the slowing and subsequent turnaround in a once steady decline in heart disease mortality. This is unlikely to be attributable to drug overdoses.

There is a lot more going on than just the opioid epidemic, including prescription drugs, heroin, and fentanyl, and we continue to believe that the broader epidemic, including opioids, is linked to the long-term decline of working class lives, and that while economic decline is part of the story, it is only a part.



Source, Case and Deaton (2017) Appendix, Figure 7