

# Mental Health and Mortality in a Time of COVID-19

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## ABOUT THE AUTHORS

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There is no question that mental illness contributes to an enormous burden of disability worldwide. Unipolar depression, for example, is the leading cause of disability as measured by years lived with disability.<sup>1</sup> Substance use disorders are also a leading cause of disability in several countries worldwide. It is also widely understood that mental health in populations has worsened during the COVID-19 pandemic, with several population-based studies now showing a two- to three-fold increase in mood-anxiety disorders.<sup>2</sup>

Despite the ubiquity of mental illness, its contribution to overall burden of disease, and increase in prevalence during recent years, we seldom consider mental health and its association with mortality. We think this is a substantial oversight and one that is worth addressing through a recalibration of the academic and public conversations on mortality. There are three reasons why mental health matters to mortality in general but perhaps particularly so in a time of COVID-19.

First, there is a direct causal link between some forms of poor mental health and mortality. Principally, for mood-anxiety disorders, it manifests as self-inflicted harm and death by suicide. We know, for example, that persons

who have severe depression are 2.2 times more likely to die by suicide than persons with mild depression.<sup>3</sup> Suicide, in turn, is one of the leading causes of death for younger persons throughout the world.<sup>1</sup> In the context of the COVID-19 pandemic, data are still unclear as to whether the increasing prevalence of mental illness will also be associated with an increase in suicide, although one early report has found a substantial increase in emergency department presentations for both self-harm and mental health conditions throughout the United States.<sup>4</sup> With record unemployment levels, it is not implausible that suicide may increase during the pandemic because of exposure to stressors such as job loss.<sup>5</sup> Substance use disorders are also linked with mortality, particularly through unintentional drug overdoses. The aforementioned emergency department visit study also reported an increase in visits for opioid overdoses during the COVID-19 pandemic.<sup>4</sup> The United States was already in the midst of an opioid epidemic when the pandemic struck, and all evidence points to an increase in overdose mortality in 2020, exacerbating trends in mortality that were just beginning to abate before the COVID-19 pandemic hit. It is likely that greater

confinement to home and absence of opportunities for other engagements contributed to this increase in mortality, illustrating the link between behavioral disorders and mortality during times of social and economic upheaval.

Second, there is a clear link between a range of more severe mental illness and mortality. For example, we know that persons with psychotic disorders have three-fold higher mortality rates than persons without these disorders and a commensurately shorter life expectancy.<sup>6</sup> This is also true for persons with other severe mental illness and is likely the result of a combination of more limited access to health care and a greater burden of risk behaviors that contribute to poor health. It remains to be seen whether the lack of access to routine health care experienced during the COVID-19 pandemic will also contribute to greater mortality among persons with severe mental illness.

Third, core to our understanding of mental health and mortality is that persons with mental illness die predominantly of the same conditions as people of all populations, principally noncommunicable disease (NCD). However, a greater burden of these NCDs fall on persons with poor mental health who have both earlier onset and greater severity of NCD. This association is likely caused by greater prevalence of risk behaviors, such as smoking, use of illicit substances, and obesity, and potentially by specific biologic mechanisms that characterize the co-occurrence of mental health and physical health.<sup>7</sup> Higher socioeconomic position is associated with both improved NCD outcomes and better mental health.<sup>8</sup> The COVID-19 pandemic, associated economic precarity, and poorer national mental health may ultimately contribute to greater risk

behavior and longer-term changes in NCD mortality.

Bringing these observations together, a review of more than 200 studies conducted worldwide found that the median reduction in life expectancy for persons with mental illness was more than 10 years, a doubling of relative mortality rate overall, and more than 8 million excess deaths were related to mental illness annually.<sup>9</sup> This finding reinforces the fundamental observation that mental health is inextricably linked with mortality and needs to be considered in any discussion of mortality in general—and particularly so in the context of the COVID pandemic—in a time of increasing mental illness. **AJPH**

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S. Galea receives consulting fees from Sharecare and Tivity Health, and C. K. Ettman receives consulting fees from Sharecare, all unrelated to the topic of this editorial.

**REFERENCES**

1. World Health Organization. Depression. Published January 30, 2020. Available at: <https://www.who.int/news-room/fact-sheets/detail/depression>. Accessed February 14, 2021.
2. Ettman CK, Abdalla SM, Cohen GH, Sampson L, Vivier PM, Galea S. Prevalence of depression symptoms in US adults before and during the COVID-19 pandemic. *JAMA Netw Open*. 2020;3(9): e2019686. <https://doi.org/10.1001/jamanetworkopen.2020.19686>

3. Hawton K, Casañas I, Comabella C, Haw C, Saunders K. Risk factors for suicide in individuals with depression: a systematic review. *J Affect Disord*. 2013;147(1-3):17–28. <https://doi.org/10.1016/j.jad.2013.01.004>
4. Holland KM, Jones C, Vivolo-Kantor AM, et al. Trends in US emergency department visits for mental health, overdose, and violence outcomes before and during the COVID-19 pandemic. *JAMA Psychiatry*. 2021;78(4):372–379. <https://doi.org/10.1001/jamapsychiatry.2020.4402>
5. Elbogen EB, Lanier M, Montgomery AE, Strickland S, Wagner HR, Tsai J. Financial strain and suicide attempts in a nationally representative sample of US adults. *Am J Epidemiol*. 2020;189(11):1266–1274. <https://doi.org/10.1093/aje/kwaa146>
6. Oakley P, Kisely S, Baxter A, et al. Increased mortality among people with schizophrenia and other non-affective psychotic disorders in the community: a systematic review and meta-analysis. *J Psychiatr Res*. 2018;102:245–253. <https://doi.org/10.1016/j.jpsychires.2018.04.019>
7. Howren MB, Lamkin DM, Suls J. Associations of depression with C-reactive protein, IL-1, and IL-6: a meta-analysis. *Psychosom Med*. 2009;71(2):171–186. <https://doi.org/10.1097/PSY.0b013e3181907c1b>
8. Muntaner C. Socioeconomic position and major mental disorders. *Epidemiol Rev*. 2004;26(1):53–62. <https://doi.org/10.1093/epirev/mxh001>
9. Walker ER, McGee RE, Druss BG. Mortality in mental disorders and global disease burden implications. *JAMA Psychiatry*. 2015;72(4):334–341. <https://doi.org/10.1001/jamapsychiatry.2014.2502>

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