

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/336053629>

Ignoring Data Delays Our Reaction to Emerging Public Health Tragedies Like 13 Reasons Why

Article · September 2019

DOI: 10.1001/jamapsychiatry.2019.2755

CITATIONS

0

READS

20

3 authors, including:



[Eric Leas](#)

University of California, San Diego

43 PUBLICATIONS 558 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Using Big Media Data to Improve Behavioral Medicine [View project](#)



Behavioral Epidemiology [View project](#)

Letters

COMMENT & RESPONSE

Ignoring Data Delays Our Reaction to Emerging Public Health Tragedies Like *13 Reasons Why*

To the Editor We applaud Niederkrotenthaler and colleagues¹ for adding another layer of evidence that *13 Reasons Why* is harming the public by pushing some individuals toward suicide. However, their dismissal of some of the earliest evidence on this subject deserves a revision not because it undermines their central claim but because it makes it even stronger and can make psychiatric epidemiology more actionable in the future.

Our October 2017 study in *JAMA Internal Medicine*² provided the first evidence for what some suspected at the time but for which there were no data: *13 Reasons Why* increases suicidal outcomes. Google queries reflective of suicide ideation increased substantially immediately after the show's release. This included searches for "how to commit suicide" (up 26%), "commit suicide" (up 18%), and "how to kill yourself" (up 9%). While the authors make reference to our study, they dismiss it as simply tracking the show's popularity and excluded the study when presenting a detailed summary of all "available studies that present quantitative findings" in Table 1.¹

Dismissing search query surveillance undermines our scientific principles to rely on data when making health care decisions. One of the added values of search query surveillance over traditional sentinel surveillance is timeliness. *13 Reasons Why* aired for an additional 646 days between the publication of our study² and the study by Niederkrotenthaler and colleagues.¹ Another added value is mining search queries allows psychiatric researchers to understand what people are thinking and when they are thinking it across billions of observations without any obtrusive instruments. Therefore, it follows that suicide search trends are correlated with actual suicides,³ something the authors' findings, and the 6 additional studies they make reference to, also attest to by mirroring our earlier conclusion. Such correlations also extend to many other health phenomena. For instance, search queries for HIV predicted increases in HIV testing more than a year before traditional data were available.⁴

Should our attitude be to discount available early data when the consequence is more suicides? Imagine if the public health community promoted our early results; might Netflix have been compelled to act sooner?

An openness, rather than dismissiveness, to search query surveillance (and other novel big media data⁵) in the future will potentially make the public health community more responsive to the acute needs of the public it serves. The next time we are faced with an emerging crisis that can only be clarified with data, a well-executed search query-derived study might again provide the earliest empirical evidence and should be taken as a serious call to action.

Eric C. Leas, PhD, MPH
Mark Dredze, PhD
John W. Ayers, PhD, MA

Author Affiliations: Division of Health Policy, Department of Family Medicine and Public Health, University of California San Diego, La Jolla (Leas); Department of Computer Science, Johns Hopkins University, Baltimore, Maryland (Dredze); Division of Infectious Diseases and Global Public Health, Department of Medicine, University of California San Diego, La Jolla (Ayers).

Corresponding Author: John W. Ayers, PhD, MA, Department of Medicine, University of California, San Diego, Ste 333 Central Research Services Facility (CRSF), 9500 Gilman Dr, La Jolla, CA 92093-0507 (ayers.john.w@gmail.com).

Published Online: September 25, 2019. doi:10.1001/jamapsychiatry.2019.2755

Conflict of Interest Disclosures: Dr Dredze reports personal fees from Bloomberg LP and Good Analytics outside the submitted work. No other disclosures were reported.

1. Niederkrotenthaler T, Stack S, Till B, et al. Association of increased youth suicides in the United States with the release of *13 Reasons Why* [published online May 29, 2019]. *JAMA Psychiatry*. doi:10.1001/jamapsychiatry.2019.0922
2. Ayers JW, Althouse BM, Leas EC, Dredze M, Allem JP. Internet searches for suicide following the release of *13 Reasons Why*. *JAMA Intern Med*. 2017;177(10):1527-1529. doi:10.1001/jamainternmed.2017.3333
3. Yang AC, Tsai SJ, Huang NE, Peng CK. Association of Internet search trends with suicide death in Taipei City, Taiwan, 2004-2009. *J Affect Disord*. 2011; 132(1-2):179-184. doi:10.1016/j.jad.2011.01.019
4. Allem JP, Leas EC, Caputi TL, et al. The Charlie Sheen effect on rapid in-home human immunodeficiency virus test sales. *Prev Sci*. 2017;18(5):541-544. doi:10.1007/s11121-017-0792-2
5. Ayers JW, Althouse BM, Dredze M. Could behavioral medicine lead the web data revolution? *JAMA*. 2014;311(14):1399-1400. doi:10.1001/jama.2014.1505