

# Letters

## RESEARCH LETTER

### Media Trends for the Substance Abuse and Mental Health Services Administration 800-662-HELP Addiction Treatment Referral Services After a Celebrity Overdose

The nation is facing a drug epidemic. Despite a substantial investment in evidence-based addiction resources, only 10% of US individuals who need treatment get it.<sup>1</sup> The Substance Abuse and Mental Health Services Administration (SAMHSA) national helpline (800-662-HELP) is the only free, federally managed and endorsed US addiction treatment referral service, helping callers find the best local services that match their needs. Are millions fighting addiction alone simply because they are not aware that lifesaving help is a telephone call away?

**Methods** | On July 24, 2018, singer Demi Lovato was hospitalized for an overdose that on-the-scene investigators linked to heroin.<sup>2</sup> Lovato has since recovered. During the week after her overdose (July 24-30, 2018), we assessed public awareness and engagement with 800-662-HELP on Google News (<https://news.google.com>), Twitter ([twitter.com](https://twitter.com)), and Google (<https://google.com/trends>).<sup>3</sup> Given that these analyses were based on public aggregate data, institutional review was not required for this study.

We obtained counts of articles, posts, or searches that mentioned (1) *Lovato*, (2) *opioid* or *heroin*, and (3) *800-662-HELP*, including various spellings (eg, *8006624357*), from their respective public data feeds with raw Google search volumes estimated using media measurement and analytics from comScore (comscore.com). Furthermore, because internet searchers may not know the SAMHSA helpline number, all searches for *opioid* or *heroin* and *helpline* or *help* were included in the latter category. We replicated this strategy for the week after Anthony Bourdain's suicide on June 8, 2018, substituting *Bourdain*, *suicide*, and the National Suicide Prevention Lifeline (*800-273-TALK*) where appropriate (content that also mentioned *blast*, *bomber*, *doors*, or *squad* [eg, *suicide squad*] was omitted). Raw counts were computed using Py-

thon software (version 3.0; Python Software Foundation), and volumes were compared between the 2 searches.

**Results** | We located 42 500 news stories, 972 500 tweets, and 14.7 million searches referencing Lovato the week after her overdose (Table). Of these, 25 300 news stories, 342 200 tweets, and 1.2 million searches mentioned opioids or heroin. In contrast, 216 news stories, 258 tweets, and 8000 searches referenced 800-662-HELP; the latter volume was consistent with that of the mean 90 days before Lovato's overdose (7300; 95% CI, 6200-8200).

In comparison, after Bourdain's suicide we found 4940 news stories, 20 900 tweets, and 29 000 searches for the National Suicide Lifeline, reflecting 22.9, 81.0, and 3.6 times greater volume. These disparities persist even after factoring in general interest in Bourdain or suicide (eg, *Bourdain* was cited in fewer news stories [22 400] and *suicide* was cited in tweets 6.2 times more [2 117 000] than comparative findings after Lovato's overdose).

**Discussion** | 800-662-HELP appears to be underappreciated in the media and among the public at large. Additional surveillance is needed to clarify our formative findings, because our keyword-based analyses may have omitted some forms of addiction resource promotion, and our contrasted case studies of Lovato and Bourdain may not be indicative of broader patterns outside these events. Nevertheless, the dearth of engagement with 800-662-HELP we found can help to motivate strategies for health leaders, news makers, and media companies to promote 800-662-HELP.

The World Health Organization created guidelines around suicide news reporting, standardizing the practice of including suicide helpline numbers, which appears to be effective.<sup>4</sup> Similar guidelines for 800-662-HELP are warranted, such as imploring news reporters to include 800-662-HELP in their stories on addiction.

Social media and internet search companies could themselves promote 800-662-HELP. Bing and Google place sui-

Table. Engagement With Federally Backed Helplines 1 Week After a Celebrity Overdose and Suicide

Source	Key Words, No. of Mentions or Searches <sup>a</sup>					
	Demi Lovato Overdose			Anthony Bourdain Suicide		
	<i>Lovato</i>	<i>Opioid</i> or <i>Heroin</i>	<i>800-662-HELP</i> <sup>b</sup>	<i>Bourdain</i>	<i>Suicide</i> <sup>c</sup>	<i>800-273-TALK</i> <sup>b</sup>
Google News	42 500	25 300	216	22 400	120 000	4940
Twitter	972 500	342 200	258	2 205 300	2 117 000	20 900
Google search	14 700 000	1 200 000	8000	18 900 000	3 827 000	29 000

<sup>a</sup> Counts reflect weekly volumes for news stories archived on the study sources 1 week after Lovato's overdose (July 24, 2018) and Bourdain's suicide (June 8, 2018).

<sup>b</sup> Raw Google search volumes were estimated by monitoring queries per 10

million, with the denominator inferred from comScore summaries. Searches for *help* or *helpline* were also included to capture those searching for these national hotlines.

<sup>c</sup> Excludes matching content that also included *blast*, *bomber*, *doors*, or *squad*.

cide hotline numbers as the reserved first result for suicide method searches, such as *I want to kill myself*. Likewise, social media companies have implemented strategies to reach suicidal users who need help.<sup>5</sup> Similar efforts could be applied to drug addiction, with industry prioritizing 800-662-HELP within their platforms when their users seek out help.

The managers of 800-662-HELP could use search engine and smartphone-based conversational agent (ie, Siri) optimization to fill existing awareness gaps without relying on media companies themselves.<sup>6</sup> Moreover, replicating mass media campaigns, such as how Tips From Former Smokers promotes the smoker's helpline, might also insert 800-662-HELP into the national conversation, thereby engendering broader free media coverage. The result of these changes will mean more of those who need help know of 800-662-HELP, and tragedies, like that besetting Lovato, could have a positive effect on public health.

**John W. Ayers, PhD, MA**  
**Alicia L. Nobles, PhD, MS**  
**Mark Dredze, PhD**

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

**Accepted for Publication:** September 29, 2018.

**Corresponding Author:** John W. Ayers, PhD, MA, Division of Infectious Diseases and Global Public Health, Department of Medicine, University of California, San Diego, 9500 Gilman Dr, CRSF Room 333, La Jolla, CA 92093 (ayers.john.w@gmail.com).

**Published Online:** January 14, 2019. doi:10.1001/jamainternmed.2018.6562

**Author Contributions:** Dr Ayers had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

**Concept and design:** All authors.

**Acquisition, analysis, or interpretation of data:** All authors.

**Drafting of the manuscript:** All authors.

**Critical revision of the manuscript for important intellectual content:** Ayers, Dredze.

**Statistical analysis:** Ayers, Dredze.

**Administrative, technical, or material support:** Nobles, Dredze.

**Supervision:** Dredze.

**Conflict of Interest Disclosures:** None reported.

1. Center for Behavioral Health Statistics and Quality. *Results from the 2015 National Survey on Drug Use and Health*. Rockville, MD: Substance Abuse and Mental Health Services Administration; 2016.
2. Park A. Singer Demi Lovato hospitalized for suspected heroin overdose. *CBS News*. <https://www.cbsnews.com/news/demi-lovato-reportedly-hospitalized-for-overdose/>. Published July 24, 2018. Accessed July 29, 2018.
3. 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
4. World Health Organization (WHO) International Association for Suicide Prevention; Department of Mental Health and Substance Abuse. Preventing suicide: a resource guide for media professionals. [http://www.who.int/mental\\_health/prevention/suicide/resource\\_media.pdf](http://www.who.int/mental_health/prevention/suicide/resource_media.pdf). Accessed June 29, 2018.
5. Buchwald E. What happens when you Google for suicide methods. *MarketWatch*. <https://www.marketwatch.com/story/from-apps-to-search-results-how-tech-companies-are-trying-to-prevent-suicide-2018-06-09>. Accessed October 11, 2018.
6. Miner AS, Milstein A, Schueller S, Hegde R, Mangurian C, Linos E. Smartphone-based conversational agents and responses to questions about mental health, interpersonal violence, and physical health. *JAMA Intern Med*. 2016;176(5):619-625. doi:10.1001/jamainternmed.2016.0400