Alcohol use disorder narratives in U.S. digital news coverage and engagement on social media

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Abstract

Social media regularly serves as a source of news and health-related information subsequently shaping public opinion and behavior. We examined mainstream digital news narratives about alcohol use disorder (AUD), including coverage of solutions to AUD, and associations between narratives and engagement on social media. AUD-related articles (N = 339) published in top U.S. newspapers and digital native news sources in 2019 were analyzed by trained coders with a structured codebook (κ = 0.75), examining characteristics of stories highlighting specific individuals affected by AUD and solution-framing of AUD. Facebook shares were used as a proxy measure for an article's potential "reach" on social media. Of articles focused on individuals (72.0%), most (62.7%) depicted individuals affected by AUD as criminals, as opposed to engaging with alcohol treatment or being in recovery (31.1%). These criminal depictions received over eight times as many FB shares, compared to alcohol use treatment or recovery depictions. Law enforcement solutions (63.9%) were depicted most often, followed by AUD-treatment oriented solutions (40.1%), and prevention-oriented solutions (15.8%). Law enforcement solutions received more than five times as much social media engagement than AUD-treatment oriented solutions and over twenty-nine times more engagement than prevention-oriented solutions. There is a need to increase news coverage featuring depictions of individuals who have successfully engaged with alcohol treatment and recovery, reflecting the millions of Americans who have resolved a significant past alcohol problem. News coverage of AUD should also incorporate more depictions of evidence-based prevention-oriented and treatment-oriented solutions to AUD.

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Keywords

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INTRODUCTION

Over half (53%) of Americans regularly use social media as a source of news information, with Facebook (FB) serving as a regular source of news for one out of every three Americans (Pew Research Center, 2021). Moreover, the majority of Americans rely on online media sources, such as digital news media and social media, for *health-related information* (Pew Research Center, 2013). Often times, this health-related information is presented via digital news articles published by media outlets and then shared through formal (e.g., news agency social media accounts, such as CNN) and informal social media accounts (i.e., individual social media users) to broad audiences. Thus, digital news articles have the ability to shape public perception(s) about health issues via agenda setting (i.e., giving certain topics the most attention) and media framing (i.e., emphasizing certain aspects of an issue over others; Scheufele & Tewksbury, 2007). More specifically, news media coverage often relies on depictions of a specific individual experiencing a health issue (e.g., addiction), thus allowing audiences to generalize those characteristics to the entire population with similar afflictions (Avery & Avery, 2019). Additionally, news media coverage often implements a "solution frame" (i.e., directly states or implies that a particular solution is best suited to resolve a problem) which, in turn, influences individuals' knowledge of and preference for solutions to address the issue (Avery & Avery, 2019).

The social construction of target populations framework asserts that social constructions are stereotypes about particular groups of people with shared characteristics (i.e., target populations) created by politics, the media, and culture, and which serve to influence the agendas and designs of policies concerning aforementioned target populations (Schneider & Ingram, 1993). When target populations are highly stigmatized and ascribed with negative constructions or stereotypes (e.g., dishonest, selfish, undeserving, criminals) – such as those affected by substance use disorder (SUD) – the public are more likely to support punitive policies, rather than policies intended to help such populations. In the case of news media coverage of SUD, individuals who suffer from SUD are often portrayed in a negative light (e.g. having weak moral character, exhibiting violent or criminal activity) and as reluctant or unwilling to engage in substance use treatment or recovery support services (Avery & Avery, 2019; McGinty et al., 2016). Despite recommended guidelines for the use of less stigmatizing verbiage from the Associated Press (2017) regarding SUD media coverage, the use of stigmatizing language in news media remains commonplace (McGinty et al., 2019). Generally, SUD has also been presented as a criminal justice issue, as opposed to a public health issue (McGinty et al., 2016; McGinty et al., 2019). For instance, news media stories covering solutions to the opioid epidemic from 1998–2012 featured law enforcement-centric approaches 64% of the time, while referring to expansion of substance use treatment in less than 5% of stories (McGinty et al., 2016). However, a follow-up study revealed solution-oriented news media coverage of the opioid crisis from 2013–2017 mentioned substance use treatment approaches in one of every three stories, while criminal justice

approaches were featured in one out of every five stories (McGinty et al., 2019). Though this increased emphasis on coverage of public health-oriented solutions to SUD is encouraging, the portrayal of successful examples of these solutions (i.e., recovery narratives) remain scant. Consequently, media depictions may foster stigmatizing attitudes among the general public, medical and healthcare professionals, and policy makers, while also reinforcing fear of discrimination and delays in treatment-seeking behaviors among those with SUD or who are in recovery (Atayde et al., 2021; Kelly et al., 2010; Kelly & Westerhoff, 2010; McGinty et al., 2015; Schomerus et al., 2011).

While prior research has largely focused on news coverage of the opioid crisis in mainstream news media, this investigation is novel in that we sought to examine digital news media coverage of content related to *alcohol use disorder (AUD) and AUD recovery* – accounting for engagement with aforementioned content on social media (FB shares). Though harmful alcohol use remains a public health priority in the United States and is the third leading cause of preventable death (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016; SAMHSA, 2020), alcohol use typically receives less media attention than other illicit drug use, which contributes to the public perception that AUD may not be as pressing of an issue as other drug use disorders (Avery & Avery, 2019; Fan, 1996). To address this gap, we sought to examine mainstream digital news media coverage of AUD, including media framing (i.e., individual depictions of those affected by AUD, news coverage of specific AUD solutions) and how these factors are associated with diffusion on social media (FB shares). Though this investigation was exploratory in nature, previous studies exploring related topics – such as news media coverage of the opioid crisis (McGinty et al., 2016, 2019) – contributed to the development of the following guiding research questions:

1. How does news coverage related to AUD tend to depict individuals who suffer from current or past alcohol problems (e.g., as being violent or involved in criminal activity vs. being engaged in any capacity with alcohol treatment or recovery support services)?

2. To what degree do news stories focusing on AUD emphasize different purported solutions to AUD, including criminal justice-oriented solutions (e.g., arrests and/or prosecutions), public health prevention-oriented solutions (e.g., educating individuals about the dangers and proper use of alcohol, restricting and reducing alcohol marketing), and AUD treatment-oriented solutions (e.g., medications to help people stop or reduce their drinking, mutual-support groups, expansion of substance use treatment)?

3. Does news story social media engagement (number of Facebook shares) differ based on the type of individual depictions or AUD solutions depicted?

METHODS

Data collection

Media Cloud (www.mediacloud.org) – an open-source platform for studying media ecosystems – was used to identify and collect digital news articles related to AUD and/or

AUD recovery published between January 2019 to December 2019. Data were collected in May 2021. An original query using the stem word "alcohol" was first applied to gather digital news articles related to the broad topic of alcohol (i.e., any word in the news article was "alcohol; N = 45,980) from 87 top U.S. newspapers (e.g., New York Times, Los Angeles Times, New York Post, The Wallstreet Journal, USA Today, etc.) and digital native news sources (e.g., Huffington Post, BuzzFeed, Bleacher Report, TMZ, etc.). To narrow the scope of data for relevance to AUD or AUD recovery, a filter employing Boolean operators and using the following search terms was implemented: alcohol use disorder, alcoholism, alcohol abuse, alcohol abuser, alcohol dependence, alcoholic*, drunk*, alcohol addiction, alcohol treatment, alcohol recovery, alcoholics anonymous. Application of specific search terms narrowed the scope of news articles to 15,872. For feasibility of human annotation, we extracted a 5% random subsample (n = 794) for subsequent content analysis. We then excluded any stories that did not discuss hazardous alcohol use (e.g., binge drinking, intoxication, blacking out), alcohol use disorder (e.g., addiction, dependence), or recovery from alcohol use disorder (i.e., attempts to cut down on or abstain from alcohol use), resulting in a final analytic sample of 339 news stories from 160 news sources (see Table 1).

Codebook development and coding procedures

To facilitate the coding process, the source for each digital news article and associated meta data were exported to a spreadsheet outlining the title of the news article, publication date, publication outlet, number of FB shares, as well as a link to the original entire article. To guide content analysis of each digital news article, a codebook was adapted from prior work examining news media coverage of the opioid crisis (e.g., depictions of individuals affected by AUD, solutions to AUD; McGinty et al., 2016). A separate sample of 25 pilot articles was first annotated by the lead and second author, where disagreements were adjudicated, and codebook definitions were refined and finalized. For the final sample, the first 100 news articles were independently double-coded by both annotators. Cohen's Kappa values ranged from 0.66–0.91 (average Cohen's κ = 0.75), indicating sufficient inter-rater reliability for categorical coding variables (see Tables 2 and 3); thus, the two coders each independently coded approximately half of the remaining 239 news articles in the final dataset.

Measures

Final coding categories broadly represented two types of news media depictions: (1) depictions highlighting specific individuals affected by AUD (see Table 2), and (2) solution-framing of AUD (see Table 3).

Individual depictions.—First, we assessed whether news articles related to AUD and recovery utilized a depiction of a specific individual affected by AUD in their coverage (yes/no). For stories employing an individual depiction, we then coded for the presence of the following characteristics (yes/no) of the individual/s depicted: 1) any involvement in criminal activity (e.g., public intoxication, DWI, or DUI, robbery, sexual assault, child abuse, homicide, use of illicit drugs in addition to alcohol), 2) receiving any type of alcohol treatment or any involvement in 12-step recovery (e.g., AA) or other mutual help-groups (e.g., SMART Recovery), and 3) celebrity status.

Solution-framing.—We further examined whether news articles discussed any purported solutions to AUD (yes/no). For those utilizing a particular AUD solution-frame, we coded for the presence of three broad categories: 1) law enforcement solutions (i.e., arrests and prosecutions of individuals with alcohol-related problems), 2) public health prevention-oriented solutions, and 3) AUD treatment-oriented solutions. For stories including any prevention-oriented solution, we then coded for the presence of particular prevention strategies (i.e., educating individuals about the dangers and proper use of alcohol, changing warning labels on alcoholic beverages, restricting the location of alcohol outlets and/or limiting the number of outlets that can be licensed within a given area, increasing alcohol prices or alcohol taxes, and restricting alcohol marketing). For coverage employing any AUD treatment solution-framing, we coded for the presence of the following treatment-oriented strategies: 1) medications to help people stop or reduce their drinking (e.g., naltrexone, acamprosate, disulfiram), 2) behavioral/psychological treatments provided by licensed therapists aimed at changing drinking behavior (e.g., brief interventions, such as motivational interviewing; contingency management; cognitive behavioral therapy; mindfulness-based approaches), 3) mutual-support groups providing peer support for stopping or reducing drinking (e.g., AA or SMART Recovery), and 4) expansion of substance use treatment or recovery support services (e.g., recovery community centers).

Digital news article potential reach.—As an indicator of potential digital reach, we utilized data provided by Media Cloud (via CrowdTangle) to document the number of FB shares associated with each digital news article and then applied a multiplier for an average Facebook user's number of Facebook friends (155 friends; Dunbar, 2016), a method previously employed by Beletsky et al. (2020) to capture the upper bound on the total number of potential user-views of each article. In other words, this metric assumes that each Facebook user who shares an article will result in an average of 155 potential views by their Facebook friends.

Analysis

A content analysis approach was employed, utilizing descriptive statistics (i.e., frequencies and percentages) to quantitatively describe the presence of dichotomous coding variables (i.e., characteristics of individual depictions, AUD solution-framing) within the news articles. To account for reach on social media across varying types of AUD and recovery-related news depictions, we report the number of FB shares multiplied by an average user's number of online 'friends' (i.e., 155).

RESULTS

RQ1 – Individual depictions: "How does news coverage related to AUD tend to depict individuals who suffer from current or past alcohol problems?"

The majority (72.0%) of news articles from the corpus of digital news media coverage depicting AUD or AUD recovery centered stories on singular persons affected by AUD. Of articles utilizing individual AUD depictions, far more articles (62.7%) depicted these individuals as being involved in criminal or illegal activity, as opposed to engaging with some form of alcohol treatment or any involvement in 12-step recovery or other mutual

help groups (31.1%). The five most frequently used criminal depictions were: 1) public intoxication, driving while intoxicated (DWI), and/or driving under the influence (DUI; 29.9%), 2) use of illicit drugs in addition to alcohol (23.4%), 3) homicide (8.6%), 4) sexual assault (6.1%), and 5) aggravated assault (6.1%).

RQ2 – Solution-framing: "To what degree do news stories focusing on AUD emphasize different purported solutions to AUD, including criminal justice-oriented solutions, public health prevention-oriented solutions, and AUD treatment-oriented solutions?"

Over half of news stories (59.6%) mentioned a specific solution to AUD. Of articles mentioning a specific solution, law enforcement solutions (63.9%) were depicted most often, followed by AUD-treatment oriented solutions (40.1%), and prevention-oriented solutions (15.8%). Law enforcement solutions for individuals with alcohol-related problems was implied as a solution in almost two-thirds (63.9%) of articles depicting any type of solution to AUD. Prevention-oriented solutions to AUD were only mentioned in approximately one out of every six solution-oriented articles (15.8%). In articles discussing prevention-oriented solutions, educating individuals about the health and physical effects of alcohol was featured most often (10.4%), followed by increasing alcohol prices or taxes (3.5%), restricting and reducing alcohol marketing (3.0%), restricting the location of alcohol outlets or limiting the number of outlets that can be licensed within a given area (3.0%), and changing warning labels on alcoholic beverages (0.5%). AUD news articles highlighting a particular solution depicted treatment-oriented solutions in less than half of articles (40.1%). Of news coverage emphasizing AUD-treatment oriented solutions, expanding substance use treatment or recovery support services (22.8%) was mentioned most frequently, followed by mutual-support groups providing peer support for stopping or reducing drinking (16.8%), behavioral/psychological treatments provided by licensed therapists aimed at changing drinking behavior (13.4%), and medications to help people stop or reduce their drinking (5.5%).

RQ3 – Digital Reach: "Does news story social media engagement (number of Facebook shares) differ based on the type of individual depictions or AUD solutions depicted?"

Individualized criminal depictions received over eight times as many FB shares (237,291) and potential user views (36,780,105) compared to depictions of individuals engaging with alcohol use treatment or involvement in recovery (27,503 FB shares; 4,262,965 user views). Stories depicting use of illicit drugs (147,119 FB shares) and sexual assault (52,984 FB shares) received the most social media engagement. Law enforcement solutions received 182,799 FB shares and 28,333,845 potential user views – more than five times as much social media engagement than AUD-treatment oriented solutions and over twenty-nine times more engagement than prevention-oriented solutions.

DISCUSSION

Media coverage of AUD and recovery likely plays an important role in shaping public perceptions of (a) AUD, (b) individuals experiencing AUD, and (c) potential solutions to AUD (Schneider & Ingram, 1993). AUD is a treatable health condition with many evidence-based treatment offerings (Witkiewitz et al., 2019). Moreover, many persons with AUD do

indeed recover (Jones et al., 2020; Kelly et al., 2017). Nevertheless, most digital news media coverage in our sample relied on portrayals of singular individuals and characterized these persons as criminals who rarely engaged with any form of alcohol treatment or recovery support services. Portrayals such as these may foster stigmatizing beliefs that alcohol treatment is ineffective or that persons with AUD rarely achieve recovery. However, the majority (75%) of individuals with lifetime substance use problems report being in recovery or having recovered from their substance use problem (Jones et al., 2020). In fact, more than 20 million Americans have reported resolving a past alcohol or drug problem (Jones et al., 2020; Kelly et al., 2017). There is a need for increased news coverage depicting individuals who have successfully engaged with various types of alcohol treatments, so they may serve as a successful recovery narrative and example of the millions of Americans who have resolved a significant past alcohol problem.

Similarly, news articles in our sample more often framed AUD as a criminal justice problem needing criminal justice solutions – rather than public health-oriented solutions – and rarely portrayed AUD as a treatable health condition. These findings are in line with the social construction of target populations framework and other studies demonstrating that mainstream news media coverage focuses on the opioid crisis as primarily a criminal justice issue (McGinty et al., 2016; McGinty et al., 2019). There is evidence that alcohol prevention policies, such as increasing alcohol taxes and/or regulating alcohol outlet density, are associated with decreases in alcohol consumption and reductions in alcohol-related harms (Campbell et al., 2009; Elder et al., 2010); however, AUD news media coverage featured in our study rarely portrayed such prevention-oriented solutions. Similarly, AUD treatment-oriented solutions were depicted less often than law enforcement solutions and received less engagement on social media. For instance, there are currently three medications approved by the U.S. Food and Drug Administration, that can be used alone or in combination with behavioral treatments or mutual-support groups, to help people stop or reduce their drinking (i.e., naltrexone, acamprosate, disulfiram; Witkiewitz et al., 2019). These medications were rarely mentioned. This finding is in line with media coverage of treatment solutions for opioid use disorder, in which medication treatment was rarely mentioned as a solution to the opioid epidemic (McGinty et al., 2019). While there has been a growing recognition of the need to decrease emphasis on law enforcement-based approaches to SUD and increase support for policies expanding SUD treatment, stigma and discrimination among policymakers, clinicians, and the general public persist as a public health threat to individuals struggling with alcohol and other drug use disorders (Kilian et al., 2021; Schomerus et al., 2011; Van Boekel et al., 2013). Efforts should be made to increase news media coverage of the various evidence-based public health prevention-oriented approaches to AUD (e.g., education, alcohol outlet restrictions) and efficacious AUD treatment options (e.g., medications, behavioral/psychological treatments), as well as to reduce stigma associated with AUD and alcohol treatment-seeking behaviors.

Limitations

This study was not without limitations. First, our sample of news stories was collected from a single year (2019), and thus, we were unable to examine changing trends in news coverage of AUD and recovery. Given recent shifts in funding for policies supporting

expansion of substance use treatment, there may be a need for follow-up investigation to examine changing trends in media coverage of AUD and to understand whether and how this news content shapes public opinion. Although we accounted for news coverage from 87 top U.S. newspapers and digital native news sources, we are unable to generalize our findings to digital news coverage more broadly and delivered via other news outlets. Additionally, while we accounted for diffusion of news stories on social media by using FB shares and an average FB friends multiplier, this measure provides a crude understanding of potential reach and reflects the non-normal (i.e., viral) nature of social media content sharing. Moreover, our analyses did not assess how exposure to AUD and recovery digital news media influences public opinion. Lastly, manual coding of content in news articles included in the sample may be prone to bias. To mitigate this limitation, we implemented an iterative process to codebook development, conducted extensive pilot coding exercises, and assessed interrater reliability.

Conclusions

Findings associated with our examination of mainstream digital news coverage of AUD indicate most coverage portrayed individuals with AUD as criminals, rather than as individuals who have engaged with any form of alcohol treatment or who have resolved their alcohol problems and achieved stable recovery. Similarly, news media coverage often presented law enforcement solutions as a means through which to address AUD, as opposed to prevention-oriented or treatment-oriented solutions. Finally, stories emphasizing law enforcement solutions received more social media engagement and greater reach. Overall, there is a need to shift how news coverage discusses AUD in the United States. At minimum, the characterization of persons with AUD as criminals or violent persons should be addressed. Along these lines, less discussion of law-enforcement solutions and approaches is needed, and there should be a greater emphasis on treatment and prevention engagement. Successful recovery narratives, though many, are rarely featured in mainstream digital news sources.

REFERENCES

Atayde AMP, Hauc SC, Bessette LG, Danckers H, Atayde AMP, Hauc SC, Bessette LG, & Danckers H (2021). Changing the narrative: A call to end stigmatizing terminology related to substance use disorders. Addiction Research & Theory, 29(5), 1–4. 10.1080/16066359.2021.1875215

Avery JD, & Avery JJ (2019). The stigma of addiction: An essential guide. Springer. 10.12968/denn.2018.14.7.330

Beletsky L, Seymour S, Kang S, Siegel Z, & Sinha MS (2020). Fentanyl panic goes viral: The spread of misinformation about overdose risk from casual contact with fentanyl in mainstream and social media. International Journal of Drug Policy, 86, 102951. 10.1016/j.drugpo.2020.102951 [PubMed: 32949901]

Campbell CA, Hahn RA, Elder R, Brewer R, Chattopadhyay S, Fielding J, Naimi TS, Toomey T, Lawrence B, & Middleton JC (2009). The effectiveness of limiting alcohol outlet density as a means of reducing excessive alcohol consumption and alcohol-related harms. American Journal of Preventive Medicine, 37(6), 556–569. 10.1016/j.amepre.2009.09.028 [PubMed: 19944925]

Dunbar RIM (2016). Do online social media cut through the constraints that limit the size of offline social networks? Royal Society Open Science, 3(1). 10.1098/rsos.150292

Elder RW, Lawrence B, Ferguson A, Naimi TS, Brewer RD, Chattopadhyay SK, Toomey TL, & Fielding JE (2010). The effectiveness of tax policy interventions for reducing excessive alcohol

consumption and related harms. American Journal of Preventive Medicine, 38(2), 217–229. 10.1016/j.amepre.2009.11.005 [PubMed: 20117579]

Fan DP (1996). News media framing sets public opinion that drugs is the country's most important problem. Substance Use & Misuse, 31(10), 1413–1421. [PubMed: 8879081]

Jones CM, Noonan RK, & Compton WM (2020). Prevalence and correlates of ever having a substance use problem and substance use recovery status among adults in the United States, 2018. Drug and Alcohol Dependence, 214(June), 108169. 10.1016/j.drugalcdep.2020.108169 [PubMed: 32682218]

Kelly JF, Bergman B, Hoeppner BB, Vilsaint C, & White WL (2017). Prevalence and pathways of recovery from drug and alcohol problems in the United States population: Implications for practice, research, and policy. Drug and Alcohol Dependence, 181(August), 162–169. 10.1016/j.drugalcdep.2017.09.028 [PubMed: 29055821]

Kelly JF, Dow SJ, & Westerhoff C (2010). Does our choice of substance-related terms influence perceptions of treatment need? An empirical investigation with two commonly used terms. Journal of Drug Issues, 10(4), 805–818. 10.1177/002204261004000403

Kelly JF, & Westerhoff CM (2010). Does it matter how we refer to individuals with substance-related conditions? A randomized study of two commonly used terms. International Journal of Drug Policy, 21(3), 202–207. 10.1016/j.drugpo.2009.10.010 [PubMed: 20005692]

Kilian C, Manthey J, Carr S, Hanschmidt F, Rehm J, Speerforck S, & Schomerus G (2021). Stigmatization of people with alcohol use disorders: An updated systematic review of population studies. Alcoholism: Clinical and Experimental Research, 45(5), 899–911. 10.1111/acer.14598 [PubMed: 33970504]

McGinty EE, Goldman HH, Pescosolido B, & Barry CL (2015). Portraying mental illness and drug addiction as treatable health conditions: Effects of a randomized experiment on stigma and discrimination. Social Science and Medicine, 126, 73–85. 10.1016/j.socscimed.2014.12.010 [PubMed: 25528557]

McGinty EE, Kennedy-Hendricks A, Baller J, Niederdeppe J, Gollust S, & Barry CL (2016). Criminal activity or treatable health condition? News media framing of opioid analgesic abuse in the United States, 1998–2012. Psychiatric Services, 67(4), 405–411. 10.1176/appi.ps.201500065 [PubMed: 26620290]

McGinty EE, Stone EM, Kennedy-Hendricks A, Sanders K, Beacham A, & Barry CL (2019). U.S. news media coverage of solutions to the opioid crisis, 2013–2017. Preventive Medicine, 126(February), 105771. 10.1016/j.ypmed.2019.105771 [PubMed: 31325526]

Pew Research Center. (2013). Majority of adults look online for health information. https://www.pewresearch.org/fact-tank/2013/02/01/majority-of-adults-look-online-for-health-information/

Pew Research Center. (2021). News use across social media platforms in 2020. https://www.journalism.org/2021/01/12/news-use-across-social-media-platforms-in-2020/

Scheufele DA, & Tewksbury D (2007). Framing, agenda setting, and priming: The evolution of three media effects models. Journal of Communication, 57(2007), 9–20. 10.1111/j.1460-2466.2006.00326.x

Schneider A & Ingram H (1993). Social construction of target populations: Implications for politics and policy. The American Political Science Review, 87(2), 334–347. 10.2307/2939044

Schomerus G, Lucht M, Holzinger A, Matschinger H, Carta MG, & Angermeyer MC (2011). The stigma of alcohol dependence compared with other mental disorders: A review of population studies. Alcohol and Alcoholism, 46(2), 105–112. 10.1093/alcalc/agq089 [PubMed: 21169612]

Substance Abuse and Mental Health Services Administration (US); Office of the Surgeon General (US). (2016). Highlights of the Surgeon General's report on alcohol, drugs, and health: At-a-glance key messages of the Surgeon General's report. https://www.ncbi.nlm.nih.gov/books/NBK424857/pdf/Bookshelf_NBK424857.pdf

Substance Abuse and Mental Health Services Administration. (2020). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health. HHS Publication No. PEP19–5068, NSDUH Series H-54, 170, 51–58. https://www.samhsa.gov/data/

Van Boekel LC, Brouwers EPM, Van Weeghel J, & Garretsen HFL (2013). Stigma among health professionals towards patients with substance use disorders and its consequences for

healthcare delivery: Systematic review. Drug and Alcohol Dependence, 131(1–3), 23–35. 10.1016/j.drugalcdep.2013.02.018 [PubMed: 23490450]

Witkiewitz K, Litten RZ, & Leggio L (2019). Advances in the science and treatment of alcohol use disorder. Science Advances, 5(9). 10.1126/sciadv.aax4043

Table 1

Top 20 news sources (n = 160) for articles included in final sample (N = 339)

Variable	Number of articles (%)
Fox News	14 (4.1%)
US News & World Report	9 (2.7%)
USA Today	8 (2.4%)
AZCentral	7 (2.1%)
Guardian	7 (2.1%)
New York Post	7 (2.1%)
Washington Post	7 (2.1%)
CNN	6 (1.8%)
HuffPost	6 (1.8%)
New York Times	6 (1.8%)
Seattle Times	6 (1.8%)
US Weekly	6 (1.8%)
Vice	6 (1.8%)
Newsweek	5 (1.5%)
Rolling Stone	5 (1.5%)
Columbus Dispatch	4 (1.2%)
Inquisitr	4 (1.2%)
ledger-enquirer.com	4 (1.2%)
NPR	4 (1.2%)
San Diego Union Tribune	4 (1.2%)

Table 2

News media stories depicting individuals affected by alcohol use disorder, 2019 (N = 339)

Variable (κ)	N (%)	FB shares	Potential User Views
Any depiction of an individual affected by AUD (κ = 0.80)	244 (72.0%)	248,389	38,500,295
Characteristics of individuals depicted (*N* = 244) **[not mutually exclusive]**			
Criminal depiction (κ = 0.75)			
Any involvement in criminal or illegal activity	153 (62.7%)	237,291	36,780,105
Public intoxication, DWI, or DUI	73 (29.9%)	7,338	1,137,390
Robbery	3 (1.2%)	148	22,940
Sexual assault	15 (6.1%)	52,984	8,212,520
Aggravated assault	15 (6.1%)	1,740	269,700
Intimate partner violence	13 (5.3%)	3,895	603,725
Child abuse	13 (5.3%)	25,009	3,876,395
Homicide	21 (8.6%)	7,391	1,145,605
Use of illicit drugs in addition to alcohol	57 (23.4%)	147,119	22,803,445
Celebrity (κ = 0.85)	101 (41.4%)	29,218	4,528,790
Non-athlete	62 (25.4%)	25,129	3,894,995
Athlete	24 (9.8%)	1,986	307,830
Politician	15 (6.1%)	2,103	325,965
Treated alcohol use depiction (κ = 0.66)			
Receiving any type of alcohol treatment or any involvement in 12-step recovery (e.g., AA) or other mutual-help groups (e.g., SMART recovery)	76 (31.1%)	27,503	4,262,965
Treating categories as mutually exclusive (*N* = 244)			
Criminal depiction only	78 (32.0%)	196,568	30,468,040
Celebrity depiction only	20 (8.2%)	459	71,145
Treated alcohol use depiction only	14 (5.7%)	1,810	280,550
Criminal and celebrity depiction	34 (13.9%)	18,181	2,818,055
Criminal and treated alcohol use depiction	15 (6.1%)	15,115	2,342,825
Celebrity and treated alcohol use depiction	21 (8.6%)	3,151	488,405
Criminal, celebrity, and treated alcohol use depiction	26 (10.7%)	7,427	1,151,185
Depictions of individuals affected by AUD, but not including criminal, celebrity, or treated alcohol use depictions	36 (14.8%)	5,678	880,090

Note: For depictions of any individuals affected by AUD, proportions were calculated for the total number of news stories (N = 339). For mentions of specific characteristics of individuals depicted, proportions were calculated for the subset of news stories that depicted any individual affected by AUD (N = 244).

Table 3

News media mentions of solutions to alcohol use disorder, 2019 (N = 339)

Variable (κ)	N (%)	FB shares	Potential User Views
Any mention of a solution to AUD ($\kappa = 0.86$)	202 (59.6%)	213,903	33,154,965
Types of solutions depicted ($N = 202$) **[not mutually exclusive]**			
Law enforcement solutions ($\kappa = 0.91$)	129 (63.9%)	182,799	28,333,845
Arrests and prosecutions of individuals with alcohol-related problems	129 (63.9%)	182,799	28,333,845
Prevention-oriented solutions ($\kappa = 0.79$)	32 (15.8%)	6,229	965,495
Educating individuals about the dangers and proper use of alcohol	21 (10.4%)	4,480	694,400
Changing warning labels on alcoholic beverages	1 (0.5%)	0	0
Restricting the location of alcohol outlets or limiting the number of outlets that can be licensed within a given area	6 (3.0%)	1,460	226,300
Increasing alcohol prices or alcohol taxes	7 (3.5%)	1,690	261,950
Restricting and reducing alcohol marketing	6 (3.0%)	529	81,995
AUD treatment-oriented solutions ($\kappa = 0.74$)	81 (40.1%)	31,943	4,951,165
Medications to help people stop or reduce their drinking (e.g., naltrexone, acamprosate, disulfiram)	11 (5.5%)	21,987	3,407,985
Behavioral/psychological treatments provided by licensed therapists aimed at changing drinking behavior (e.g., brief interventions, such as motivational interviewing; contingency management; cognitive behavioral therapy; mindfulness-based approaches)	27 (13.4%)	18,848	2,921,440
Mutual-support groups providing peer support for stopping or reducing drinking (e.g., AA, SMART Recovery)	34 (16.8%)	20,852	3,232,060
Expanding substance use treatment or recovery support services (e.g., recovery community centers)	46 (22.8%)	28,218	4,373,790
Treating categories as mutually exclusive ($N = 202$)			
Law enforcement solutions only	100 (49.5%)	180,868	28,034,540
Prevention-oriented solutions only	14 (6.9%)	807	125,085
AUD treatment-oriented solutions only	49 (24.3%)	25,209	3,907,395
Law enforcement and prevention solutions	7 (3.5%)	295	45,725
Law enforcement and AUD treatment solutions	21 (10.4%)	1,607	249,085
AUD treatment and prevention solutions	10 (5.0%)	5,098	790,190
Law enforcement, prevention, and AUD treatment solutions	1 (0.5%)	29	4,495

Note: For mentions of any AUD solution, proportions were calculated for the total number of news stories (N = 339). For mentions of specific AUD solutions, proportions were calculated for the subset of news stories that mentioned any solution (N = 202).