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Alcohol screening and brief intervention in a representative sample of veterans receiving primary care services

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ABSTRACT

Aims: Unhealthy alcohol use is common among adults, and in particular, Veterans. Routine alcohol screening followed by brief intervention is recommended and considered a prevention priority in primary care settings. While previous studies have found that Veterans enrolled in the Veteran's Health Administration (VA) receive high rates of screening and brief intervention, less than 50% of Veterans receive VA health care. No study has evaluated receipt of these services in a general sample of Veterans. Therefore, in a nationally-representative sample, we examine whether Veteran status was associated with receiving alcohol screening and brief intervention in primary care.

Methods: Using the Centers for Disease Control and Prevention's 2014 Behavioral Risk Factor Surveillance System data, we identified adults who endorsed visiting a doctor for routine checkup at least once in the past two years and responded to an optional module assessing alcohol-related care (N = 92,206; 14.1% Veterans). Multivariable logistic regression was used to assess the association between Veteran status and screening and brief intervention outcomes. We also evaluate differences in alcohol-related care across Veteran status stratified by gender. Models were adjusted for sociodemographic and clinical characteristics likely to confound the association.

Results: Overall, Veterans were more likely than non-Veterans to be screened for alcohol quantity and heavy episodic drinking (*ps* < 0.05), and more likely to endorse receiving brief intervention advice about alcohol's harmful effects ($p < .001$). Veteran status predicted an increased likelihood of being screened and receipt of advice about alcohol's harmful effects, but did not predict the likelihood of receiving advice to reduce or abstain from drinking (AOR = 1.00, 95% C.I. [0.80–1.26]). Analyses stratified by gender indicated a similar pattern of results for males as the overall sample. Results among females indicated Veteran status predicted the likelihood of being asked about heavy episodic drinking (AOR = 1.47, 95% C.I. [1.09–1.99]) and being offered advice about the harmful effects of alcohol (AOR = 1.62, 95% C.I. [1.06–2.48]). Female Veterans were not more likely than female non-Veterans to be advised to reduce and/or abstain from drinking.

Conclusions: Screening about any alcohol use was common while report of screening for quantity and heavy episodic drinking occurrence and report of brief intervention were less common. Veterans were more likely than non-Veterans to report receiving recommended care, though rates of advice to reduce or abstain from drinking did not differ across groups. Persistent gaps in delivery of recommended alcohol-related care, especially for particularly vulnerable subpopulations such as women Veterans, suggest a need for quality improvement.

1. Introduction

Approximately one out of every five adult patients seen in primary care report unhealthy alcohol use (22%; Vinson et al., 2010) and rates among Veterans seeking primary care services may be equal to or higher than this (approximately 30%; Burnett-Zeigler et al., 2011;

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Hawkins, Lapham, Kivlahan, & Bradley, 2010). Unhealthy alcohol use, defined as the spectrum from drinking above recommended limits (> 7 drinks/week for women or > 14 drinks/week for men or > 3 drinks/occasion for women or > 4 drinks/occasion for men; NIAAA, 2005) to meeting diagnostic criteria for alcohol use disorders (Saitz, 2005), leads to multiple harmful negative consequences, ranging from mild (e.g., hangover) to severe (e.g., mortality; Centers for Disease Control and Prevention, 2017; Mokdad et al., 2018). In addition, the economic and societal costs of unhealthy alcohol use in the United States are staggering. Recent work estimates that unhealthy drinking costs approximately $170 billion per year in lost productivity (e.g., work disruption, incarceration), health care costs (e.g., hospitalization, ambulatory care), criminal justice, and other effects (e.g., motor vehicle crashes, property damage; Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Moreover, a vulnerable subpopulation, female Veterans, may be more at risk for negative consequences than their female non-Veteran peers, as they are more likely to experience mental health disorders associated with alcohol use, including depression, anxiety, other comorbid psychiatric disorders (Frayne et al., 2006; Lehavot, Hoerster, Nelson, Jakupcak, & Simpson, 2012; Pemberton et al., 2016) and suicide (Bohnert, Ilgen, Louzon, McCarthy, & Katz, 2017; Ilgen et al., 2010; Kaplan, McFarland, & Huguet, 2009; McCarthy et al., 2009).

Comparisons of past year rates of unhealthy alcohol use between Veterans and non-Veterans vary depending on the definition of use (e.g., heavy episodic drinking versus drinking above recommended limits) and on age and gender. For example, male Veterans (ages 18–30) report heavy episodic drinking occurrences at the same high rates as their male non-Veteran counterparts (~36%; Grossbard et al., 2013). However, older male Veterans (61 +) may be more likely to report unhealthy alcohol use (~3–10%) than older male non-Veterans (~2–8%; Bohnert et al., 2012). Research has also found that female Veterans, compared with their female non-Veteran peers, report both heavy episodic and unhealthy drinking at similar rates (~9% overall for heavy episodic and ~4% for unhealthy drinking; Lehavot et al., 2012; Pemberton et al., 2016).

Screening for unhealthy alcohol use and providing brief behavioral interventions to those screening positive in primary care can reduce alcohol use (Jonas et al., 2012; Kaner et al., 2009). Both the U.S. Preventive Services Task Force (Maciosek et al., 2017; Moyer, 2013; Whitlock, Polen, Green, Orleans, & Klein, 2004) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2005) recommend routine screening and brief alcohol-related interventions in primary care. Within the past 15 years, the Veterans Health Administration (VA) has implemented both alcohol screening for all Veteran outpatients annually and brief intervention for those screening positive (Bradley et al., 2006; Lapham et al., 2012). Both practices are incentivized via national performance measures and supported through electronic clinical reminders which prompt and support documentation of clinical care for clinicians (Bradley et al., 2006; Lapham et al., 2012; Williams et al., 2014, 2015, 2016). However, only about one-third of all Veterans receive health care from the VA (U.S. Department of Veterans Affairs, 2018), thus, rates of receiving alcohol screening and brief intervention among Veterans overall, as well as rates specific to male and female Veterans, are unknown. Research is needed to examine whether evidence-based alcohol related care is being delivered to a representative sample of Veterans whose care may not be delivered by the VA. In addition, studies should investigate whether vulnerable groups of Veterans, particularly women Veterans, receive recommended alcohol-related care.

Therefore, we evaluate rates of receiving alcohol-related screening and brief intervention in primary care across Veteran status within a nationally representative sample, adjusting for relevant sociodemographic and other health-related covariates. We investigate these questions among all participants and then stratified by gender due to a large body of past empirical work demonstrating gender differences in receipt of brief intervention (men more likely than women) among Veterans using the VA (Burman et al., 2004; Williams et al., 2017) and among civilian populations (Bertakis & Azari, 2007; Denny, Serdula, Holtzman, & Nelson, 2003; McKnight-Eily et al., 2014; Mukamal, 2007; Volk, Steinbauer, & Cantor, 1996). We hypothesized that Veterans would be more likely than non-Veterans to report receiving alcohol screening (i.e., being asked whether one drank, how much one drank, and whether one drank at heavy episodic drinking levels) and alcohol-related intervention (i.e., offered advice about levels of harmful drinking and advised to reduce or abstain from drinking). In addition, we assess intervention questions among all participants regardless of reported levels of alcohol use, and among only those participants endorsing unhealthy alcohol use for which brief intervention is recommended (Jonas et al., 2012). This approach is consistent with recommended approaches to denominator specification for measurement of receipt of alcohol-related care. We hypothesized that Veteran status would be associated with increased likelihood of receiving evidence-based alcohol-related care.

2. Methods

2.1. Study design, data collection and study sample

The current study used cross-sectional, nationally representative data collected from the Centers for Disease Control and Prevention's (CDC) 2014 Behavioral Risk Factor Surveillance System (BRFSS; CDC, 2015a, 2015b). The BRFSS uses random digit dialing (calling landline and cell phone numbers) to contact a sample of U.S. adults in all states and territories, asking them information about their health-related risk behaviors, chronic health conditions, and use of various preventive services. All states and territories administer a standard core set of questions and then can elect to administer optional modules. The 2014 survey included an optional module entitled “Alcohol Screening and Brief Intervention (ASBI)” which was given to participants if they endorsed visiting a doctor for a routine checkup (i.e., general physical exam) at least once in the past two years. Twelve states elected to administer the ASBI optional module as part of the core survey: California, Connecticut, District of Columbia, Hawaii, Kentucky, Minnesota, Montana, New Mexico, Oregon, Texas, Washington, and Wisconsin. Of the 108,436 people sampled across these 12 states, 85.03% (N = 92,206) indicated a checkup in the past two years, and thus, were administered the ASBI module and designated as the analytic study sample. The study was approved by the institutional review board at VA Pittsburgh Healthcare System.

2.2. Measures

2.2.1. Sociodemographic characteristics

Sociodemographic items included gender (male or female); age (18–44, 45–64, 65 +); race (black, Hispanic, multiracial, other, and white); educational attainment (high school diploma or less vs. some college or greater); marital status (partnered, formerly married, or never married); employment status (employed, unemployed, out of workforce [i.e., homemaker, student, unable to work], or retired); and home state (McKnight-Eily et al., 2014).

2.2.2. Veteran status

A dichotomous variable was created from the question “Have you ever served on active duty in the United States Armed Forces, either in the regular military or in a National Guard or military reserve unit?” Individuals who answered “Yes” were considered a “Veteran” and coded as “1” and individuals who answered “No” were considered non-Veterans and coded as “0”. Those who answered “Don't know/Not sure”, “Refused”, or had missing data were excluded from analyses (< 1%).