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Recognition and management of alcohol misuse in OEF/OIF and other veterans in the VA: A cross-sectional study

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ABSTRACT

Background: Mental health problems have been identified among soldiers serving in Operations Enduring Freedom and Iraqi Freedom (OEF/OIF), but little is known about the prevalence and management of alcohol misuse in OEF/OIF veterans seen in the Veterans Administration health care system (VA).
Methods: We identified 12,092 veterans (n = 2009 women) 55 and younger and screened for alcohol misuse in FY2007 from a cross-sectional national sample of VA outpatients randomly selected for standardized medical record review for quality monitoring. Alcohol misuse was assessed with the Alcohol Use Disorders Identification Test Consumption questions (AUDIT-C $\geq$5). Based on medical record reviews, brief alcohol interventions (BI) were defined as documented (1) advice to abstain or drink within recommended limits or (2) feedback about health risks associated with drinking.
Results: Adjusted prevalence of alcohol misuse was higher in OEF/OIF men than non-OEF/OIF men [21.8% vs. 10.5%, adjusted odds ratio (AOR) = 2.37 (95% CI: 1.88–2.99)], but did not differ reliably between OEF/OIF and non-OEF/OIF women [4.7% vs. 2.9%, AOR = 1.68 (0.74–3.79)]. Adjusted rates of documented advice or feedback [31.6% vs. 34.6%, AOR = 0.87 (0.58–1.21)] and referral [24.1% vs. 28.9%, AOR = 0.78 (0.47–1.30)] were not significantly different between OEF/OIF and non-OEF/OIF men who screened positive for alcohol misuse.
Conclusion: OEF/OIF men were more likely to screen positive for alcohol misuse than non-OEF/OIF men. Overall, approximately half of those with alcohol misuse had documented BI and/or referral to alcohol treatment suggesting a need for improvement in addressing alcohol misuse in OEF/OIF and other veterans.

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1. Introduction

Initial reports of military personnel serving in Operations Enduring Freedom and Iraqi Freedom (OEF/OIF) have raised concerns about the high rates of mental health problems identified among these individuals (Hoge et al., 2004). Studies of OEF/OIF veterans using the Veterans Affairs (VA) health care system have raised similar concerns (Seal et al., 2007), but surprisingly little scientific attention has been given to the risk of alcohol misuse in this cohort of veterans.

Alcohol misuse, which includes the spectrum of unhealthy alcohol use from at-risk drinking to alcohol use disorders, is relatively common with estimates as high as 30% in primary care settings (Fiellin et al., 2000; Whitlock et al., 2004). The health consequences associated with excessive alcohol use represent a significant public health problem (Room et al., 2005). Hazardous alcohol consumption has been associated with increased mortality, morbidity and disability (Rehm et al., 2003), and is considered one of the leading causes of mortality in the United States (Mokdad et al., 2000).

Unique characteristics and military service experiences of OEF/OIF veterans potentially place them at increased risk for alcohol misuse. The risk of alcohol misuse is greater among men and individuals younger than 30 (Grant et al., 2004a; Jacobson et al., 2008). Studies of population-based surveys and clinical samples have also supported higher rates of alcohol problems among persons with anxiety, mood, or drug use disorders (Grant et al., 2004b; Jacobsen et al., 2001). In clinical samples, alcohol use disorders are ranked as the most common co-occurring disorders among men with post-traumatic stress disorder (Jacobsen et al., 2001), and a recent report has found an increased risk of new-onset haz-

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ardous drinking among OEF/OIF combat veterans (Jacobson et al., 2008).

Brief alcohol interventions (BI) reduce alcohol use and health care-related costs (Fleming et al., 2000, 2002; Kaner et al., 2007; Solberg et al., 2008; Whitlock et al., 2004). BI consisting only of simple advice to drink within recommended drinking limits and as brief as 5–15 min have been shown effective (WHO Brief Intervention Study Group, 1996). Based on the relative health impact and cost effectiveness of BI, the National Commission on Prevention Priorities ranked BI 3rd among 25 clinical preventive services recommended by the US Preventive Services Task Force for the US adult population, after aspirin for heart disease prevention and tobacco counseling (Solberg et al., 2008). Despite evidence-based support and recommendations from national authorities to screen and treat the spectrum of alcohol use in primary care settings, research suggests only a minority of at-risk drinkers are managed appropriately (Calhoun et al., 2008; D'Amico et al., 2005; Milliken et al., 2007; Rose et al., 2008).

This study was designed to evaluate the recognition and management of alcohol misuse in OEF/OIF veterans enrolled in the VA health care system. First, we estimate the prevalence of documented alcohol misuse and documented rates of brief alcohol interventions, referral to alcohol treatment, and completed referral among OEF/OIF veterans. Second, we compare the prevalence of alcohol misuse and documented rates of brief alcohol interventions, referral to treatment, and completed referral to a contemporary sample of non-OEF/OIF veterans.

2. Methods

2.1. Data collection

The VA Office of Quality and Performance (OQP) contracts with an external agency to conduct monthly standardized medical record reviews of outpatient care as part of the External Peer Review Program (EPRP), and uses the data to monitor compliance on national performance measures. Medical record reviews are used to monitor brief alcohol interventions, because there are currently no reliable methods to monitor BI electronically in the VA. A sample of eligible outpatients from each facility is randomly selected for review each month. Total number of patients selected can vary from year to year and by facility depending on the size of the facility, but a minimum number of patients are sampled from each facility to obtain a representative sample of VA patients. Patients were eligible for random selection if they (1) attended an outpatient visit in any VA medical clinic (e.g., primary care, cardiology, diabetes, hypertension) or an individual or group-related outpatient visit for mental health related services (e.g., substance use disorder, post-traumatic stress disorder, psychosocial services) in the month prior to selection, (2) were not previously sampled during the fiscal year, and 3) attended one or more visits in any VA outpatient clinic in the 13–24 months before chart review. The latter criterion is used to select established patients receiving health care in the VA. Patients receiving outpatient care associated with selected diagnostic conditions (e.g., coronary artery disease) were also sampled for EPRP during the study period, but because non-random approaches were used to sample those patients, they were not eligible for the present study. Study approval was obtained from the University of Washington and VA Human Subjects Committees and the VA Office of Quality and Performance.

2.2. Study sample

Potentially eligible patients were included in this study if the following criteria were met: (1) they were screened with the Alcohol Use Disorders Identification Test Consumption questions (AUDIT-C) from October 1, 2006 to September, 30 2007, (2) the AUDIT-C score was documented in the medical record; and (3) the medical record review date followed the alcohol screen date by a minimum of 30 days.

The study sample was restricted to outpatients screened for alcohol use between October 1, 2006 and September 30, 2007 for two reasons. First, effective October 1, 2006, the national performance measure mandated use of the AUDIT-C for routine alcohol screening in the VA, except for patients in palliative care or with documented cognitive impairment (<1%). Second, October 1, 2007 marked the initial implementation of a national VA performance measure for brief alcohol interventions, requiring the medical records of all patients who screened positive for alcohol misuse to have documentation of brief alcohol counseling. Medical records reviewed from October 1, 2006 to September 30, 2008 were used to obtain a sample of outpatients screened for alcohol misuse between October 1, 2006 and September 30, 2007, because medical record reviews identified the most recent alcohol misuse screen within the 12 months prior to review.

OEF/OIF veterans are on average younger than other veterans and younger age is associated with alcohol use and misuse. We reviewed the age distributions for OEF/OIF and non-OEF/OIF veterans to determine an age cutoff that could be used to limit the potential confounding effect of age in our analyses, while preserving the overall representativeness of the OEF/OIF sample and generalizability of the study's results. Based on a review of the age distributions that revealed only 3.6% of OEF/OIF veterans were over 55 years old, study eligibility was limited to outpatients 55 or younger.

2.3. Measures

2.3.1. Measure of alcohol misuse. The AUDIT-C assesses alcohol consumption patterns in the past year and has been validated as a brief alcohol-screening test in veteran (Bradley et al., 2003; Bush et al., 1998) and non-veteran samples (Bradley et al., 2007a). Scores on the AUDIT-C range from 0 to 12. Higher AUDIT-C scores indicate greater alcohol misuse severity (Bradley et al., 2004), and AUDIT-C scores of 8–12 have been associated with a higher risk for alcohol use disorders (Bush et al., 1998), subsequent hospitalizations for liver disease, upper GI bleeding and pancreatitis (Au et al., 2007), and mortality (Bradley et al., 2001). Although the AUDIT-C screening thresholds that balance sensitivity and specificity are ≥4 and ≥3 for men and women, respectively (Bradley et al., 2003; Bush et al., 1998), in the present study men and women were considered to have screened positive for alcohol misuse with a score of ≥5. This threshold for alcohol misuse is consistent with the national VA policy that became effective October 1, 2007, requiring follow-up of men and women patients with AUDIT-C scores of 5 or greater and minimizes the burden of providing brief alcohol counseling to patients with false-positive AUDIT-C screens (Bradley et al., 2003, 2007a).

To facilitate interpretation of AUDIT-C scores, outpatients were grouped into four categories: non-drinkers (AUDIT-C = 0), low-level drinkers who screen negative for alcohol misuse (AUDIT-C = 1–4), mild-moderate alcohol misuse (AUDIT-C = 5–7) and severe alcohol misuse (AUDIT-C = 8–12) (Au et al., 2007).

2.3.2. Military service information. Service in Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) was determined from EPRP chart review and based on a nationally disseminated screen activated in patients' electronic medical records to identify these veterans. The screen was activated by a date of separation from active military duty that occurred after September 11, 2001 and prompted providers to ask and document if patients served in Afghanistan or Iraq. Although minimal information is available on the validity of the military service measure obtained from the national clinical reminder, a recent study supports the validity of this measure. Of 820 OEF/OIF veterans identified using the national clinical reminder, 778 (95%) were verified in the VA National OEF/OIF Roster data (Seal et al., 2008).

2.3.3. Measures of documented brief intervention (BI), referral and completed referral to alcohol treatment. Trials of brief alcohol interventions (BI) have included a number of components, but in primary care settings where most alcohol misuse screening occurs there is considerable time pressure to complete interventions efficiently. We used two measures of BI in this study noted to be common in trials of BI (Whitlock et al., 2004) and monitored by EPRP. First, we used either documented advice or feedback linking the patient's drinking and health as a minimal measure of any BI (Advice or Feedback). Second, we used a more stringent measure of advice plus feedback linking drinking to health that is consistent with a performance measure implemented by the VA in FY2008 to evaluate the delivery of BI services (Bradley et al., 2007b). Advice was defined as documentation in the medical record to abstain or drink within recommended limits (men: ≤14 drinks per week and <5 drinks per drinking occasion; women: ≤7 drinks per week and <4 drinks per drinking occasion). Feedback was defined as documentation in the medical record that indicated a patient was provided personalized or general feedback, education, or counseling about the association between excessive alcohol use and health.

Trained medical record reviewers use computerized algorithms to ensure reliable and accurate data abstraction (Jha et al., 2003). Reviewers recorded documented BI with the following standardized instructions: "*At any time since the most recent alcohol screening, does the record document any of the following components of brief alcohol counseling for past-year drinkers? Indicate all that apply and the date counseling was noted in the record*: (1) *Patient drinks within recommended limits per self-report*, (2) *Advice to abstain*, (3) *Personalized counseling regarding relationship of alcohol to the patient's specific health issues*, (4) *General alcohol-related counseling* (*not linked to patient's issues*), (5) *Patient advised to drink within recommended limits*, (6) *No alcohol counseling documented.*" Reviewers were provided with examples that satisfied each of the above components of brief alcohol counseling.

Referral to alcohol treatment was defined as a documented discussion of referral for VA or non-VA (e.g., Alcoholics Anonymous) services to address alcohol misuse or a scheduled appointment for VA services. Chart reviewers were instructed to review patients' medical records for information of any referral to VA or non-VA alcohol treatment services and document type of referred services (e.g., addiction specialty-care, mental health, primary care services) and date of referral appointment. Alcohol treatment services were defined as any of the following with documentation indicating the purpose of the service was to evaluate or address alcohol misuse: VA inpatient or outpatient specialty-care addiction services, VA inpatient or outpatient mental health services (e.g., PTSD clinic, mental health clinic), other VA clinics (e.g.,