Alcohol Disorders in the U.S. Army – A Proposal for Better Prevention and Intervention

By

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Abstract

Alcohol consumption has been chronicled throughout most of recorded history. When that use becomes extreme, excessive, or addictive, it can lead to potential behavioral and physical symptoms diagnosed as alcohol use disorder. Historically, within the military alcohol has been used as a reward, a means to build camaraderie, and a way to ease stressors of conflict; however, alcohol disorders within the military can be detrimental to its readiness and effectiveness. The National Academy of Sciences has recently described alcohol disorders and drug use in the United States Military as a public health crisis. Issues that prevent United States Army soldiers from receiving intervention and treatment include the negative stigma perceived with seeking help, alcohol disorder treatment being considered punitive, lack of extensive outpatient or partial hospitalization options, and a current policy focus primarily towards abstinence. The goal of this paper is to apply public health concepts of prevention, screening and health education to help improve how the United States Army addresses alcohol disorders. Potential approaches to improve screening and prevention include moving to a single-question screening tool and restricting twenty-four hour sales of alcoholic beverages. Considerations to improve treatment options include adding a moderation approach to help educate soldiers of the acceptable amounts of consumption and to provide extensive outpatient and partial hospitalization options to align with current best practices.
Background

Alcohol Use and Definitions

Alcohol use, especially its misuse, is widely seen as a public health problem not only in the United States of America but globally. The Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5), (American Psychiatric Association [APA], 2013) is the most widely accepted criteria by clinicians and researchers for substance-related and addictive disorders, which include alcohol-related disorders. Alcohol-related disorders contain the following subcategories: alcohol use disorder (AUD) including hazardous, binge and heavy drinking, alcohol intoxication, alcohol withdrawal, other alcohol-induced disorders, and unspecific alcohol-related disorders. This paper will focus on alcohol use disorder, referred to throughout the paper as alcohol disorder. The diagnostic criteria, as defined by the DSM-5, is based on an assortment of behavioral and physical symptom and must at least two of the following criteria (APA, 2013).

Alcohol Use Disorder Diagnostic Criteria

A problematic pattern of alcohol use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
1. Alcohol is often taken in larger amounts or over a longer period than was intended.
2. There is a persistent desire or unsuccessful efforts to cut down or control alcohol use.
3. A great deal of time is spent in activities necessary to obtain alcohol, use alcohol, or recover from its effects.
4. Craving, or a strong desire or urge to use alcohol.
5. Recurrent alcohol use resulting in a failure to fulfill major role obligations at work, school, or home.
6. Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of alcohol.
7. Important social, occupational, or recreational activities are given up or reduced because of alcohol use.
8. Recurrent alcohol use in situations in which it is physically hazardous.
9. Alcohol use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by alcohol.
10. Tolerance, as defined by either of the following:
   a. A need for markedly increased amounts of alcohol to achieve intoxication or desired effect.
   b. A markedly diminished effect with continued use of the same amount of
alcohol.

11. Withdrawal, as manifested by either of the following:
   a. The characteristic withdrawal syndrome for alcohol
   b. Alcohol (or a closely related substance, such as a benzodiazepine) is taken to relieve or avoid withdrawal symptoms.

The goals of the paper are to review history and current prevalence of alcohol disorders and propose improved prevention and treatment options for consideration by the United States (U.S.) Military with emphasis for the U.S. Army.

**Epidemiological Impact**

Alcohol disorder has had significant effects in the United States. It is noted that in 2014 that 57 percent of the population aged 18 and older, approximately 137 million adults, reported on the National Survey on Drug Use and Health (NSDUH) that they are current alcohol users (Center for Behavioral Health Statistics and Quality [CBHSQ], 2015b). The prevalence of drinking alcohol in the U.S. shows that 87.6 percent of people age 18 or older reported that they drank alcohol at some point in their lifetime, 71.0 percent indicated that they drank in the past year, and 56.9 percent stated that they drank in the last month (CBHSQ, 2015a). Among the more dangerous drinking disorders is binge drinking defined as drinking five or more alcoholic beverages for males or four or more for females on the same occasion, and heavy drinking defined as binge drinking on five or more days in the past month (National Institute on Alcohol Abuse and Alcoholism [NIAAA], n.d.). Among U.S. adults aged 18 or older, 24.7 percent meet criteria for binge drinking in the past month, and 6.7 percent reported that they engaged in heavy drinking in the past month (CBHSQ, 2015a). In 2014, 6.8 percent (CBHSQ, 2015a) of the 16.3 million adults aged 18 or older had a diagnosis of alcohol use disorder (CBHSQ, 2015b) and 1.5 million adults, needed and received treatment (CBHSQ, 2015a). Unfortunately, 15.4 million adults in the same year needed but did not receive treatment (CBHSQ, 2015a). The amount of noted alcohol disorder is not without cost including both economic and social. The economic
impact due to alcohol use in the U.S. is approximately $250 billion in 2010, up from the estimated $223 billion in 2006 (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015).

**Health Effect of Alcohol Consumption**

The impact of alcohol disorders is not a single country problem, as it is the world’s leading risk factor for morbidity, disability, and mortality (World Health Organization [WHO], 2014). Further, in a 2013 study reported that alcohol disorders were a leading global risk factor for both death and disability-adjusted life years for both sexes aged 20-24 from 1990 to 2013 (Mokdad, et al., 2016). Fundamental problems on the global aspect of measuring alcohol consumption include measuring the amount of pure alcohol and accurately account for the quantity, i.e. the grams of ethanol, versus “drinks,” or “units” (Bloomfield, Stockwell, Gmel, & Rehn, 2003). In 2010, it was estimated that worldwide consumption was equal to 6.2 liters of pure alcohol per person aged 15 years or older, approximately 13.5 grams per day; however, this is an underestimate since it is thought that the almost 25% of consumption is unrecorded (WHO, 2014). Between regions, there is a difference in levels of consumption due to a multitude of factors including socioeconomic, culture and religion and its influence towards abstentions, and preferred beverage type (WHO, 2014).

Alcohol disorders can be directly related to increased mortality. In the U.S. from 2006-2010 approximately 88,000 people died of alcohol-related causes annually (Centers for Disease Control and Prevention [CDC], 2013). Alcohol disorders are noted to be the third leading key contributor of death in the United States, attributable to oropharyngeal, esophageal, liver, laryngeal and female breast cancers; cardiovascular disease including stroke and hypertension; and other chronic liver disease and cirrhosis (Mokdad, Marks, Stroup, & Gerderding, 2004). Globally, its consumption results in approximately 3.3 million deaths per year (WHO, 2014). In
2009, alcohol related liver disease was the primary cause of almost 1 in 3 liver transplants in the United States (Singal, et al., 2013). In 2014, it was noted that approximately 31 percent, nearly 10,000, driving fatalities were alcohol related (National Center for Statistics and Analysis, 2015). Further, alcohol is regularly correlated with violent crimes, but its involvement likely under-reported for attributable crime and violence (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Neuropsychiatric conditions associated with alcohol disorder including epilepsy, depression and anxiety disorder (WHO, 2014). Other significant disease and injury categories that result from its consumption include suicide, cardiovascular diseases, fetal alcohol syndrome, diabetes mellitus, and infectious diseases (WHO, 2014).

**History and Culture of Alcohol Use**

Alcohol consumption is chronicled throughout most of recorded history. Views on alcohol use have varied widely and are directly related to culture and societal influences with endpoints ranging from ardent immersion to total rejection. For the Kofyar people in northern Niger, beer has a central role in both daily life, but also instrumental in agriculture production in which beer is the principal form of payment (Netting, 1964). While some consider alcohol indispensable with their way of life, others see it as caustic. Indian tribes in the Southwest viewed drinking as damaging to their culture and people. Their loathing led to a prohibition on their settlements for many years (Mandelbaum, 1956). Of course, religious extremes also factor into the views of alcohol. The Aztecs felt the gods would not be pleased if worshipers were not inebriated during ceremonies, while Protestant denominations, with their strong abstinence views, consider alcohol so repulsive that its use was forbidden even during the communion rite (Mandelbaum, 1956).
Further, drinking alcohol is known to trigger various emotions outcomes among partakers and in different societies. Consumption by Japanese men is noted to ease expressions of affection, versus the aggressive hostility as mentioned with its use amid the Papago Indians (Mandelbaum, 1956). Lastly, alcohol is also used in a social context, in the 1950s it was demonstrated in a cocktail being prepared by a housewife upon return of her husband from work in the evening, providing separation from the hustle of the office and labor and the leisure that the home offers (Honigmann, 1963).

The reported effects of alcohol have noted differences among different persons and cultures. Some feel euphoric effects with only a minuscule amount while others seem to be able to absorb large quantities before exhibiting deleterious effects. Westerners have said that Japanese men can reach a blissful state after only the first sip of a drink (Mandelbaum, 1956); the Aleut Indians become intoxicated only after a small amount of a beverage with low alcohol content (Berreman, 1956). In contrast, others are only mildly affected by consumption of large quantities, as seen with the Camba people in Bolivia. They have reported only mild irritation to the oropharyngeal, and almost no ill effect even after drinking large quantities from a distillate of 89% ethyl alcohol (Health, 1958).

Varied social functions and different cultural expression can lead to the drastic difference in why people drink, even in the same ethnic group. For instance, as noted earlier most Protestants branches tend to have an ardent abstinence view. Among the Camba people, there is a Protestant sect who have fully embraced this principle. Besides the non-drinking doctrine, the attitudes of this sect towards each other also factor into their self-discipline. They have been noted to gather multiple times during the week for religious purposes, and show gratitude and warm regards to each other. They are noted to seek social interaction with others; however, this
is a divergence from the larger population of the Camba people who avoid interacting even with others are in their presence. This fear and avoidance is the perceived factor of why the rest of the Camba people drink until inebriated versus the Protestant sect.

**Prevention and Diagnosis**

Prevention of poor health behaviors is the fundamental approach of medicine and public health. Though unlike the individual patient focus of a therapeutic approach, public health looks to develop community or population interventions, policies and guidelines to prevent the onset or limit the progression of unhealthy conditions (Frieden, 2010). With alcohol disorders, this methodology is no different as the early identification is critical to determine the most appropriate approach for deterrence and management. Prevention can come in a variety of practices, policies, and outreach measures. A few methods include establishing a standard age for purchase or entering establishments in which alcoholic drinks are served, limiting or prohibiting alcohol advertisement, the use of media campaigns or public service announcements, and controlling the hours of sale (AlcoholPolicyMD, 2005). One U.S. Army installation made a change from allowing the sale of alcohol from twenty-four hours per day to restricting its purchase between the hours of 11:01 pm to 6:59 am. They compared data for the subsequent year with the year before the modification and observed a decrease in crime on the installation, reduction in emergency room visits, and a drop-in driving under the influence convictions (U.S. Army Public Health Command, 2016). While there is a strong focus on prevention, equal attention in medical care must be directed at a proper diagnosis of health conditions, including alcohol disorders, to determine which form of treatment is most appropriate.
**Screening Instruments**

One of the most efficient ways to identify alcohol disorders is through the use of screening techniques. Some of the first screening measures include the Michigan Alcoholism Screening Test (MAST) and another related assessment, the CAGE questionnaire, which have been around since the 1970s. While they had a high specificity for correctly identifying those with the most extreme form of alcohol disorders, but found to be less sensitive for detecting those among the broader spectrum of alcohol disorders (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993). In 1983, the Alcohol Use Disorders Identification Test (AUDIT) was developed as part of a multi-country project to provide a primary health care with a ten-question screening tool for dangerous and harmful alcohol consumption, thus helping to identify at risk persons before alcohol disorders can develop. An example of the AUDIT tool is presented below. Questions one to three measure alcohol consumption; four through six, drinking behavior; seven and eight, adverse reactions; and nine and ten, alcohol-related problems, with scoring for each question from zero to four. The AUDIT screen was validated through a 1,888-person study sample, and the sensitivity of cut-off point score of eight was determined after 99% of the alcoholics scored eight or higher, and only 0.5 percent of nondrinkers scored eight or more (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993).
The Alcohol Use Disorders Identification Test (AUDIT) can detect alcohol problems experienced in the last year. A score of 8+ on the AUDIT generally indicates harmful or hazardous drinking. Questions 1–8 = 0, 1, 2, 3, or 4 points. Questions 9 and 10 are scored 0, 2, or 4 only. (NIAAA, n.d.)

To increase usage within a primary care setting, the abbreviated three-item Alcohol Use Disorders Identification Test – Consumption (AUDIT-C), was selected as an appropriate brevity tool after it achieved comparable identification for the spectrum of alcohol disorders to the full AUDIT. It comprises of the three consumption inquiries (question one, two, and three) from the
full ten question AUDIT (Rubinsky, Dawson, Williams, Kivlahan, & Bradley, 2013). The AUDIT-C is the current screening tool used by the Veterans Affairs (VA) and Department of Defense (DoD) (VA and DoD, 2015).

**Intervention**

There are a range of interventions for alcohol disorder management. These interventions include medical, pharmacological, and psychological, whether used separately or in conjunction and are divided into three general categories: brief intervention; specialized treatment programs; and mutual help groups. The AUDIT score helps discern among the variable levels of risk and severity. The figure below summarizes how the AUDIT scores assist in determining the level of intervention. Scores less than eight do not require any intervention. Scores between eight and fifteen, considered low positive, should receive a brief intervention. Persons in the intermediate range, with scores of sixteen to nineteen, require brief intervention and regular monitoring and could be referred for more formal assessment if excessive consumption continues. Those with a score of twenty or greater, high positive range, require further diagnostic evaluation and depending on the severity potential detoxification and other treatments (Room, Babor, & Rehm, 2005).
Algorithm for identification and management of alcohol disorders

Brief interventions allow for preventative options before and early treatment soon after the development of alcohol-related disorders. These approaches help can help moderate consumption versus taking a hard abstinence stance. Randomized controlled trials have supported the effectiveness of these methods on lowering alcohol consumption and minimizing alcohol disorders (Room, Babor, & Rehm, 2005) (Kaner, et al., 2007).

Specialized treatments focus on the managing of alcohol disorders, including treatment of withdrawal symptoms, the prevention of relapse to alcohol dependence, and providing social and psychological rehabilitation (Room, Babor, & Rehm, 2005). For those that suffer from alcohol disorders, receiving treatment for withdrawal symptoms can be a critical first step. The severity
dictates the amount of medical involvement. Less intensive treatment can include outpatient monitoring, comprising of recording vital signs, nursing care, focused attention and reassurance, but may not require pharmacological therapy. More intensive treatment may include requiring extensive outpatient and multiple medications, with benzodiazepines being the preferred choice (Ricks, Replogle, & Cook, 2010) (Room, Babor, & Rehm, 2005). Further, management focuses on the preventing medical complications and preparing for rehabilitation treatment, which includes both full-time residential and intensive outpatient programs. These centers can be hospital-based, freestanding, or in conjunction with psychiatric units. There is not much difference in treatment outcomes based on the type of setting, but residential programs can be preferred for individuals who have a higher recidivism potential, lack socioeconomic support, or have a dual diagnosis (Room, Babor, & Rehm, 2005).

Therapeutic modalities within the residential programs include a multifaceted psychotherapy approach, twelve-step facilitation, and potential for pharmacological treatment. Behavioral therapies focused on the prevention of relapse and building appropriate management skills. Introduction to the twelve-step program allows for the transition to organizations and programs that help promote and sustain abstinence. The twelve-step model is a structured, systematic program using spiritual, cognitive, behavioral and social means to help recovery from addictions, reach abstinence, and sustain sobriety (Sober Media Group, 2017). Different medications can contribute to the support of certain phases of treatment. As noted, benzodiazepines are instrumental in minimizing the effects of alcohol withdrawal (Room, Babor, & Rehm, 2005). Two medication are used in support of management effects to prevent relapse. Naltrexone, an opioid antagonist, helps reduce the euphoric effects contributing to the decrease in craving and desire to drink. Acamprosate, an amino-acid derivative, has been used
successfully in maintaining abstinence, though the exact mechanism of action is unknown. Antidepressants are useful in limiting alcohol consumption in persons with coexisting mental health disorders (Winslow, Onysko, & Hebert, 2016).

**Alcohol Use in the Military**

**Military Cultural Impact of Alcohol Use**

Alcohol use has been documented as long-established within military culture. Historically, alcohol was used to reward hard work, ease interpersonal tensions, and to promote unit cohesion and camaraderie (Gibbs, Rae Olmsted, Brown, & Clinton-Sherrod, 2011). It has also been noted to help ease the strains of conflict and stress. There have been reports that it has a positive effect in assisting in group bonding during training, providing sureness during times of battle, and assisting as a sleep aid in the immediate aftermath of combat (Holmes, 1985).

**Alcohol Disorders in the Military Population**

The 2011 Health Related Behaviors Survey of Active Duty Military Personnel found that approximately 11% of all active duty personnel had an AUDIT score of greater than eight (DoD, 2013). While the rates of alcohol use across the military and civilian population were found to be comparable (Witkiewitz & Estrada, 2011), Hoerster, et al. found that active duty members were more likely than civilians to report heavy alcohol consumption, using multivariable logistic regression based on self-reported data from the 2010 CDC Behavioral Risk Factor Surveillance Survey (2012). In the Army during the ten-year period, from 2001 to 2010, there were approximately 92,000 acute and 64,000 chronic alcohol related diagnoses (Armed Forces Health Surveillance Center, 2011). Within the active Army in 2015, four percent approximately nearly 20,000 soldiers, had a diagnosis of substance abuse disorder (U.S. Army Public Health
Command, 2016), and alcohol is known to be the most commonly abused substance in the Army (Elliott, 2016). (Holmes, 1985)

**Impact on Training**

The number one priority of the Chief of Staff of the Army, General Mark Milley, is readiness (Initial Message to the Army, n.d.), of which the effects of alcohol can decrease the operational efficiency impacting the readiness of the soldier, the soldier’s unit and the Army. It is estimated that in 2006 alcohol disorders resulted in over ten thousand active-military members being unable to deploy (Schumm & Chard, 2012). In the recent 2016 Health of the Force report, the Institute of Medicine of the National Academies of Science states that “alcohol and other drug use in the armed forces remain unacceptably high, constitute a public health crisis, and both are detrimental to force readiness and psychological fitness” (U.S. Army Public Health Command, p. 94). Further, the impact of alcohol disorders on readiness is not a new problem. Stephen F. Austin was reported to plead not to send any more spirits, due to the negative impact alcohol was having on the troops during the stand at the Alamo (Austerman, 2010). Besides the impact on the readiness of the soldier and the unit, alcohol disorders have negative outcomes on military careers. For example, it was recently reported that increased occurrences of a particular alcohol disorder, binge drinking, led to an upsurge in the following: driving while intoxicated, soldiers working below their normal level of performance, getting into fights, and were less likely to or did not get promoted (Department of Defense, 2013). In 2006, due to alcohol disorders, almost thirty-five thousand arrests were made with half being for driving under the influence (DUI), and slightly over two thousand persons were separated due to their alcohol disorder (Schumm & Chard, 2012).
Unit commanders are required to intervene early and refer all soldiers who take part in substance abuse to U.S. Army’s Substance Abuse Program (ASAP), as the Army finds that abuse of alcohol and illicit drugs is inconsistent with its readiness mission to prepare to fight and win the Nation’s wars. The Uniform Code of Military Justice (UCMJ) gives authority to unit commander to take legal action against soldiers who fail to participate adequately after being enrolled in ASAP, or who do not respond successfully to rehabilitation. If a soldier has a subsequent alcohol incident in the twelve months following successful completion or if the soldier is involved in two serious incidents of alcohol-related misconduct within 12 months the unit commander must process the soldier for separation (U.S. Department of the Army, 2016).

**Current U.S. Army Policy for Alcohol Disorders**

The policy for prevention and treatment of the ASAP is found in Army Regulation 600-85. The Army’s Installation Management Command oversees the ASAP for substance abuse deterrence and drug testing programs, prevention training and the ASAP training curriculum. The Army’s Medical Command integrates substance abuse medical care within behavioral health services through the Substance Use Disorder Clinic Care (SUDCC). Despite ASAP and SUDCC services are found on all installations, the Army is limited in its availability of intensive treatment services. Across the Army there are only three residential programs: Eisenhower Army Medical Center at Fort Gordon, Georgia, Madigan Army Medical Center at Joint Base Lewis-McCord, Washington and Fort Belvoir Community Hospital, Virginia; and only two intensive outpatient treatment centers located at Tripler Army Medical Center, Hawaii, and Landstuhl Regional Medical Center, Germany. These programs largely utilize an abstinence model, and endorse the twelve-step model, and encourage participation in Alcoholics Anonymous®. A recent instruction memo to the DoD from the Under Secretary of Defense for
Personnel and Readiness endorsed an outpatient treatment goal to foster an environment that was consistent with abstinence (Wright, 2014). Further treatment options can be available through non-military centers that accept TRICARE™, which is the health care insurance program for uniformed service members. TRICARE™ will cover services including emergency inpatient services, detoxification, medication assisted treatment, mental health therapeutic services, partial hospitalization and residential treatment facility care.

**Issues with Seeking Treatment**

Multiple factors are leading to the difficulty for seeking treatment of alcohol disorders in the military. At the time of initial entry soldiers are conditioned to be physically strong and mentally tough; however, value based on strength creates a risk of stigma for any situation in which weakness is perceived, including the situation of seeking help or reporting alcohol disorder. Accordingly, if there is a belief that substance abuse treatment is associated with weakness, service-members may be mocked by peers, hindering them from seeking out treatment (McFarling, D'Angelo, Drain, Gibbs, & Rae Olmstead, 2011). While all military personnel reported stigmas, the stigma associated with the treatment of an alcohol disorder was higher than those not receiving treatment (Rae Olmsted, et al., 2011). The stigma of alcohol disorder has social disapproval that ranges further than just within the military. This is widely known and was documented in a study that reviewed disparaging conditions across general populations from fourteen different countries in which alcoholism ranked near the top (Room, 2005). Another source of stigma is presented by the fact that service-members often enter treatment only after alcohol-related infractions or incidents where alcohol disorder led to an impairment of job performance, so subsequently treatment can be viewed as a punitive result of members’ inability to use alcohol in ways consistent with military culture (Witkiewitz & Estrada, 2011). This
perceived influence can deter future service-members from self-referring or seeking treatment for fear that they would be judged as a poor performer or had recently had been involved in legal actions. While the Army has three residential treatment centers, availability of enrollment to these programs can require a multi-week wait for an opening or requiring admission only on a certain day due to the program structure, causing a delay in initiating the appropriate treatment. This is compounded by the Army’s lack of partial hospitalization and intensive outpatient treatment options, limiting the range of treatment options available. Lastly, while TRICARE™ does provide coverage to a wide range of treatment options from a non-military treatment facility, gaining the required authorization from the approving military treatment facility can be difficult or delayed.

**Potential Options for Prevention and Intervention**

The recidivism rate for the larger U.S. Army and Military is not readily reported. Eisenhower Residential Treatment Facility (RTF) determined through meta-analysis, that during but during the 2001-2006 period it’s substance abuse related relapse after one year was comparable to rates of the general population in which approximately twenty-five percent of patients who completed an alcohol-related treatment remain abstinent after one year (Mooney, et al., 2014). The U.S. Army and Military do have policies, processes, personnel, and facilities directed at the issue of alcohol disorders; however, there are potential areas for improvement to align with general best practices regarding the prevention, intervention, and treatment. Due to the problems outlined above, this section is presented to review current options and propose some new options to prevent and provide more efficient interventions for alcohol disorders.
Prevention and Screening

A possible deterrence form of prevention includes decreasing the hours of availability to purchase alcoholic beverages from convenience stores located on military posts. This approach has been successfully implemented at only one installation and could be expanded across military posts that sell alcohol beverages twenty-four hours or have extended hours. Further to help limit the ease of access especially during the late-night hours, military leaders of the installation can engage with local community leaders to request ordinances or statutes that promote similar restraints on the timing of the sale of alcohol. This approach could help limit a soldier from only having to drive a few miles to the post convenience store to one just outside the installation to purchase alcohol. Another option could include providing activities during the evening hours that would discourage the consumption of alcohol; for example, this could include allowing twenty-four access to fitness centers or providing intramural sports leagues.

In addition to prevention, better screening for early intervention should also be considered. A screening option, especially within primary care encounters, using a slightly modified approached to the AUDIT-C would be to implement a single item alcohol screening question. This change would minimize the time required for the subject to complete the testing, decrease the recall needed by the provider to review response options and score the AUDIT-C, and possibly reduce the resources required, i.e. questionnaire printed on paper. It is proposed that the screening question is limited the single question of “how many times in the past year have you had X or more drinks in a day?” (Smith, Schmidt, Allensworth-Davies, & Saltz, 2009, p. 784). One or more occurrences of five or more drinks for a male, or four or more drinks for females is considered positive, i.e., requires early intervention. The screener could include an introductory question to ask the person if they sometimes drink alcoholic beverages or not. For
the individual who does not consume any alcoholic beverages, there is no need to continue with the screening. One concern with modifying these proven tools is how these modifications would affect the instrument’s sensitivity and specificity. The single item alcoholic screening test has been studied with a small sample size of 286 persons, but showed positive results in which it had an 82% sensitively and 79% specificity for detection of alcohol disorders (Smith, Schmidt, Allensworth-Davies, & Saltz, 2009). Decreasing the time to conduct, score and review a screening tool could increase the time available for brief intervention approaches.

**Intervention Improvements**

After a provider recognizes a potential alcohol disorder through screening, he or she should engage in a brief intervention. The DOD/VA clinical practice guidelines do not endorse a particular brief intervention format, but Fernandez, Hartman, and Olshaker recommended the brief negotiated interview (BNI) technique utilizing a motivational interviewing model. The authors did not conduct research on the proposed model but cited a 3,000-person non-military specific study using similar techniques that saw a greater than 50% reduction in alcohol consumption. The authors’ BNI followed a model that initially gives feedback of personal risk of the drinking behavior, then seeking acceptation of personal reasonability. Next, the authors suggest to advice to make a change while providing options to reduce alcohol consumption. The authors recommend empathic but engaged counseling style while promoting a sense of self-efficacy (2006). This brief intervention approach can be accomplished in multiple settings, such as the primary care office, behavioral health setting or the emergency room, thus increasing the likelihood of a person with an alcohol disorder to be exposed to the intervention.

A possible additional outpatient treatment is to move away from an abstinence only model largely used within the U.S. Army. Implementing a moderation approach can help
educate the patient on the dangers of alcohol disorders, but also provide techniques and approaches to improve and control drinking habits. Some of the proposed practices include with an understanding of the amount of ethanol in a standard drink to set a limit to a blood alcohol level the person wishes to reach, forcing oneself to slow the time it takes to consume the first drink then increasing the amount of time with subsequent drinks, and maintaining a drinking diary to provide clarity to help to reduce the number of drinking occasions and limit intake when it occurs (Miller & Munoz, 2005).

Finally, the Army should look at expanding the type of treatment options available, to include partial hospitalization and intensive outpatient treatment options. This consideration could include expanding these opportunities within established military treatment facilities or easing the restrictions to allow for referrals to non-military facilities offering these services. As noted above there is typically a waitlist for the limited residential treatment facilities. Increasing access and the type of available substance abuse disorder care would ensure U.S. Army and the Military are consistent with full spectrum treatment options and current best practices within the non-military treatment facilities.

**Discussion**

The proposed interventions recommended are to address potential gaps in prevention, screening, and interventions for the issue of alcohol disorders within the U.S. Army. Limiting the hours of sales for alcoholic beverages on a military installation or providing alternative activities for soldiers can help physically prevent a soldier’s ability from purchasing alcoholic beverages, potentially decreasing consumption. Reducing a person’s ability of procurement can be a de facto forcing function to prevention. Limitations include if an off-post facility sells
alcoholic beverages during these hours, the soldier only have to drive there to purchase, or the soldier might buy a greater quantity before the restricted hours take effect.

Use of a single question screening can help decrease the time needed to screen and assess the patient thus allowing for more time towards intervention. This testing could be included during the soldier’s annual periodic health assessment, with a post-deployment health evaluation and re-assessment, during intakes for behavioral health encounters, and during select routine medical encounters. The single item alcohol question has demonstrated acceptable sensitivity and specificity but did not reach the level of accuracy of the large-scale study used to validate the AUDIT. Further research to expand the scope and sample size, specifically looking at a military population is a recommendation of this paper since it would help ensure its application.

The brief negotiation interview model proposed above provides an idea framework and script for use by a health care provider to help provide understanding and improve potential outcomes, gauge a readiness to change, and develop a plan of action. This approach can likely be easily taught to the staff and implemented immediately. Further study is recommended utilizing a military population, specifically looking at the rate of potential consequences and health outcomes of alcohol disorder. Additionally, research can look at the BNI effects on the economic impact of hospitalization and other healthcare cost directed to the care of persons with alcohol disorders.

Implementing a moderation approach provides an additional behavioral modification and treatment. The inclusion of this method might require more extensive training of personnel to be competent, and the length of this training is unknown. To conduct or provide training of the staff to new approaches is not without expense. A recommendation would be to implement at one or
two trial locations to provide a cost-based analysis and study its effectiveness before incorporating at a larger scale.

The inclusion of partial hospitalization and intensive outpatient programs would expand the treatment options available. This would be applicable for the patient that did not truly meet criteria for a residential inpatient treatment, but the severity of alcohol disorder was greater than that which could be managed with outpatient care alone. These facilities could also provide treatment close the soldiers’ base, decreasing the impact of the soldier having to be transported to one of five locations. Research could be carried out to investigate if partial hospitalization and intensive outpatient programs help reduce military health care costs that are incurred with an inpatient program.

These proposed recommendations might have limitations to be truly applicable or achieve the desired purpose. Any of these new ideas or approaches should be planned carefully and evaluated in a systematic manner by collecting and analyzing data using a standardized health program development and evaluation strategy. One such method is proposed by Issel, largely using a five-step approach of defining the problem, developing the program, implementing and monitoring the health program, and evaluating the impact and outcome of the program (2013). This evaluation methodology could also be expanded to include future research initiatives to compare the effectiveness of alternative approaches for prevention and intervention for alcohol disorders in the U.S. Army.
References


