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Original Investigation

A qualitative analysis of the tobacco control climate in the U.S. military

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Abstract

Introduction: Rates of tobacco use in the U.S. military have traditionally been higher than in the general U.S. population. While the military has experienced decreases in tobacco use over the past two decades, recent surveys suggest a trend of increased use. Given the negative impact of tobacco on both the readiness and the long-term health of military members, it is important to understand what factors may be related to the increased use rates. It has been suggested that there is a culture that supports tobacco use in the military.

Methods: We examined perceptions about the climate of tobacco control among military installation Tobacco Control Managers and Service Policy Leaders from all four branches of the military ($n = 52$) using semistructured interviews.

Results: The primary strength of the military's tobacco control program, according to the participants, was mandating the provision of treatment services on every military installation. Any military member can receive both counseling and pharmacotherapy for tobacco. Opinions vary on the most promising new strategies for tobacco control. Many have pushed for a completely tobacco-free Department of Defense, including requiring troops to be tobacco-free and banning tobacco sales on military installations. However, a number of tobacco control experts within the military worry about unintended consequences of a complete ban.

Discussion: While several benefits of the current tobacco control program were identified, opportunities for improvement were identified at both the installation and service level.

Introduction

The U.S. military has a long history of having a culture that supports and encourages tobacco use by its members (Nelson & Pederson, 2008). For example, until 1975, the military provided tobacco use to its members as a part of typical rations (Joseph, Muggli, Pearson, & Lando, 2005), and it still allows military members and retirees to purchase cigarettes at a significant discount when compared with civilian prices (Smith, Blackman, & Malone, 2007). With increased understanding of the long-term negative health consequences of tobacco use, the military instituted smoke-free indoor air policies in the mid-1980s and began initiatives designed to decrease tobacco use among its members (Bachman, Freedman-Doan, O'Malley, Johnston, & Segal, 1999; Bushnell, Forbes, Goffaux, Dietrich, & Wells, 1997). During the same time period, tobacco use declined from approximately 50% to 33% in 2005 (Bray & Hourani, 2007; Bray et al., 2006). While tobacco control efforts seem to have been successful at decreasing rates of tobacco use since the 1980s, rates among military members remain high (Haddock et al., 2007) and increases in smoking have been seen among younger military personnel (18- to 25-year olds) between 1998 and 2002 with approximately 40% of junior enlisted members reporting that they currently smoke (Bray et al.; Lynch, Hanson, & Koa, 2004).

Although many smokers in the military start their tobacco use prior to entering the military and the military might attract tobacco users (Trent, Hilton, & Melcer, 2007; Woodruff, Conway, Edwards, & Elder, 1999), data from Bray et al. (2006) indicate that approximately one-third of current military smokers started using after enlisting in the military. Military personnel report several perceived benefits to tobacco use. As an example, smoking breaks are one of the only sanctioned reasons for taking a break from duty, and "smoking pits" are valued as places to socialize (Haddock et al., 2009; Hoffman et al., 2008). Junior enlisted personnel have reported being pressured by senior enlisted personnel to join them in the smoking pits. Peer pressure to use tobacco has been found to be particularly high during times of deployment (Poston et al., 2008). However, studies (e.g., Zadoo, Fengler, & Catterson, 1993) have actually demonstrated tobacco use to be detrimental to deployment diminishing combat readiness by reducing physical

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fitness, increasing risk of injury, loss of visual acuity (particularly at night), and a higher likelihood of discharge. It is likely that the social role that tobacco plays in military culture will make "buy in" for tobacco control policy more difficult. However, most military members, particularly senior commanders, are very concerned about combat readiness. Educating commanders about the negative impact of tobacco on combat readiness would likely increase the support for better policy in the services.

It has been suggested that elevated rates of tobacco use among military personnel may be due to population-based explanations, such as the stresses associated with military life (Boos & Croft, 2004), the relatively young age of military members (Lynch, Hanson, & Koa, 2004), and the related demographic of lower education level (Haddock, Klesges, Talcott, Lando, & Stein, 1998). Military recruits are predominantly young high school graduates, and in the military, as in the general population, tobacco use significantly decreases with age (Bray et al., 2006). Combat also may increase the likelihood of tobacco use. Of the veterans of Operation Enduring Freedom (Afghanistan) and Operation Iraqi Freedom, approximately 13% were diagnosed with Posttraumatic Stress Disorder, a diagnosis that has been significantly related to tobacco use (Fu et al., 2007; Seal, Bertenthal, Miner, Sen, & Marmar, 2007). Klevens et al. (1995) found that ever and current smoking was higher in military veterans than in the general population. No definitive explanation for the relationship between posttraumatic stress disorder and tobacco has been proven; however, it is likely that acculturation to an organization where smoking is considered to be an accepted stress relief method is likely a contributing factor.

While decreases in smoking rates since the 1980s signify a positive change, it is clear from recent trends, particularly among junior enlisted (Bray et al., 2006), that more effort needs to be expended in changing the culture of tobacco in the military. Unfortunately, there are little data available to personnel in the military regarding the climate of tobacco control in the Department of Defense. Thus, the current study provides qualitative data from in-depth interviews with installation Tobacco Control Managers and Policy Leaders in all four branches of the military about the current climate of tobacco control in the U.S. military.

Methods

Study overview

This study was a portion of a larger project designed to examine tobacco control climate in the U.S. military and to retrieve and analyze internal tobacco industry documents in order to describe how the industry attempted to influence that climate. In this article, we present the results of key informant interviews of both health Policy Leaders and Tobacco Control Managers in each service on a diverse set of military installations. Human subject's approvals were obtained from the involved universities and by the Tricare Management Activity Institutional Review Board (IRB) Program Office. Based on the IRBs, we have attempted to remove any individually identifying information.

Development of interview procedures and guide

In order to develop interviewer guides, three strategies were used. First, we sent requests to national tobacco policy experts explaining the purpose of the project and asking for relevant interview questions. Second, we collected and analyzed tobacco policy interviews in the published literature. Third, we asked our colleagues in the military services to send us potential interview questions. The original draft of the guide was sent to both national tobacco policy experts and military colleagues for comment and then was continually revised until consensus was met by the team about content. While most questions were similar for Tobacco Control Managers and Policy Leaders, there were some questions developed that were position specific and questions were tailored to position (e.g., asking about installation rather than service for Tobacco Control Managers). Domains from the guides that are discussed in this article include (a) perceived acceptability of smoking among military personnel, (b) strengths and weaknesses of the military tobacco program, (c) tobacco use among influential personnel in the military, (d) barriers to tobacco control in the military, (e) how to overcome barriers to tobacco control, and (f) tobacco industry influence in the military (see Table 1).

Sample

In consultation with the project consultant team, which consisted of both military personnel and civilian tobacco control experts, military Policy Leaders and Tobacco Control Managers were selected to be interviewed. Policy Leaders consisted of individuals who were involved in health policy development and/or implementation at a service level. Tobacco Control Managers were individuals tasked with the day-to-day tobacco control duties at their military installation. For example, these individuals are in charge of planning events, such as the Great American Smoke-Out, providing metrics to commanders about tobacco use and intervention, and overseeing tobacco cessation programs. Tobacco control is not typically the only responsibility of these individuals as their duties often include addressing other health behaviors as well (e.g., weight management programs). Policy Leaders from each service branch were identified by our military consultants. To obtain a sample of Tobacco Control Managers, we used a purposive sampling of typical instances sampling strategy (Shadish, Cook, & Campbell, 2002). We identified a sample of interviewees, which provided a diverse picture of how tobacco control is perceived and practiced. Along with our military colleagues, we identified installation-level personnel from a broadly representative set of major commands and geographic locations.

Policy Leaders were from each service branch (eight Air Force, three Army, three Navy, and two Marines) and half were active duty military officers (see Table 2). The remaining Policy Leaders were civilians who worked for their respective military branch. Half of the Policy Leaders were female and most (81%) had been involved in military tobacco control for more than 5 years. Tobacco Control Managers were also from each service branch (9 Air Force, 10 Army, 10 Navy, and 7 Marines); however, most were civilians who worked for the installation (83%). The majority of the Tobacco Control Managers were female (75%) and had more than 5 years experience as managing the tobacco program at their installation (56%).

Procedures

Upon identifying a potential interviewee, our research team made a precontact by E-mail in order to provide an overview of the study, provide an offer to help with any administrative requirements needed to participate, and to schedule a time for the

Table 1. Relevant interview questions

Interviewee	Domain	Question
PL & TCM	Acceptability	How acceptable is smoking in your service? a. What, in your service, sends the message that tobacco is acceptable? b. What, in your service, sends the message that tobacco is unacceptable?
PL & TCM	Strengths	In your opinion, what is your service's (installation's) biggest strength in your tobacco control program?
PL & TCM	Weaknesses	In your opinion, what is your service's (installation's) biggest weakness in your tobacco control program?
TCM	Influential personnel	Do any "high profile" or "influential" personnel smoke such as commanders, influential senior enlisted personnel, opinion leaders, etc.? If so, have you noticed anything specific (positive or negative), which has resulted from their influence?
PL & TCM	Barriers	What do you think are the 3 biggest barriers to reducing tobacco use in your service?
PL & TCM	Overcoming barriers	How do you think these barriers can be overcome?
PL & TCM	Tobacco industry	Do you know of any occasion where a tobacco company has either directly or indirectly attempted to influence tobacco policy in your service? If yes, can you tell me a little bit about what happened? Do you believe the tobacco industry influences your service's tobacco policy in any way?

Note. PL = Policy Leader; TCM = Tobacco Control Manager.

interview. All interviews were performed by the project's coordinator who had extensive training and experience with qualitative research techniques. Participants were informed that the interviews were being audiotaped to be transcribed later. They were encouraged to speak freely and were assured their information would not be linked to uniquely identifying information.

Data analyses

An iterative two-phase process was used to capture the meaning behind the transcribed text with an overall purpose of creating an increasingly sophisticated and rich description of Policy Leader and installation-level personnel's perspectives regarding tobacco control efforts, obstacles to tobacco control policy initiatives, and potential future efforts. First, two trained researchers reviewed the transcriptions to develop a familiarity with the text and to search for emergent patterns and themes that occurred frequently in a single interview or that were common across interviews. Once the preliminary themes were identified and agreed upon, the assistants then uploaded the transcriptions into NVivo 2.0, a qualitative data analysis software program (NVivo, 2008). The data were then coded to the themes, referred to as "nodes" in NVivo. A line-by-line coding analysis

Table 2. Demographics of participants

	Air Force	Army	Navy	Marines	Total
Policy Leaders	*n* = 8 (%)	*n* = 3 (%)	*n* = 3 (%)	*n* = 2 (%)	*N* = 16 (%)
Rank					
Civilian	25	100	100	0.0	50.0
Age in years					
31–40	25.0	0.0	0.0	0.0	12.5
41–50	62.5	100.0	100.0	100.0	81.2
50+	12.5	0.0	0.0	0.0	6.1
Gender					
Male	25.0	66.7	100.0	50.0	50.0
Years in military tobacco control					
>5 years	77.5	66.7	100.0	50.0	81.3
Tobacco Control Managers	*n* = 9 (%)	*n* = 10 (%)	*n* = 10 (%)	*n* = 7 (%)	*N* = 36 (%)
Rank					
Civilian	88.9	70.0	80.0	100.0	83.3
Age in years					
21–30	11.1	0.0	10.0	28.6	11.1
31–40	55.6	40.0	40.0	71.4	50.0
41–50	33.3	40.0	30.0	0.0	27.8
50+	0.0	20.0	20.0	0.0	11.1
Gender					
Male	11.1	10.0	60.0	14.3	25.0
Years in military tobacco control					
>5 years	25.0	80.0	60.0	57.1	55.6

by the two research assistants of the transcriptions while in NVivo ensured that all text was represented in one or more node reports, depending on its relevance. This software program also enabled all responses to the same questions across the interviews, as well as any relevant responses to other questions, to be collated and produced in respective node reports for researchers to review. Upon completion of the coding, the two research assistants agreed upon a written summary interpretation of each node report in preparation for the next phase of the analysis.

In the second phase, a third researcher audited the transcripts and node reports to determine whether summary interpretations provided by the first two research assistants were consistent with the audit. The use of multiple reviewers assists in establishing the accuracy and objectivity of the coding scheme and the identified nodes (Hill, Thompson, & Williams, 1997). Given the transparent nature of the responses and their clear affiliation with their respective and/or other questions, disagreements were rare and relatively trivial, limited only to a small degree of how strongly to word the summary or which quote might best exemplify a particular node. In the event of any disagreement, the three researchers consulted until a consensus was reached.

Results

Themes identified in response to the structured questions were very similar across services and between positions (Tobacco Control Managers and Policy Leaders). Thus, results are presented for the military as a whole rather than service specific. Given the relatively small number of individuals involved in military tobacco control, this provides additional protection of the confidentiality of participants.

How accepted is smoking?

Overall, Policy Leaders reported that smoking was generally accepted within their service. The most common evidence cited for the acceptability of smoking was the easy access of relatively low-priced cigarettes and the visibility of people smoking on military installations.

> Well, obviously, it is acceptable. It is sold in our commissaries and BXs. People are allowed to smoke in designated areas, even areas that are not designated, people ignore the rules and there's not a whole lot of attention given to it specifically organizationally wide.

Tobacco Control Managers also believed that smoking was an accepted part of the military culture. They noted the lack of enforcement of tobacco control policies, cheap cigarettes sold on military installations, attractive and widely available designated smoking areas, and tolerance of smoking in nonsmoking areas as evidence of smoking's acceptability.

> Well, I would say at our installation, smoking is the culture. It's part and parcel of being, you know, in the military . . . . Weapon in one hand and cigarette in the other kind of thing.

In contrast to the general culture of acceptance of smoking, Tobacco Control Managers reported that some unit and installation commanders take a strong stand against tobacco use. Tobacco Control Mangers discussed several factors, which were designed to alter the culture of acceptance for tobacco use. These factors included the wide availability of no-cost smoking cessation services on military installations, antismoking signs and posters located on the installation, and clean indoor air rules.

Strengths of the tobacco control program

Policy Leaders were asked to discuss what they believed were the primary strengths of the tobacco control program in their service. Across all services, the availability of smoking cessation services was mentioned as a primary strength of the program.

> That the [service deleted] offers tobacco cessation treatment to all comers for active duty, family members, and retirees though their medical clinics and hospitals.

Tobacco Control Managers echoed the Policy Leaders' belief that the provision of cessation services was the primary strength of the military's tobacco control program. Both Policy Leaders and Tobacco Control Managers also frequently mention that the military promotes public health messages about the harmful nature of tobacco use to military personnel.

Weakness of the tobacco control program

For both Policy Leaders and Tobacco Control Managers, a major weakness of the military's tobacco control program was inconsistent support from military commanders. Participants noted that the quality of tobacco control varied across installations and over time within services depending on the position of the service leader or installation commander.

> Well, I think once again I would have to highlight our leadership . . . . I think really what's keeping us from that [stronger tobacco control] is lack of leadership, that if the generals who run the [service deleted] wanted to make it happen, they could.Our tobacco control program is inconsistent, depending on the installation and the priorities, and the vision of the leadership of the installation.

Other weakness of the tobacco control program mentioned by Policy Leaders included the money raised for base services from tobacco sales and the fact that TriCare (the organization which manages military health care) doesn't reimburse for tobacco counseling by providers or all types of tobacco cessation treatments.

> We let things like the money that's raised or that's gotten from tobacco sales sometimes cloud what we're doing.

Tobacco Cessation Managers frequently mentioned the lack of enforcement of tobacco policy as a barrier to tobacco control. A typical statement from Tobacco Control Managers was:

> Enforcement. Support from leadership just in general and people enforcing it. It's hard to enforce a culture change. It's really, really hard to enforce a culture change, but that's what we need. And that's our biggest weakness is that nobody's willing to do it.

Tobacco use among influential personnel

As a general rule, interviewees reported that most officers and high-ranking personnel were nonsmokers. However, in the rare

instances when those in power were tobacco users, it was not uncommon for their tobacco use to be hidden. Some Tobacco Control Managers reported:

> I definitely know that there are some high profile senior higher enlisted influential personnel who smoke, but what I see them do is they tend to hide it better . . . they do a better job the higher influential enlisted officers they do a better job of hiding it because they realize that they do influence the young (service deleted) and a lot of times the young (service deleted) will look up to these guys as role models. So, they do a better job of hiding it.

While it was perceived by most Tobacco Control Managers that high-ranking officers were not tobacco users, many interviewees reported that it was not uncommon for senior enlisted personnel to be tobacco users.

There are a number of negative consequences when those in leadership positions are tobacco users. One of the most common consequences identified was that leadership using tobacco makes its use appear more acceptable and smoking breaks can be used as a bonding experience. An example of statements by Tobacco Control Managers included:

> . . . it tends to be sort of an accepted social event that people tend to want to hang out together.

Some reported that the tobacco use of higher ranking officials sometimes influences tobacco policies and the priority placed on tobacco control on base. One instance was cited by a Tobacco Control Manager who reported that a commander who was a tobacco user was unsupportive of tobacco control efforts being implemented on their installation. Some interviewees cited the positive influence of leaders, particularly if they are former tobacco users. Given their understanding of the addiction, the challenges of quitting and the health impact of changing tobacco use patterns, their influence can be useful in changing subordinates use patterns.

When high-ranking medical personnel are smokers, there seem to be particularly negative consequences for tobacco control efforts. One Tobacco Control Manager reported that patients of a smoking health care provider find it harder to quit their own tobacco use when working with a using provider. Another Tobacco Control Manager stated that high-ranking medical personnel smoking is sometimes used as an excuse for others to use.

Barriers to tobacco control

The access to inexpensive tobacco products on the installations was frequently cited as one of the barriers to limiting tobacco use among military members. Availability and accessibility to tobacco were specifically cited by several Policy Leaders including:

> I think one of the things I really struggle with is both the cost and availability of tobacco products on our installation.

It was also regularly noted by Tobacco Control Managers that while tobacco is easily accessible, access to treatments is not.

> . . . it's easier to be able to purchase cigarettes or dip or chew than it is to get pharmacotherapy or intervention to quit smoking or dipping.

Limitations in the use of medications available for tobacco cessation as well as lack of support for those attempting to quit tobacco use also were cited as barriers to improving quit rates among military members.

Policy Leaders cited challenges of finding time to address tobacco use with patients and difficulty accessing the latest in treatment options as barriers. Example statements include:

> Essentially, providers are supposed to see so many patients a day and so they only get so much time allotted and so, when you've got something more urgent, counseling about tobacco cessation often gets dropped off or we'll talk about it next time.

Several cited the lack of direction from the leadership on the issue of tobacco and the lack of understanding among leadership about the impact of tobacco on readiness. Some examples from tobacco control managers include:

> I think any change in the military has to come from the top, you know. It's not going to be a bottom up change. It's got to be a top down change. So someone at the top level, the Secretary of Defense, Service Chiefs, they're going to have to say to Commanders, "Folks, we've got a problem. This is something that's impacting our ability to perform our combat mission."

Tobacco company influence also was recognized as a contributing barrier to reducing tobacco use in the military. One Policy Leader explained it as:

> I think the biggest barrier is the political pressure that tobacco companies can bring to bear on the service leaders. I really think that the fear of either pressure politically from tobacco state legislators who often sit on defense committees and who have bearing on funding and different types of programs, or just being called to testify in front of congress and have to defend why you banned smoking from a base and why you're keeping Johnny from his legal right to smoke. You know, how can you do that? Or even the threat of being sued . . . if I had to guess, those are the biggest questions or barriers in the minds of our top generals when they think, "You know what? This is the right thing to do, but you know, it's going to be really hard because I could get called to congress. I could be embarrassed in public. I could have a suit filed against us.

At times, the location of the installations becomes a barrier to tobacco control efforts. For instance, installations that are overseas tend to have fewer limitations on tobacco.

> Our number one barrier, in my eyes, is where we're located . . . where we are is in a culture overseas where it is very challenging. A lot of the locals/nationals that work on our installation smoke.

At installations that have a high rate of civilian personnel, there are additional challenges. For example, leadership does not have the same amount of control over the actions of civilians as they do over those in the military so limiting tobacco use is more of a challenge. In addition, there are challenges of installations that are primarily populated by commuters. It was highlighted by some Tobacco Control Managers that not being able to limit tobacco use where people primarily live makes discouraging tobacco use more difficult.

Overcoming barriers to tobacco control

One key component to overcoming the barriers to tobacco control in the military identified by Policy Leaders was changing the overall messages being sent by the military leadership. Some Policy Leaders cited the unique structure of the military as being able to limit tobacco use, while others discussed the need for strong leadership directing tobacco control efforts.

> So I think if leadership gets buy into it, it's not going to be a fast process, but I think we could do it . . . the fact that we have a captured audience, you know, the fact that we have military and they're in uniform and you set guidance, set policy and set roles, that's our biggest strength.

Other Policy Leaders stated a belief that changes in tobacco control policies on military installations were necessary to change the tobacco culture. In particular, changes in policies allowing cheaper tobacco to be sold at the installations were cited as an example.

> And again, raising the price. I mean, if you do make it available, raise the price of tobacco.

Policy Leaders also discussed the need to change the overall view of tobacco in the military. Some discussed the need for changes to the view of tobacco use by military members to be more in line with other personal rights in the military.

> . . . we could overcome the idea that it's a personal right because so are many of the things that we dictate in the military. The length of your hair, how you wear it. You have to wear the uniform a certain way. Alcohol is not illegal, but people don't drink during the duty day. We have very strict guidelines on our facilities, and our members have to adhere to that. There are all kinds of inalienable rights that we control. This is just another one.

Tobacco industry influence in the military

When asked if they knew about any occasion where a tobacco company has either directly or indirectly attempted to influence tobacco policy at their installation or in their service, most Tobacco Control Managers said they were not aware of any direct influence. However, they did believe there was indirect influence by the industry on tobacco use among military personnel. For instance, they cited the advertising of smokeless tobacco targeted toward military members.

> I'm sure, if you've been working with the military, you've heard about the smokeless tobacco companies sending free smokeless tobacco products to Iraq . . . those are the underhanded kind of ways. I'm sure that there's lots of different instances of those things that we don't know about. I know with smokeless that they're really pushing it, because it's a tobacco free (Service). They just want to subvert it.

One Tobacco Control Manager referenced the sponsoring of water distribution by tobacco companies as a way the companies influence their perception in the military.

> I do know that (Tobacco Company) does help to bring in bottled water. (Question: How did you know that it was (Tobacco Company)?) Very good question. The bottles didn't say it . . . but I know they paid for it . . . I can't remember how I found that out but I know they did pay for it . . . I know when I went through Desert Storm, it was common knowledge that, "well, if you can't smoke 'em, at least you can drink 'em"

While some Tobacco Control Managers cited specific examples of tobacco companies attempting to directly influence tobacco use in the military through free samples on installations, most indicated that current attempts to influence military policy are likely less visible.

> If it is, it's very back door and shady . . . they've done a very good job of keeping it hidden if it's happening and I strongly believe it's happening. . . . industry does influence military very much, so in terms of what we buy from airplanes to shoe laces. I would actually probably be shocked if there were no subtle, indirect influences on military policy.

Discussion

Both installation Tobacco Control Managers and Policy Leaders expressed a belief that tobacco is generally an accepted part of the military culture, particularly among younger military members. While tobacco use by officers is limited, use by key midlevel management, such as senior enlisted personnel, is believed to encourage higher rates of tobacco use among junior enlisted. According to both groups of interviewees, examples of evidence of the acceptability of tobacco use include lack of enforcement of existing tobacco control policies, the accessibility of inexpensive tobacco on military installations, the attractive and widely available designated smoking areas, tolerance of smoking in nonsmoking areas, and acceptability of smoking breaks for tobacco users. These findings are consistent with studies of junior enlisted personnel, who report that liberal smoking breaks and relatively cheap prices for and easy access to tobacco products are evidence of the acceptability of tobacco within the military culture (Haddock et al., 2008). Unfortunately, research also suggests that the acceptability of smoking increases during military deployments (Poston et al., 2008). Thus, although military policy makers should be commended for relatively aggressive efforts to reduce tobacco use among its troops, it appears that a culture of tobacco use persists in the military (Conway, 1998).

It is possible that increased smoking restrictions may lead to higher rates of smokeless tobacco use among military personnel. Indeed, previous research has suggested that smokers in the military use smokeless tobacco when they cannot smoke (Haddock et al., 2009). Also, it appears that the smokeless tobacco industry is specifically targeting military members with advertising as regulations on smoking and secondhand smoke increase because smokeless tobacco use is more difficult to detect (Haddock et al., 2008). Thus, new tobacco policy should also address the potential impact that restrictions on the sale and use of cigarettes might have on other tobacco products.

This study suggests that the military should develop initiatives to challenge the social acceptability of tobacco use among its personnel. First, the military should educate line commanders about the actual impact of tobacco on military health and readiness. Line commanders should receive training on how to provide clear and consistent messages to their troops that tobacco use is unacceptable in the military. Second, the military should address the cost of and access to tobacco products on

military installations. Unfortunately, current military policy actually forbids using price as a tobacco control strategy. Department of Defense Instruction 1330.09 (2005) requires that "Prices of tobacco products sold in military resale outlets in the United States, its territories and possessions, shall be no higher than the most competitive commercial price in the local community." This policy effectively bans one of the most effective tobacco control strategies available (Centers for Disease Control and Prevention, 2007). Third, they highlight the importance of focusing on existing (e.g., breaks for smokers) and future policies and their enforcement. In addition, it is recommended that funds from tobacco sales be used to fund additional tobacco control activities rather than popular installation services. Current practices appear to provide a perverse incentive to continue to promote tobacco consumption on military installations. Finally, this study suggests that the military should address perceived gaps in treatment services for tobacco addiction. Although the military provides tobacco services on its installations, participants suggested that these services are inconsistent and that the military's primary funder of health care, TriCare, does not reimburse for tobacco cessation treatment.

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Declaration of Interests

None declared.

References

Bachman, J. G., Freedman-Doan, P., O'Malley, P., Johnston, L. D., & Segal, D. R. (1999). Changing patterns of drug use among US military recruits before and after enlistment. *American Journal of Public Health*, *89*, 672–780.

Boos, C. J., & Croft, A. M. (2004). Smoking rates in the staff of a military field hospital before and after wartime deployment. *Journal of the Royal Society of Medicine*, *97*, 20–22.

Bray, R. M., & Hourani, L. L. (2007). Substance use trends among active duty military personnel: Findings from the United States Department of Defense Health Related Behaviors Surveys, 1980–2005. *Addiction*, *102*, 1092–1101.

Bray, R. M., Hourani, L. L., Olmsted, K. L. R., Witt, M., Brown, J. M., Pemberton, M. R., et al. (2006, December). *2005 Department of defense survey of health related behaviors among active duty military personnel: A component of the Defense Lifestyle Assessment Program (DLAP)*. Research Triangle park, NC: RTI International. Retrieved 14 August 2007, from www.ha.osd.mil/special_reports/2005_Health_Behaviors_Survey_1-07.pdf

Bushnell, F. K., Forbes, B., Goffaux, J., Dietrich, M., & Wells, N. (1997). Smoking cessation in military personnel. *Military Medicine*, *162*, 715–719.

Centers for Disease Control and Prevention. (2007). *Best practices for comprehensive tobacco control programs—2007*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

Conway, T. L. (1998). Smoking and the United States military: A longstanding problem. *Tobacco Control*, *7*, 219–222.

Department of Defense Instruction 1330.09. (2005). *Armed services exchange policy*. U.S. Department of Defense.

Fu, S. S., McFall, M., Saxon, A. J., Beckham, J. C., Carmondy, T. P., Baker, D. G., et al. (2007). Post-traumatic stress disorder: A systematic review. *Nicotine & Tobacco Research*, *9*, 1071–1084.

Haddock, C. K., Hoffman, K., Taylor, J. E., Scwab, L., Poston, W. S. C., & Lando, H. A. (2008). An analysis of messages about tobacco in the Military Times magazines. *Nicotine & Tobacco Research*, *10*, 1191–1197.

Haddock, C. K., Klesges, R. C., Talcott, G. W., Lando, H., & Stein, R. J. (1998). Smoking prevalence and risk factors for smoking in a population of United States Air Force basic trainees. *Tobacco Control*, *7*, 232–235.

Haddock, C. K., Pyle, S. A., DeBon, M., VanderWeg, M., Klesges, R. C., Peterson, A. L., et al. (2007). Cigarette use among two cohorts of U.S. Air Force recruits, compared with secular trends. *Military Medicine*, *172*, 288–294.

Haddock, C. K., Taylor, J. E., Hoffman, K. M., Poston, W. S. C., Peterson, A., Lando, H. A., et al. (2009). Factors which influence tobacco use among junior enlisted in the United States Army and Air Force: A formative research study. *American Journal of Health Promotion*, *23*, 241–246.

Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist*, *25*, 517–572.

Hoffman, K. M., Haddock, C. K., Poston, W. S. C., Taylor, J. E., Lando, H. A., & Shelton, S. (2008). A formative examination of messages that discourage tobacco use among junior enlisted members of the United States military. *Nicotine & Tobacco Research*, *10*, 653–661.

Joseph, A. M., Muggli, M., Pearson, K. C., & Lando, H. (2005). The cigarette manufacturers' efforts to promote tobacco in the US military. *Military Medicine*, *170*, 874–880.

Klevens, R. M., Giovino, G. A., Peddicord, J. P., Nelson, D. E., Mowery, P., & Grummer-Strawn, L. (1995). The association between veteran status and cigarette-smoking behaviors. *American Journal of Preventive Medicine*, *11*, 245–250.

Lynch, J. P., Hanson, K., & Koa, T. (2004). Health-related behaviors in young military smokers. *Military Medicine*, *169*, 230–235.

Nelson, J. P., & Pederson, L. L. (2008). Military tobacco use: A synthesis of the literature on prevalence, factors related to use, and cessation interventions. *Nicotine & Tobacco Research*, *10*, 775–790.

NVivo. (2008). NVivo qualitative data analysis software (Version 2). Doncaster, Victoria, Australia: QSR International Pty Ltd.

Poston, W. S. C., Taylor, J. E., Hoffman, K. A., Peterson, A., Lando, H. A., Shelton, S., et al. (2008). Smoking and deployment: Perspectives of junior enlisted US Air Force and US Army personnel and their supervisors. *Military Medicine*, *173*, 441–447.

Seal, K. H., Bertenthal, D., Miner, C. R., Sen, S., & Marmar, C. (2007). Bringing the war back home: Mental health disorders among 103,788 US veterans returning from Iraq and Afghanistan seen at Department of Veterans Affairs facilities. *Archives of Internal Medicine*, *167*, 476–482.

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Boston: Houghton-Mifflin.

Smith, E. A., Blackman, V. S., & Malone, R. E. (2007). Death at a discount: How the tobacco industry thwarted tobacco control policies in US military commissaries. *Tobacco Control*, *16*, 38–46.

Trent, L. K., Hilton, S. M., & Melcer, T. (2007). Premilitary tobacco use by male Marine Corp recruits. *Military Medicine*, *172*, 1077–1083.

Woodruff, S. I., Conway, T. L., Edwards, C. C., & Elder, J. P. (1999). The United States Navy attracts young women who smoke. *Tobacco Control*, *8*, 222–223.

Zadoo, V., Fengler, S., & Catterson, M. (1993). The effects of alcohol and tobacco use on troup readiness. *Military Medicine*, *158*, 480–484.