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A CONTENT ANALYSIS OF MILITARY COMMANDER MESSAGES ABOUT TOBACCO AND OTHER HEALTH ISSUES IN MILITARY INSTALLATION NEWSPAPERS: WHAT DO MILITARY COMMANDERS SAY ABOUT TOBACCO?

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Abstract

Military installation newspapers are a primary means used by military commanders to communicate information about topics important to military personnel including leadership, training issues, installation events, safety concerns, and vital health issues. We conducted a content analysis of military commanders' messages about health issues that were published in online military installation newspapers/newsfeeds. We identified a total of 75 publicly accessible installation newspapers/newsfeeds with commanders' messages (n=39 Air Force, n=19 Army, n=7 Navy, n=1 Marine, and n=9 Joint Bases). Commander messages published between January 2012–December 2012 were collected, screened, and coded. Coder inter-rater reliability was 98.9%. Among the 2,479 coded commanders' messages, 132 (5.3%) addressed a health topic as the primary focus. There were no significant differences between service branches in the percentage of health-oriented messages ($\chi^2=5.019$, $p=0.285$). The most commonly addressed health topics were exercise/fitness (23.5%), other mental health concerns (19.7%), alcohol/DUI (13.6%), and suicide (12.1%). Tobacco use was directly addressed as a primary health aim in only two commanders' messages (1.5%). Health topics, and particularly tobacco-related content, are rarely written about by military commanders. The absence of tobacco-related health messages from line leadership contributes to the perception that tobacco control is a low priority.

Keywords

military; tobacco control; tobacco cessation; commanders

INTRODUCTION

The DoD Survey of Health Related Behaviors Among Active-Duty Personnel,^{1, 2} a military health surveillance program conducted every four to five years, provides tobacco use

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prevalence estimates based on a representative sample from the over 1.3 million military personnel³ from each service branch. Smoking has declined substantially over the past three decades, with 51% of military personnel smoking in 1980 compared to 30.4% in 2008 and 24.5% in 2011.^{1, 2} In addition to smoking, 12.8% of military personnel report using smokeless tobacco.¹

Tobacco use has substantial negative impact on military health care costs. The DoD spends \$1.6 billion on tobacco-related healthcare and lost productivity.⁴ In the USAF alone, smoking has resulted in over 893,128 lost workdays per year, which would have been equivalent to the loss of approximately 3,573 full-time equivalent positions (assuming 250 workdays per year) at the time the study was conducted.⁵ Smoking status was associated with over \$130 million in excess training costs per year because smokers are significantly more likely to be prematurely discharged or fail basic training.^{6, 7} Tobacco also is a threat to the financial well-being of individual military members. For instance, in 2002, junior enlisted troops who smoked reported significantly greater financial strain than nonsmokers at similar pay grades, with tobacco purchases consuming as much as 14.8% of his/her base pay.⁸ In 2014, an E-1 (lowest enlisted rank) with less than two years of service would spend approximately 11% of their annual base pay to smoke just one pack of cigarettes per day, given the average sales price of \$5.49 per pack at military exchanges.^{9, 10}

Tobacco impacts military operational readiness more than other health issues that receive greater attention from military leadership, such as body composition.¹¹ Military personnel who smoke are more likely to be injured,^{12–14} have significantly lower fitness levels and decreased muscle endurance,^{13–16} more post-surgical infections and impaired wound healing,^{17–20} longer hospital stays,⁴ reduced night vision and mental sharpness⁴ than non-smoking troops.^{12–20} Smokers in the military also report poorer mental health and significantly greater work and life stress than their nonsmoking peers, likely due to chronic nicotine withdrawal.^{21–22} Tobacco use is associated with increased prevalence and severity of psychosocial problems that result from combat exposure^{23–25} and there is a strong dose-response relationship between the number of cigarettes smoked and suicide.²⁶

Military line leadership (i.e., those who lead troops in combat-related and support activities) can have a significant impact on the attitudes and behaviors of military personnel regarding the many health and safety issues that affect them. For instance, several studies found that military personnel believe that line leadership have an influence on health behaviors including tobacco use and diet choice.^{27–29} Commanders also are ultimately responsible for enforcing policy and setting conduct norms for their troops. Previous research has documented that both military health policy leadership (PLs) and installation health promotion managers (HPMs) report that commanders frequently lack important knowledge about the impact of tobacco products on military combat readiness and often make decisions based on misinformation about tobacco control policy. For instance, PLs and HPMs report that military commanders often believe that tobacco use has minimal impact on military readiness, despite substantial evidence to the contrary. Because of this, they believe that commanders often place a low priority on enforcement of tobacco control policy.^{30–31}

Knowing that military personnel perceive line leadership as not prioritizing tobacco control^{27–31} is informative, but no studies to date have indirectly or directly examined military line commanders' views on tobacco control. Several factors may contribute to this including the high operations tempo under which the military has operated for over a decade, that commanders may need to seek multiple approvals to be interviewed, and that the approval process may have extra requirements to ensure that military personnel are participating voluntarily. Military installation newspapers are publicly accessible, require no approvals to obtain, and represent an important avenue for commanders to communicate with their installation personnel. In addition, data suggests that installation newspapers are read by the majority of military service members³² and the Code of Federal Regulations that governs them specifically states that "The newspaper provides information to make command members aware of the hazards of the abuse of drugs and other substances, and of the negative impact that substance abuse has on readiness"³³, suggesting that installation papers are viewed by the military as one of several important mediums for commanders to inform members about the dangers of substance use including tobacco.

Thus, messages provided by military commanders could be extremely influential for military personnel and examining the content of commanders' messages in military newspapers represents a useful method to indirectly assess military commanders' attitudes and practices regarding tobacco relative to other health issues. The purpose of this study was to conduct a content analysis of military commanders' messages to personnel about health issues that were published in online military installation newspapers/newsfeeds.

METHODS

Installations Included

Military installation newspapers are one of the primary means used by military commanders to communicate information to installation personnel about a number of important topics important to military personnel and their families including leadership, training issues, installation events, safety concerns, and important health issues such as smoking cessation, drinking and driving, healthy weight objectives, and fitness, to name just a few.³²

Information was collected on all military installations in the continental US (CONUS), including Hawaii and Alaska, listed on the National Army Security Agency Associations' U.S. Military Base Locations listing (available at www.nasaa-home.org/baselocs.htm). The list of installations was entered into an excel spreadsheet and each installation website was searched to determine: 1) whether the installations' site had a PDF or online newsfeed/newspaper; 2) the name of the installation paper; 3) if the paper/newsfeed had commanders' messages; 4) where the commanders' messages were located; and 5) the frequency of commanders' messages. Links to the paper or newsfeed were recorded for each installation when available.

In total, 231 military installation websites were searched for available electronic newspapers. The comprehensive list included some that were no longer active, hospitals, and other groups not meeting the definition of a military installation. These non-installations (n=46) were eliminated, leaving a sample of 185 newspapers, of which 91 contained

leadership/commanders' messages as part of the content. During the data collection process, we identified a total of 75 out of the 91 (82.4%) that published commanders' messages for installation personnel that were publicly accessible and archived (n=39 Air Force, n=19 Army, n=7 Navy, n=1 Marine, and n=9 Joint Bases); the remaining 16 either did not archive past issues over the year (i.e., only the most recent issue could be viewed).

Military Line Leadership

Several research team meetings, which included two prior service Air Force officers and a former Marine on the research team, as well as military consultants (one retired USN O-6, one retired USNR O-6 who also was a USN civilian employee, and one retired USAF O-6), were held to determine the types of commanders whose messages should be included in the study. It was determined that collection of messages should focus on line Field Grade and General Officers (O-4 and above) because they exercise general command authority, are eligible for operational commands or leadership, and are most likely to command at a higher level (i.e., larger groups such as Battalions, Groups, Wings, Garrisons, Divisions, and other larger units) and thus have greater influence. We excluded company grade officers (<O-4) because they command much smaller units and arguably have less influence on a broad range of military personnel. We also excluded officers in non-line capacities including the medical service, judge advocate general, chaplains, civilian DoD employees., etc. because they serve in non-combatant, supportive capacities, do not typically exercise the same command authority as line commanders, and because line troops, the majority of military personnel, typically have the majority of their time under the authority and influence of line leadership.

Senior enlisted personnel (i.e., Non Commissioned Officers in the E7–E9 ranks) also were included because they also are very influential to military personnel and exercise leadership and implement commanders' authority over larger groups of enlisted personnel. If there was no author as listed, the article was automatically excluded even if it was described as from a military leader. Each article identified in the initial phase was screened by two of our investigators, who were both prior service military officers. Potential commander messages were evaluated to confirm that the author was a line officer who met all the rank category criteria. In addition, we also examined the command structure of each military installation to determine if the author was considered the overall Installation Commander or a unit commander other than the installation commander. This was done because it was sometimes the case that the installation commander, i.e., the individual who was the commander of the host unit, was not always the highest ranking individual on the installation, as some guest units might have a higher ranking officer depending on their mission.

Commander Message Coding Form

The coding manual was developed by the research team and military consultants and was based on our previous content analyses of military and veterans organizations publications, policies, and websites.^{32, 34–36} In brief, a total of 21 health and 23 general topics relevant to military members were selected for coding as the primary aim of the commanders' message. The coding form (with the health and general topics) is presented in Figure 1.

These topics were selected for several reasons including, but not limited to their frequency of occurrence in our previous our content analyses of health topics among military-related print media, websites, and policies, input from our military consultants, and their relevance based on a review of military and veterans' health concerns.^{32, 34–36}

Health topics included substance use issues (e.g., alcohol, illegal drugs, tobacco [directly or indirectly addressed], and smoking cessation), mental health topics (e.g., suicide, post-traumatic stress disorder [PTSD], other mental health concerns), war and deployment-related health problems (e.g., disability, amputation, wounds, Traumatic Brain Injury [TBI], Gulf War Syndrome [GWS], and Agent Orange), fitness and weight (e.g., exercise, fitness, weight, body composition, diet, hydration), health system issues (e.g., health insurance, Tricare, Veterans Administration benefits and services, and pharmaceutical formulary provisions), and more general health topics (seatbelt use, cancer, other health concerns).

Tobacco content was defined as either directly or indirectly addressed.^{32, 34–36} Directly related tobacco topics included content where the primary focus of the information was on tobacco products (e.g., cigarettes, smokeless tobacco, cigars), tobacco use, the risks and outcomes of smoking, environmental tobacco smoke, etc. Content was coded as indirectly related to tobacco when the main focus of the information was on other issues such as personal human interest stories, policy discussions, articles about commissary pricing, etc. where tobacco use or tobacco products were incidentally mentioned (e.g., housing fires caused by smoking in bed). Smoking cessation was coded when the content directly discussed smoking cessation services or the benefits of quitting smoking.

General topics included housing, personal and occupational safety concerns, holiday notices and goals/resolutions, voting/politics, installation initiatives and programs, base realignments and closures, inspections, leadership, supervision, and teamwork, education and training, Commissary and Morale, Welfare and Recreation resources, awards/accomplishments, welcomes and farewells, family and community, professionalism/discipline and rules and regulations, military service and history, and terrorism and force protection.

Message Coding Process

Coding was a six step process, which ensured that all messages were thoroughly and reliably coded. First, one researcher accessed all the installation newspaper/newsfeed links for each installation website each month and checked each relevant webpage and tab for pertinent content. Second, one of the team's prior service military officers screened each message to determine if it was from a commander based on the previously described inclusion criteria and if the commander was the installation commander. Next, two independent coders read the entire message to determine the primary aim (general vs. health aim and which category it fell into within either of those main categories) and any health topics mentioned in addition to the primary aim. Fourth, each pair of coded messages was reviewed for discrepancies. When there were discrepancies, the fifth step required a third independent reviewer to read the message and decide which identified aim was more accurate. Thus, a total of 2,479 commanders' messages published between January 2012 to December 2012 were collected and screened from the 75 installations. Coding by the two independent

reviewers was done in batches from March 2012 to March 2013. Data entry, cleaning, and reconciliation by a third reviewer in the small percentage of cases where raters disagreed, occurred from April 2013 to October 2013. Inter-rater reliability between coders was high, with raters agreeing an average of 98.9% of the time on the coding of more than 59,496 data-points prior to resolving any discrepancies.

Statistical Approach

SPSS (Version 21) was used to conduct all descriptive quantitative analyses, e.g., computing frequencies and percentages. The number of times general and health topics were the primary aim of a commanders' message was computed, as well as the frequency of the coded general and health topics previously noted. We examined the distributions of both general and health topics by the service branch of the installation, rank of the leader/commander who wrote the message, and by their status as the installation commander. Finally, we also reviewed each tobacco-related item identified in the content analysis to determine if it met the previously defined criteria for being directly or indirectly related to tobacco.

RESULTS

Installations, Commanders, and Messages by Service Branch

Table 1 presents the distribution of installations, commanders, and message number and type by service.

A large number of unique installations and commanders, and commanders' messages came from USAF and USA installation papers, but this is largely due to the inclusion requirement for our study that required the installation to have an online and publicly accessible installation paper that included messages from senior commanders and leaders.

Commanders messages about health-related topics were rare; out of 2,479 messages identified, only 132 (5.3%) addressed a health topic as the primary focus of the message. There were no significant differences in the rate of health-oriented vs. general messages when examined by service branch ($\chi^2=5.019$, $p=0.285$; see Table 1), rank of the commander/leader (E7–E9=5.3%, O4=4.4%, O5=6.8%, O6=4.8%, and >O7=5.3%; $\chi^2=0.2510$, $p=0.643$) or whether the author was the overall installation commander (yes=4.5%, n=5.5%; $\chi^2=0.684$, $p=0.408$).

Health and General Topics Addressed in Commander Messages

Table 2 presents the ranking of health topics for commanders messages coded as having a health topic (n=132) as the primary aim.

The most commonly addressed health topics by commanders were exercise/fitness, other mental health concerns, alcohol/DUI, suicide, and other health topics (the most frequent themes in this category were kidney donation and dental health). Tobacco use was directly addressed as a primary health aim in only two commanders' messages and was never addressed indirectly. The first message that directly addressed tobacco was by a commander/leader from the USAF in the E7–E9 category and the message was about the growing

popularity and dangers of smoking hookah. Hookah smoking disease risk factors, the greater nicotine delivery and potential for nicotine addiction, and information about smoking cessation were discussed.

The second message was a response by a USAF O-6 to a concern raised by an installation community member about the proximity of a smoking area around the fitness center and exposure to environmental tobacco smoke. The commander noted that the current smoking area was negotiated and approved by the installation leadership and the union representing federal employees and that the area was in compliance with the pertinent USAF Instruction (AFI 40-102). However, the commander noted that the facility manager would be contacted to discuss potentially relocating the smoking area. Thus, tobacco use as a commanders' message topic represented only 1.5% of those where health was the primary aim and only 0.1% of all messages.

Among the commanders' messages where the primary topic was coded as a general topic (n=2,347), the five most common were: 1) Installation initiatives/program updates (n=499); 2) Leadership, supervision, and mentorship (n=333); 3) Professionalism/rules, discipline/compliance, and customs/courtesies (n=169); 4) Education, training, and drills (n=166); and 5) other (n=160), with these five topic constituting 56.5% of the messages coded as general topics.

Health Topics Mentioned as a Secondary Aim in Commanders Messages

We also coded whether any health topic was mentioned in commanders' messages where a general or health topic was addressed as the primary aim of the message. Figure 2 illustrates the top five health topics mentioned in commanders' messages where the primary topic addressed was a different health topic or a general one.

Exercise/Fitness was the most commonly mentioned health topic in commanders' messages where some other health or a general topic was the primary aim. Direct and indirect mentions of tobacco-related issues were rare. Among messages where a different health topic was addressed as the primary aim (n=132), there were only two that indirectly mentioned tobacco and none that mentioned it directly. Within the messages where a general topic was the primary aim (n=2,340), there were three and six direct and indirect mentions of tobacco use, respectively. Thus, out of the 2,479 total commanders' messages, tobacco use (either directly or indirectly) was only mentioned in 0.4% of all messages. Table 3 summarizes the authors' rank, branch of service, and topics discussed in these 11 messages.

DISCUSSION

Tobacco content, whether directly or indirectly addressed, was rarely mentioned in published military commanders' messages. Commanders and leaders most often discussed general military issues in their published messages, with installation initiatives/program updates, leadership, supervision, and mentorship, and professionalism/rules, discipline/compliance, and customs/courtesies constituting the most common topics. Despite being one of the primary purposes of installations newspapers,³²⁻³³ health messages were only contained in slightly more than 5% of all messages. While it is not entirely surprising that

topics such as installation and program updates and leadership were the primary aims of most commanders' messages, it is unfortunate that health topics are so rarely mentioned, particularly topics like tobacco use that represent such significant threats to the military. For instance, The DoD spends \$1.6 billion on tobacco-related healthcare and lost productivity⁴ and tobacco use results not just in long-term health problems, but increases risk for a number of more immediate concerns including early discharge, impaired wound healing, stress and other mental health issues, and lower fitness levels, all of which contribute to reduced operational readiness.^{6, 11–25, 37} Given that military members believe that line leadership can influence their health issues,^{27–29} strong messages about the impact of tobacco use on military readiness are needed to help create a culture where non-use is normative. While not specifically studied in the military, this approach is consistent with that advocated by public health experts and its effectiveness is supported by research demonstrating that public health messages, particularly those that are framed to highlight the benefits of behavior changes, can substantially impact health behaviors, particularly tobacco use.³⁸

Previous content analytic studies also have documented tobacco's low priority overall and even among other health issues. For example, Haddock and associates³² examined the coverage of tobacco in military installation print newspapers for a 12-month periods. Overall, they coded 793 newspapers from all four service branches and found that tobacco was discussed in only 5.9% of the articles and this was the lower than articles about seatbelts (6.3%), illegal drugs (9.3%), alcohol (9.6%) and exercise/fitness (12.3%). In addition, they also found that nearly 10% of the newspapers contained pro-tobacco advertisements, which is in conflict with a primary goal of the Code of Federal Regulations governing installation newspapers, which is that military installation newspapers are to make service members aware of the dangers of drugs and other substances and educate them about their impact on military readiness.³³

Haddock et al.³⁶ content analyzed the *Military Times* magazines, a very influential group of magazines targeted to each of the service branches for one year (N=208 issues total from all four services); anti-tobacco articles only represented 2.3% of the 488 identified health-related articles, which was substantially lower than other health topics such as exercise and fitness (59.0%) and mental health (23.8%). Finally, we also recently examined the health-related content of 24 active military and veteran's service organization websites.³⁵ Out of 277 coded health topics, tobacco was only mentioned four times (1.4%) across all websites and smoking cessation was never addressed. These findings are striking given the high rates of tobacco use among active military members and veterans and the significant health care costs attributable to smoking in the Veteran's Administration and DoD health systems.^{4, 36}

Military line leadership can have substantial influence over the attitudes and behaviors of military personnel, so the absence of information about their perspectives on health, and particularly about tobacco, is unfortunate. For example, Green and associates³⁹ found that having a military training leader who smoked increased the risk new initiation of smoking by previous non-smokers by 70% and relapse to smoking among previous smokers by 95% in a large sample of US Air Force trainees. Our previous research documented that junior and senior enlisted military personnel were uncertain about how their leadership viewed

tobacco use or that it was not a priority and that military PLs and HPMs perceive line commanders as lacking knowledge about tobacco's impact on readiness.^{28,31}

Even more troubling, Nelson and colleagues²⁷ reported that enlisted soldiers believed that while most supervisors and commanders were neutral about tobacco use, those who did use it were more likely to allow their use to bias enforcement of existing tobacco control measures. It is possible that the lack of commanders' messages focused on health, and in particular tobacco use, is due to line commanders and leaders not feeling qualified to present health messages or that they lack adequate information about the problems tobacco causes for the DoD and military service members. Both military PLs and HPMs that we interviewed expressed concerns that line commanders may not know enough about the impacts of tobacco on readiness or even when they did, they do not make their views on tobacco use and readiness public.³¹ Providing line commanders with information and other tools to increase their comfort in presenting health messages could be first step in addressing this deficiency and clearly, military members believe that commanders influence their health behaviors.²⁷⁻²⁹

Our study has a number of strengths including the use of a content coding process with a high degree of constancy and accuracy, versions of which we have used successfully in previous studies,^{32, 34-36} a very large sample of commander/leadership messages from a wide range of commander/leader ranks and military installations across the country. In addition, this is the first study to focus on capturing what commanders and leaders say about tobacco and other health issues by exclusively focusing on the commanders' messages and not the other content in military installation newspapers and newsfeeds. However, our study also had a few important limitations. First, it would have been desirable to actually interview active duty line commanders, and to date there have been no published studies that have been able accomplish this feat. This is likely due to difficulties in getting such interviews approved and ensuring commanders feel comfortable speaking with those outside the military given that many believe there is a significant cultural gap between military and civilian cultures.⁴⁰ In addition, because so many military installation newspapers have moved from print to only online media, we did not have equal public access to media from all services, so the USAF and USA are overrepresented in our sample when compared to our previous content analyses.³² Finally, the exclusion of some non-line leadership, particularly medical treatment facility commanders, likely impacted both the total number of health messages and tobacco messages extracted.

In conclusion, health topics, and particularly tobacco-related content, are rarely written about by military commanders. This absence of tobacco health messages from line leadership likely feeds the perception that tobacco control is a low priority for them^{28,36} and also that tobacco is a benefit for military members that should not be examined.⁴¹ Given the somewhat inconsistent enforcement of tobacco policies and discounted tobacco product sales on military installations,⁴¹⁻⁴² together these factors contribute to what has been called a general acceptance of tobacco use despite the best intentions of military tobacco control policies and programs,^{27,30,41} and should be addressed by encouraging commanders to communicate with their troops about tobacco cessation and prevention.²⁷

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57250

Commanders Messages Coding
V.2.6

Coder Initials

Goal: (a) to understand what issues commanders address in their commanders messages
(b) to understand what health issues commanders address
(c) to determine whether commanders address tobacco in their messages and, if so, what they say about it

Service: ☐ Navy ☐ Marines ☐ Air Force ☐ Army ☐ Joint Base

Base #:

Commander's Last Name:

Installation Commander: ☐ Yes ☐ No ☐ Unknown

Commander's Rank: ☐ E7-E9 ☐ O4 ☐ O5 ☐ O6 ☐ O7 and above

Commander's Unit:

Date / /

1. Which of the following **GENERAL** topics is the **PRIMARY AIM** of the article? (Choose one)

☐ Primary aim is not a general topic	☐ History/Heritage
☐ Housing	☐ Education/Training
☐ Holiday	☐ Leadership/Supervision
☐ Safety-Personal (e.g. driving, recreational equipment)	☐ Teamwork
☐ Safety-Occupational	☐ Welcome/Goodbye/Farewell
☐ Goals/Resolutions	☐ Morale Welfare Recreation
☐ Installation Initiatives/Programs	☐ Commissary
☐ Base Realignment/Closure	☐ Professionalism/Rules/Discipline/Compliance
☐ Inspections	☐ Voting/Politics
☐ Congratulations/Accomplishment/Award	☐ Terrorism/Force Protection
☐ Community/Family	
☐ Military Service/Pride/Heroes	
☐ Other: 	

2. Which of the following **HEALTH** topics is the **PRIMARY AIM** of the article? (Choose one)

☐ Primary aim is not a health topic	☐ Illegal Drugs
☐ Alcohol/DUI	☐ PTSD
☐ Suicide	☐ Disability/Amputation/Wounds
☐ Gulf War Syndrome	☐ Pharmaceutical Formulary
☐ Agent Orange	☐ Seatbelt
☐ Directly Tobacco Related	☐ Diet
☐ Indirectly Tobacco Related	☐ Depression/Anxiety
☐ Exercise/Fitness	☐ Other Mental Health
☐ Weight/BodyComp	☐ Cancer
☐ Traumatic Brain Injury	☐ Other:
☐ Health Insurance/Tricare/VA	

NOTE: IF TOBACCO, SMOKING OR PRICING IN MILITARY EXCHANGES/COMMISSARIES IS ADDRESSED, MAKE A COPY OF THE COMMANDERS MESSAGE AND THIS SHEET AND FILE SEPARATELY

Figure 1.
Commanders Message Coding Form.

Figure 2.

Percent of general and health focused messages in which a health topic(s) was mentioned (top 5).[¥]

[¥]Note. More than one health topic could be mentioned in a general or health message, so the percent reflects the total mentions for that topic divided by the number of general or health messages and summing across all mentions does not equal 100.0%.

*Most common other topic was sleep.

Table 1

Number of Installations, Commanders, and Messages by Service.

Variable	Service					All Installations
	USA	USAF	USN	USMC	Joint Base	
Number of Unique Installations	19	39	7	1	9	75
Number of Unique Commanders/Leaders	153	643	43	6	123	968
Number of Newspapers Coded with a Commanders Message	695	1210	164	22	388	2479
-Number of General Messages	663	1143	158	22	361	2347
-Number of Health Messages	32	67	6	0	27	132
Percent of Messages Addressing Health Topic (%)	4.6%	5.5%	3.7%	0.0%	7.0%	5.3%

Note: Overall, health messages represented 5.3% of all commander messages coded across all services. There were no significant differences between services with regard to proportion health-related commanders/leaders messages vs. general messages; $\chi^2=0.5019$, $p=0.285$.

Table 2

Commanders' messages where a health or general topic is addressed as the primary aim of the message ranked by frequency.

Health Topic Rank	Number of Commanders Messages	Percent of Total Health Topics
1. Exercise/Fitness	31	23.5
2. Other mental health	26	19.7
3. Alcohol/DUI	18	13.6
4. Suicide	16	12.1
5. Other	14	10.6
6. Cancer	6	4.5
7. Disability/Amputations/Wounds	5	3.8
8. PTSD	4	3.0
9. Insurance/Tricare/VA	3	2.3
10. Directly tobacco related	2	1.5
10. Illegal drugs	2	1.5
10. Diet	2	1.5
10. Weight/Body Composition	2	1.5
14. Depression/Anxiety	1	0.8
15. Pharmaceutical formulary	0	0.0
16. Seatbelts	0	0.0
17. Indirectly tobacco related	0	0.0
18. Gulf War Syndrome	0	0.0
19. Traumatic brain injury	0	0.0
20. Hydration	0	0.0
21. Agent Orange	0	0.0
Total	132	100.0%

General Topic Rank	Number of Commanders Messages	Percent of Total General Topics
1. Installation Initiatives, programs, or updates	499	20.1
2. Leadership, supervision, or mentorship	333	13.4
3. Professionalism, rules, discipline, customs and courtesies	169	6.8
4. Education, training, exercises	166	6.7
5. Other	160	6.5
6. History or heritage	146	5.9
7. Military service and pride	145	5.8
8. Personal safety	126	5.1
9. Welcomes and goodbyes	110	4.4
10. Congratulations, awards, thank you	105	4.2
11. Holiday announcements	99	4.0
12. Community or family	76	3.1

General Topic Rank	Number of Commanders Messages	Percent of Total General Topics
13. Teamwork	47	1.9
14. Sexual assault or domestic violence	36	1.5
15. Inspections	35	1.4
16. Goals and resolutions	28	1.1
17. Terrorism, security, and force protection	22	0.9
18. Base realignment or closure	13	0.5
19. Voting or politics	12	0.5
20. Occupational safety	10	0.4
21. Housing	5	0.2
22. Morale, Welfare, and Recreation	4	0.2
23. Commissary	1	0.0
Total	2,479	100.0%

Table 3

Summary of general and health messages which addressed tobacco.

Message Primary Aim is a Different Health Topic with Tobacco Indirectly Mentioned		
Rank	Service	How tobacco was mentioned
E7–E9	USAF	In an article about how to maximize one's score on the Air Force Physical Fitness Test, it is mentioned that service members may benefit from a number of on base classes including ones on nutrition, fitness, and tobacco cessation.
O-6	USAF	In a column about fitness and New Year's resolutions, the commander mentions quitting or cutting back on smoking.
Message Primary Aim is a General Topic with Tobacco Directly Mentioned		
Rank	Service	How tobacco was mentioned
O-6	USA	Tobacco use is directly mentioned as lifestyle choice that parents can discuss (along with alcohol and drug use) with their children during the nation's drug prevention week.
O-6	USN	The availability of tobacco cessation classes are provided alongside the commander's statement outlining their mission readiness.
E7–E9	USAF	Smoking cigarettes in general and smoking them in no-smoking areas (as well as other unprofessional or unrealistic actions or conduct such as drinking underage, drinking and driving, using illegal drugs, or sexually harassing or assaulting someone) are highlighted as things that the author labeled as hard to believe someone could be that ridiculous.
Message Primary Aim is a General Topic with Tobacco Indirectly Mentioned		
Rank	Service	How tobacco was mentioned
E7–E9	USA	In a column about the importance of doing the right thing so as to create a favorable impression about personal conduct and military bearing, the author gives examples of when they have had to correct soldiers for smoking in unit areas.
O-7	USA	In a general column highlighting events and new businesses on the installation, the opening of a cigar store is mentioned.
O-6	USA	In a general column highlighting events, new shuttle services and business, the opening of a cigar store is mentioned.
O-6	USAF	In a farewell message to installation personnel, the installation commander recounts experiences in the community and mentions a cigar booth.
O-6	USAF	In a column about National Fire Prevention week, the author discusses the history of the week and how it was established, notes the importance of having a home fire escape plan, and then recounts several facts about home fires, including that smoking is the leading cause of home fire deaths.
E7–E9	USAF	In a commentary about how military members live in a "fishbowl", the author recounts an experience in which they witnessed an Airman in violation of appearance standards (i.e., out of uniform and, it was noted by the author, with a pack of cigarettes in view) in a public, civilian venue and they later confronted the individual about their disregard for the dress and appearance standards.