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# The Cigarette Manufacturers' Efforts to Promote Tobacco to the U.S. Military

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This article describes findings from review of tobacco industry documents regarding promotion of tobacco to the military, and efforts to influence Department of Defense policies regarding the use and sale of tobacco products. The documents reveal that the industry has targeted the military for decades for reasons including: (1) the volume of worldwide military personnel; (2) the opportunity to attract young men who fit a specific socioeconomic and cultural profile; (3) potential carryover of profits to civilian markets; and (4) the unusual price structure of commissaries and exchanges. The industry used distinctive promotion methods such as in-store merchandising, sponsorships, and even brand development to target the military, both in the United States and abroad during times of conflict. Legislative activity to protect tobacco promotion to this vulnerable population was carried out in response to smoking policy changes proposed by the Department of Defense. The tobacco industry has contributed to the high prevalence of smoking in the military and among veterans.

I do not think, either, that the historic and traditional link between the services and tobacco can be ignored. In times of war, tobacco has been a tremendous morale booster to the soldier, and a great source of pleasure and satisfaction. Armies ceased fire to trade it during the Civil War (a most civil thing to do). In World War II, the soldier often extracted the cigarette from a K-Ration packet and threw the ration away. In every war, cigarettes are a currency and are bartered for all sorts of booty. And what soldier's training would be complete without "policing the area" and field-stripping cigarette butts?... I am somewhat surprised that only "more than 50%" of military personnel smoke.... All it signifies to me is that soldiers are acting as soldiers always have acted, enjoying simple pleasures in situations and settings that are not always pleasurable. (To Caspar Weinberger, Secretary of Defense, March 4,1986, from Stephen Neal (D-NC), House of Representatives, in response to proposed ban on sale of cigarettes in military commissaries).<sup>1</sup>

## Introduction

 $\mathbf{T}$  he adverse health effects and decreased productivity associated with tobacco use in the military,<sup>2-7</sup> among veterans,<sup>8-10</sup> and in the general population<sup>11</sup> have been widely reported. The cultural endorsement of smoking in the military, combined with availability of reduced priced cigarettes through tax exempt commissaries and exchanges (a market system for military personnel and their dependents), has created an environment that continued to foster tobacco use long after World War II.<sup>12</sup>

The prevalence of smoking and smokeless tobacco use among U.S. military personnel has been higher than that of the general population.<sup>13-18</sup> A high prevalence of smoking in the military has also been reported in Norway,<sup>19</sup> Canada,<sup>20,21</sup> Great Britain,<sup>22</sup> and Israel.<sup>17,23</sup> Cigarette smoking in the U.S. military declined from 51.0% in 1980 to 29.9% in 1998, but rates increased in 2002 to 33.8%.<sup>13</sup> Since 1995, differences in the prevalence of smoking between the military and general population have become statistically insignificant, with the exception of 18- to 25-yearolds.<sup>12</sup> Military personnel are also more likely to engage in heavy use of cigarettes. Military subgroups with the highest prevalence of smoking include those in the Army and Navy, those with a high school education or less, and those with junior enlisted pay grades (E1-E3).<sup>13</sup> In addition, 12.2% of the military use smokeless tobacco. The high prevalence of smoking is explained in part by the socioeconomic characteristics of military recruits; however, studies also indicate that significant initiation occurs in the military.<sup>13,14,24-27</sup> During Operation Desert Storm, for example, 7% of Navy personnel started smoking, 9% started using smokeless tobacco, and of those who already smoked, 29% reported increased use.<sup>28</sup> Not surprisingly, young males have been and continue to be the tobacco industry's primary target in its highly competitive military market,<sup>29-33</sup> because smoking in the military is associated with a lifelong pattern of increased cigarette consumption, demonstrated among male and female veterans of all ages.<sup>34-36</sup>

The Department of Defense (DoD) has recognized the important effects of tobacco on health. Policy initiatives (Table I) have been based on both scientific data about the health risks of smoking and specific information regarding the effect of smoking on military readiness. In 1975, cigarettes were discontinued in K-rations and C-rations. In 1978, basic smoking restrictions were implemented, including designation of smoking and nonsmoking areas. By 1985 the DoD issued a report recommending several potential methods to curb smoking in the military, including the elimination of tobacco from stores, raising prices to civilian levels, and an educational program to discourage smoking; the latter was chosen. DoD Directive 1,010.10, issued in 1986 by Secretary of Defense Caspar Weinberger, established

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#### TABLE I

## DOD TOBACCO POLICY CHANGES

| <b></b>              |   |
|----------------------|---|
| 1975                 | Cigarettes are discontinued in K-rations and C-rations  |
| 1978                 | Basic restrictions, designated smoking areas  |
| 1986                 | DoD Directive 1010.10, "Health Promotion" <sup>37</sup>   |
|                      | No promotions aimed specifically at DoD personnel   |
|                      | Health care providers prohibited from smoking during patient care   |
|                      | School grounds smoking bans   |
|                      | Goal to reduce all tobacco use rates to below civilian rates and to reduce personnel and active duty rates by 10% per year  |
|                      | Tobacco use banned during Army basic training <sup>94</sup>   |
| 1992                 | DeCA Directive 40-13, Merchandizing Program <sup>38</sup>   |
|                      | Tobacco sales will be deglamorized, same as general public marketing  |
|                      | Stock cigarettes at back of commissary  |
|                      | Prohibiting promotional activities or special off-shelf displays  |
| -                    | Permitting coupons only available to the public   |
| 1993                 | First smoke-free Navy Ship Roosevelt <sup>40</sup>  |
| 1994                 | DoD instruction 1010.15, Smoke-Free DoD Workplace <sup>95</sup>   |
|                      | Ban smoking in DoD workplaces and designates outdoor smoking areas  |
|                      | Health related consequences of smoking explained  |
|                      | Upon entry into the military nonsmokers encouraged to refrain from smoking, smokers encouraged to quit <sup>96</sup>  |
| 1996                 | Defense Commissary prices equal military exchange rates   |
| 1997                 | Executive Order 13058; Protecting Federal Employees and the Public From Exposure to Tobacco Smoke in the Federal Workplace <sup>97</sup>  |
|                      | Prohibited smoking in all government-owned, rented, or leased interior spaces   |
|                      | Secretary of Defense approved a 3-year phase-in period for installations to comply. The phase-in period came to an end on   |
|                      | December 7, 2002 <sup>41</sup>  |
| 2001                 | DoD Instruction 1010.15, Smoke-free DoD Facilities <sup>98</sup>  |
|                      | DoD/Veterans Affairs Tobacco Cessation Clinical Practice Guideline established  |
|                      | DoD tobacco prices brought within 5% of local economy <sup>42</sup>   |
| 1994<br>1996<br>1997 | <ul> <li>DoD instruction 1010.15, Smoke-Free DoD Workplace<sup>95</sup></li> <li>Ban smoking in DoD workplaces and designates outdoor smoking areas</li> <li>Health related consequences of smoking explained</li> <li>Upon entry into the military nonsmokers encouraged to refrain from smoking, smokers encouraged to quit<sup>96</sup></li> <li>Defense Commissary prices equal military exchange rates</li> <li>Executive Order 13058; Protecting Federal Employees and the Public From Exposure to Tobacco Smoke in the Federal Workpla</li> <li>Prohibited smoking in all government-owned, rented, or leased interior spaces</li> <li>Secretary of Defense approved a 3-year phase-in period for installations to comply. The phase-in period came to an end on December 7, 2002<sup>41</sup></li> <li>DoD Instruction 1010.15, Smoke-free DoD Facilities<sup>98</sup></li> <li>DoD/Veterans Affairs Tobacco Cessation Clinical Practice Guideline established</li> </ul> |

policy on smoking and other health risk behaviors.<sup>37</sup> New features included an increase in designated nonsmoking areas, prohibition of health care providers from smoking on duty, and distribution of information to new personnel on health consequences of smoking and encouragement to quit. Finally, commissaries and exchanges were precluded from participating with tobacco manufacturers' promotions directed specifically at DoD personnel according to a "deglamorization" plan developed for the commissaries.<sup>38,39</sup> In 1993, the Navy ship Roosevelt became the first smoke-free vessel<sup>40</sup> and in 1994 the DoD banned worksite smoking. Although DoD facilities were covered by an Executive Order banning smoking issued in 1997, morale, welfare, and recreation facilities were given a 3-year phase in period to implement the ban that only ended in 2002.<sup>41</sup>

Unfortunately, the effect of policy changes has been limited by the continuing availability of tobacco through the commissary and exchange system. Sales are not subject to state excise taxes, so there are significant price reductions compared to civilian prices. The commissary/exchange system formerly priced tobacco at only 5% over wholesale; however, since 2001 the DoD has required tobacco to be priced within 5% of the local competitive price.<sup>42</sup> Tobacco product sales in 1998, for example, yielded \$458 million in sales per year in the military, and therefore are an important source of revenue.<sup>12</sup>

Access to previous secret tobacco industry documents allows a historical glimpse of tobacco companies' practices targeting this population as well as their efforts to subvert DoD policy that would decrease tobacco use in the U.S. military. Documents show that the tobacco industry has targeted the military for decades largely because of (1) the large concentrated volume of potential smokers; (2) the opportunity to attract young "less educated" men, who, as consumers, will subsequently carryover to civilian markets resulting in profits of billions of dollars; and (3) the commissary and exchange system which allows tobacco manufacturers to take advantage of the tax differential between military and civilian markets and affords a concentrated target market for merchandising, promotional, and sponsorship activities. The purpose of this article is to use these documents to highlight some industry strategies to promote tobacco use in the military.

## Methods

The origin and operating procedures of the two major tobacco industry document depositories, located in Minneapolis, Minnesota and Guildford, UK have been previously described.<sup>43-47</sup>

The settlement terms of the Minnesota trial against the tobacco industry required the public release of approximately 27 million pages of documents, and that the defendant tobacco companies produce ongoing discovered company documents from postsettlement smoking and U.S.-based health litigation into the Minnesota depository until at least 2008. In this manner, 1.2 million pages of industry documents were reviewed from June 1998 to February 1999 at the Minnesota depository and additional searches were conducted at the three reliable on-line tobacco document resources from February to April 2004.<sup>48-50</sup>

Searches were conducted in all document populations (American Tobacco Company, Brown & Williamson, Council for Tobacco Research, Inc., Lorillard Tobacco Company, R.J. Reynolds Tobacco Company, Philip Morris Incorporated, and the U. S. Tobacco Institute) and specific fields such as author, recipient, copyee, document date, title keyword(s), plaintiff request number, and document type were used to search the

collections. Several measures were implemented to ensure as thorough a search as possible. The selected topic (i.e., military) and related terms (i.e., commissaries) were searched as "title keywords." Boxes housed at the Minnesota depository containing the selected document were then reviewed for relevant material as there are frequently other documents pertaining to the selected search such as letters, memos, and speeches that are not titled or dated. Once key persons, dates, and key words were identified, the on-line indices were searched for terms and people, and full-text searches were carried out at Tobacco Documents Online for phrases that might appear in the text of a document (e.g., "military market overview," "military young adult smokers (YAS)," and "military plan"). Documents housed at the Guildford depository were not searched because our research focused on the U.S. cigarette manufacturers targeting U.S. military personnel. Limitations of tobacco document research have been previously described.<sup>43-47</sup> For example, the litigation which created the depositories did not intend to capture all correspondence relating to targeting efforts aimed at military personnel. Additionally, internal tobacco company documents produced in response to litigation do not represent a complete source of information on this subject. Furthermore, the majority of the documents cited here are from the late 1980s and 1990s, primarily because this is the time frame in which document production was required during litigation. Last, research conducted for this article was carried out shortly after the Minnesota depository was opened in 1998, and, therefore, we did not rely on the currently improved accessible documents posted on-line, but rather on a rather rudimentary index and hard copy manual searches.

## Findings

#### **Opportunities in the Military Market**

In 1993, Philip Morris' advertising firm, Leo Burnett, reported to the tobacco industry leader and maker of Marlboro cigarettes that the worldwide military market was a "force' to be reckoned with" since its size could be compared to the second largest U.S. city, that it had a large concentration of young adult males, and that it was an "economic giant," spending billions of dollars per year on cigarettes.<sup>51</sup> In fact, Leo Burnett compared smoking rates in the military to civilian markets using an index (prevalence of smoking in military/prevalence in general population), expressed as a percent; 100 being equal prevalence). They calculated an index of 198 among 18- to 34-year olds, 250 among 18- to 25-year olds, and 244 among 18- to 21-year olds.<sup>51</sup>

In addition to the young demographics of military personnel, the military community was a lucrative market because of socioeconomic and cultural profiles of military recruits that predicted smoking initiation that the industry identified as follows: "military YAS have downscale smoker background-blue collarless educated-limited job prospects-part of "wrong crowd"-in trouble with authorities."<sup>52</sup>

Another incentive for the tobacco industry to target the military was the recognized phenomenon that consumer product preferences developed during years serving in the military would eventually translate into civilian market profits as service members leave the military or permanently retire.

One-half million military personnel filter back into the civilian market every year, product preferences and all . . . and that's just one reason why the military market . . . is an important market to the growth and expansion of the Newport brand, as well as the Lorillard family.<sup>53</sup>

R.J. Reynolds, whose brands include Camel and Salem cigarettes, described the expected profits for the company inherent in capturing young smokers over time:

If an 18-year-old adopts an RJR full price brand in 1990 and stays through our 1993 Plan horizon, than one smoker would contribute \$1,359 to our profits (contribution margin).

- If he/she stays with our brand for 7 years (average span), the profit contribution would be \$3,710.
- Over 10 years, the contribution would be \$6,148.
- Over 20 years (not uncommon), \$18,794....

If we hold these YAS for the market average of 7 years, they would be worth over \$2.1 billion in aggregate incremental profit. I certainly agree with you that this payout should be worth a decent sized investment.<sup>54</sup>

## Strategies Used to Effectively Target to the Military Market

Commissaries and exchanges afforded the tobacco companies a direct link to military personnel through in-store merchandising such as Point of Sale displays and brand promotions. As early as 1982, R.J. Reynolds offered several options for shelf-display plans in Navy exchanges, paying the exchanges a specific amount per month for 30 to 40% of shelf space allotted for cigarette advertising and limiting competitors' advertisements.<sup>55</sup>

When the DoD attempted to eliminate the use of in-store merchandising and other marketing strategies specifically designed for use in the military, documents demonstrate that the industry considered a variety of mechanisms to circumvent these limits. A 1994 internal Philip Morris email entitled Military Volume describes an innovative in-carton coupon that would be not be visible on the carton's exterior and was therefore found acceptable by the government.

There is no price call out POS [Point of Sale] allowed instore and we cannot run any advertising in military publications announcing the reduction. I know this sounds hard to believe, but the regulations are there and the commissary agency... will not budge.... We could not reference the actual price, amount of reduction, use the words 'special', 'offer,' etc.

[The Commissary Agent] is very nervous about anything other than a normal carton coupon, and will say no rather than take a risk. . . . We will be getting some valuable learning from this program. . . . The key is the Commissary Agency's reaction—We have our fingers crossed that they like it and will let us do it again. So far so good, and God bless the government!<sup>56</sup>

In addition to in-store merchandising techniques, sponsorship of military events, such as bar or club events (e.g., bingo, bridge), targeting military spouses,<sup>57,58</sup> military motor sport sponsorship,<sup>59</sup> and music sponsorship like "Marlboro Music" and Kool brand concert events,<sup>60,61</sup> was pursued. Carnivals, picnics, and "mini-war games" with company versus company

competition were considered important to reach the military consumer.<sup>62</sup> The likely appeal of such sponsorship would be to an audience of young adults who were starved for entertainment and general civilian merchandise. Sponsorship of events also allows for sampling cigarettes; a technique used to recruit new smokers.

Brand development was also a strategy investigated by the tobacco companies. In 1985, R.J. Reynolds considered new brand concepts for the young military adult such as rest and relaxation and Double Eagles, which were described as:

A cigarette for the younger adult, military smoker who is looking for a product . . . and an image which positively supports his decision to serve in the Armed Forces. The Target feels a patriotism which is not overt; it is based on traditional values and the belief that America is 'on the right track'. . . . "<sup>63</sup>

Another brand concept for the military market was specifically designed for "real young military male smokers" and would be packaged in camouflage print with the cigarette barrel in black.<sup>64</sup> Although, to our knowledge, Reynolds' plans did not come to fruition, one company, Park Avenue, developed the 1776 brand for the military market.<sup>65</sup> Its pack consisted of an embossed flag design with gold, red, white, and blue colors.

Finally, tobacco product advertising was included in military base newspapers, commercial military-focused magazines (*Ar-my/Navy/AirForce Times, Family, Lady-Com, Off Duty*), and the industry relied on spill over from the general market (Playboy, Penthouse).<sup>66</sup> Documents demonstrate that advertising vehicles were chosen by the distribution of the age of their readership, targeting a more youthful audience.<sup>67-69</sup>

## Promotions in Times of Conflict: Operation Desert Storm

Tobacco companies have, in the past, distributed free "smokes to the soldiers,"<sup>70</sup> but the DoD stopped this practice in 1986. In October 1990, however, during Operation Desert Storm, Philip Morris and Brown & Williamson distributed free tobacco products to U.S. Army soldiers stationed in Saudi Arabia<sup>71-73</sup> and Navy personnel reported receipt of cigarettes from "any sailor" mailings and support organizations.<sup>28</sup> R.J. Reynolds additionally explored the business potential for distributing cigarettes to troops in Operation Desert Shield. The company estimated that 30% of the troops were smoking and assumed the following:

With or without shooting war, U.S. military presence will continue in Southwest Asia to ensure regional stability and to protect U.S. strategic interests.<sup>74</sup>

R.J. Reynolds was hesitant to undertake activities similar to those undertaken by its competitors Philip Morris and Brown & Williamson due to adverse public relations, government relations, and legal consequences.<sup>75</sup> In anticipating criticism of this program, a question and answer document was prepared for spokespeople.

A Pentagon spokesman said he knew nothing of the free cigarettes sent by Philip Morris and Brown & Williamson. Did the tobacco companies go behind the government's back on this move?

No. I suggest you check with the Defense Logistics Agency in Washington. They have a "wish list" from the soldiers stationed in Saudi Arabia which includes request for cigarettes, among other items. Throughout the past several months, Reynolds Tobacco has received numerous requests from soldiers stationed in the Middle East. The company decided to comply with requests made by the soldiers. Through the proper military channels, Reynolds Tobacco arranged to deliver the product to a U.S. military base where the product was loaded on a military aircraft and shipped overseas.<sup>76</sup>

In 1990, Philip Morris also embarked on a unique program to promote the Marlboro brand among military personnel in Saudi Arabia with the objectives of achieving corporate goodwill and to gain brand exposure among young adult male smokers.<sup>77</sup> The "voice card" advertising program, costing \$1 million,<sup>78</sup> was designed to get national coverage through USA Today and Newsweek magazines and was communicated through base newspapers to soldiers stationed in Saudi Arabia.<sup>79</sup> Family members in the United States would be provided a 10-second voice message, recorded on a chip, to be inserted in a holiday greeting card from Marlboro.

To a service member stationed in the Gulf, what could be more appreciated than hearing a friendly voice from home. If someone you love is overseas and involved in Operation Desert Shield, now you can send them your love in a unique holiday card, free.

It's called a Voice Card. And it carries your personal tensecond message that plays back when a button is pressed inside the card. This way, your best wishes, news and greetings for the holidays will be heard loud and clear.

Below is a list of military installations where you can record a Voice card on November  $9^{th}$ ,  $10^{th}$ , and  $11^{th}$ ...

Your Voice Card is a holiday gift from Marlboro.<sup>80</sup>

## Importance of the Commissary/Exchange System

Perhaps the most valued vehicle to reach the military market is the commissary/exchange system because it provides a highly concentrated market that is easy to reach through instore marketing activities and targeted military magazines.

For example, in 1987, 63% of the military trade was conducted in commissaries and 32% in exchanges.<sup>81</sup> The commissary/exchange system is also unique in that products are exempt from state and local excise taxes, and prices are generally only 5% above wholesale. The pricing structure of the commissary/exchange system historically translated into savings of up to 76% of cigarette carton prices for the consumer. Savings are greater in commissary than exchange stores and greater for generic than premium brands (Fig. 1).

Given the importance of the tax-exempt status of military commissaries, shifts in sales volume are extraordinarily sensitive to changes in state excise taxes. For example, in 1989, California experienced the highest tobacco state excise tax increase of \$0.25, which subsequently increased military sales for Philip Morris by 14% in 1 month "largely due to an increase in demand" at commissaries (Fig. 2).<sup>82</sup>

It not surprising then that the DoD efforts in the late 1980s to

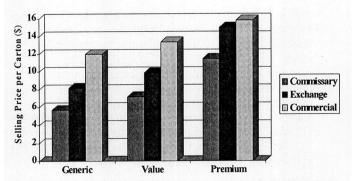


Fig. 1. Comparison of average cigarette prices (adapted from Ref. 96). Data approximately 1996—contemporaneously with document description period.

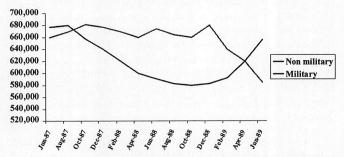


Fig. 2. California full margin sales volume.<sup>82</sup> As a consequence of California's 250% (25-cent) tax hike, the military sales of Philip Morris grew 13%.

eliminate tobacco sales or increase tobacco prices to parallel civilian prices and to use profits from price increases to promote the health and fitness of members of the Armed Force and their dependents were both met with strong opposition by the tobacco industry. After Senator Bingaman (D-NM) introduced such legislation in 1993, industry strategists presented several arguments against the proposal bill, including the following:

[S]mokers deciding to stop smoking due to high prices . . . will likely result in a number of smokers deciding to stop shopping in the commissaries altogether. . . . If enacted . . . all proceeds [should] be . . . reinvesting [in] the service members' dollars back into their commissary system. . . . Such reinvestment would have more visible, tangible results versus the more intangible 'promote the health and fitness' reinvestment outlined in the bill.<sup>83</sup>

## Further Legislative Activities to Subvert DoD Smoking Policies

In the 1980s, the DoD smoking policy initiatives included restrictions on smoking in public areas and smoking cessation campaigns.<sup>37</sup> In 1986, R.J. Reynolds interoffice correspondence indicated concern over the Army's consideration of a new restrictive smoking policy that would make nonsmoking the norm in the Army and called for political activity to intervene with this initiative.

While the [no-smoking] policy itself is sufficient cause for considerable alarm, the notion that the policy provides minimum standards and that local commanders can expand the policy is genuinely frightening. The newest sport at Army posts could be a contest to find out which commander can promulgate the most stringent anti-smoking regulations. I believe the only way to reverse this policy is by political pressure. The Republican members from Tobaccoland must rise up in outrage about this policy.<sup>84</sup>

Accordingly, the U.S. Tobacco Institute circulated a letter among members of the U.S. House of Representatives and Senate asking Secretary of Defense Casper Weinberger to reconsider the policy.<sup>85</sup> An R.J. Reynolds document reveals that the industry generated political pressure against the proposed smoking restriction measures and was successful at promoting an education strategy rather than restrictive regulation:

The Air Force announcement spells out a new eight-point program which constitutes an educational campaign, which is in the spirit of the DoD Directive, in sharp contrast to the approach taken last month by the Army—and temporarily rescinded by the Army last week in response to our efforts.<sup>86</sup>

Philip Morris and the U.S. Tobacco Institute were also consulted in R.J. Reynolds' efforts to subvert the DoD restrictive smoking policy initiatives.<sup>87</sup>

## Conclusion

The documents reviewed here reveal that the tobacco industry has targeted the military for decades for several reasons, including (1) the sheer volume of worldwide military personnel; (2) the unique business opportunity in attracting young men who may fit a specific socioeconomic and cultural profile and will carryover profits to civilian markets if they continue to smoke; and (3) the highly concentrated and easily targeted nature of the commissaries and exchanges. The industry used distinctive promotion methods such as in-store merchandising, sponsorships, and even brand development to target this population in the United States and abroad during times of conflict. Legislative activity to protect tobacco promotion to this vulnerable population was conducted in response to smoking policy changes proposed by the DoD. The demographic profile of military recruits coupled with price structure opportunities has resulted in a high prevalence of smoking in the military.

We have selected individual documents to illustrate themes we observed in our review. The document search was not systematic or complete, which is one of the limitations of this study. Other limitations include restrictions on the time period of document review. This article describes strategies that the tobacco industry used to target the military, but it should also be pointed out that some DoD policies continued to support tobacco use. For example, the ready availability of low-priced tobacco products in the commissary/exchange system was very profitable. We were not able to investigate the degree to which the DoD combated industry efforts to maintain tobacco product availability, and it is possible that tobacco was perceived as a useful commodity to maintain recruits' satisfaction with their military experience.

There is a growing body of literature that demonstrates the health effects of tobacco use in the military. There is an inverse relationship between smoking and measures of "performance readiness" as reflected by physical fitness tests,<sup>4–6,12</sup> completion of combat training,<sup>2,7</sup> and training-related injuries.<sup>3</sup> In addition, smoking in the military is associated with more time lost from work, illness,<sup>88,89</sup> and convalescent time from respiratory dis-

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ease.<sup>70</sup> Smoking among Air Force recruits is associated with smokeless tobacco use, binge drinking, and less physical activity;<sup>15</sup> smokeless tobacco use is also associated with a number of risky lifestyle behaviors.<sup>90</sup>

The attendant health problems from tobacco use in the military are sustained because of a cohort effect resulting in high rates of smoking later in life.<sup>36</sup> This effect is demonstrated in the high prevalence of smoking among veterans compared to the general population.<sup>34,35</sup> Vietnam combat veterans and those with post-traumatic stress disorder exhibit a particularly high prevalence.<sup>91</sup>

Efforts to decrease the prevalence of smoking in the military will have immediate beneficial economic consequences. The DoD estimated current smoking was responsible for \$930 million in costs in 1995 for all branches.<sup>92</sup> A study by Klesges et al. showed that military training for recruits in the Air Force who smoke is associated with \$18 million per year in excess costs; applied to all service branches, smoking excess training costs are more than \$130 million.<sup>93</sup>

The DoD has made considerable progress by banning smoking during basic training and in worksites and by changing the price structure of tobacco in the commissary exchange system. Nevertheless, there is more that could be done. Revenue from sale of tobacco products should be directed at the "welfare" mission of morale, welfare, and recreation and should be used to prevent and treat tobacco dependence in the military. The commissary system should not continue to derive profit from tobacco product sales, but rather develop alternative sources of revenue. The DoD should continue to investigate and develop aggressive and innovative interventions to prevent initiation and continuation of tobacco use in the military and take advantage of the social milieu provided to this population of young American adults who are uniquely vulnerable to tobacco industry influence.

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## References

- Neal SL: The Associated Press Has Reported That You Are Considering a Ban on the Sale of Cigarettes in Military Commissaries and This Report Has Been Confirmed by Some of My Colleagues Who Have Talked to You About It. In Congress, March 4, 1986. Bates No. 504989620-504989621. Available at http://tobaccodocuments.org/rjr/504989620-9621.html; accessed May 12, 2004.
- Blake GH, Parker JA Jr.: Success in basic combat training: the role of cigarette smoking. J Occup Med 1991; 33: 688–90.
- Reynolds KL. Heckel HA, Witt CE, et al: Cigarette smoking, physical fitness, and injuries in infantry soldiers. Am J Prev Med 1994; 10: 145–50.
- Conway TL, Cronan TA: Smoking and physical fitness among Navy shipboard men. Milit Med 1988; 153: 589–94.
- Conway TL, Cronan TA: Smoking, exercise, and physical fitness. Prev Med 1992; 21: 723–34.
- Bahrke MS, Baur TS, Poland DF: Tobacco use and performance on the U.S. Army physical fitness test. Milit Med 1988; 153: 229–35.
- Zadoo V, Fengler S, Catterson M: The effects of alcohol and tobacco use on troop readiness. Milit Med 1993; 158: 480–4.
- Harris RE, Hebert JR, Wynder EL: Cancer risk in male veterans utilizing the Veterans Administration medical system. Cancer 1989; 64: 1160–8.
- McLaughlin JK, Hrubec Z, Blot WJ, Fraumeni JF Jr.: Smoking and cancer mortality among U.S. veterans: a 26-year follow-up. Int J Cancer 1995; 60: 190–3.

- Rogot E, Murray JL: Smoking and causes of death among U.S. veterans: 16 years of observation. Public Health Rep 1980; 95: 213–22.
- 11. U.S. Department of Health and Human Services: The Health Benefits of Smoking Cessation. DHHS Publication No. (CDC) 90-8416, 1990. Atlanta, GA. Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.
- Conway TL: Tobacco use and the United States military: a longstanding problem. Tob Control 1998; 7: 219–21.
- Bray RM, Hourani LL, Rae KL, et al. Department of Defense Survey of Health Related Behaviors among Military Personnel. Research Triangle Park, NC, 2002.
- Chisick MC, Poindexter FR, York AK: Comparing tobacco use among incoming recruits and military personnel on active duty in the United States. Tob Control 1998; 7: 236–40.
- Haddock CK, Klesges RC, Talcott GW, Lando H, Stein RJ: Smoking prevalence and risk factors for smoking in a population of United States Air Force basic trainees. Tob Control 1998; 7: 232–5.
- Bray RM, Marsden ME, Peterson MR: Standardized comparisons of the use of alcohol, drugs, and cigarettes among military personnel and civilians. Am J Public Health 1991; 81: 865–9.
- Woodruff SI, Conway TL, Edwards CC, Elder JP: The United States Navy attracts young women who smoke. Tob Control 1999; 8: 222–3.
- Weaver KB, Woodruff SI, Conway TL, Edwards CC, Zhu SH, Elder JP: Does the US Navy attract young women who smoke? Occup Environ Med 1998; 55: 792-4.
- Schei E, Sogaard J: The impact of military service on young men's smoking behavior. Prev Med 1994; 23: 242–8.
- Myette TL: Maritime Command's new smoking-reduction strategy unprecedented among world's navies. Can Med Assoc J 1993; 149: 206–8.
- Sullivan P: Major antismoking moves proposed after navy survey points to smoking epidemic. Can Med Assoc J 1992; 147: 1827–9.
- Lewthwaite CJ, Graham JT: The smoking habits of young soldiers. J R Army Med Corps 1992; 138: 67–71.
- Shahar Y, Carel RS: Changes in smoking patterns in young military recruits in relationship to psychosocial characteristics. Milit Med 1991; 156: 455–61.
- Cronan TA, Conway TL: Is the Navy attracting or creating smokers? Milit Med 1988; 153: 175–8.
- Klesges RC, Haddock CK, Lando H, Talcott GW: Efficacy of forced smoking cessation and an adjunctive behavioral treatment on long-term smoking rates. J Consult Clin Psychol 1999; 67: 952–8.
- Cronan TA. Conway TL, Hervig LK: Evaluation of smoking interventions in recruit training. Milit Med 1989; 154: 371–5.
- 27. Haddock CK, Poston WS, Klesges RC, Talcott GW, Lando H, Dill PL: An examination of body weight standards and the association between weight and health behaviors in the United States Air Force. Milit Med 1999; 164: 51–4.
- Forgas LB, Meyer DM, Cohen ME: Tobacco use habits of naval personnel during Desert Storm. Milit Med 1996; 161: 165–8.
- Trone Advertising Company: RJRT Military 1990 Promotion Program Recommendations, R.J. Reynolds Tobacco Company. Bates No. 507470601-44, November 10, 1989.
- Marketing I, Military Marketing Overview. Brown & Williamson. Bates No. 138016147-313, 1998.
- Anonymous: Military YAS Initiative, R.J. Reynolds Tobacco Company. Bates No. 509210682-94, 1989.
- Anonymous: Military Market 1982 Annual Marketing Plan, R.J. Reynolds Tobacco Company. Bates No. 503980087, August 20, 1981.
- Anonymous: Marlboro Military ROP Plan Recommendation. Philip Morris Incorporated. Bates No. 2041819249-50, 1994.
- McKinney WP, McIntire DD, Carmody TJ, Joseph A: Comparing the smoking behavior of veterans and nonveterans. Public Health Rep 1997; 112: 212–17.
- Klevens RM, Giovino GA, Peddicord JP, Nelson DE, Mowery P, Grummer-Strawn L: The association between veteran status and cigarette-smoking behaviors. Am J Prev Med 1995; 11: 245–50.
- Feigelman W: Cigarette smoking among former military service personnel: a neglected social issue. Prev Med 1994; 23: 235–41.
- 37. Department of Defense Directive 1010.10, Health Promotion, March 11, 1986.
- Department of Defense Commissary Agency Directive 40-13, Merchandising Program, July 10, 1992.
- Memorandum for Assistant Secretary of the Army, Assistant Secretary of the Navy, Assistant Secretary of the Air Force, Director, Defense Commissary Agency, Tobacco Policy, October 15, 1997.
- Gunby P: Despite tensions of monitoring world trouble spot, aircraft carrier becomes first to ban tobacco. JAMA 1993; 269: 2960.
- 41. Memorandum for Under Secretary of Defense. Phase-In Period for Compliance

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with Executive Order 13058 at DoD Morale, Welfare, and Recreation (MWR) Facilities, December 7, 1999.

- Memorandum for Secretaries of the Military Departments, Tobacco Pricing Policy, October 5, 2000.
- Balbach ED, Gasior RJ, Barbeau EM: Tobacco industry documents: comparing the Minnesota Depository and internet access. Tob Control 2002; 11: 68–72.
- 44. Muggli ME, Forster JL, Hurt RD, Repace JL: The smoke you don't see: uncovering tobacco industry scientific strategies aimed against environmental tobacco smoke policies. Am J Public Health 2001; 91: 1419–23.
- 45. Muggli ME, Pollay RW, Lew R, Joseph AM: Targeting of Asian Americans and Pacific Islanders by the tobacco industry: results from the Minnesota Tobacco Document Depository. Tob Control 2002; 11: 201–9.
- Malone RE, Balbach ED: Tobacco industry documents: treasure trove or quagmire?. Tob Control 2000; 9: 334–8.
- 47. Tobacco Company Strategies to Undermine Tobacco Control Activities at the World Health Organization: Report of the Committee of Experts on Tobacco Industry Documents, 2000.
- Tobacco Documents Online. Available at http://tobaccodocuments.org; accessed May 12, 2004.
- The Tobacco Archives. Available at www.tobaccoarchives.com; accessed May 12, 2004.
- University of California, San Francisco, Legacy Tobacco Documents Library. Available at http://legacy.library.ucsf.edu; accessed May 12, 2004.
- Leo Burnett Agency, Hoffer JB: 30000 Marlboro Military Plan, Philip Morris Incorporated. Bates No. 2041818452-57 at 8452 and 8453, Minnesota Tobacco Document Depository, April 1, 1993.
- Military YAS Initiative: R.J. Reynolds. Bates No. 507189382-94 at 9387, Minnesota Tobacco Document Depository, 1989.
- Anonymous: Lorillard. Bates No. 85280726-53 at 0726-0727, Minnesota Tobacco Document Depository, estimated year 1983.
- Burrows DS: Dollar Value of YAS Over Time, R.J. Reynolds Tobacco Company. Bates No. 507472439-40 at 2439, Minnesota Tobacco Document Depository, October 12, 1989.
- Grout D: R.J. Reynolds Company Navy Exchange Shelf Display Plan, R.J. Reynolds. Bates No. 502341778-79, Minnesota Tobacco Document Depository, October 1, 1982.
- Stirlen R: Military Volume, Philip Morris Incorporated. Bates No. 2045849711A, Minnesota Tobacco Document Depository, June 9, 1994.
- Brown & Williamson Tobacco Corporation Marketing Plans. Bates No. 670626284-670626877, 1983.
- Revision of Raleigh/Belair 840000 Operational Plan. Bates No. 670614679-670614819, 1984.
- Toft HC, Alcazar DA. Document Clearance Sheet. Contract 0369-00-00, Sponsorship of Speedway Military Night. 19 Sep 1990. Bates No. 512985247-512985248, September 19, 1990.
- 960000 Marlboro Community Event Marketing Plan. Bates No. 2041940822-2041940852, estimated year 1996.
- Lewis LR: Kool Military Proposal. Bates No. 544002309-544002311, May 1, 1980.
- Anonymous: Lorillard. Bates No. 85280726-85280753 at 0740 and 0741, Minnesota Tobacco Document Depository, estimated year 1983.
- Project Mp, R.J. Reynolds. Bates No. 503803536-503803553 at 3553, Minnesota Tobacco Document Depository, February 11, 1985.
- Evans SY: New Brands and Strategic Research Report Project Mp Concept Ideation Session, R.J. Reynolds. Bates No. 504447216-504447242 at 32, Minnesota Tobacco Document Depository, January 30, 1985.
- Hall T: Smokers in Military are Firm's Market for 1776 Cigarette Packaging is Designed with Embossed Flag to Appeal to Patriotism, 19850213, Philip Morris Incorporated. Bates No. 2045382087.
- Anonymous: Lorillard. Bates No. 85280726-85280753 at 0747, Minnesota Tobacco Document Depository, estimated year 1983.
- Anonymous: Lorillard. Bates No. 85280726-85280753 at 0746, Minnesota Tobacco Document Depository, estimated year 1983.
- Ostern E: MCS Military Newspapers, Philip Morris Incorporated. Bates No. 2041819194-9201 at 9201, Minnesota Tobacco Document Depository, March 1994.
- 69. Burnett L: Marlboro 1994 Military ROP Plan Recommendation, Philip Morris

Incorporated. Bates No. 2041819249-9251 at 9249, Minnesota Tobacco Document Depository, 1994.

- 70. Blake GH: Smoking and the military. NY State J Med 1985; 85: 354-6.
- Gunby P: Service in strict Islamic nation removes alcohol, other drugs from major problem list. JAMA 1991; 265: 560–2.
- Savage S: Free Cigarettes for Troops in Saudi Arabia Defended. The News and Observer. Bates No. 88014268A, Raleigh, NC, October 13, 1990.
- Anonymous: Retired Col. Griffith— AUS. Lorillard. Bates No. 88014247, September 20, 1990.
- Sprink JJ: Paul Patrick's Presentation, December 19, R.J. Reynolds. Bates No. 507625002-5020 at 5011, Minnesota Tobacco Document Depository, January 14, 1991.
- Jones M: Operation Desert Shield— Government Relations Perspective, R. J. Reynolds. Bates No. 507625022, Minnesota Tobacco Document Depository, January 7, 1991.
- DDW: Q&A on RJR's Exchange Initiative Program, Draft, December 7, 1990, R.J. Reynolds. Bates No. 507625032-5036 at 3036, Minnesota Tobacco Document Depository.
- Anonymous: Philip Morris Incorporated. Bates No. 2044246007-12, Minnesota Tobacco Document Depository, estimated year 1990.
- Purchase Requisition Approval Request, Philip Morris Incorporated. Bates No. 2044938407, Minnesota Tobacco Document Depository.
- Capreol GR: Marlboro's Military Voice Chip Program, Philip Morris Incorporated. Bates No. 2044938403-04. Minnesota Tobacco Document Depository, October 5, 1990.
- Burnett L: Operation Desert Shield. [Advertisement], Philip Morris Incorporated. Bates No. 2044939470, Minnesota Tobacco Document Depository, estimated date October 1990.
- Table of Contents, Philip Morris Incorporated. Bates No. 2042076656-6700, Minnesota Tobacco Document Depository, September 1987.
- Neidle B: August 6, 1989. Military Performance in California, Philip Morris Incorporated. Bates No. 2040299473-83 at 73, Minnesota Tobacco Document Depository, August 6, 1989.
- U.S. Tobacco Institute. Fact Sheet Subject: Military Tobacco Sales Act, Tobacco Institute. Bates No. TIMN0354489-93 at 4490 and 4491, Minnesota Tobacco Document Depository, June 1993.
- Bergeson PC: U.S. Army Smoking Policy, R.J. Reynolds Tobacco Company. Bates No. 504983484, Minnesota Tobacco Document Depository, June 13, 1986.
- Chilcote SD: Army Smoking Policy, June 27, 1986. Lorillard. Bates No. 87639911-12, Minnesota Tobacco Document Depository, 2004.
- Chilcote SD: R.J. Reynolds Tobacco Company. Bates No. 504986214, Minnesota Tobacco Document Depository, July 8, 1986.
- Gaillard RC: Air Force Tobacco Reduction Plan/DOD Response to "Smokefree" Work Place. R.J. Reynolds Tobacco Company. Bates No. 514255536, Minnesota Tobacco Document Depository, January 29, 1993.
- Kristen MM: How much can business expect to profit from smoking cessation? Prev Medicine 1983; 12: 358–81.
- U.S. Centers for Disease Control. Medical are expenditures attributable to cigarette smoking—U.S. 1993. MMWR 1994; 43:469–72.
- Lando HA, Haddock CK, Klesges RC, Talcott GW, Jensen J: Smokeless tobacco use in a population of young adults. Addict Behav 1999; 24: 431–437.
- Beckham JC, Roodman AA, Shipley RH, et al: Smoking in Vietnam combat veterans with post-traumatic stress disorder. J Trauma Stress 1995; 8: 461–72.
- Robbins AS, Chao SY, Coil GA, Fonseca VP: Costs of smoking among active duty U.S. Air Force personnel—United States, 1997. MMWR 2000; 49: 441–5.
- Klesges RC, Haddock CK, Chang CF, Talcott GW, Lando HA: The association of smoking and the cost of military training. Tob Control 2001; 10: 43–7.
- Hagey A: Implementation of a smoking policy in the United States Army. NY State J Med 1989; 89: 42–4.
- Department of Defense Instruction 1010.15, Smoke-Free DoD Workplace, March 7, 1994.
- Inspector General DoD: Economic impact of the use of tobacco in DOD 97-060, December 31, 1996.
- Executive Order 13058: Protecting Federal Employees and the Public from Exposure to Tobacco Smoke in the Federal Workplace, August 9, 1997.
- Department of Defense Instruction 1010.15, Smoke-Free DoD Facilities, January 2, 2001.