

## Data from the DoD Health and Related Behaviors Survey, 2008

### Overview and summary of tobacco related findings

It should be noted that this cycle of the survey includes active duty Coast Guard in addition to the Army, Navy Marines and Air Force. However, totals in this report are provided only for the DoD services (Army, Navy, Marines, and Air Force), and, when appropriate, by branch of service. Data were collected from May-July 2008 and the survey size is 39,800 (DoD services only) with a 70 percent response rate.

Cigarette use in the past 30 days is at 31 percent. It was at 32 percent in 2005 which is virtually the same as the level in 1998 – 30 percent. There is some variation by branch of service (Army – 33%,; Navy – 31%; Marines – 37%; Air Force- 23%). Using adjusted prevalence the report presents odds ratios that allow for examining statistically significant differences by key demographic factors. Those found to be significant are:

- Branch of service (AF is the reference group)
- Gender (female is the reference group)
- Education (college is the reference group)
- Family status (Married with wife present is the reference group)
- Pay grade (01-010 is the reference group)
- Race/ethnicity (with White being the reference group).

With the exception of race/ethnicity, the reference group is the one with the lowest percentage currently using cigarettes. For race/ethnicity, the highest percentage was observed among Whites.

The overall rates of smoking initiation among males age 18-25 is 17 percent and there is some variation by branch of service (Army – 16%; Navy – 18%; Marines – 21%; Air Force – 15%). The rate of smoking initiation is higher among current smokers (males age 18-25) - 30%. Among this group there is greater variation by branch of service (Army – 27%; Navy – 32%; Marines – 34%; Air Force – 30%).

The three top reasons cited for starting to smoke are:

- To help relieve stress – 25%
- To look “cool” or to be “cool” – 24%
- To help relax or calm down – 19%.

Seventeen percent of the current smokers have tried to quit with little variation by branch of service (Army – 18%; Navy – 18%; Marines – 22%; Air Force – 13%.)

## Data from the Survey

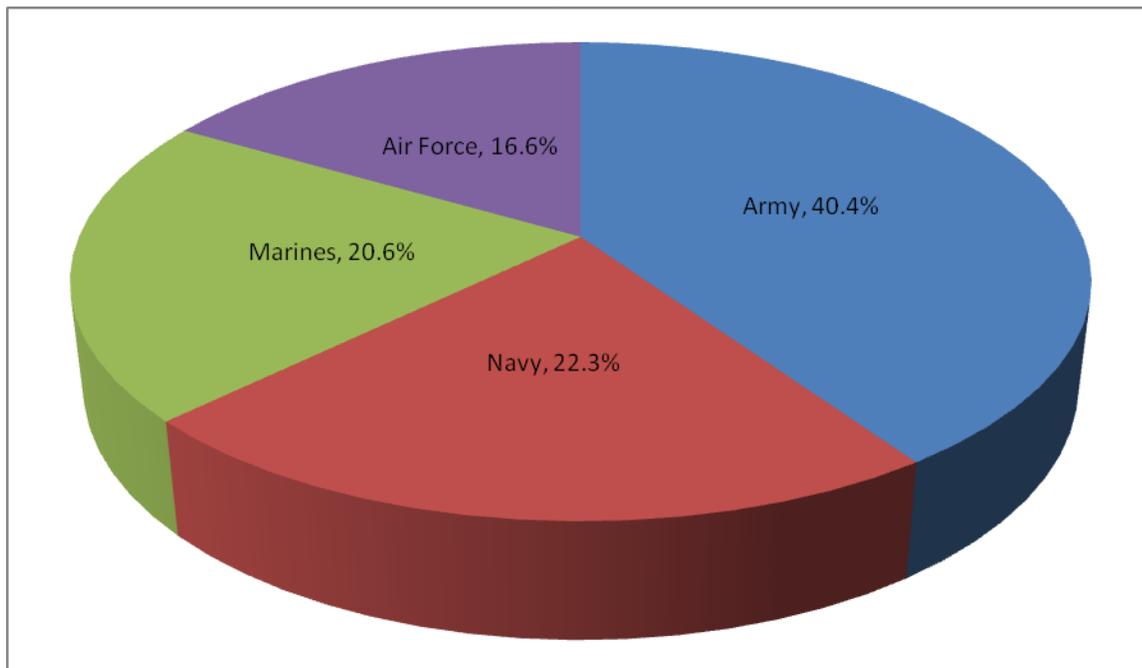
ICF Macro was provided access to the raw data file and generated tabulations<sup>1</sup> to examine the following:

- What are the characteristics of the target population (18-24 year olds, rank E1-E3)?
- How is this population different from the general military population?
- Are there correlates for those who began smoking after joining the military?
- Are there other behaviors associated with tobacco use?
- Are there behaviors associated with quitting tobacco use?

*What are the characteristics of the target population?*

There were approximately 307,000 service personnel who are in our target population of the estimated 1.3 million service personnel in the military. Figure 1 displays the distribution of the target population by branch of service.

Figure 1: Distribution by Branch of Service, 2008 for Population age 18-24, Grade E1-E3



<sup>1</sup> Though the data set included the Coast Guard, they are excluded from any tabulations reported.

Nearly all (98.7 %) are in pay grades 1 and 2. Overall, 87% of the respondents are male with slight differences by branch of service (Army – 87%; Navy – 83%; Marines – 94%, and Air Force – 81%). One of our targets is the family of service personnel and there is variation by branch of service in the percentage who are married (Table 1). Overall, about one-third of the service personnel are married and this ranges from 28% in the Navy to 36% in the Army and Air Force. There was no real difference by gender (males – 33% vs females – 34%). Related to this is the percentage of respondents with a live-in partner. Again about one-third of the respondents have a live-in partner and there is only slight variation by branch of service (Army – 32%; Navy – 32%; Marines – 27%, and Air Force – 38%), but a large difference by gender (males – 31% vs females – 41%).

Table 1: Percentage Married by Branch of Service, 2008 for Population age 18-24, Grade E1-E3

<b>Branch of Service</b>	<b>Percentage</b>
Army	36%
Navy	28%
Marines	30%
Air Force	36%
Total	33%

Because our focus is an educational campaign, educational level of the target audience is important. Generally two thirds of the audience has a high school education or less. As shown in Table 2, this does vary by service from 72% for the Marines to 44% for the Air Force, gender (65% for males and 46% for females), and marital status (married – 58%, single – 65%, separated/divorced/widowed – 56%).

Table 2: Percentage with a High School Education or Less, by Branch of Service, 2008 for Population age 18-24, Grade E1-E3

<b>Branch of Service</b>	<b>Percentage</b>
Army	64%
Navy	63%
Marines	72%
Air Force	44%
Total	62%

*How is this population different from the general military population?*

A few interesting differences emerge when comparing the target population to that of the general military population. Nearly twice the percentage of the target population are Marines compared to the general population (24% versus 13%). Our target population is less likely to be married (23% versus 55%), but this could be a function of age. Our target group is younger by design. The target group is also

less educated than the general military population with 67% having a high school degree or less as compared to 33% in the general military.

*Are there correlates for those who began smoking after joining the military?*

A number of different variables were examined to determine if they were associated with higher percentages of individuals starting use of tobacco in the military<sup>2</sup>. Two variables seemed to be important – when the person had their last cigarette and the number of days within the last 30 that they smoked; however the relationship was the opposite of what we expected. Sixty-four percent of those who did not start smoking in the military smoked a cigarette today, as compared to 59 percent of those who did start smoking in the military. Likewise, 66 percent of those who began smoking prior to the military smoked each of the 30 days, while only 50% of those who began in the military smoked each of the past 30 days. This is potentially an indicator that the desire to smoke is greater for those who began smoking prior to joining the service, an indication that their “habit” is more entrenched. One might therefore surmise that getting people who started smoking in the military to stop smoking may be easier.

Table 3 presents data on the reasons related to starting use of tobacco being different for those who started use in the military versus those who did not. Fifteen reasons related to beginning tobacco use were listed in the survey and 5 showed results that are different enough for the two groups to be important.

A higher percentage of those who began tobacco use in the military indicated they did so to fit in with their unit, relieve stress, help relax, or relieve boredom than those who did not begin in the military. It should also be noted that the only a small percentage indicated fitting in with their unit was an important factor in their beginning tobacco use. Most respondents indicated that relieving stress and helping them relax were the primary factors motivating them to begin using tobacco.

One reason, to rebel against parents or others in authority was cited more frequently as a reason for beginning tobacco use among those who did not begin smoking in the military. This is probably a reflection of these individuals begging at an early age, and is another indication of their being firmly entrenched in tobacco use.

Seventy-five percent of those who began tobacco use in the military began using smokeless tobacco since joining the military as compared to 46% for those who did not start in the military.

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<sup>2</sup> Chi-square tests of statistical significance were not performed, because with large data sets nearly all differences are statistically significant. Rather we report important differences which are defined as the absolute difference in percentages being at least 5 percent.

Table 3: Percentage of Respondents Indicating Factor Was Very Important or Important in Their Beginning Tobacco Use by Whether Respondent Began Use in the Military

<b>Factor</b>	<b>Started in the military</b>	<b>Did not start in the military</b>
Fitting in with my military unit	12%	5%
Relieve stress	66%	61%
Help relax	69%	63%
Relieve boredom	54%	48%
To rebel against my parents or others in authority	19%	30%

*Are there other behaviors associated with tobacco use?*

The literature supports the notion that individuals often engage in multiple risky health and related behaviors. That is one of the reasons this survey collects such a wide range of data. We examined the variables of seat-belt use, and exercise pattern (both moderate and vigorous). These do not appear to be predictors of smoking, however the amount of exercise a person does and the amount they smoke do appear to be related. Among those who smoked two or more packs per day, 49 percent engaged in moderate physical activity only once in the past month. This decreases to 37 percent among those who smoked less than 0.5 packs per day. The declining percentage (dose-response) engaged in moderate physical activity only once in the past month was seen across those smoking 1.5 packs per day, and 1 pack per day.

The same finding was present for vigorous physical activity where 36 percent of those who smoked two or more packs per day only engaged once in the past month in vigorous physical activity while 18 percent of those smoking less than 0.5 packs per day only engaged once in the past month in vigorous physical activity. A similar dose response pattern was observed.

*Are there behaviors associated with quitting tobacco use?*

Overall 17% of the target population has tried to quit and among current users of tobacco 62% tried to quit in the last 12 months. There are no real correlates related to that. Correlates that were examined include: I had trouble with the police (civilian or military); I was arrested for a driving violation; I was arrested for an incident not related to driving; I spent time in jail, stockade, correctional custody, or brig; and, I had trouble on the job. There was an important difference in the percentage indicating they seriously intended to quit in the next 30 days, by whether the person began tobacco use in the military. Twenty-nine percent of those who began tobacco use in the military indicated they seriously intended to quit in the next 30 days as compared to 22% for those who did not begin while in the military.

*Comparison of results for bases where QTMEP is highly visible and where it is not*

Using ICF Macro's own database we developed a list of bases, all of which are Air Force bases, that we know as having highly visible QTMEP programs. The list of bases is provided in Appendix A. Results for cigarette smokers (age 18-24, E1-E3) on these bases were compared to all other bases on six variables. The hypothesis is that on the bases with highly visible programs there should be no difference by whether they began in the military, less smoking currently, and a greater willingness to quit smoking. The no difference by whether they began in the military is because the base program would have no impact on that. These data are summarized in Table 4.

As expected there was no difference between the two groups on whether they began smoking in the military. On the other variables there generally was a difference indicating that the highly visible programs are having an impact. A smaller percentage of respondents at those bases had their last cigarette today, smoked less days in the past month and smoked less packs per day. About the same percentage of respondents indicated they have tried to quit in the past year but a much higher percentage of those on bases with highly visible programs indicate they are seriously intending to quit in the next 30 days than respondents from all other bases. The one qualifier to these results is that all the bases with highly visible programs are with the Air Force. There were not a sufficient number of respondents at other Air Force bases to do a comparison. Thus, to the extent that respondents who are in the Air Force differ from all other respondents, that is reflected in these results.

Table 4: Percentage of Respondents (smokers) Indicating Cigarette Use and Willingness to Quit by Whether they Were at a Base with Highly Visible QTMEP Program

<b>Factor</b>	<b>High Visibility QTMEP Program</b>	<b>All Others</b>
Started smoking in the military	29%	28%
Had their last cigarette today (versus past 30 days, or more than 30 days ago)	53%	64%
Smoked each day in the past 30 days (versus 20-29 days or less than 20 days)	52%	63%
Smoked one pack or more per day in the last 30 days (versus 0.5 packs per day or less than 0.5 packs per day)	22%	32%
Tried to quit in the last 12 months	64%	61%
Seriously thinking of quitting smoking in the next 30 days (versus next six months or not considering quitting)	26%	6%

## **Appendix A**

### **List of bases with highly visible QTMEP Program**

- a. Andersen
- b. Barksdale
- c. Egin
- d. Fairchild
- e. Holloman
- f. Little Rock
- g. Maxwell
- h. McGuire
- i. Nellis
- j. Offutt
- k. Osan
- l. Patrick
- m. Peterson
- n. Mildenhall
- o. Ramstein
- p. Wright-Patterson