Navy and Marine Corps Public Health Center

Fleet and Marine Corps Health Risk Assessment 2013
Prepared 2014

The enclosed report discusses and analyzes the data from almost 200,000 health risk assessments for active and reserve components of the Navy, Marine Corps and Coast Guard during calendar year 2013.

Questions or comments about this report can be sent to the HRA Program Manager at (757) 953-0962 or to http://www.med.navy.mil/sites/nmcphc/health-promotion/Pages/hra.aspx.

Commands needing additional information about implementing the HRA in 2013 can also contact the program manager.

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Executive Summary

The Fleet and Marine Corps Health Risk Assessment (HRA) is a 22-question self-assessment of many of the most common health risks for Department of the Navy (DON) service members. The HRA supports preventive health screening and counseling by healthcare providers during the annual Periodic Health Assessment (PHA), provides individual members with credible sources of health information on the Web, provides data to health educators to plan and implement community interventions, and provides commanding officers at all levels with snapshots of unit profiles.

The HRA tool is web-based, but there is also a stand-alone Microsoft Excel version that can be used on ships with poor Internet connectivity. Completion of the voluntary assessment takes approximately three minutes and provides personalized reports to each individual. A total of 233,281 completed assessments were analyzed during the 12-month period of January 1, 2013 through December 31, 2013 and included responses from both active and reserve component (RC) members from the Navy (USN), Marine Corps (USMC), and Coast Guard (USCG).

This report utilizes both descriptive and analytic methods to report the results by the total responses as well as by service component and specific demographic characteristics. Demographic variables that were examined included age, gender, race, rank, and service component. Analyses utilized one of two measures: 1) “healthy” or “unhealthy” risk ratings or 2) a risk score based on the total number of risk behaviors reported by an individual.

The prevalence of specific risk factors has remained fairly constant from 2012, with the leading health risks being low consumption of fruits and vegetables, high consumption of high-fat foods, deficient dental hygiene (not flossing), and inadequate sleep. The mean number of risk factors showed that more USMC members qualified as “high risk” (29.9%), followed by the USMCR (26.7%), USN (24.1%), USNR (13.2%), USCG (11.9%), and USCGR (9.1%). The data also indicate that, in general, Navy and Coast Guard personnel were more likely than Marines to be classified as overweight.

Background

- Health risk assessments (HRAs) became widely used both in military and civilian settings beginning in the mid-1980s. HRAs are tools that can be used to educate patients, to assist healthcare professionals in counseling patients, and to inform decision makers of the overall health status of populations. Different versions of HRAs are available to assess a range of conditions and risk behaviors, and HRAs are often used to assess health concerns of specific age groups.

- The 2013 Fleet and Marine Corps HRA is a voluntary 22-question, self-reported, web-based assessment tool specifically designed to assess risk behaviors common to Department of the Navy (DON) military members. However, the topics and scoring criteria are also valid for the general United States (U.S.) adult population. To ensure maximum participation and to remove any stigma that might be associated with a specific risk behavior, no personal identifying information is collected and demographic data, such as age, are reported by categories.

- The questions are based on other validated tools, such as the Alcohol Use Disorders Identification Test (AUDIT), the Department of Defense (DOD) Survey of Health Related Behaviors Among Military Personnel, and the National Health and Nutrition Examination Survey (NHANES), or from input from subject matter experts. The questions address 10 risk categories that provide a snapshot of leading health indicators. The categories include:

    1. tobacco use
    2. alcohol use
    3. safety
    4. stress management
    5. sexual health
    6. physical activity
    7. nutrition
    8. supplement use
    9. dental health
    10. sleep problems

Methods

Data Collection and Analyses

Data from 236,510 surveys were collected from the most recent 12-month period, 01 January 2013 through 31 December 2013. The data were analyzed by the EpiData Center (EDC) at the Navy and Marine Corps Public Health Center (NMCPHC). Individual surveys were excluded from analysis for either of the following reasons:

a. Records with blank fields, except for the race-related questions, were considered incomplete and were excluded from analysis. Blank fields for race-related questions were excluded from race-related analysis only. There were a total of 1,648 incomplete records across all services and 6,000 blank fields for race-related questions.

b. Surveys completed by service members who identified themselves as Navy, Marine Corps, or Coast Guard members and had a rank of civilian were excluded from analysis (1,581).

The total number of surveys included in the analysis was 233,281.

All analyses utilized one of two measures: 1) "healthy" or "unhealthy" risk ratings or 2) a risk score. The 22 risk assessment responses were categorized healthy or unhealthy according to the standards listed in Appendix B.

A risk score was tabulated based on the total number of risk categories in which one or more of the responses were reported as unhealthy. Risk scores ranged from 0-10 and were categorized into risk levels low, medium, and high:

0-2 risk categories = low risk
3-4 risk categories = medium risk
5 or more risk categories = high risk

Risk scores do not predict early morbidity or mortality; rather, higher risk scores indicate a greater likelihood that members will utilize more healthcare services in the future than lower risk members.

Days away from home station categories were created using the variable 'days away', which is the number of days from home station respondents indicated on deployment related questions. Descriptive analyses, frequencies, and percentages were used to describe survey respondents. Logistic regression examining the relationship between days away from home station and risk number was conducted using SAS® software (Version 9.2 SAS Institute, Inc., Cary, North Carolina).

The following demographic variables were collected: age, gender, race, rank, and service. Member age was categorized using ranges of 17-19, 20-29, 30-39, 40-49, and 50 years and over. Race was categorized as Caucasian, African American, Asian and Pacific Islander, Hispanic, or Other. Rank was categorized as enlisted service members (E1-E5 or E6-E9), officers (O1-O3 or O4-O9), and warrant officers (W1-W5). E-10 and O-10 were not included in the analysis due to only one person being at those ranks and would be identifiable.

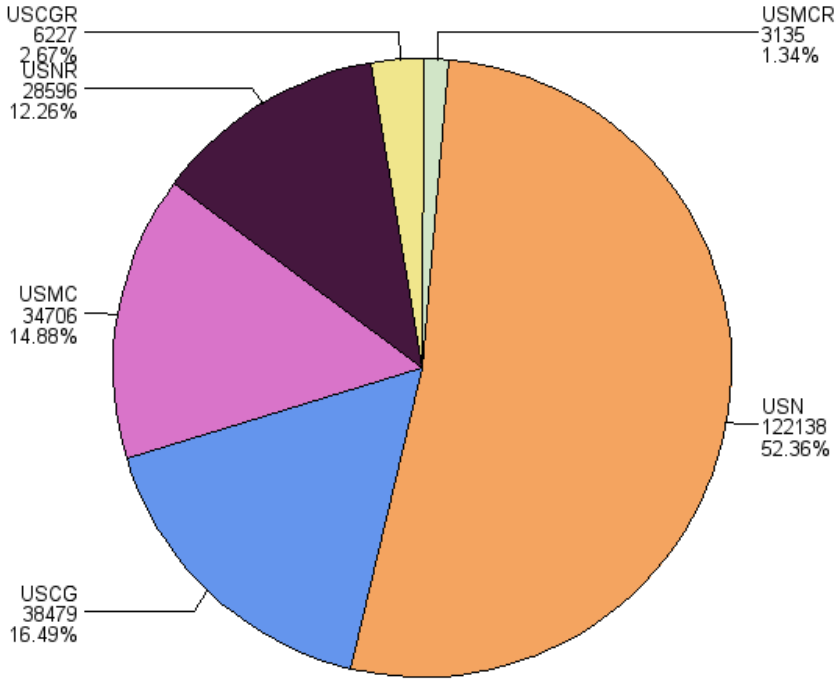
Body mass index (BMI) was calculated from self-reported height and weight data according to the current Centers for Disease Control and Prevention (CDC) guidelines ([weight ÷ (height in inches)^2] x 703).[1] According to the CDC, BMI values that exceed healthy levels have been shown in published studies to be an independent risk factor for certain diseases and all-cause mortality.

Results

Demographic Analysis

There were 236,510 surveys completed for the 2013 HRA, of which 233,281 surveys completed by the study cohort were included in the analysis. Descriptive analyses of service demographics showed that the majority (52%) of survey respondents were active duty Navy service members, while 12% were Navy Reservists, 16% were active duty and reserve Marines, and 19% were active duty and reserve Coast Guard members (Figure 1).

Figure 1:
Distribution of Completed HRAs by Service Component
233,281 records



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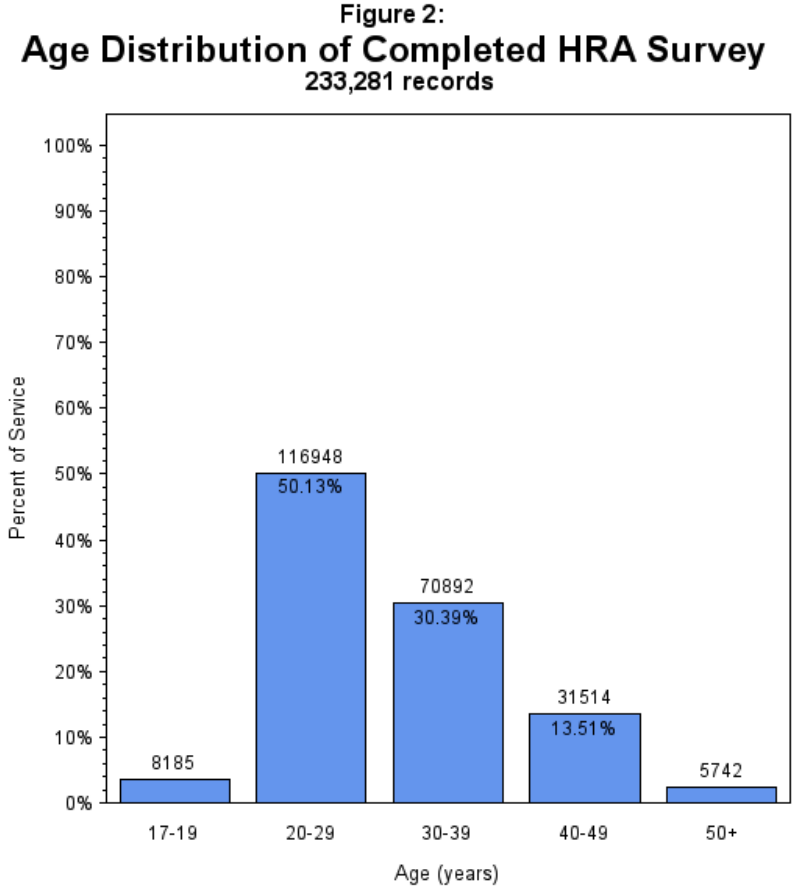
The age distribution of survey respondents indicated that 50% of the respondents were in the 20-29 year old age group (Figure 2).

Figure 2:



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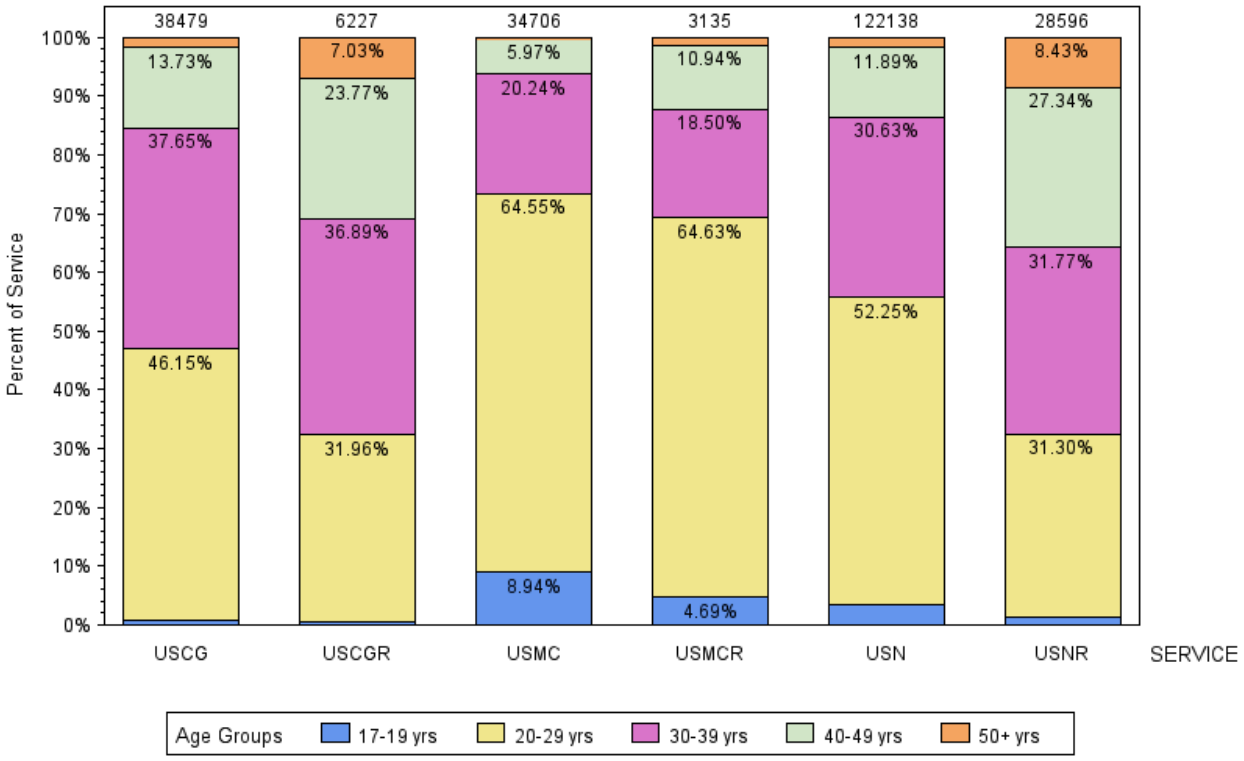
Overall, Navy and Coast Guard service member respondents were older than the Marines survey respondents (Figure 3). The mean age of service member respondents was USN=29.9 years, USNR=35.5 years, USMC=26.4 years, USMCR=27.9 years, USCG=31.3 years, and USCGR=34.9 years.

Figure 3:
Age Distribution of Completed HRAs by Service Component
233,281 records



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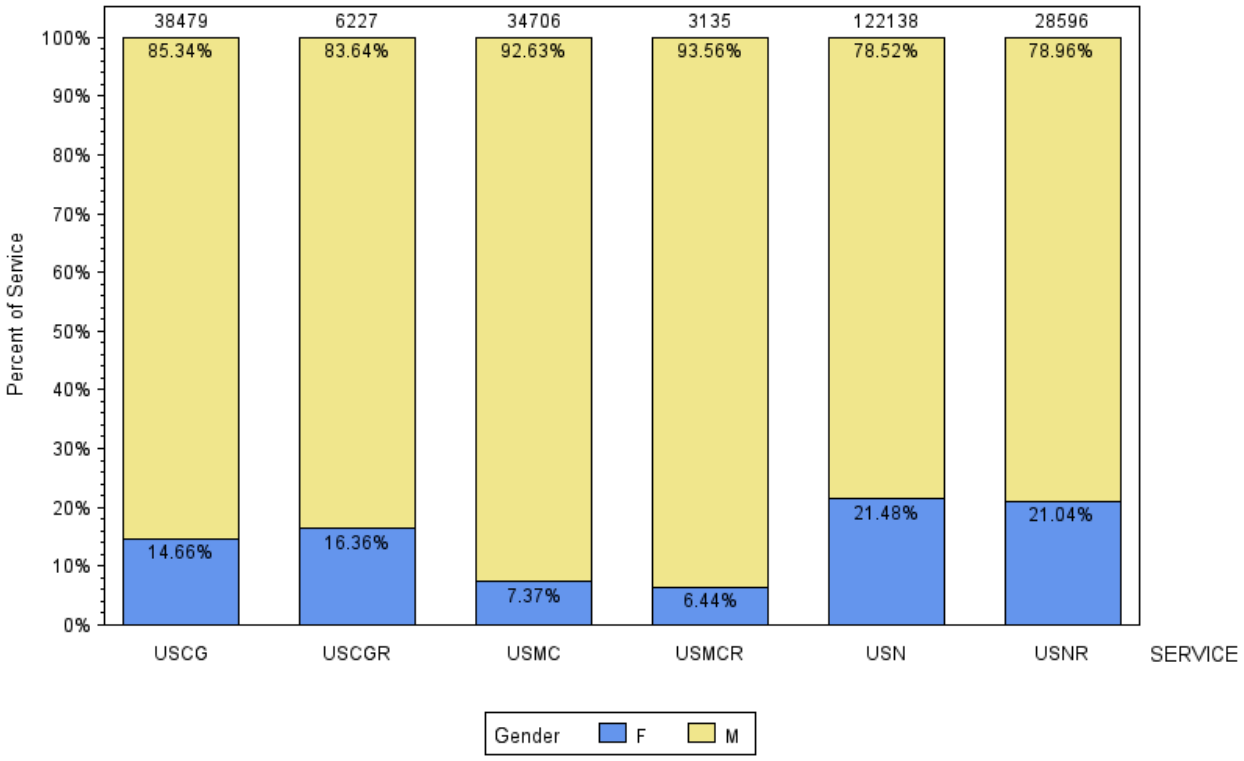
With respect to gender, more males (82%) completed the HRA than females, which reflect the general male/female ratio of DON service members. The gender difference was especially evident in the Marine Corps, with fewer than 8% of the HRAs completed by females compared to 21% in the Navy.

Figure 4:

Gender Distribution of Completed HRAs by Service Component

233,281 records



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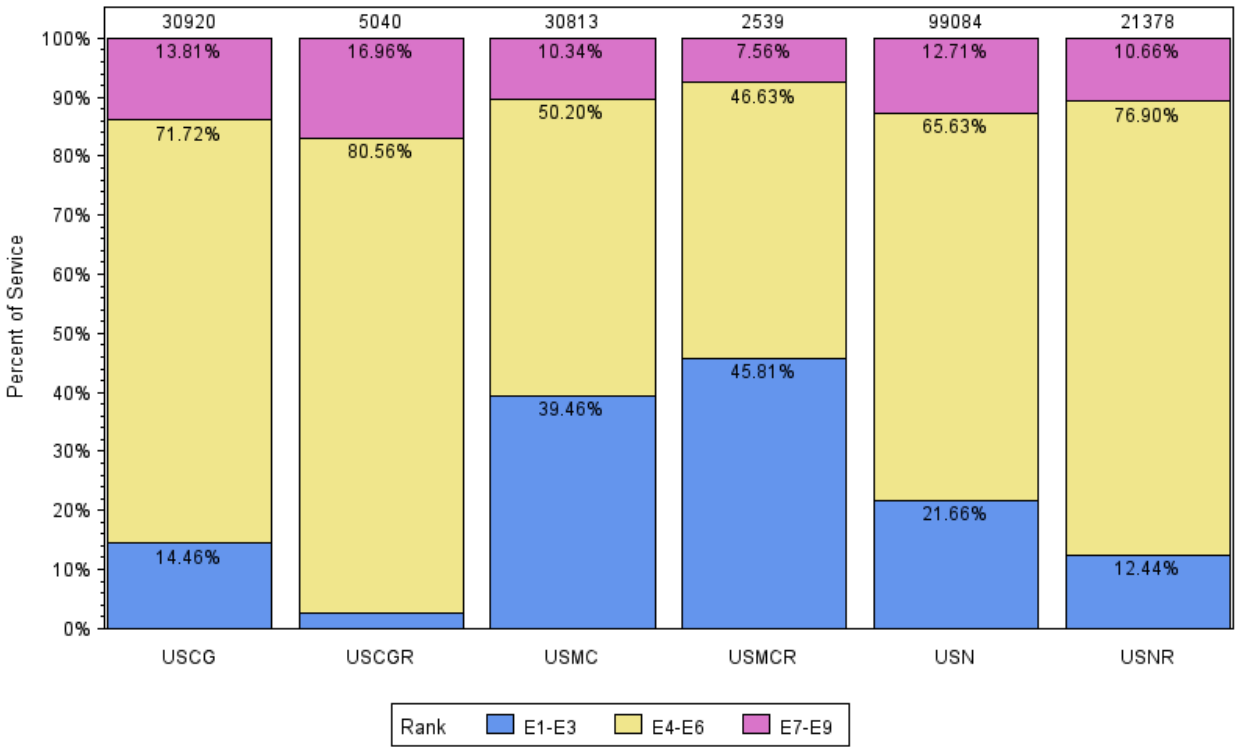
Distribution by respondent rank indicated that 81% of the surveys were completed by enlisted members, 17% by officers, and 1% by warrant officers. Figures 5-7 display the distribution of respondent ranks by service.

The USMC and USMCR had the largest percentage of lower-ranking enlisted members (39.5% and 45.8%, respectively). The USCG (71.7% E4-E6 and 13.8% E7-E9) and USCGR (80.6% E4-E6 and 17.0% E7-E9) had the largest percentage of senior-ranking enlisted members.

Figure 5:
Rank (Enlisted Personnel) Distribution of Completed HRAs by Service Component*
189,774 records



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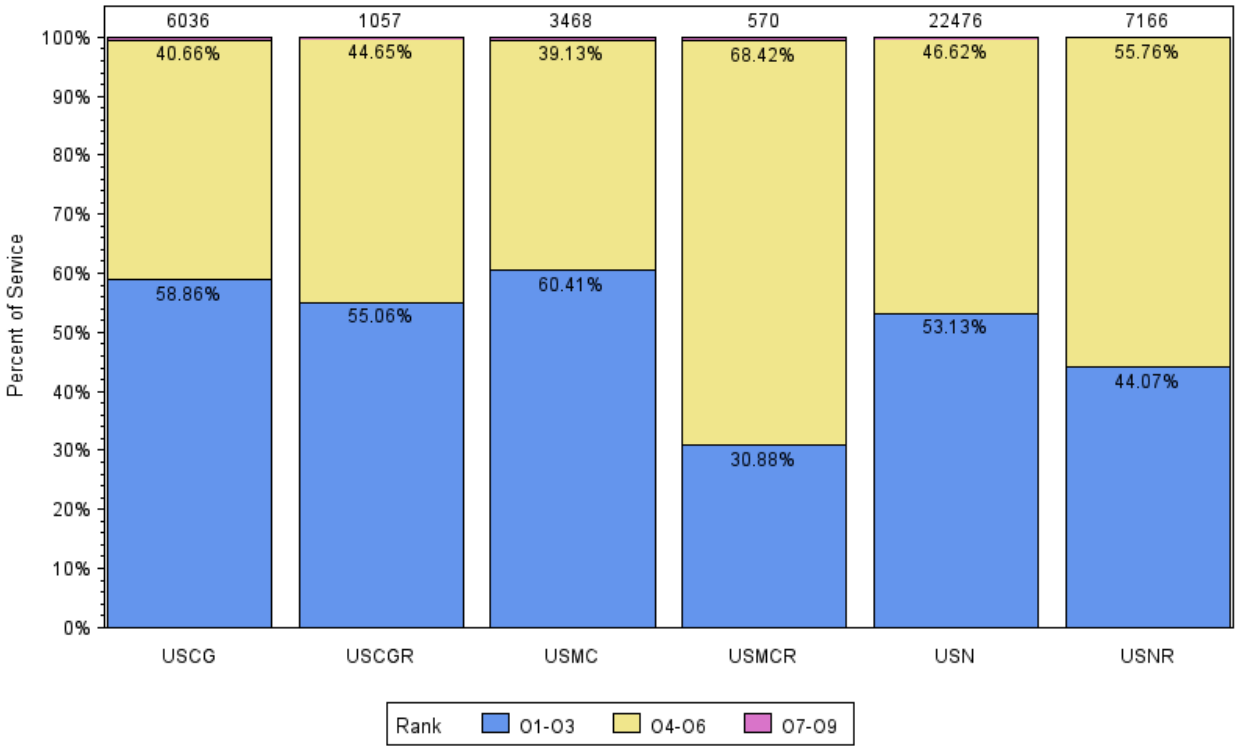
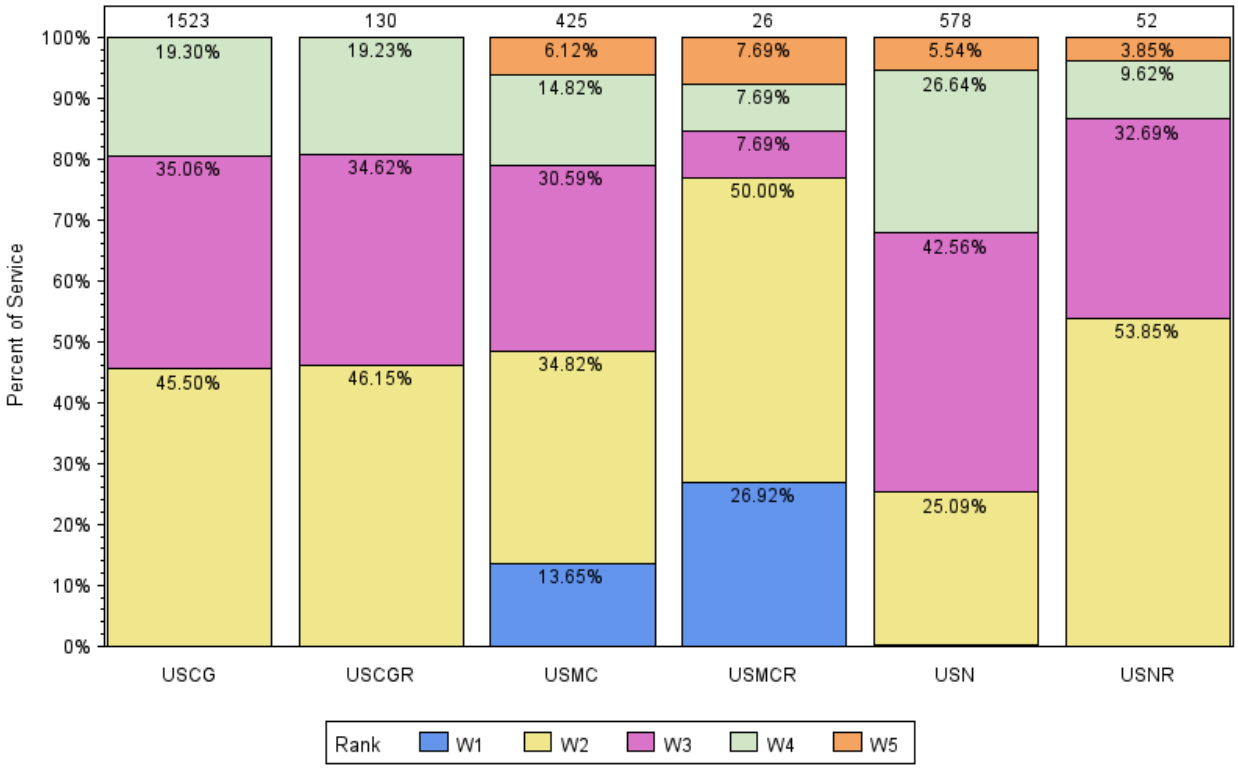
*Does not include people who indicated a rank of E10

Figure 6:
Rank (Officer Personnel) Distribution of Completed HRAs by Service Component
40,773 records



Prepared by the EpiData Center Department, Navy and Marine Corps Public Health Center on 13 March 2014
*Does not include people who indicated a rank of O10

Figure 7:
Rank (Warrant Officer) Distribution of Completed HRAs by Service Component
2,734 records



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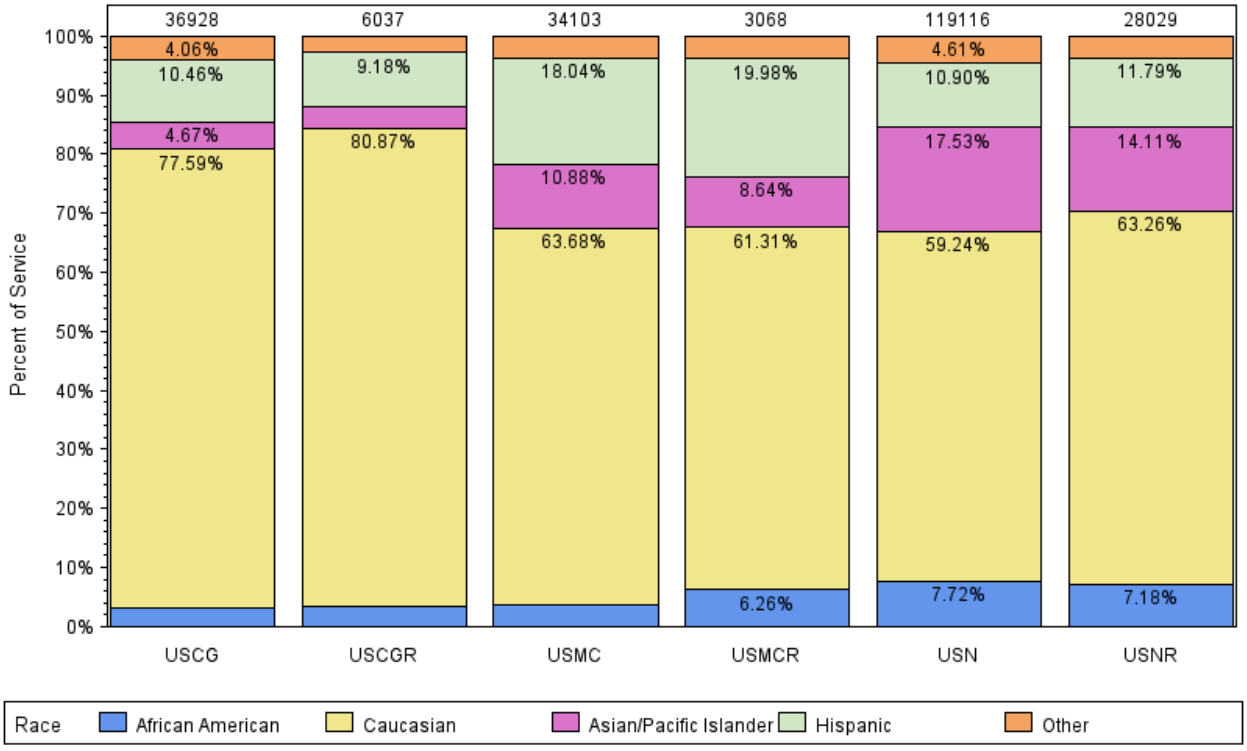
Race varied somewhat between service components, but across services, survey respondents were predominantly Caucasian (64%), followed by Asian/Pacific Islander (13%), Hispanic (12%), African American (6%), and Other (4%) (Figure 8).

Figure 8:

Race Distribution of Completed HRAs by Service Component*

227,281 records



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*6,000 did not answer race question

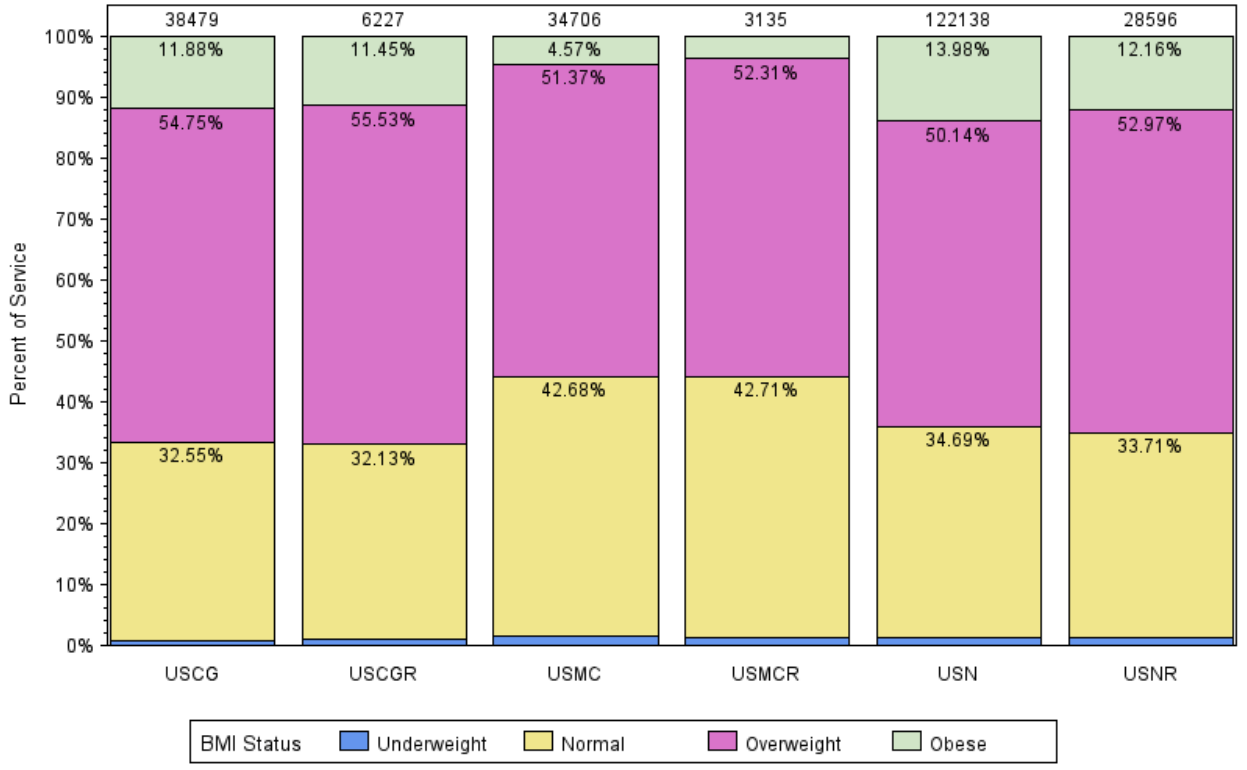
HRA Risk Factor Analysis

BMI Status

As a screening test, BMI usually correlates well in the U.S. population with an individual's amount of body fat, although some individuals, such as muscular athletes, may have BMIs that identify them as overweight even though they do not have excess body fat. Therefore, this analysis should not necessarily lead to the conclusion that all individuals exceeding these levels are overweight or obese. Rather, the analysis may support some general observations about weight across the services.

Overall, 63% of service members were classified as overweight according to the CDC BMI standards for healthy adults. The analysis indicated that, in general, Navy and Coast Guard personnel were more likely than Marines to be classified as overweight or obese. Active duty Navy, Coast Guard, and Marine personnel are nearly equally as likely to be of normal BMI as reservists (Figure 9).

Figure 9:
Distribution of BMI Category for Completed HRAs by Service Component
233,281 records



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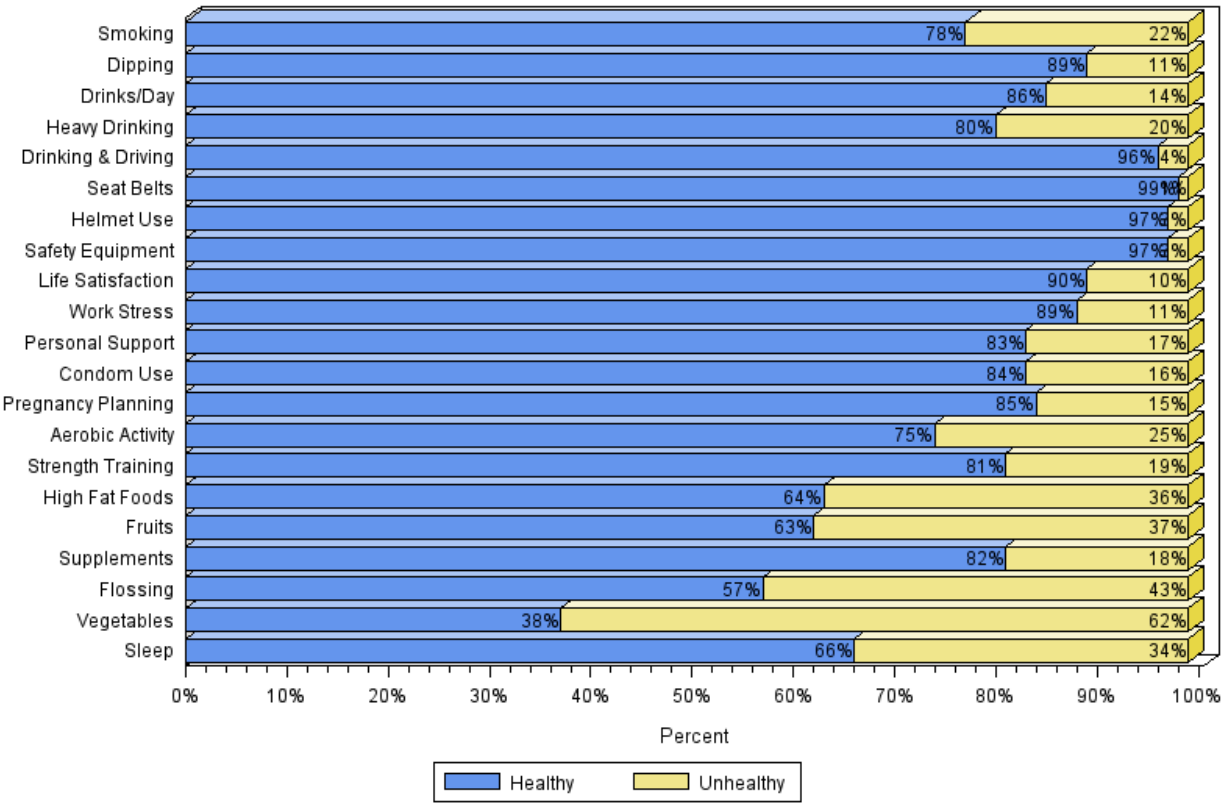
Distribution of Healthy Versus Unhealthy Responses

As shown in Appendix B, each HRA response was classified as healthy or unhealthy based on the risk factors associated with that response.

The next seven graphs (Figures 10-16) display the results of these questions by service component. Healthy (blue) and unhealthy (yellow) response frequencies are displayed along the horizontal axis which depicts total response percentage. A longer blue bar indicates more people were classified as healthy than unhealthy.

Overall and for all components, the leading health risks (unhealthy ratings) were low daily intake of vegetables (62%), lack of dental flossing (43%), low daily intake of fruits (37%), and high daily intake of high-fat foods (36%). Among all respondents, other significant areas of concern included lack of sleep (34%), lack of aerobic activity (25%), smoking (22%), and heavy drinking (20%). Overall, the most common healthy behaviors reported by members included use of seat belts (99%), use of safety equipment (97%), and avoiding drinking and driving (96%) (Figure 10).

Figure 10:
Distribution of Healthy vs. Unhealthy Responses on HRA Questions for All Service Components



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USN and USNR response distributions closely resembled one another (Figures 11 and 12). Both groups shared their top two risk factors of low intake of vegetables (66% and 56%, respectively) and lack of flossing (43% and 35%, respectively). In addition, 40% of USN and 31% of USNR members reported low intake of fruit; 40% of USN and 29% of USNR members also reported frequent consumption of high-fat foods. USN service members reported more frequent heavy drinking (21%) and a higher average number of drinks per day (15%) than did USNR members (12% and 8%, respectively). USN members reported a higher percentage of smoking (24%) than did USNR members (14%). More USN members also reported they did not get enough restful sleep (38%) compared with USNR members (24%).

Figure 11:

USN Distribution of Healthy vs. Unhealthy Responses on HRA Questions

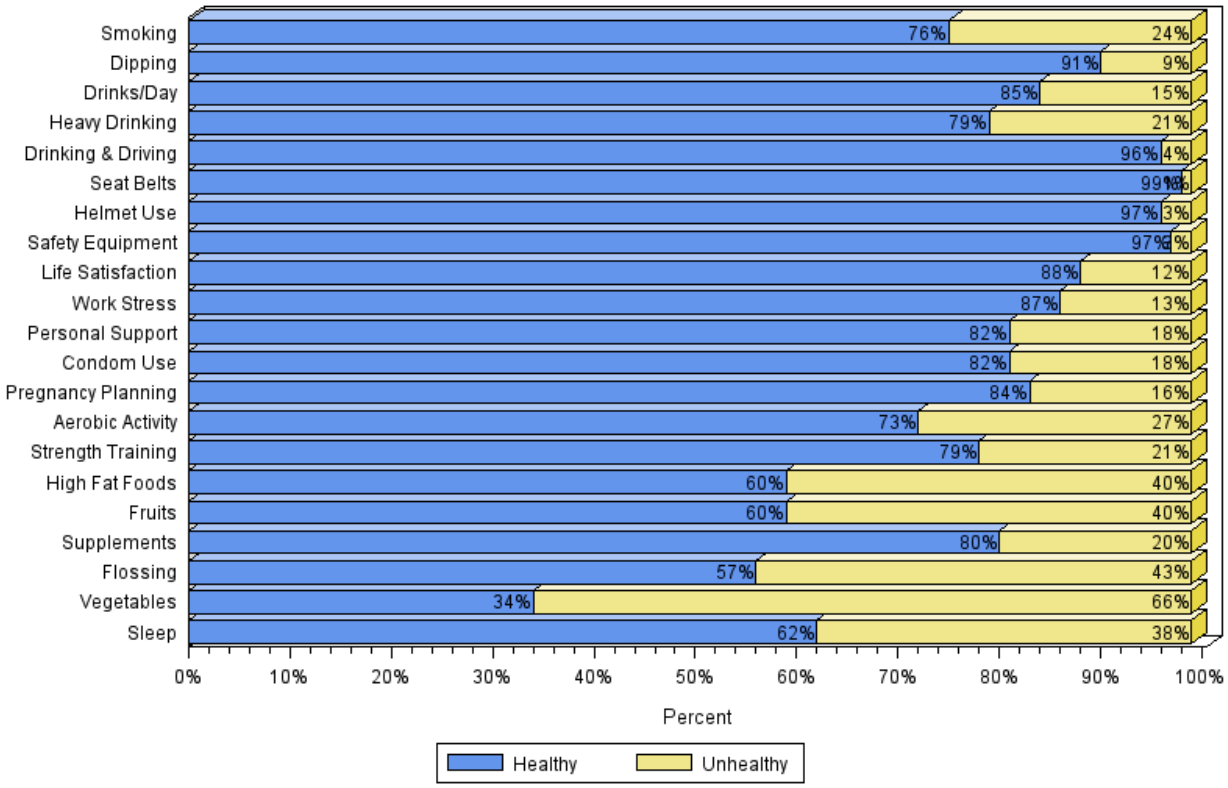

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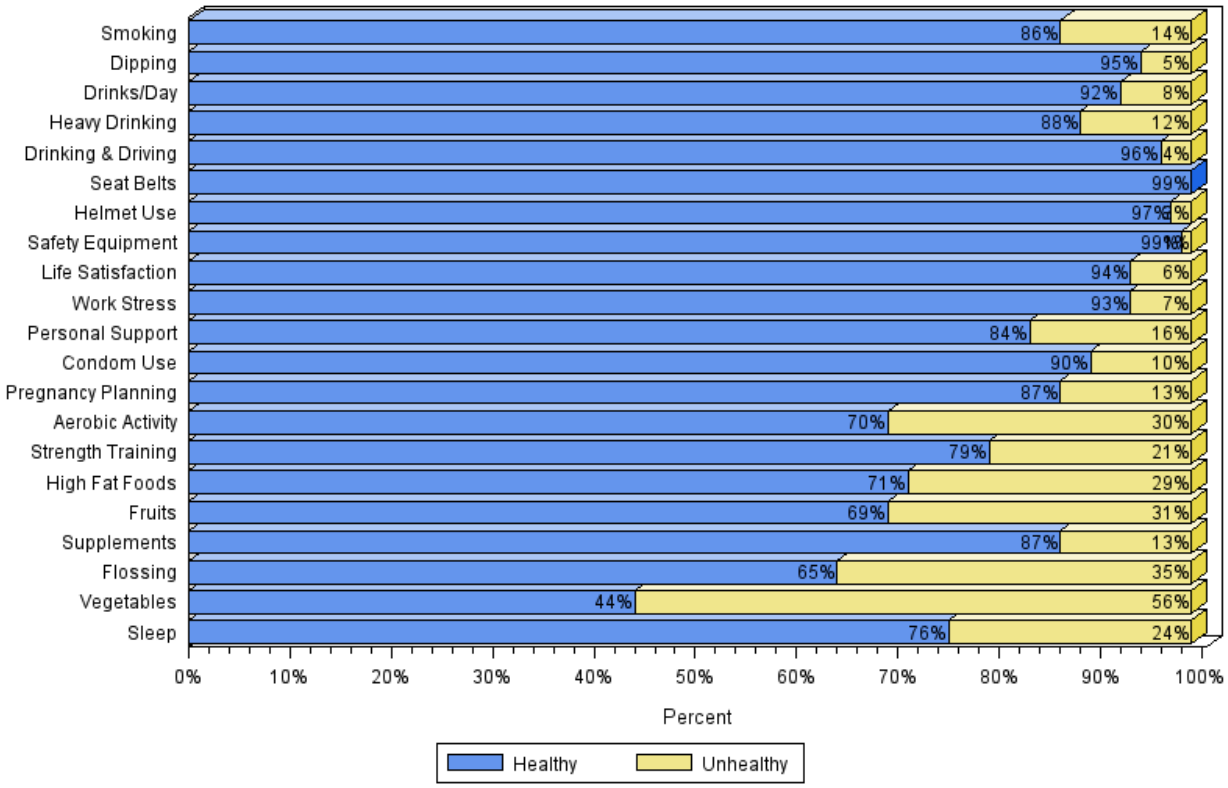
Figure 12:

USNR Distribution of Healthy vs. Unhealthy Responses on HRA Questions



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The USMC and USMCR followed similar trends based on reported risks (Figures 13 and 14). Unhealthy responses for both groups included low intake of vegetables (72% and 66%, respectively), low levels of flossing (54% and 51%, respectively), and low intake of fruits (46% and 42%, respectively). USMC members more often reported higher levels of work stress (12%) than USMCR members (9%). USMC and USMCR members both reported a high percentage of heavy drinking (29% and 25%, respectively) and a high average number of drinks per day (21% and 19%, respectively). Members of both groups also reported high levels of tobacco use. Smoking was 32% and 23%, and smokeless tobacco use (dipping) was 22% and 16%, respectively. Both groups of Marines reported they commonly did not get enough restful sleep (41% and 33%, respectively). More USMCR members (8%) reported driving after drinking too much alcohol than USMC members (4%). Both groups of Marines also reported lack of condom use more frequently compared with Navy members (24% and 20% for USMC and USMCR, respectively).

Figure 13:

USMC Distribution of Healthy vs. Unhealthy Responses on HRA Questions

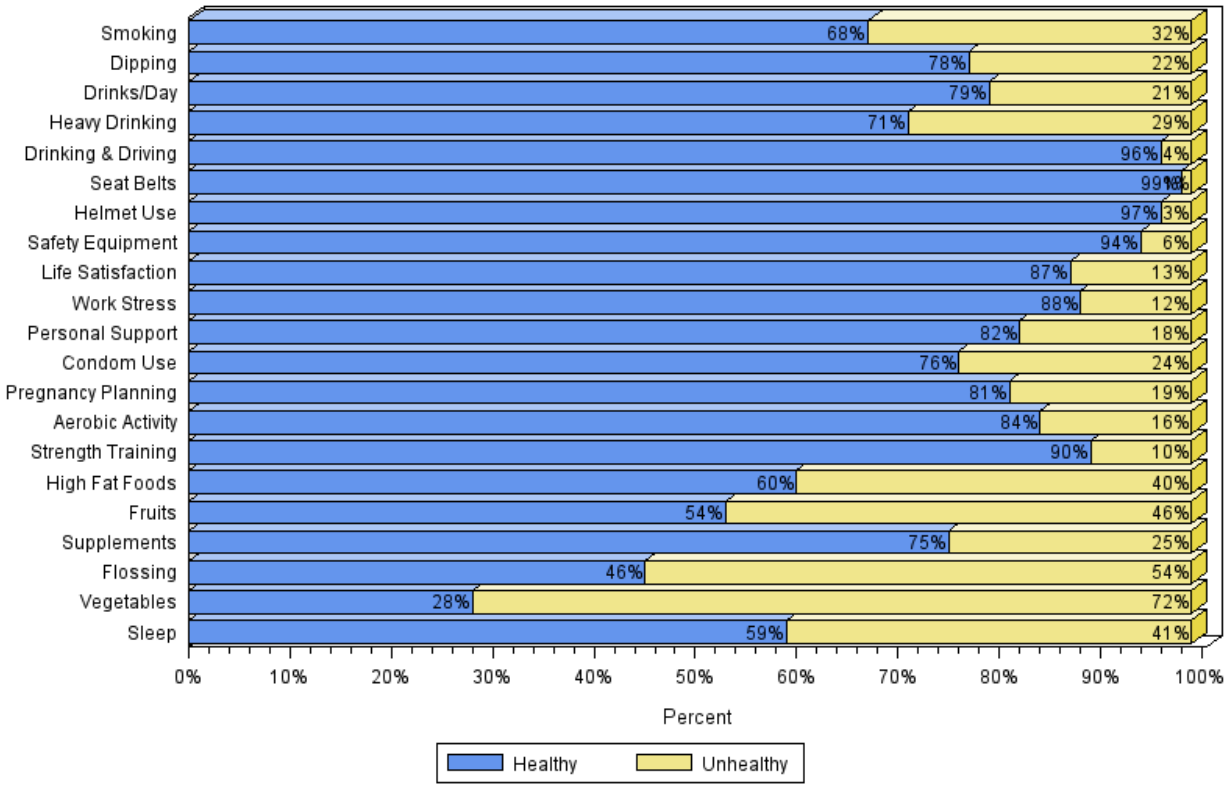

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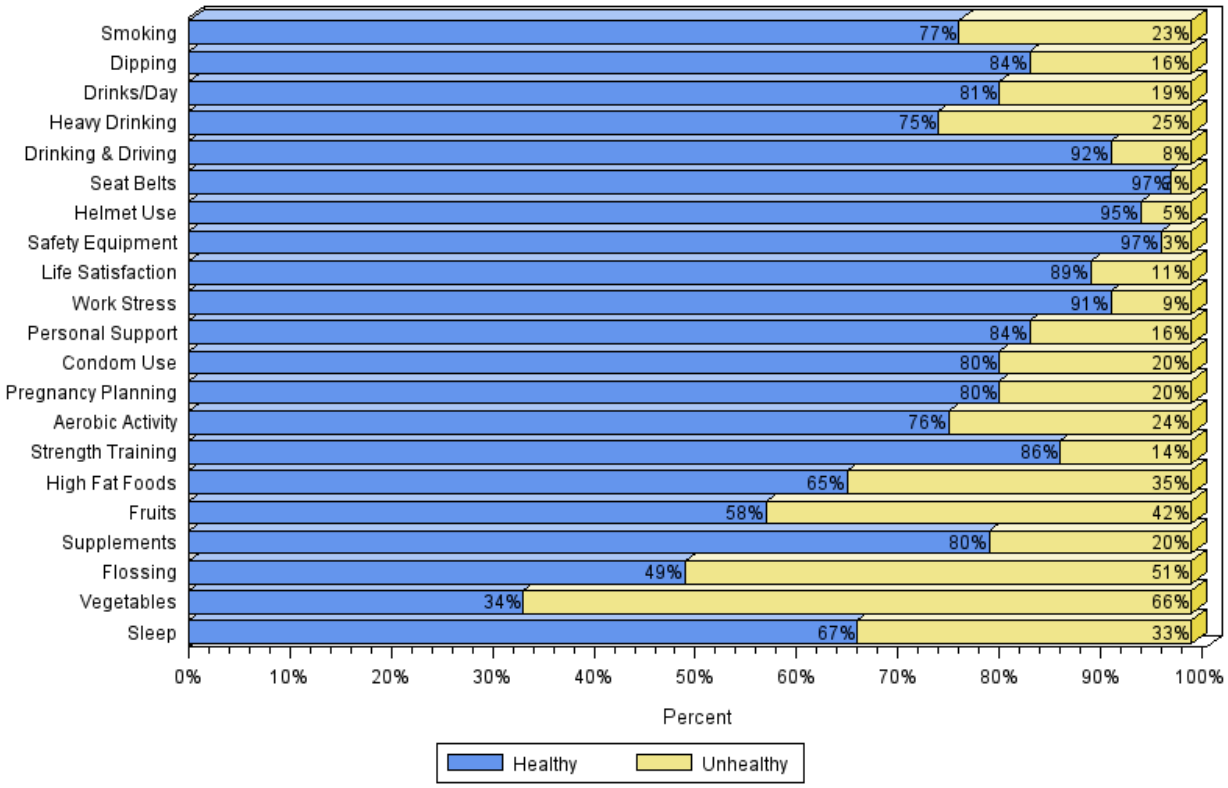
Figure 14:

USMCR Distribution of Healthy vs. Unhealthy Responses on HRA Questions



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The USCG and USCGR showed similar results (Figures 15 and 16). Members of both groups reported low intake of vegetables (49% for both), low levels of flossing (36% and 30%), high intake of high-fat foods (27% and 26%), and low intake of fruits (25% and 26%). USCG and USCGR members reported slightly lower percentages of smoking (17% and 10%, respectively) than other services. The USCG reported a lower unhealthy number of drinks per day (10%) and a lower percentage of heavy drinking (13%) than the USMC and USN. Like other service members, the USCG frequently reported inadequate sleep (25% and 19%).

Figure 15:

USCG Distribution of Healthy vs. Unhealthy Responses on HRA Questions

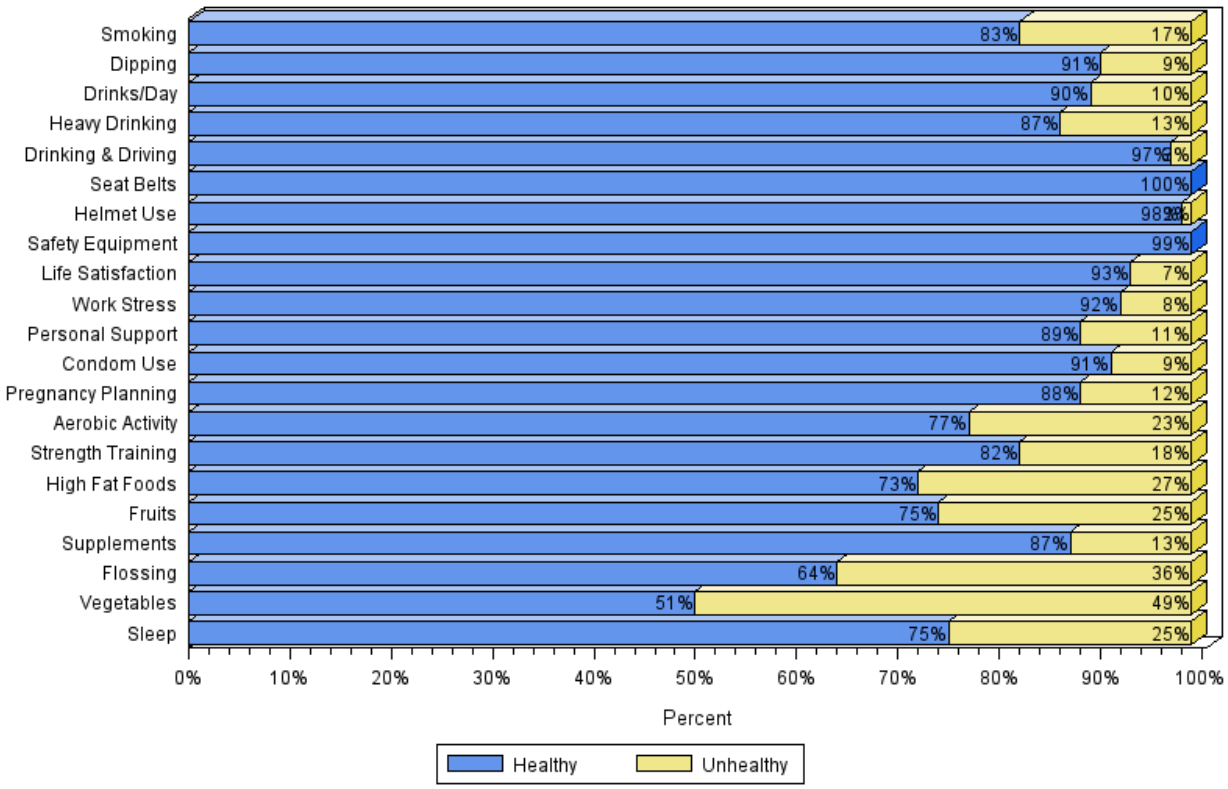

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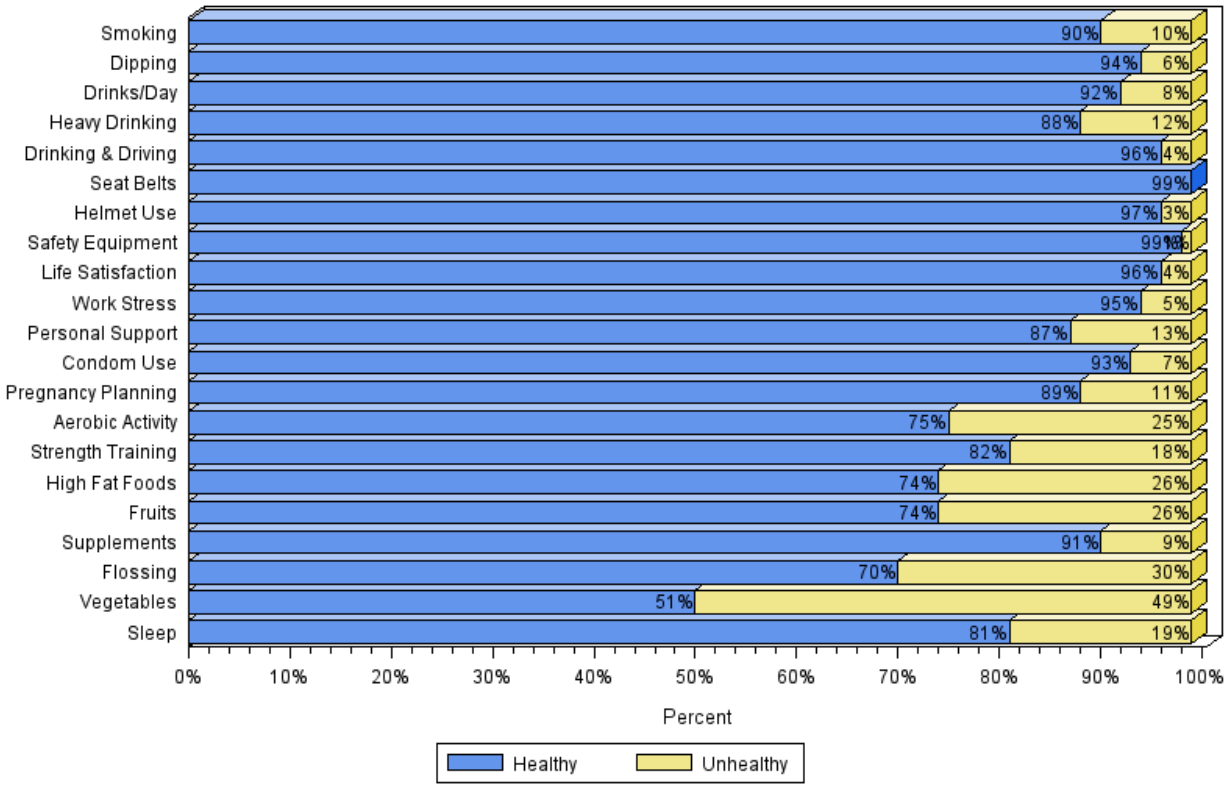
Figure 16:
USCGR Distribution of Healthy vs. Unhealthy Responses on HRA Questions



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Distribution of Risk Categories

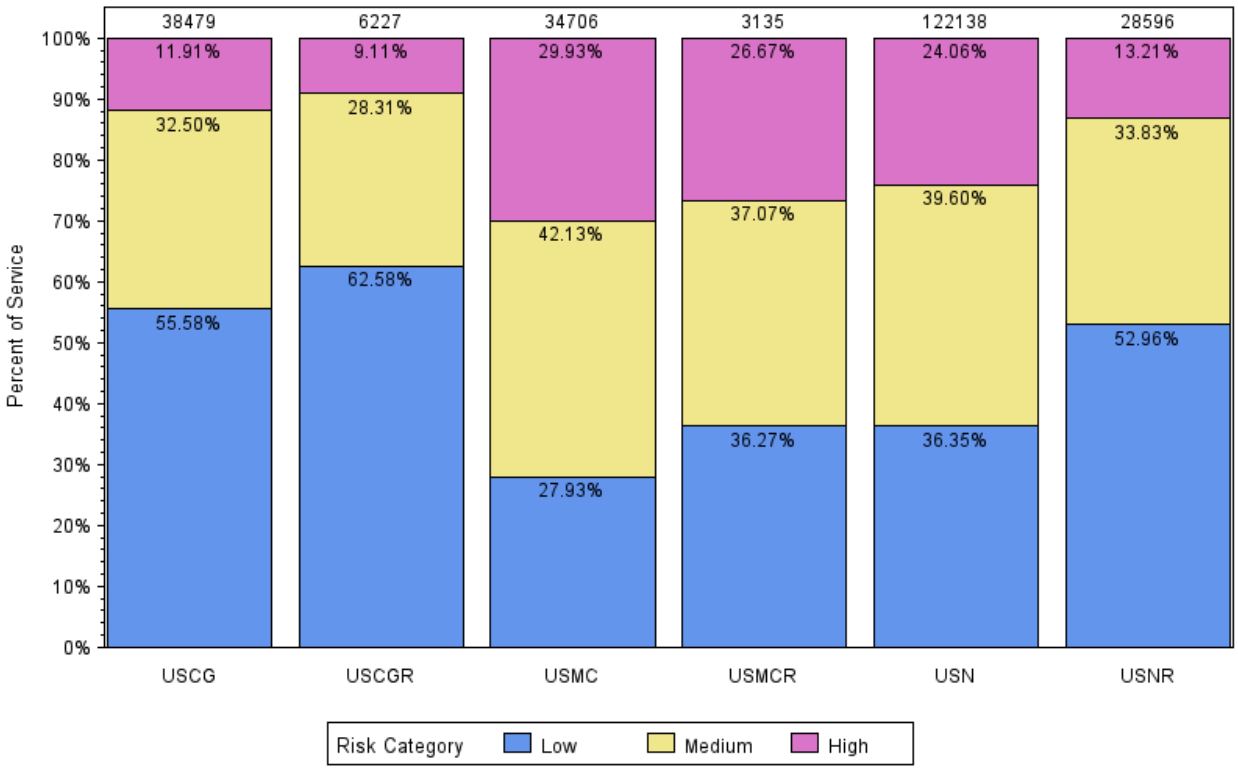
Figure 17 displays risk categories for each service component, based on the number of members falling within each risk category. Each service member was categorized as low, medium, or high risk based on the number of risk categories in which they reported unhealthy behaviors. Members in higher risk categories are considered more likely to utilize healthcare services in the future.

Based on mean number of risk factors, USMC members were most often scored as high risk (29.9%), followed by the USMCR (26.7%), USN (24.1%), USNR (13.2%), USCG (11.9%), and USCGR (9.1%). Members of the USCGR most often scored in the low risk category (62.6%).

Figure 17:

Distribution of Risk Categories for Completed HRAs by Service Component

233,281 records



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Changes in Health Responses

Table 1 displays the percentage of respondents who were classified as healthy for both 2013 and the previous study period of July 1, 2011 to June 30, 2012. The percent change in the healthy response was calculated and appears in the last column; increases in values indicate healthier behaviors. Overall, most healthy responses remained similar or slightly improved, with the exception of smokeless tobacco use (dipping), which had a 0.1% decrease in healthy responses. Condom use and personal support improved significantly in 2013, with an increase of 8.4% and 8.2% in healthy responses, respectively.

Table 1. Percent Change in Healthy HRA Responses, Total[a]

	2011-2012 (n = 198,529)	2013 (n = 233,281)	% Change
Aerobic Activity	74.6	74.9	0.4
Condom Use	77.4	83.9	8.4
Dipping	89.3	89.2	-0.1
Drinking & Driving	96.1	96.3	0.2
Drinks/Day	84.3	85.8	1.7
Flossing	56.9	57.5	1.0
Fruits	61.3	63.0	2.7
Heavy Drinking	78.3	80.4	2.7
Helmet Use[b]	93.5	97.1	3.9
High Fat Foods	62.5	63.9	2.2
Life Satisfaction	89.5	89.8	0.4
Personal Support	77.1	83.4	8.2
Pregnancy Planning	80.3	84.5	4.2
Safety Equipment[b]	96.7	97.2	0.5
Seat Belts	95.3	98.8	3.5
Sleep	65.2	66.1	0.9
Smoking	76.3	77.6	1.3
Strength Training	80.5	81.2	0.7
Supplements	81.3	81.9	0.6
Vegetables	36.3	37.9	1.6
Work Stress	88.1	88.9	0.8

[a] May not exactly total 100 due to rounding error.

[b] Excludes not applicable answers.

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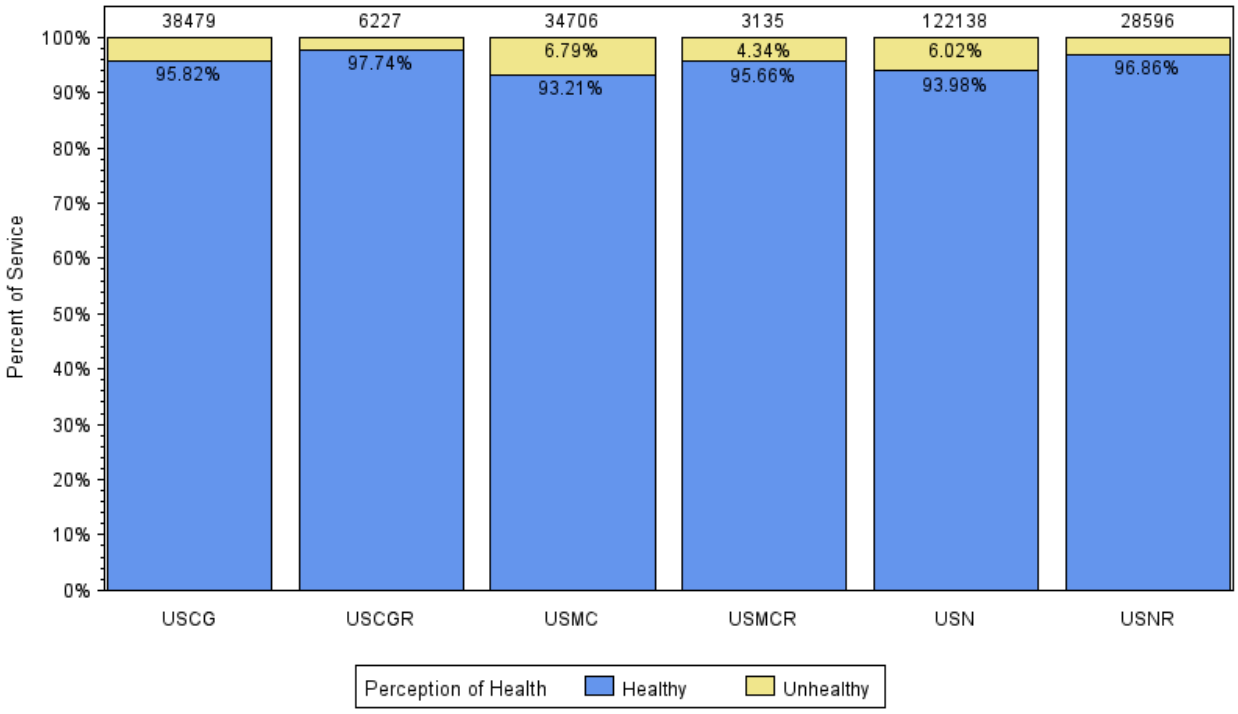
Perception of Health

Self-perception of one's current state of health has been shown to be fairly accurate. However, perception of current good health may not accurately reflect future health for members who report significant risk factors that are major determinants of health. Of all service members, 95% rated their "health in general" as either good or excellent (Figure 18), even though the scoring of HRA data shows many members reported risk factors that placed them in medium and high risk categories (Figure 17).

Figure 18:
Distribution of Perception of Health Category for Completed HRAs by Service Component
233,281 records



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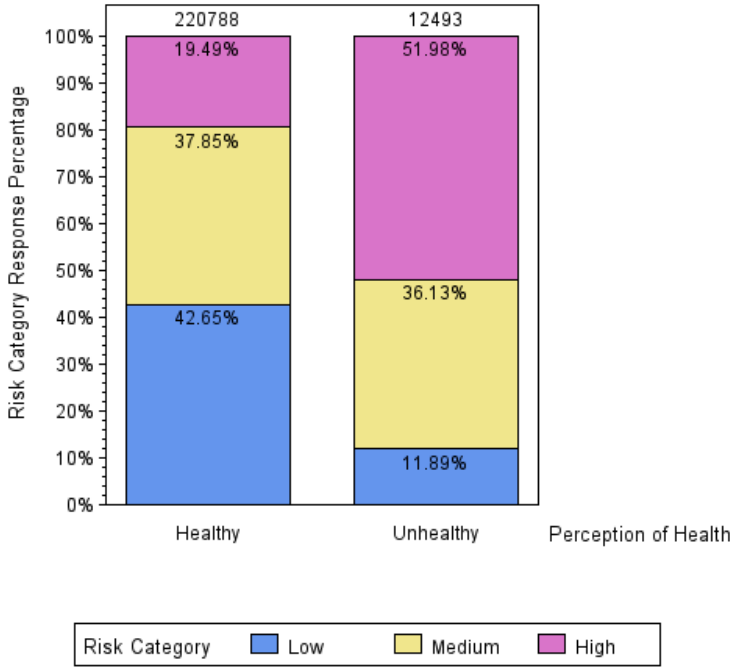
The differences in perception of health and risk category demonstrated that those who perceived their health to be unhealthy (i.e., self-rating their health as either fair or poor) were more likely to be in the high risk category compared to those who perceived themselves to be "healthy." Of the small percentage of respondents who indicated their health was generally unhealthy (5% of respondents), the majority had risk scores that fell into the medium to high risk categories (88%) (Figure 19).

Figure 19:
Distribution of Perception of Health Category Compared to Risk Category for Completed HRAs
233,281 records



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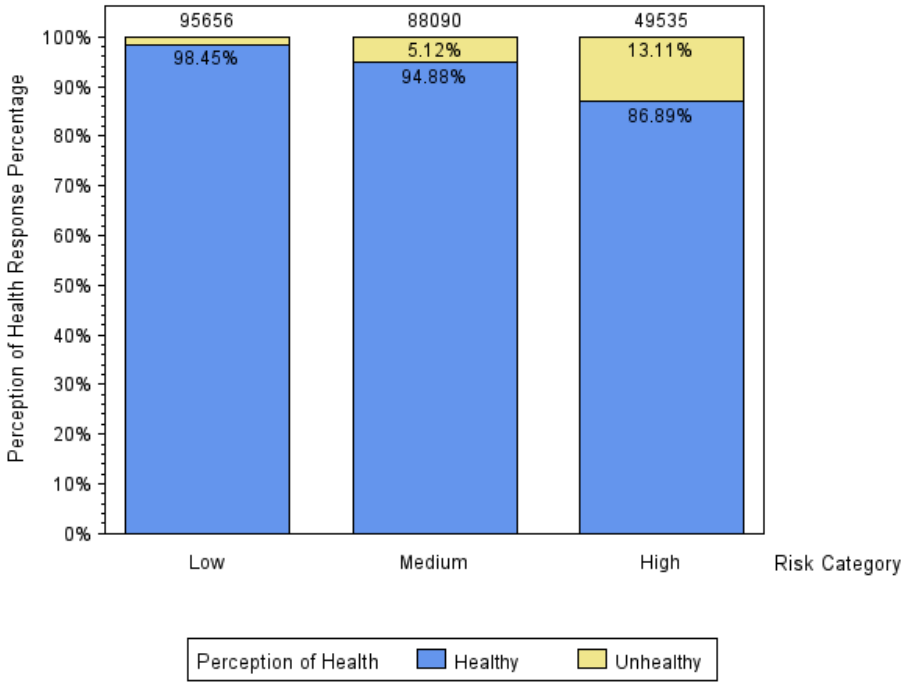
The differences in perception of health and risk category were small but consistent, with lower risk groups having a higher perception of good health (98%) than the other two categories (Figure 20). However, 87% of high risk individuals also perceived their health as good.

Figure 20:
Distribution of Perception of Health Category Compared to Risk Category for Completed HRAs
233,281 records



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Mean Risk by Demographic Variables

A risk score for each individual was tabulated based on the total number of risk categories in which one or more behaviors were reported as unhealthy. There were a total of 10 risk categories. Risk scores were grouped into risk levels of low (0-2 risk categories), medium (3-4 risk categories), and high (5 or more risk categories).

More males classified as high risk (22%) than females (16%) (Table 2).

Table 2. Risk Category by Gender[a]

Gender	% in Low Risk	% in Medium Risk	% in High Risk
Female (n=41,672)	48.8	35.4	15.7
Male (n=191,609)	39.3	38.3	22.40

[a] May not exactly total 100 due to rounding error.

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Age was also examined (Table 3). Risk was highest for individuals 20 to 29 years old but then steadily decreased with age. More than 49% of younger members (age 17-29) were in the high risk category. The decreasing percentage of members in the high risk category after the age of 29 may be due to survivor effect or healthy worker effect, indicating that those who remain in the military tend to be healthier than those who leave the service. It may also be that some individuals reduce their risky lifestyle behaviors as they mature.

Table 3. Risk Category by Age[a]

Age Group (Years)	% in Low Risk	% in Medium Risk	% in High Risk
17-19 (n=8,185)	32.3	44.1	23.6
20-29 (n=116,948)	35.7	38.4	25.9
30-39 (n=70,892)	44.3	37.6	18.1
40-49 (n=31,514)	51.4	35.9	12.7
50+ (n=5,742)	63.7	28.7	7.6

[a] May not exactly total 100 due to rounding error.

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The same association between age and percentage of high risk members was demonstrated by comparing rank with risk categories (Table 4). The E1-E5 group, which is generally comprised of younger service members, had a greater percentage of members in the high risk category compared to E6-E9 personnel and the officer ranks. Senior officers (O6-O9) had a lower percentage of members in the high risk category compared to other officers. Warrant officers were generally most likely to be in the high risk category compared to all other officer ranks.

Table 4. Risk Category by Rank[a]

Rank Group[b]	% in Low Risk	% in Medium Risk	% in High Risk
E1-E5 (n=129,979)	35.7	38.5	25.8
E6-E9 (n=59,795)	41.5	38.9	19.6
O1-O5 (n=37,577)	55.8	34.1	10.1
O6-O9 (n=3,196)	64.1	29.9	6.1
W1-W5 (n=2,734)	52.4	35.2	12.4

[a] May not exactly total 100 due to rounding error.

[b] excludes individuals who indicated a rank of E10 or O10.

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Race was also examined by risk category (Table 5). No strongly significant difference between race and risk category were noted. This has been the case in previous years' reports.

Table 5. Risk Category by Race[a]

Race Group[b]	% in Low Risk	% in Medium Risk	% in High Risk
African American (n=14,083)	37.8	38.3	23.9
Caucasian (n=145,426)	42.8	37.1	20.1
Asian/Pacific Islander (n=30,756)	36.1	40.4	23.5
Hispanic (n=27,467)	39.4	38.4	22.2
Other (n=9,549)	38.7	37.5	23.9

[a] May not exactly total 100 due to rounding error.

[b] 6,000 individuals did not indicate race.

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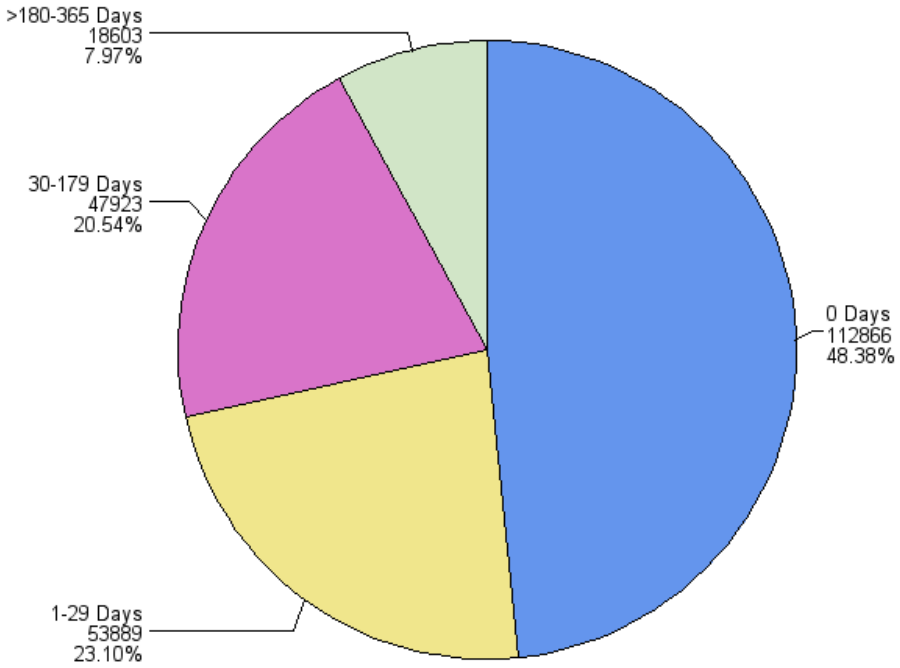
Days Away From Home Station

The relationship between days away from home station and unhealthy behavior response was examined. Using the "days away" variable, four time points were created: 0 days, 1-29 days, 30-179 days, and 180-365 days.

In the entire population, 48% of individuals did not spend any time away from the home station, 23% spent 1-29 days away, 21% spent 30-179 days away, and 8% spent 108-365 days away from the home station (Figure 21).

Figure 21:
Percentage of Days Spent Away from Home Station
233,281 records



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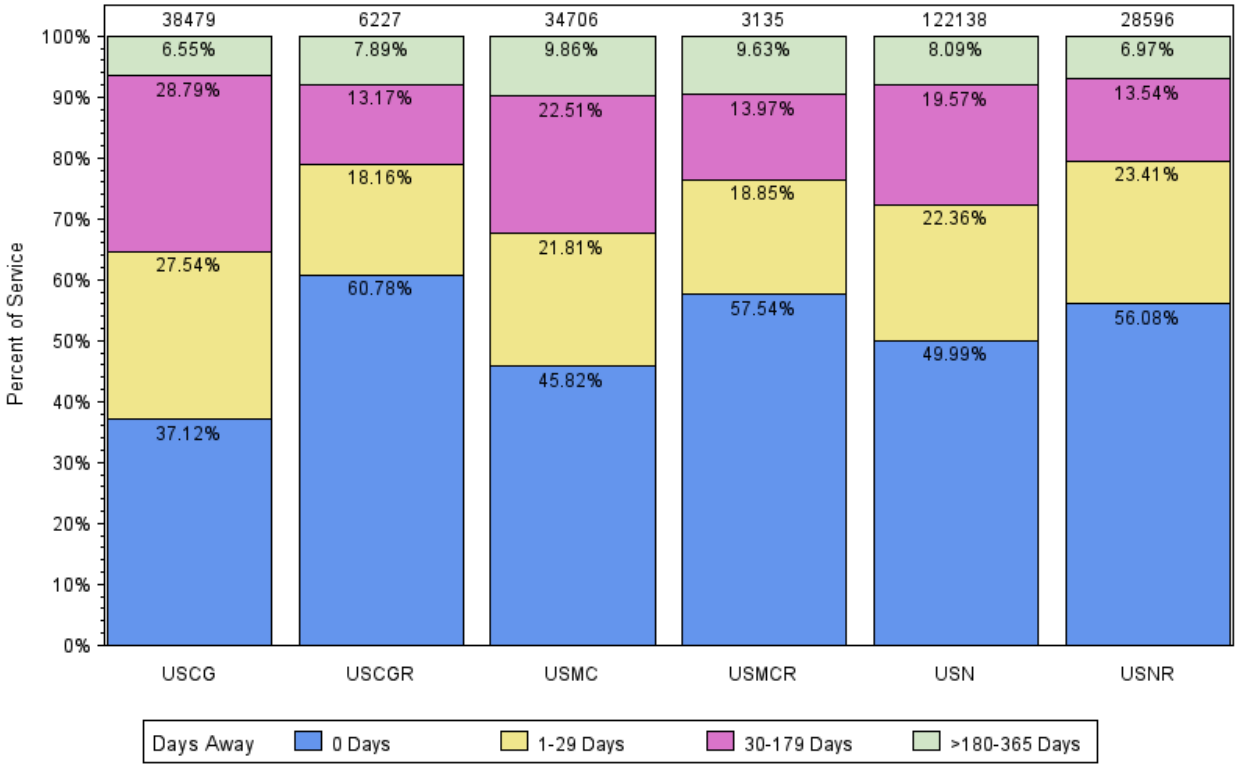
Time away from home station was examined by service component (Figure 22). At least 50% of all USN and USNR members reported 0 days away from home station while 57-60% of all reserve branches reported spending 0 days away from home station. The USCG, USMC, and USN had the highest percentages for total days away with at least 50% of members reporting at least 1 day away from home station. USMC members reported having the greatest percentage of members away from home station for 180-365 days (10%) while the USNR members only had 7% of individuals away from home station for 180-365 days. USCG members reported having the lowest percentage of members away from home station less than 30 days (65%).

Figure 22:

Days Away From Home Station by Service

233,281 records



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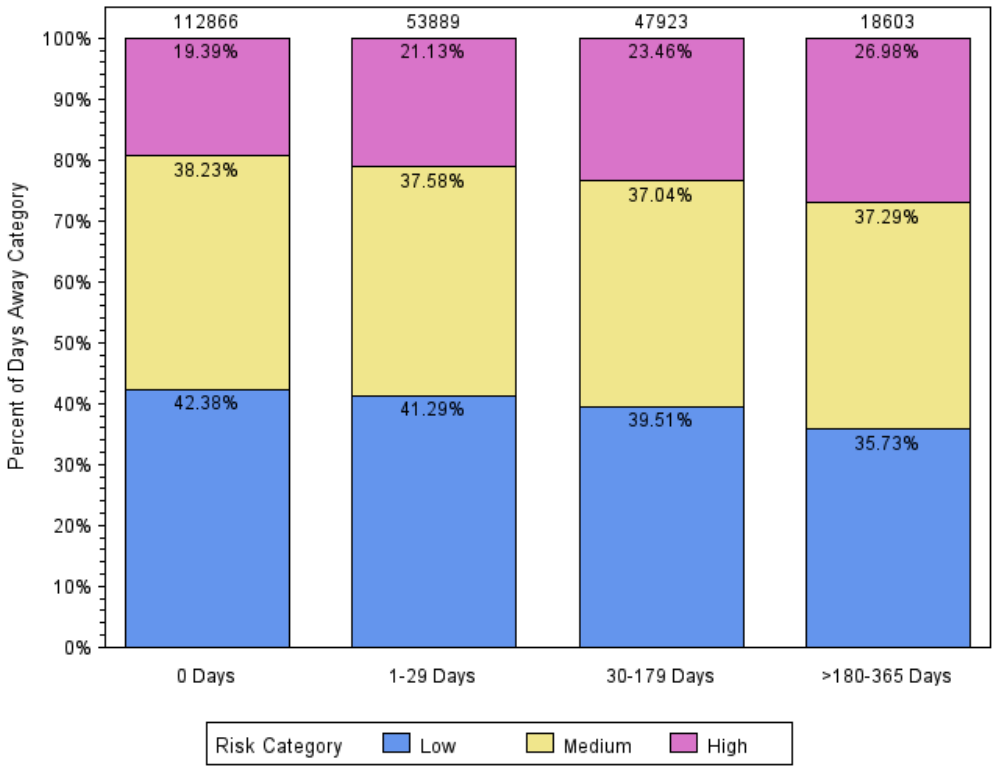
Total HRA risk score was examined in relation to the four time points using frequency distribution and logistic regression. The distribution of risk categories, determined by total HRA response risk score, was similar for people classified as a medium risk across all categories. Both the low risk and high risk categories showed a percentage response change over time. The percent of members in the low risk category decreased from 42% at 0 days away to 35% at 180-365 days away. The percentage of members in the high risk category increased from 19% at 0 days away to 27% at 180-365 days away (Figure 23).

Figure 23:
Distribution of Risk Categories for Completed HRAs for Days Away from Home Station
233,281 records



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Days Away From Home Station and Mean Risk

Risk category was compared with the amount of time away from home station. As time away from home station increased, the percentage of members in the high risk category increased.

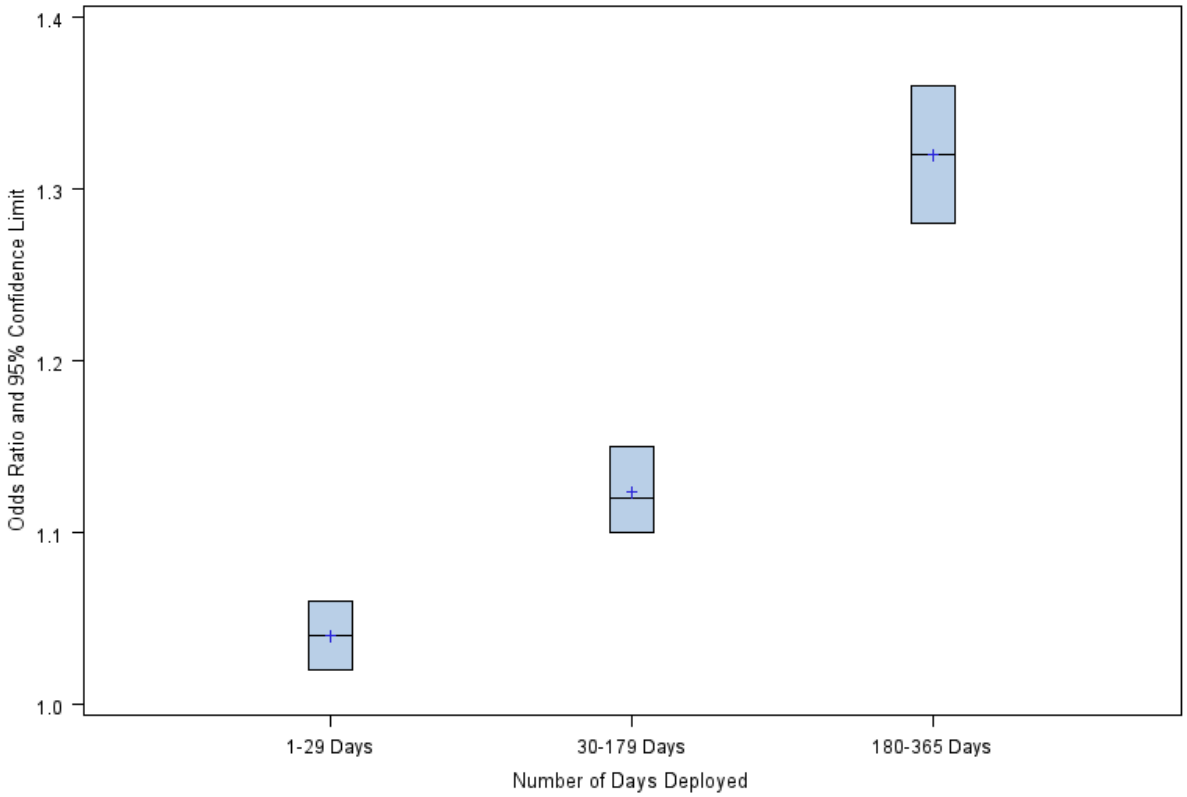
Days Away From Home Station and Risk Score

To evaluate the relationship between number of days away from home station and risk score, a logistic regression model was used. A risk score of greater than 2 (medium and high categories) was set as a dependent variable, while days away from home station was used as a predictive variable divided into four groups: 0 days away from home station, 1-29 days away from home station, 30-179 days away from home station, and 180-365 days away from home station. The model was found to be significant with the odds ratio (OR) increasing in each of the days away categories when compared to not leaving home station (Figure 24): OR [1-29 days] 1.04 (95% CI 1.02-1.06), OR [30-179 days] 1.12 (95% CI 1.10-1.15), and OR [180-365days] 1.32 (95% CI 1.28-1.36).

Figure 24:

Relationship Between Risk Number and Different Days Away Categories

233,281 records



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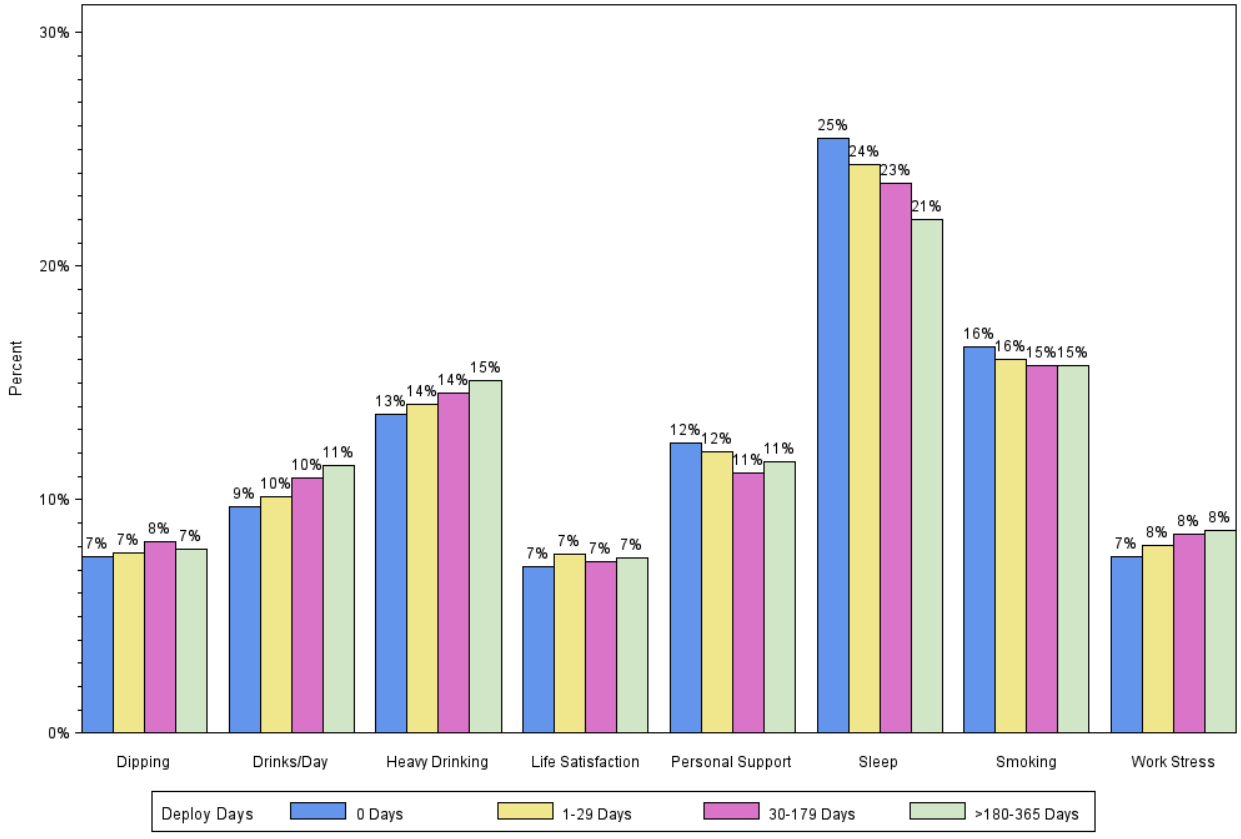
Days Away from Home Station and Unhealthy Behaviors

Responses to questions about smoking, smokeless tobacco use (dipping), average number of drinks per day, heavy drinking, life satisfaction, work stress, personal support, and sleep were examined over the four time points. The responses to eight different questions addressing these topics were examined to determine any time-related differences in the reporting of unhealthy behaviors.

The next seven graphs (Figures 25-31) display the results of unhealthy responses by self-reported time away from home station. Heavy drinking, average numbers of drinks per day, and work stress increased as time away from station increased, for all service components grouped together. However, lack of restful sleep decreased as time away from home station increased.

Figure 25:
Distribution of 'Unhealthy' Behaviors by Time Away from Home Station, All Service Components
233,281 records



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Frequency of unhealthy responses increased or stayed relatively stable for all risk factors for USN members as days away from home station increased (Figures 26 and 27), with the exception of sleep and smoking. Compared to USNR members, USN members reported higher average numbers of drinks per day, starting at 9% of all behaviors for those who spent 0 days away and increasing to 11% of all behaviors for those who spent 180-365 days away. On the other hand, USNR members reported a greater lack of personal support, starting at 17% of all behaviors for those who spent 0 days away and increasing to 18% of all behaviors for those who spent 30-179 days away. However, USNR members reporting a lack of personal support decreased back to 17% of all behaviors for those who spent >180-365 days away. Other behavior changes were relatively similar between the two groups.

Figure 26:
USN Distribution of 'Unhealthy' Behaviors by Time Away from Home Station
233,281 records

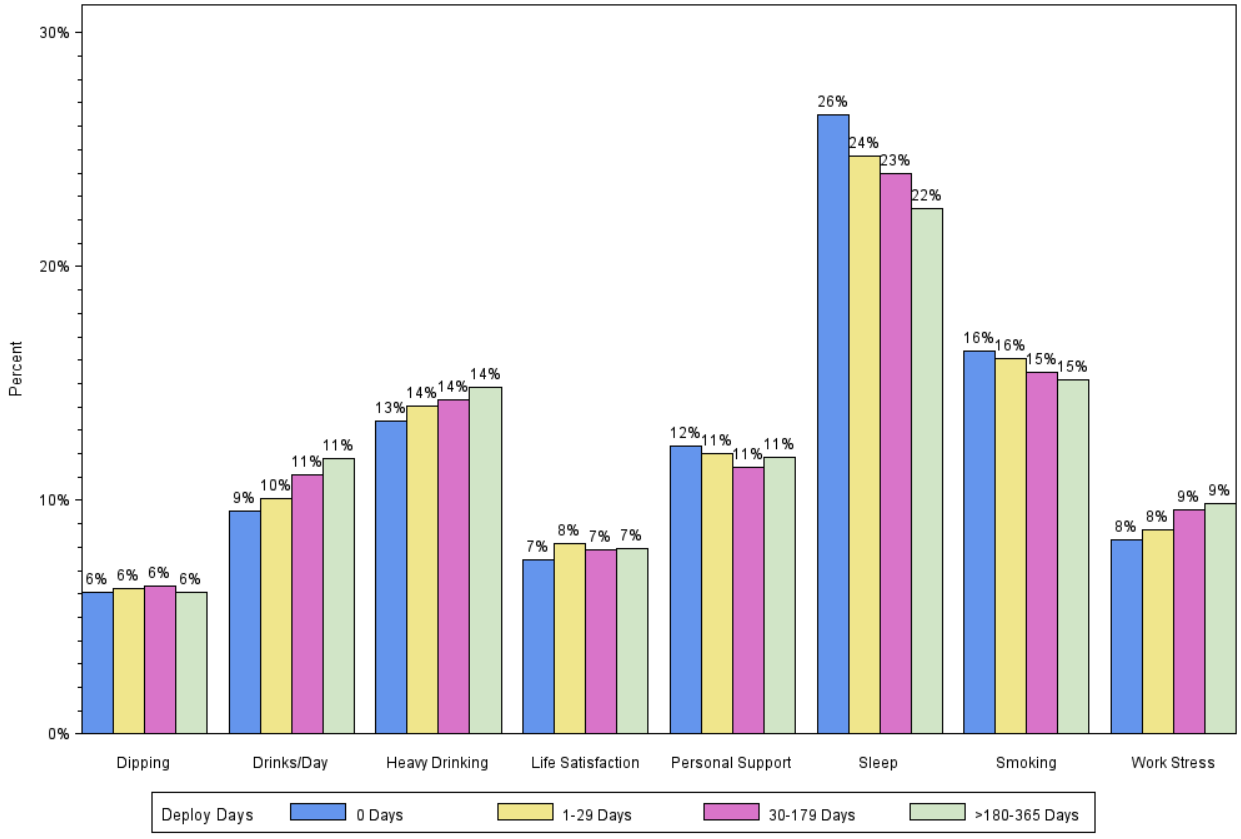

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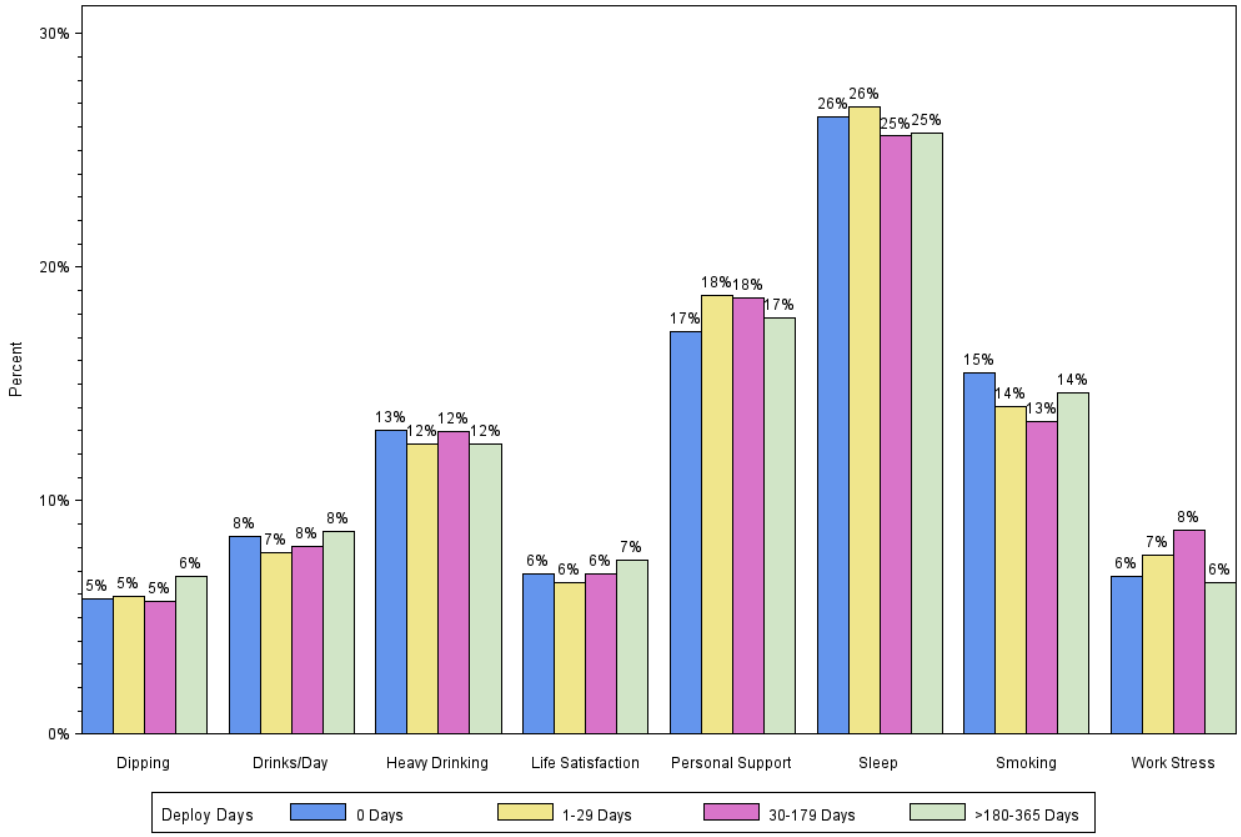
Figure 27:
USNR Distribution of 'Unhealthy' Behaviors by Time Away from Home Station
233,281 records



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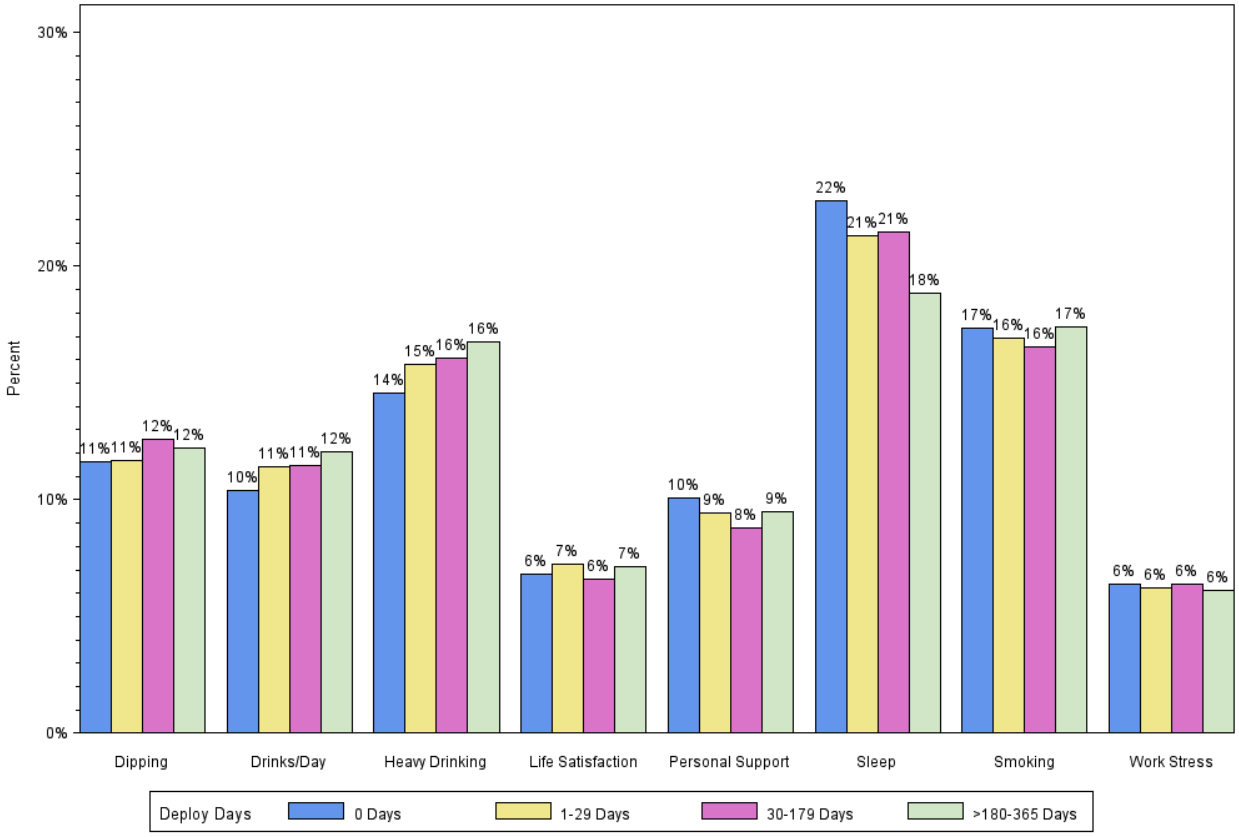
Compared to Navy and Coast Guard members, Marines tended to report higher unhealthy number of drinks per day and a higher percentage of heavy drinking which generally increased as days away from home station increased (Figures 28 and 29). Frequency of unhealthy responses increased or stayed relatively stable for all risk factors for USN members as days away from home station increased, with the exception of sleep. Percentages between USMC and USMCR differed at most by 3%.

Figure 28:
USMC Distribution of 'Unhealthy' Behaviors by Time Away from Home Station
233,281 records

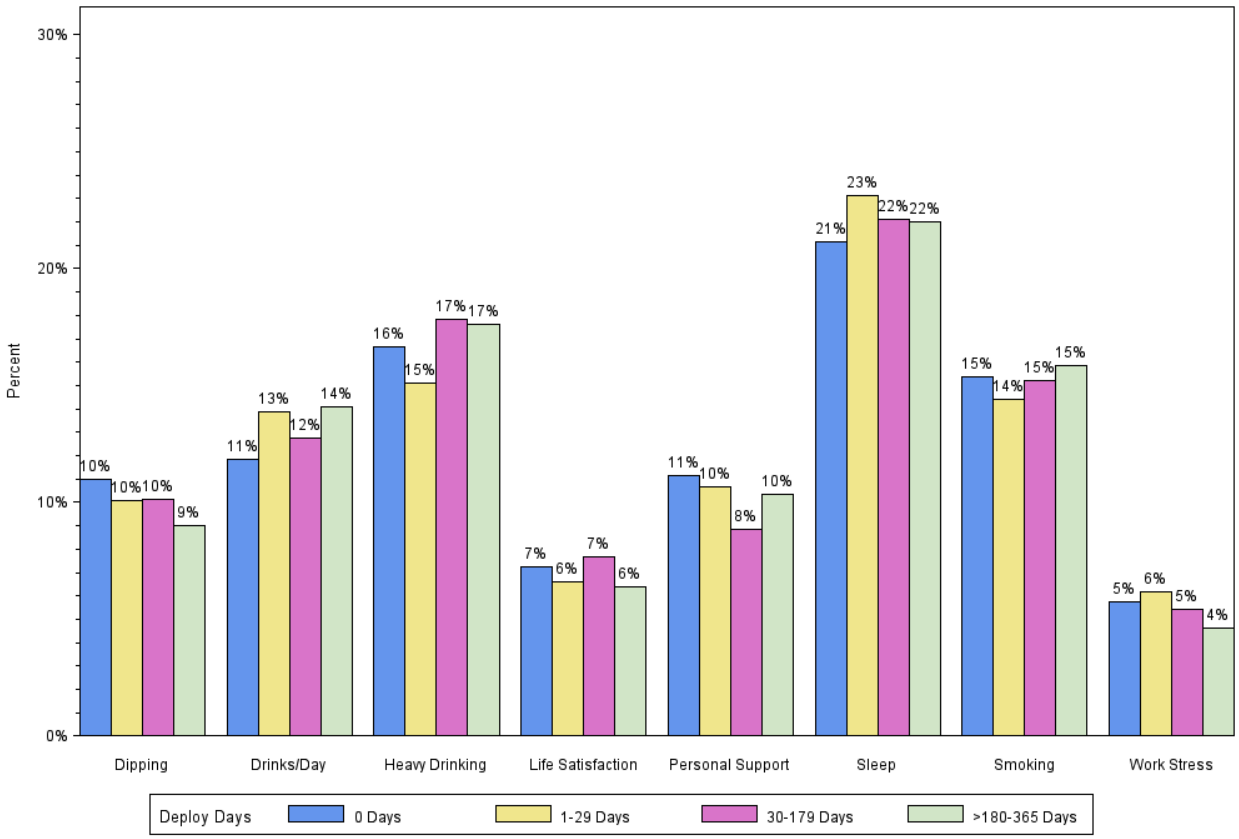


Prepared by the EpiData Center Department, Navy and Marine Corps Public Health Center on 13 March 2014

Figure 29:

USMCR Distribution of 'Unhealthy' Behaviors by Time Away from Home Station

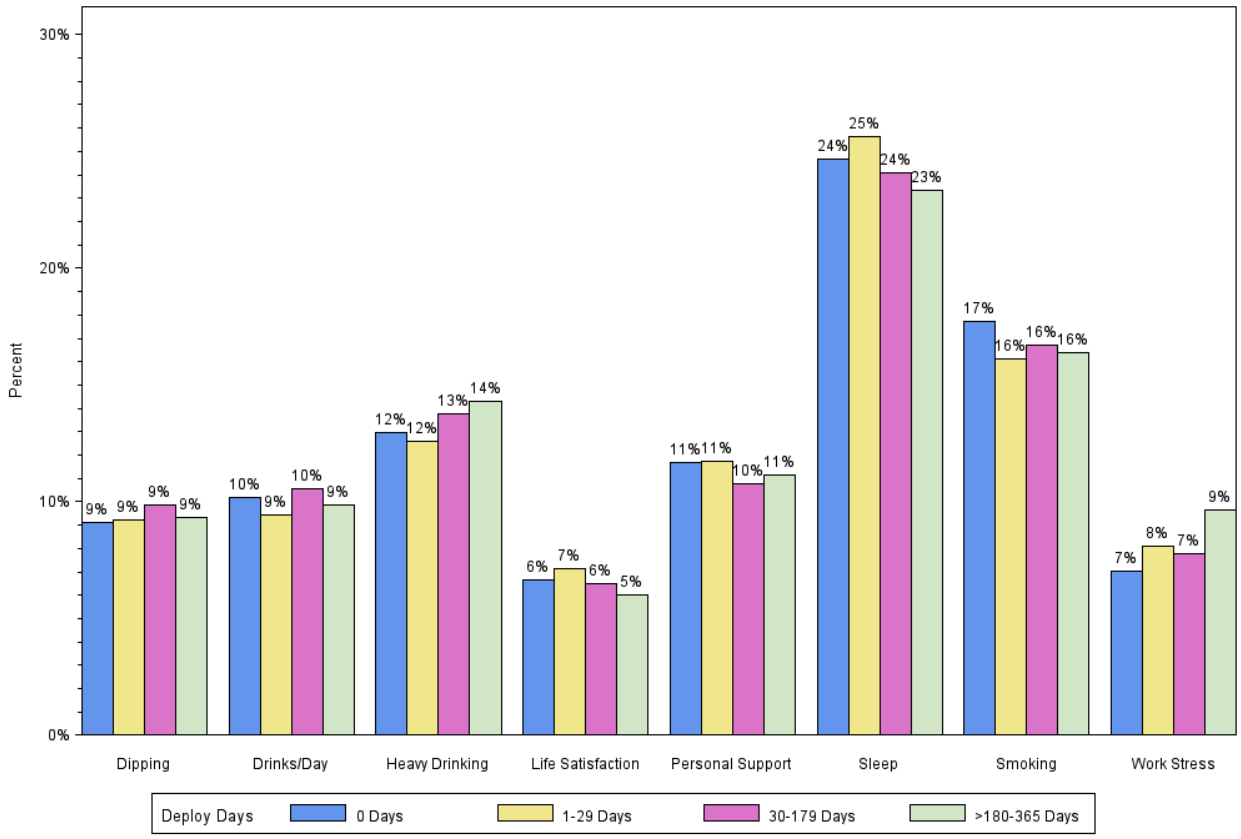
233,281 records



Prepared by the EpiData Center Department, Navy and Marine Corps Public Health Center on 13 March 2014

Compared to USCGR members, USCG members reported higher levels of work stress, starting at 7% of all behaviors for those who spent 0 days away and increasing to 9% of all behaviors for those who spent 180-365 days away; USCG members also reported slightly higher levels of smoking than USCGR members. However, USCGR members reported a greater lack of personal support, peaking at 17% for those deployed 1-29 days, as compared to USCG's peak at 11%. Other behavior changes were relatively similar between the two groups (Figures 30 and 31).

Figure 30:
USCG Distribution of 'Unhealthy' Behaviors by Time Away from Home Station
233,281 records

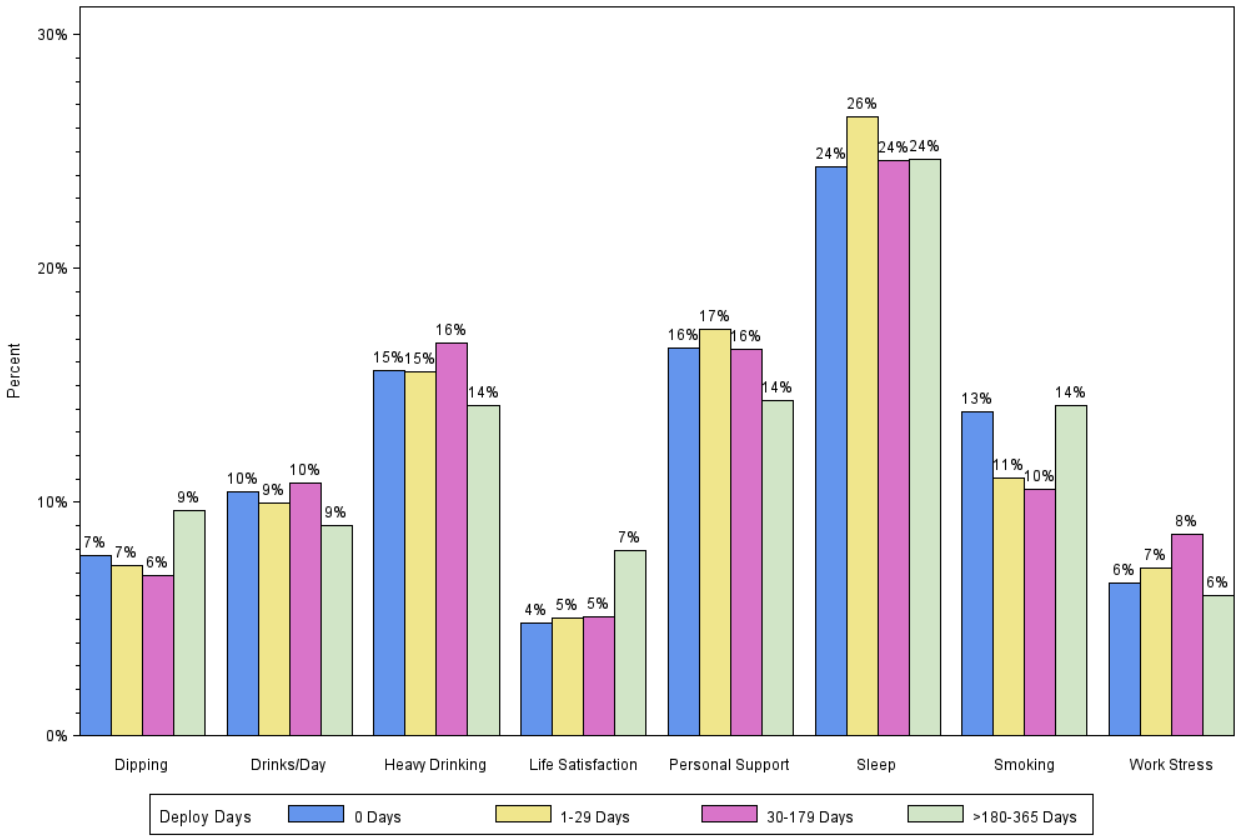


Prepared by the EpiData Center Department, Navy and Marine Corps Public Health Center on 13 March 2014

Figure 31:

USCGR Distribution of 'Unhealthy' Behaviors by Time Away from Home Station

233,281 records



Prepared by the EpiData Center Department, Navy and Marine Corps Public Health Center on 13 March 2014

Discussion

Strengths and Limitations

One strength of the survey results is that the Fleet and Marine Corps HRA questionnaire does not ask for any personal identifiers, making it more likely that participants will answer honestly about risky behaviors in which they engage. In regards to sampling bias, taking the assessment is merely a matter of commands' implementation of the PHA process; thus, these responses would not represent merely a convenience sample.

Limitations of this report can be attributed to the limitations of the data collection tool. As a self-reported survey, the results can be biased due to participant recall or by the tendency to report socially desirable responses. As such, some overestimation of positive behaviors and underestimation of negative behaviors may occur. Although there is no reason to suspect that individuals complete the questionnaire multiple times, there is no way to block or detect duplicate entries. It is also difficult to directly compare service components because the demographic characteristics that influence health behavior, as described earlier, such as age and job duties, vary significantly.

Demographics

The use of the HRA tool grew for some service components for 2013 as compared to 2012: USN (+24,096), USNR (+3833), USMC (+4,278), USCG (+2293), and USCGR (+373). However, the number of USMCR (-121) members who participated in the survey declined compared to last year.

When interpreting the results, it is important to use caution if comparing groups that are dissimilar. For example, the Marine Corps is comprised of significantly younger members whose mission and environment may affect the results. It would be expected that younger members would report different types and levels of risk behaviors compared to older members. Similar differences in results could be attributed to gender differences. Although specific risk behaviors were not analyzed in this report by age or gender, the total number of risk behaviors (the risk number category) was examined for both of these variables. Not surprisingly, increasing age was inversely associated with the percentage of individuals who fell into the medium and high risk number category. In addition, female members had a lower mean risk number than males.

Risk Factors

Collection and analysis of body composition was added to the HRA tool at the request of Navy customers. The tool uses BMI, a fairly reliable indicator of body fat for most people that is based on self-reported height and weight values and is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems.[1] Military height-weight tables use this approach but are more lenient for establishing official standards. BMI can also overestimate body fat in lean, muscular individuals. Therefore, these data should not necessarily lead to the conclusion that all individuals exceeding healthy levels are either overweight or obese. Rather, the data may support some general observations about weight across the services. For example, these data indicate that, in general, Navy and Coast Guard personnel were more likely than Marines to be classified as overweight, and active duty Navy and Coast Guard personnel are nearly equally as likely to be of normal BMI as reservists.

When compared to previous surveys, the prevalence of specific risk factors has remained fairly constant, with the leading health risks being low consumption of fruits and vegetables, high consumption of high-fat foods, lack of dental flossing, and lack of restful sleep. These results should be used to plan health promotion interventions that target priority areas. Although comparing individual service results to the total of all services may be tempting, it may be more appropriate to seek realistic and incremental percentages improvements when setting goals for the future.

Days Away From Home

The largest number of individuals who completed the HRA did not deploy at all last year (48%). When added to the number of members who were away from home for fewer than 30 days, the total percentage was 71%. USCG members were away from home for more days than members of other service components. As stated earlier, as time away from home station increased, both mean risk and percentage of members in the high risk category increased. Therefore, implementing health promotion activities may be especially important in a population that experiences frequent or long separations.

Conclusion

The Fleet and Marine Corps HRA is a valuable tool for tailoring health messages to individuals. The personalized feedback and referrals to credible health websites provides participants with the knowledge and skills to better manage their personal health.

From a more global, population health approach, the aggregate data in this HRA report provides each of the service components with valuable information that can be incorporated into comprehensive community health assessments, which is a first step in planning effective health promotion programs. Local HRA administrators have the ability to generate additional reports that identify risk at the individual unit level.

Decision-makers can use the data in this report for strategic planning and the results of this report have a bearing on recruitment, retention, readiness, and quality of military life.

Appendix A

Fleet and Marine Corps HEALTH RISK SURVEY

Age:		Sex:		Rank/Rate:		Service:	
Race/Ethnicity:		Height:	FEET	INCHES	Weight: women select non-pregnant weight	POUNDS	

Number of days spent away from home station in the past 12 months:

1. Would you say that your health in general is ....
   - a. Excellent
   - b. Good
   - c. Fair
   - d. Poor

2. Do you currently smoke cigarettes, cigars, pipes or hookah?
   - a. Every day
   - b. Most days
   - c. Some days
   - d. Never smoked
   - e. I quit

3. Do you currently use smokeless tobacco (e.g., dip snuff)?
   - a. Every day
   - b. Most days
   - c. Some days
   - d. Never used smokeless tobacco
   - e. I quit

4. How many alcoholic beverages do you have during a typical day when you drink alcohol? *(One drink = 12 ounces of regular beer, 5 ounces of wine, 1.5 ounces of 80-proof distilled spirits)*
   - a. 5 or more
   - b. 3-4
   - c. 1-2
   - d. Not applicable, I do not drink alcohol or I seldom drink alcohol

5. How often do you typically drink 5 or more alcoholic drinks on one occasion? *("One Occasion" refers to an event or period when drinking exceeds one drink per hour)*
   - a. Daily
   - b. Weekly
   - c. Monthly
   - d. Once or twice per year
   - e. Never

6. How often do you drive when perhaps you have had too much to drink?
   - a. Often (i.e., more than once during the past 6 months)
   - b. Sometimes (i.e., once during the past 6 months)
   - c. Rarely (i.e., not in the past past 6 months, but at least once during the past year)
   - d. Never (i.e., not during the past year)

7. Do you use a seat belt when you drive or ride as a passenger?
   - a. Always
   - b. Most of the time
   - c. Sometimes
   - d. Rarely
   - e. Never

8. How often do you wear a helmet when you ride a motorcycle, all-terrain vehicle, or bicycle?
   - a. Always
   - b. Most of the time
   - c. Sometimes
   - d. Rarely
   - e. Never
   - f. Does not apply to me / I do not ride these vehicles

9. How often do you use the safety equipment recommended for your job? *(e.g., hearing and vision protection, respirators, barriers, and other safety devices)*
   - a. Always
   - b. Most of the time
   - c. Sometimes
   - d. Rarely
   - e. Never
   - f. Does not apply to me / None recommended

10. In general, how satisfied are you with your life? *(e.g., work situation, social activity, accomplishing what you set out to do)*
    - a. Very satisfied
    - b. Mostly satisfied
    - c. Somewhat satisfied
    - d. Not satisfied

11. How often do you feel that your work situation is putting you under too much stress?
    - a. Always
    - b. Most of the time
    - c. Sometimes
    - d. Rarely
    - e. Never

12. How often do you have someone to talk to when you are feeling lonely, depressed, angry, or in need of help?
    - a. Always
    - b. Most of the time
    - c. Sometimes
    - d. Rarely
    - e. Never

13. In the past 12 months, how often did you or your partner(s) use a condom when you had sex? ***(read all choices below carefully before responding)*** ○ a. Not Applicable, I am in a long-term relationship where we only have sex with each other / I am not sexually active ○ b. Always ○ c. Most of the Time ○ d. Sometimes ○ e. Rarely ○ f. Never	14. On average, how many weeks per month do you engage in a total of at least 150 minutes of **moderate-intensity** aerobic activity (moderate-intensity physical activity means working hard enough to raise your heart rate and break a sweat, yet still being able to carry on a conversation. *i.e., brisk walking, swimming leisurely, or leisurely biking*) **OR** at least 75 minutes of **vigorous-intensity** aerobic activity (vigorous-intensity means you will not be able to say more than a few words without pausing for a breath , *i.e., jogging/running, swimming laps, or jumping rope*)? ○ a. 4 weeks per month ○ b. 3 weeks per month ○ c. 2 weeks per month ○ d. 1 week per month ○ e. I do not participate in aerobic training	15. On average, how many days per week do you engage in muscle-strengthening activites that work all muscle groups (legs, hips, back, abdomen, chest, shoulders and arms). ○ a. 4 or more days a week ○ b. 3 days a week ○ c. 2 days a week ○ d. 1 day a week ○ e. I do not participate in strength training
16. How often do you usually eat high-fat foods? *(e.g., fried foods; high-fat dairy products such as butter, cheese, or whole milk; regular salad dressing or mayonnaise; or packaged foods high in fats)* ○ a. At most or every meal ○ b. At least once a day ○ c. 3-5 times per week ○ d. 1-2 times per week ○ e. Rarely or never	17. About how many cups of fruit do you eat each day? *(One cup of fruit = one small piece of fruit, one cup of cut-up fruit, one cup of 100% fruit juice, or 1/2 cup of dried fruit)* ○ a. Four or more ○ b. Three ○ c. Two ○ d. One ○ e. Less than one	18. How often do you use over the counter (OTC) drugs, dietary supplements, or herbal products to help you manage your weight, enhance athletic performance, or treat depression? ○ a. Daily ○ b. Weekly ○ c. Monthly ○ d. Seldom ○ e. Never
19. How frequently do you floss your teeth? ○ a. Daily ○ b. Most days ○ c. Sometimes ○ d. Rarely ○ e. Never	20. About how many cups of vegetables do you eat each day? *(One cup of vegetables = one cup of raw or cooked vegetables, 1 cup of 100% vegetable juice, or 2 cups of raw leafy greens)* ○ a. Four or more ○ b. Three ○ c. Two ○ d. One ○ e. Less than one	21. How often do you get enough restful sleep to function well in your job and personal life? ○ a. Always ○ b. Most of the time ○ c. Sometimes ○ d. Rarely ○ e. Never
22. For both men and women, regarding your actions related to possible pregnancy: ○ a. I am not having sexual intercourse at this time in my life -OR- my partner or I are not fertile ○ b. My partner and I are pregnant - OR - are trying to have a baby now ○ c. My partner or I are correctly and consistently using birth control ALL the time ○ d. My partner or I are correctly using birth control MOST of the time ○ e. My partner or I are correctly using birth control SOME of the time ○ f. My partner and I are not using birth control		

FINISHED

Appendix B

CO Report Scoring Grid

Health Indicator	Health Behavior	Unhealthy Rating	Health Rating
Perception	1. Perception of health	c-d	a-b
Tobacco Use	2. Smoking	a-c	d-e
	3. Smokeless Tobacco	a-c	d-e
Alcohol Use	4. Drinks Per Day	a-b	c-d
	5. Heavy Drinking	a-c	d-e
	6. Drinking and Driving	a-c	d
Injury Prevention	7. Seat Belt	b-e	a
	8. Vehicle Helmets	c-e	a-b, f
	9. Safety Equipment	c-e	a-b, f
Stress Mngt	10. Life Satisfaction	c-d	a-b
	11. Work Stress	a-b	c-e
	12. Personal Support	d-f	a-c
Sexual Health	13. Condom Use	d-f	a-c
	22. Pregnancy Prevention	e-g	a-d
Physical Activity	14. Aerobic Activity	c-e	a-b
	15. Strength Training	d-e	a-c
Nutrition	16. High Fat Foods	a-c	d-e
	17. Fruits	d-e	a-c
Supplements	18. Supplements	a-c	d-e
Dental	19. Flossing	c-e	a-b
Nutrition	20. Vegetables	c-e	a-b
Sleep	21. Sleep	c-e	a-b
BMI	-	BMI≥25	-

References

1. Centers for Disease Control and Prevention BMI Web Site. Available at: http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/#Interpreted. Accessed March 29, 2014.

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