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Tobacco Use Prevention and Cessation Programs in the U.S. Navy

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Tearsheet requests to Dr. Terry L. Conway.

Synopsis

A representative sample of 406 U.S. Navy commands, including all medical treatment facilities, was surveyed in 1990 about their activities and programs to prevent the use of tobacco and promote smoking cessation during the preceding year. The vast majority of Navy commands (86 percent) provided some type of tobacco cessation educational materials or programs. However, the most common activities typically were rated as only "somewhat useful" in helping to curb tobacco use.

Almost one-half of all commands offered psychological or behavioral cessation programs. Survey respondents estimated that approximately one-third of those persons who attended such a program stopped their tobacco use and nearly one-half reduced their tobacco use as a result of the program. Over-the-counter smoking cessation aids were not widely available at Navy exchange stores, individual commands, or medical treatment facilities. Furthermore, only 61 percent of all commands reported that they had a written policy or instruction regarding tobacco use.

Only about one-third of medical treatment facilities had a routine system for identifying tobacco users by glancing at their medical records. However, it was estimated that 80 percent of medical treatment facility physicians routinely asked their patients about their tobacco use. The authors discuss the need for a more active Navy approach in prevention and cessation efforts and a routine system for identifying tobacco users from their medical records. In addition, inequities in cessation efforts were found among command subgroups.

ALTHOUGH THE PREVALENCE of smoking among adults has decreased during the past 25 years, smoking still remains the single most important preventable cause of death in our society (*1*). While tobacco use continues to be a public health concern and challenge for the nation at large, it is of particular concern to the U.S. Navy. A 1988 Department of Defense study reported that nearly 44 percent of the Navy's force (more than 550,000 personnel) smoked compared with 29 percent of civilian adults in 1987 (*2-4*).

Part of this difference between Navy and civilian smoking rates can be attributed to differences in age, education, and other sociodemographic factors. However, even after adjusting for such factors, the prevalence of smoking has been shown to

Medical treatment facilities (MTFs) were more likely than non-MTFs to show videos regarding tobacco use risks, have guest lecturers, and circulate or announce books on tobacco use. Shore commands were more likely than sea commands to have guest lecturers and circulate or announce books on tobacco use.

be about five percentage points higher among military personnel than among civilians and about eight percentage points higher for heavy smokers (that is, one or more packs per day) (*5*). The Department of Defense addressed the concern about tobacco use in 1986 by directing all branches of the service to establish smoking prevention and cessation programs (*6*).

Consistent with this Department of Defense policy, the Navy's goal is to create a healthful social and work environment that discourages the use of tobacco products, supports refraining from their use, and provides users with encouragement and professional assistance to stop using tobacco products (*7*). To create a healthful environment, several factors are emphasized: (*a*) personal example by top leadership in the implementation and adherence to tobacco use policy; (*b*) maximum discouragement of tobacco use (including smokeless tobacco) at initial entry to the Navy and at training points as well as at morale, welfare, and recreation facilities; (*c*) general military training (GMT) for all members regarding nicotine addiction and the health risks associated with tobacco use; and (*d*) restriction of tobacco use in Navy facilities where use of tobacco might impair the health of nonusers of tobacco or endanger life or property (*8*).

At present, however, relatively little is known about how the Navy's tobacco use policy is being implemented. There is very little documented information about the types of prevention and cessation programs and activities directed toward discouraging tobacco use at various Navy commands. For example, how many commands have any kind of prevention and cessation program? What types of activities or programs do commands currently conduct? How useful are current programs and activities? How many commands have written instructions documenting their policies regarding tobacco? How strongly enforced are restrictions on tobacco use?

Of special interest and concern are the programs and activities of medical treatment facilities (MTFs—hospitals and outpatient clinics) that are focused on prevention and cessation of tobacco use. The Secretary of the Navy (*7*) has directed health care providers to inquire about their patients' tobacco use during routine examinations. Health care providers also are instructed to advise tobacco users of the risks associated with use, the benefits of stopping, and where to obtain assistance. Additionally, they are to advise all pregnant tobacco users of the health risks to the fetus. Until this study was undertaken, there was no information available concerning the extent to which such activities are being conducted.

The purpose of this research was to provide information regarding the implementation of Navy policy on tobacco use and to document the types and prevalence of prevention and cessation programs in a representative sample of Navy commands, including all MTFs.

Method

Participating commands. A representative sample of Navy commands was targeted. The sampling procedure was designed to select: (*a*) all MTFs, (*b*) all large commands with 600 or more personnel attached to them, and (*c*) a 10 percent random sample of smaller commands with at least 25 but less than 600 personnel. All MTFs and all large commands were included in the sample because these commands have the resources to reach large numbers of Navy personnel.

This procedure resulted in the selection of 406 commands. The sample comprised 131 large commands and 275 smaller commands. Of the total sample, 41 were MTFs (of which 10, or 24.4 percent, were categorized as large commands and 31, or 75.6 percent, were small). Because the percentage of tobacco users varies significantly by the type of Navy community (*9*), commands also were categorized according to whether they were sea (that is, surface ships, submarines, or aircraft carriers) or shore commands. There were 281 shore commands and 125 sea commands. The survey response rate was 90.6 percent with 368 of the 406 targeted commands returning completed surveys. There were no statistically significant differences in response rate by command subgroups which ranged from 86 percent for sea commands to 95 percent for MTFs.

The survey cover letter requested that the survey form be completed by the Command Fitness Coor-

dinator (CFC) or someone else knowledgeable about the command's tobacco cessation programs. Almost one-half, 49 percent, of the surveys were completed by a CFC; 7 percent, by the command's chief petty officer; 5 percent, by the executive officer; 5 percent, by the command's training officer; 2 percent, by the administrative officer; 2 percent, by the safety officer; and 30 percent by some "other" person, most often a medical officer or representative.

Questionnaire measures. The "Command Tobacco Use Intervention Survey" was developed to assess five major areas related to the provision and availability of prevention and cessation programs and activities at Navy commands: (*a*) educational materials and programs, (*b*) psychological-behavioral programs, (*c*) over-the-counter aids, (*d*) command policy regarding tobacco use, and (*e*) activities specifically conducted at MTFs (nonmedical commands did not receive this section as part of their surveys).

Survey questions used a forced-choice response format to get data on activities conducted during the previous year. The survey and frequency distributions on all items are available from the authors.

Procedures. Surveys were mailed to targeted commands during the last week of June 1990. In early August, a followup letter was sent to nonresponding commands. Data were collected from late June through August 1990. In addition to descriptive statistics, independent *t* tests were performed to determine statistically significant differences between command subgroups (that is, large or small, sea or shore, and MTF or non-MTF commands). Alpha for significance was set at .05.

Results

Educational materials and programs. Table 1 summarizes responses to the section on educational materials and programs. The most frequently reported activity among all commands was to place announcements regarding tobacco prevention or cessation in the "plan-of-the-week" publication (an average of 2.7 times during the previous year). The second-ranked activity was to circulate flyers or display posters that discouraged tobacco use around the command (an average of 2.6 times during the previous year). The least frequently performed activities, conducted on the average about once during the previous year, were to have guest lecturers on tobacco use prevention or cessation (an average of 0.6 times) and to circulate or announce books on tobacco use (an average of 0.7 times).

Significant differences among subgroups were noted in the use of tobacco-related educational materials or programs. For example, large commands were somewhat more likely than small ones to provide tobacco use education through GMT and videos (showing videos may have been part of the GMT). MTFs were more likely than non-MTFs to show videos regarding tobacco use risks, have guest lecturers, and circulate or announce books on tobacco use. Shore commands were more likely than sea commands to have guest lecturers and circulate or announce books on tobacco use.

On the average, 22 percent of command personnel attended educational programs related to tobacco cessation. Command representatives rated these educational materials and programs as only "somewhat useful" with an average score of 2.1 on a 1–4 rating scale. It was noteworthy that almost 14 percent of commands indicated that no tobacco use materials or programs were provided. The only significant subgroup difference was between shore and sea commands, with sea commands rating the usefulness of tobacco-related educational training and materials lower (1.9) than shore commands (2.1).

The survey also requested information regarding the source of their educational materials. A majority of commands (56 percent) reported that they had materials provided by the American Cancer Society. Additionally, 38 percent of commands had materials supplied by the American Lung Association, 33 percent had American Heart Association materials, 30 percent had Navy publications, and 21 percent had Naval Military Personnel Command materials. Two significant command subgroup differences were noted. First, sea commands (15.7 percent) were more likely than shore commands (6.5 percent) to indicate that they did not provide any educational materials on tobacco use. Second, MTFs were more likely than non-MTFs to offer materials from the National Cancer Institute (NCI) and other agencies of the National Institutes of Health (NIH)—38.5 percent versus 10.3 percent from NCI and 28.2 percent versus 4.3 percent from other NIH agencies. Additionally, MTFs were less likely than non-MTFs (2.6 percent versus 10.0 percent) to indicate that none of these materials were provided.

Psychological or behavioral programs. This section of the survey assessed provision of four types of tobacco use cessation programs: stop-smoking clin-

Table 1. Responses to "During the past year, how often, if at all, has your command provided any of the following educational materials or programs related to tobacco use prevention or cessation?" from the Navy tobacco use program survey

Activity	All commands	Subgroups				
		Large	Small	Shore	Sea	MTF
"Plan-of-the-week" announcements:						
Number	338	113	225	239	99	37
Never (percent)	18.9	11.5	22.7	17.6	22.2	10.8
Once (percent)	7.4	6.2	8.0	6.7	9.1	. . .
Twice (percent)	13.0	10.6	14.2	13.0	13.1	13.5
Three times (percent)	9.8	9.7	9.8	10.5	8.1	18.9
Four times or more (percent)	50.9	61.9	45.3	52.3	47.5	56.8
Mean	2.66	3.04	2.47	2.73	2.49	3.11
Standard deviation	1.59	1.42	1.64	1.56	1.66	1.31
Circulated flyers or displayed posters:						
Number	338	108	230	242	96	37
Never (percent)	12.1	11.1	12.6	9.9	17.7	8.1
Once (percent)	17.5	12.0	20.0	18.2	15.6	10.8
Twice (percent)	15.4	14.8	15.7	15.3	15.6	10.8
Three times (percent)	11.8	13.9	10.9	9.1	18.8	10.8
Four times or more (percent)	43.2	48.1	40.9	47.5	32.3	59.5
Mean	2.56	2.76	2.47	2.66	2.32	3.03
Standard deviation	1.48	1.44	1.49	1.46	1.50	1.38
Distributed pamphlets:						
Number	340	114	226	241	99	36
Never (percent)	25.3	24.6	25.7	20.3	37.4	8.3
Once (percent)	16.5	14.9	17.3	17.8	13.1	11.1
Twice (percent)	16.2	13.2	17.7	15.4	18.2	5.6
Three times (percent)	7.6	7.9	7.5	7.9	7.1	8.3
Four times or more (percent)	34.4	39.5	31.9	38.6	24.2	66.7
Mean	2.09	2.23	2.03	2.27	1.68	3.14
Standard deviation	1.62	1.66	1.60	1.60	1.61	1.40
General military training:						
Number	338	108	230	239	99	33
Never (percent)	34.3	29.6	36.5	34.7	33.3	42.4
Once (percent)	25.7	19.4	28.7	27.6	21.2	21.2
Twice (percent)	21.3	21.3	21.3	20.1	24.2	9.1
Three times (percent)	3.8	5.6	3.0	4.2	3.0	. . .
Four times or more (percent)	14.8	24.1	10.4	13.4	18.2	27.3
Mean	1.39	21.75	1.22	1.34	1.52	1.48
Standard deviation	1.38	1.53	1.26	1.35	1.44	1.68
Safety training:						
Number	317	102	215	224	93	33
Never (percent)	54.9	50.0	57.2	51.8	62.4	63.6
Once (percent)	20.2	19.6	20.5	23.2	12.9	18.2
Twice (percent)	6.6	6.9	6.5	5.8	8.6	3.0
Three times (percent)	4.7	3.9	5.1	4.9	4.3	. . .
Four times or more (percent)	13.6	19.6	10.7	14.3	11.8	15.2
Mean	1.02	1.23	.92	1.07	.90	.85
Standard deviation	1.42	1.57	1.34	1.44	1.40	1.44
Provided or shown videos:						
Number	314	99	215	219	95	30
Never (percent)	53.8	45.5	57.7	50.7	61.1	36.7
Once (percent)	18.2	14.1	20.0	18.7	16.8	13.3
Twice (percent)	13.1	17.2	11.2	14.6	9.5	13.3
Three times (percent)	2.5	4.0	1.9	2.7	2.1	. . .
Four times or more (percent)	12.4	19.2	9.3	13.2	10.5	36.7
Mean	1.02	[2]1.37	.85	1.09	.84	[3]1.87
Standard deviation	1.38	1.55	1.26	1.40	1.32	1.78
Circulated or announced books:						
Number	315	102	213	219	96	33
Never (percent)	74.6	70.6	76.5	71.7	81.3	54.4
Once (percent)	6.3	6.9	6.1	6.8	5.2	12.1
Twice (percent)	5.1	5.9	4.7	6.4	2.1	6.1
Three times (percent)	1.9	2.0	1.9	.9	4.2	3.0
Four times or more (percent)	12.1	14.7	10.8	14.2	7.3	24.2

Table 1. Responses to "During the past year, how often, if at all, has your command provided any of the following educational materials or programs related to tobacco use prevention or cessation?" from the Navy tobacco use program survey—*continued*

Activity	All commands	Subgroups				
		Large	Small	Shore	Sea	MTF [1]
Mean	71	.83	.64	[4] 79	51	[3] 1.30
Standard deviation	1.37	1.47	1.32	1.43	1.20	1.70
Guest lecturers:						
Number	326	106	220	229	97	33
Never (percent)	70.2	63.2	73.6	65.9	80.4	60.6
Once (percent)	14.7	17.0	13.6	16.2	11.3	12.1
Twice (percent)	5.5	9.4	3.6	6.1	4.1	3.0
Three times (percent)	2.1	.9	2.7	3.1	4.1	. . .
Four times or more (percent)	7.4	9.4	6.4	8.7	. . .	24.2
Mean	.62	.76	.54	[4] .72	.36	[3] .15
Standard deviation	1.17	1.25	1.12	1.25	.90	1.70

[1] MTF = medical treatment facility
[2] Significantly different from small command subgroup ($P < .05$).
[3] Significantly different from non-MTF command subgroup ($P < .05$).
[4] Significantly different from sea command subgroup ($P < .05$).

Table 2. Responses to "During the past year, how often, if at all, has your command provided any of the following tobacco use cessation programs?" from the Navy tobacco use program survey

Activity	All commands	Subgroups				
		Large	Small	Shore	Sea	MTF [1]
Individual counseling:						
Number	342	110	232	236	106	36
Never (percent)	52.3	40.0	58.2	56.4	43.4	22.2
Once (percent)	3.8	3.6	3.9	3.8	3.8	. . .
Twice (percent)	5.0	4.5	5.2	5.9	2.8	11.1
Three times (percent)	1.2	.9	1.3	.8	1.9	. . .
Four times or more (percent)	37.7	50.9	31.5	33.1	48.1	66.7
Mean	1.68	2.19	1.44	1.50	2.08	2.89
Standard deviation	1.89	1.92	1.83	1.84	1.94	1.69
Stop-smoking clinics:						
Number	349	114	235	246	103	39
Never (percent)	65.0	57.0	68.9	58.9	79.6	20.5
Once (percent)	9.2	10.5	8.5	9.3	8.7	. . .
Twice (percent)	8.6	11.4	7.2	9.8	5.8	7.7
Three times (percent)	5.4	7.9	4.3	6.9	1.9	10.3
Four times or more (percent)	11.7	13.2	11.1	15.0	3.9	61.5
Mean	.90	1.10	.80	[2] 1.10	.42	[3] 2.92
Standard deviation	1.42	1.48	1.38	1.52	.97	1.61
Behavioral modification courses or training:						
Number	331	107	224	232	99	33
Never (percent)	72.8	68.2	75.0	67.2	85.9	36.4
Once (percent)	7.3	8.4	6.7	8.6	4.0	3.0
Twice (percent)	4.8	8.4	3.1	6.9	. . .	12.1
Three times (percent)	2.7	2.8	2.7	3.4	1.0	6.1
Four times or more (percent)	12.4	12.1	12.5	13.8	9.1	42.4
Mean	.75	.82	.71	[2] .88	.43	[3] 2.15
Standard deviation	1.39	1.40	1.39	1.45	1.19	1.82
Support groups:						
Number	328	109	219	229	99	31
Never (percent)	78.4	67.9	83.6	77.3	80.8	41.9
Once (percent)	6.7	10.1	5.0	5.2	10.1	6.5
Twice (percent)	4.9	9.2	2.7	5.2	4.0	9.7
Three times (percent)	2.1	2.8	1.8	2.6	1.0	9.7
Four times or more (percent)	7.9	10.1	6.8	9.6	4.0	32.3
Mean	.55	[4] .77	.43	[2] .62	.37	[3] 1.84
Standard deviation	1.19	1.32	1.11	1.29	.93	1.79

[1] MTF = medical treatment facility.
[2] Significantly different from sea command subgroup ($P < .05$).
[3] Significantly different from non-MTF command subgroup ($P < .05$).
[4] Significantly different from small command subgroup ($P < .05$).

Table 3. Findings from the Navy tobacco use survey on attendance and

Question	All commands			Large commands			Small commands		
	Number	Percent[2]	Mean	Number	Percent[2]	Mean	Number	Percent[2]	Mean
Over the course of the last year, how many people attended tobacco use cessation programs at your command?	317	14.2	66	99	11.1	110	218	16.3	39
How many people stopped using tobacco as a result of the program?	150	33.6	16	55	31.6	25	99	34.7	12
How many people reduced their tobacco use as a result of the program?	132	46.7	22	46	45.0	33	86	47.7	16
What percent of the people who attended tobacco use cessation programs fully completed the program?	160	...	[4]61.3	59	...	[4]64.9	101	...	[4]59.2

[1] MTF = medical treatment facility.
[2] Percent of total personnel at command.
[3] Significantly different from sea command subgroup ($P < .05$).
[4] Mean reported percent.

'. . . differences in the level of prevention and cessation efforts are important to recognize and possibly change, especially for sea commands because surface ships have been shown to have a higher percentage of cigarette smokers, heavier smokers, and the least success in quitting than any other Navy community.'

ics, support groups, individual counseling, and behavior modification courses or training. Table 2 shows that across all commands, the most frequently reported cessation program was "individual counseling," with 48 percent of all commands offering such counseling one or more times during the year. Stop-smoking clinics were the next most frequently provided program. Considering all commands, 35 percent made stop-smoking clinics available one or more times during the preceding year. Such clinics were offered significantly more often at shore than sea commands and at MTFs more often than at non-MTFs. Support groups and behavior modification courses or training were provided least often—and by only a quarter of Navy commands—during the previous year. The few commands offering support groups were more likely to be large than small, shore than sea, and MTFs rather than non-MTFs. Similarly, the commands that had behavior modification courses or training were more likely to be shore than sea and MTFs than non-MTFs.

Across all commands, an average of 14 percent of total command personnel attended cessation programs during the previous year (table 3). A significant subgroup difference was found with almost 17 percent of shore personnel versus only 5 percent of sea personnel attending such programs; a nonsignificant trend ($P = .11$) was found between MTFs (with nearly 27 percent of personnel) and non-MTFs (with only 11 percent of personnel) attending such programs. On the average, it was estimated that somewhat more than one-third of cessation program attendees stopped using tobacco and about half of attendees reduced their tobacco use as a result of the program (table 3). Last, estimates indicated that approximately 60 percent of the attendees completed the programs.

Command representatives rated the "overall usefulness" of these tobacco use cessation programs. More than 40 percent of all commands indicated that no cessation programs were provided; the notable exception was the MTF subgroup—less than 6 percent indicated no programs. Of the commands rating program usefulness, the average score was only 2.2 ("somewhat useful") on the 1 to 4 scale. There were two statistically significant subgroup differences: large commands and shore commands rated their cessation programs slightly more useful than did small commands and sea commands; however, the mean differences in rated usefulness were very small (about 0.1 of one point).

Over-the-counter aids. The survey form explored the availability of over-the-counter aids for stopping tobacco use at the Navy exchange store or commissary nearest to the responding command, the responding command itself, and the nearest MTF. Information about five specific aids was requested: (*a*) stop-smoking lozenges, (*b*) stop-smoking tablets, (*c*) special filters, (*d*) smokeless cigarettes, and (*e*) quit kits. Responses indicated that only special filters were available at the nearest commissary or exchange for 58 percent of com-

outcomes of cessation programs

Shore commands			Sea commands			MTF[1]		
Number	Percent[2]	Mean	Number	Percent[2]	Mean	Number	Percent[2]	Mean
220	[3]16.9	71	97	5.5	49	37	26.8	82
116	34.4	17	34	31.0	14	27	37.6	34
102	45.5	22	30	50.8	24	24	46.6	40
123	. . .	[4]61.5	37	. . .	[4]60.7	33	. . .	[4]55.0

mands. The other aids were reported as available by slightly more than one-fourth of commands. The notable exception to this generalization was the subgroup of MTFs: significantly fewer MTFs than non-MTFs reported that their nearest commissary or exchange offered stop-smoking lozenges, stop-smoking tablets, and quit kits.

Only 14 percent of all commands provided aids to members who wanted to stop using tobacco. However, there were significant subgroup differences in the proportion of commands supplying such aids: large commands were more likely to provide them than small commands (19 percent versus 12 percent), sea commands were more likely than shore commands (20 percent versus 12 percent), and MTFs were more likely than non-MTFs (32 percent versus 12 percent). Additionally, only 42 percent of commands reported that their nearest MTF supplied over-the-counter aids for tobacco cessation. However, 83 percent of all commands reported that the nearest MTF provided nicorette gum (which must be obtained with a physician's prescription). A higher percentage of shore commands than sea commands reported that nicorette gum was available at their nearest MTF (85 percent versus 78 percent).

Tobacco use policy. Slightly more than 60 percent of all commands had a written policy regarding tobacco use (table 4). MTFs were significantly more likely to have a written policy than non-MTFs (90 percent versus 58 percent). Additionally, although the difference was not statistically significant, there was a trend for more shore commands than sea commands to have a written policy on tobacco use (68 percent versus 45 percent).

Almost 95 percent of all commands restricted tobacco use inside buildings. However, there were significant subgroup differences. Small commands were more likely than large commands (96 percent versus 91 percent) and shore commands were more likely than sea commands (97 percent versus 88 percent) to have such restrictions. Additionally, 100 percent of MTFs reported that they had restrictions on tobacco use inside buildings.

The survey also assessed whether the command's smoking restrictions were adequate to provide a smoke-free environment for nonsmokers. The average response across all commands was almost 3 ("quite adequate") on a 4-point scale. "Quite adequate" was the most common response across all subgroups with two exceptions: (*a*) among sea commands, a slightly higher proportion marked only 2, "somewhat adequate" (33 percent), than marked 3, "quite adequate" (31 percent), and (*b*) MTFs were significantly more likely to mark 4, "perfectly adequate," than non-MTFs.

When asked how strictly the command's restrictions on tobacco use were enforced, the average response was "usually enforced" (3 on a 4-point scale) (table 4). The majority of commands across all subgroups replied that the restrictions were either "usually" or "always" enforced. The only statistically significant subgroup difference was that the tobacco use restrictions of the MTFs were "always enforced."

The "overall usefulness" rating of the command's restrictions on tobacco use in helping to curb use among command members was only 2, "somewhat useful," on a 4-point scale. Only one statistically significant subgroup difference was found: shore commands rated their tobacco use restrictions as more useful than did sea commands.

MTFs. An additional section of the survey form oriented primarily toward assessing the behavior of physicians was sent to all MTFs. Command respondents estimated that an average of 80 percent of MTF physicians routinely asked patients about their tobacco use. However, only about one-third of MTFs had a routine system for identifying tobacco users by glancing at their medical records. Additionally, it was estimated that MTF physicians were just "adequately prepared" (2.9 on a 4-point scale) for counseling patients to stop using tobacco products.

The respondents were asked to estimate the proportion of MTF physicians who performed 10 activities recommended for physicians to help their patients stop using tobacco products (table 5). More than half of the MTF respondents estimated that only 3 of the 10 activities were being performed by "most" or "all" MTF physicians. The most common activity was to advise pregnant

Table 4. Tobacco use policy findings from the Navy tobacco use survey

Question	All commands	Large commands	Small commands	Shore commands	Sea commands	MTF [1]
Does your command have any written policy or instruction regarding tobacco use on base?:						
Number	360	117	243	256	104	39
No (percent)	38.9	32.5	42.5	32.4	54.8	10.3
Yes (percent)	61.1	67.5	58.0	67.6	45.2	[2]89.7
Does your command have any restrictions on tobacco use inside buildings?						
Number	361	115	246	257	104	39
No (percent)	5.5	8.7	4.1	2.7	12.5	. . .
Yes (percent)	94.5	[3]91.3	95.9	[4]97.3	87.5	[2]100
Do you believe that your command's smoking restrictions are adequate for providing a smoke-free environment for nonsmokers?						
Number	360	115	245	255	105	38
0—No restrictions (percent)[5]	1.9	4.2	.8	.8	4.7	. . .
1—Not at all adequate (percent)	9.3	12.7	7.7	5.4	18.9	. . .
2—Somewhat adequate (percent)	22.5	20.3	23.6	18.2	33.0	2.6
3—Quite adequate (percent)	36.0	38.1	35.0	38.0	31.0	30.8
4—Perfectly adequate (percent)	30.2	24.6	32.9	37.6	12.3	66.7
Mean	2.89	2.78	2.94	3.09	2.39	[2]3.64
Standard deviation	.95	.98	.94	.88	.95	.54
If your command has restrictions on tobacco use on base, how strictly are they enforced?						
Number	359	115	244	253	106	38
0—No restrictions (percent)[5]	12.3	9.6	13.5	10.3	17.0	5.3
1—Never enforced (percent)	2.2	2.6	2.0	2.4	1.9	. . .
2—Sometimes enforced (percent)	14.2	17.4	12.7	13.4	16.0	2.6
3—Usually enforced (percent)	36.2	40.0	34.4	33.6	42.5	39.5
4—Always enforced (percent)	35.1	30.4	37.3	40.3	22.6	52.6
Mean	3.19	3.09	3.24	3.25	3.03	[2]3.53
Standard deviation	.79	.80	.79	.80	.75	.56
If your command has any restrictions regarding tobacco use, how would you rate their overall usefulness in helping to curb tobacco use among command members?						
Number	359	115	244	255	104	37
0—No restrictions (percent)[5]	12.3	8.7	13.9	11.4	14.4	2.7
1—Not at all useful (percent)	21.4	25.2	19.7	18.4	28.8	8.1
2—Somewhat useful (percent)	41.2	45.2	39.3	41.2	41.3	54.1
3—Quite useful (percent)	18.1	17.4	18.4	19.6	14.4	21.6
4—Highly useful (percent)	7.0	3.5	8.6	9.4	1.0	13.5
Mean	2.12	1.99	2.19	[4]2.23	1.85	2.42
Standard deviation	.87	.79	.90	.90	.73	.84

[1] MTF = medical treatment facility.
[2] Significantly different from non-MTF command subgroup ($P < .05$).
[3] Significantly different from small command subgroup ($P < .05$).
[4] Significantly different from sea command subgroup ($P < .05$).
[5] "No restrictions" category not included in mean and standard deviation.

tobacco users of the health risks to the fetus. The second most common activity was to advise patients to stop using tobacco, and the third was to explain the dangers of tobacco use. The other seven activities were practiced by "some" or no MTF physicians, according to two-thirds or more of the MTF respondents.

Physicians who did discuss tobacco use spent an estimated 5–10 minutes discussing cessation activities with their tobacco-using patients. Additionally, it was reported that less than a quarter of MTF physicians had received any formal training during the preceding year in tobacco cessation approaches to use with patients.

Discussion

Findings indicate that Navy commands should take a more active approach in preventing the use of tobacco and conducting cessation programs as part of overall efforts to reduce rates of tobacco use among Navy personnel. The most frequent

Table 5. Proportion of physicians at medical treatment facilities (MTFs) who helped their patients stop using tobacco from the responses to "When seeing patients, approximately what proportion of your physicians perform the following activities with patients who use tobacco?"

Activity	Number of MTFs	None (percent)	Some (percent)	Most (percent)	All (percent)	Mean[1]	Standard deviation
Advise pregnant tobacco users of health risks to the fetus	32		12.5	25.0	62.5	3.50	72
Advise to stop using tobacco	33		18.2	57.6	24.2	3.06	66
Explain the dangers of tobacco	33		30.3	51.5	18.2	2.88	70
Make a referral to a stop smoking program	33	6.1	60.6	27.3	6.1	2.33	69
Recommend nicotine chewing gum	33	3.0	72.7	15.2	9.1	2.30	68
Provide self-help quit materials	31	12.9	64.5	19.4	3.2	2.13	67
Help to develop a cessation plan	32	9.4	68.7	21.9		2.12	55
Record results of smoking encounter in medical record	32	15.6	62.5	21.9		2.06	62
Arrange a followup visit expressly for continued smoking cessation and maintenance	32	15.6	75.0	9.4		1.94	50
Get patients to set quit date	32	18.8	71.9	9.4		1.91	53

[1] Mean and standard deviation values are based on response codes from none—1 to all—4

educational activities (announcements, flyers, and posters) are somewhat passive approaches. Other tobacco-related activities focused on as part of GMT, lectures, and videos might require more involvement and be more effective. However, these activities typically are given only once or twice a year, and educational programs in general only reach an estimated 22 percent of command personnel. This small proportion underscores the need for commands to take a more active approach in ensuring that the Navy environment is replete with nonsmoking cues. Such cues in abundance are important in helping to motivate tobacco users to make serious quit attempts, which are critical for eventually quitting (*10,11*).

Findings from this survey also indicate that only about half of Navy commands provide any type of behavioral cessation programs and that attendance at these programs is less than 15 percent of command personnel. This percentage seems relatively low considering that more than 40 percent of Navy personnel smoke cigarettes or use other tobacco products (*9*).

On the other hand, this low attendance is consistent with other research indicating that more than 90 percent of successful quitters and almost 80 percent of unsuccessful quitters do so on their own without the aid of an organized cessation program (*10*). The vast majority of smokers quit "cold turkey" on their own. However, the Navy should continue to provide behavioral cessation programs because they do serve an important function helping heavier (that is, more addicted) smokers to quit (*10*).

Over-the-counter cessation aids also are not widely available at Navy commands or commissaries and exchanges. Thus, although such aids are readily available to Navy personnel if they are willing to purchase them in civilian stores, their low availability from Navy sources is not consistent with delivering a clear message that the Navy wants to see its membership "smoke-free" by the year 2000. That nearly 40 percent of all commands report that they have no written tobacco use policy or instruction is further evidence that commands should take more active steps in prevention and cessation efforts.

Consistent differences among command subgroups also indicate that small, sea, and non-MTF commands do not provide tobacco cessation activities to the same extent as large, shore, and MTF commands. For example, large commands provided more tobacco education using GMT and videos than did small commands, and a higher percentage of command personnel at shore facilities attended cessation programs than did personnel at sea commands. Additionally, 90 percent of MTFs, compared with only 58 percent of non-MTFs, reported that they had a written policy regarding tobacco use on base; MTFs also were more likely than non-MTFs to rate their smoking restrictions as highly adequate to provide a smoke-free environment for nonsmokers.

These differences are probably associated with lower availability and access to resources as well as to some inherent differences among various Navy environments (for example, sea versus shore and medical versus nonmedical environments). How-

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ever, differences in the level of prevention and cessation efforts are important to recognize and possibly change, especially for sea commands because surface ships have been shown to have a higher percentage of cigarette smokers, heavier smokers, and smokers with the least success in quitting than any other Navy community (*9*).

Survey results from the MTFs suggest the need for a standardized, routine system for identifying tobacco users by glancing at patients' medical records. Although such a system would help physicians identify and track the progress of persons who use (or are trying to stop using) tobacco, only about one-third of MTFs currently have an easy identification system. The most common tobacco-related practices of physicians at MTFs are in accordance with Navy instructions and current guidelines from the NCI. However, the two least common practices among Navy physicians (getting tobacco-using patients to set a quit date and arranging followup visits for continued help) are those specifically recommended by the NCI to help patients stop smoking (*11,12*). Thus, although many practices of physicians are consistent with commonly recommended guidelines, further efforts by physicians in conjunction with ancillary staff (*13,14*) would benefit Navy members trying to stop using tobacco.

Findings from this study, however, should be interpreted cautiously. Because each survey was completed by a single person representing a given Navy command, each respondent had to answer to the best of his or her knowledge, often by aggregating information across command-wide activities and programs. Thus, it is likely that some respondents may have biased their answers to put their command and command personnel in the best light possible.

Also, respondents had to provide "best guess" estimates for some questions for which no hard data were available. Thus, many of the findings should be considered as "best estimates" regarding the extent of Navy command activities and programs focused on tobacco use prevention and cessation. However, even if the findings we present represent estimates, and some may be somewhat positively biased, the general patterns of findings still provide useful information indicative of the types and relative extent of tobacco use prevention and cessation efforts in the Navy.

In summary, although it should be acknowledged that there is substantial room for improvement in programs and activities to create a smoke-free environment by the year 2000, it also should be recognized that the Navy has made progress toward reducing tobacco use among its members. Policy changes already in effect include mandating that MTFs be smoke-free, with all smoking and tobacco sales prohibited inside medical buildings. Training commands have enacted stricter policies regarding tobacco use by students, including a no-smoking policy for recruits during basic training. Navy policy makers have supported several large-scale studies on tobacco use and its effects on Navy personnel (*9,15-19*).

The findings from this 1990 survey of tobacco use intervention programs provide information regarding the prevalence and types of tobacco-related activities being conducted throughout the Navy. The survey also has supplied information about how the Navy's tobacco use policy is being implemented across different types of commands, including MTFs whose physicians have a special role in effecting the cessation of tobacco use among service members. Such information should help Navy health promotion policy makers develop more standardized and effective Navy-wide programs for tobacco use prevention and cessation, thereby helping more than 220,000 Navy tobacco users quit and preventing new personnel from starting the tobacco habit. Lowering tobacco use rates in the military is important not only for the benefit of enhanced health and military readiness of our forces, but also for the sake of long-term health care costs which will eventually be incurred by the Department of Veterans Affairs and the U.S. taxpayer.

References

1. Public Health Service, Office on Smoking and Health: Reducing the health consequences of smoking: 25 years of progress. A report of the Surgeon General. DHHS Publication No. (CDC)89-8411, Rockville, MD, 1989.
2. Bray, R. M., et al.: 1988 worldwide survey of substance abuse and health behaviors among military personnel.

Publication No. RTI/4000/06-02FR. Research Triangle Institute, Research Triangle Park, NC, December 1988.
3. Bray, R. M., Guess, L. L., Marsden, M. E., and Herbold, J. R.: Prevalence, trends, and correlates of alcohol use, nonmedical drug use, and tobacco use among U.S. military personnel. Milit Med 154: 1-11, January 1989.
4. Ballweg, J. A., and Bray, R. M.: Smoking and tobacco use by U.S. military personnel. Milit Med 154: 165-168, April 1989.
5. Bray, R. M., Marsden, M. E., and Peterson, M. R.: Standardized comparisons of the use of alcohol, drugs, and cigarettes among military personnel and civilians. Am J Public Health 81: 865-869, July 1991.
6. DoD Directive 1010.10: Health promotion. Department of Defense, Washington, DC, Mar. 11, 1986.
7. Secretary of the Navy: SECNAV instruction 5100.13A, tobacco prevention program in the Navy and Marine Corps. Department of the Navy, Washington, DC, July 17, 1986.
8. Secretary of the Navy: SECNAV instruction 6100.5, health promotion program. Department of the Navy, Washington, DC, Sept. 17, 1986.
9. Conway, T. L., Trent, L. K., and Conway, S. W.: Physical readiness and lifestyle habits among U.S. Navy personnel during 1986, 1987, and 1988. Report No. 89-24. Naval Health Research Center, San Diego, CA, 1989.
10. Fiore, M. C., et al.: Methods used to quit smoking in the United States. Do cessation programs help? JAMA 263: 2760-2765, May 23, 1990.
11. Glynn, T. J.: Methods of smoking cessation—finally, some answers. JAMA 263: 2795-2796, May 23, 1990.
12. Glynn, T. J., and Manley, M. W.: How to help your patients stop smoking: a National Cancer Institute manual for physicians. NIH Publication No. 89-3064. National Cancer Institute, Bethesda, MD, 1989.
13. Kottke, T. E., Battista R. N., DeFriese, G. H., and Brekke, M. L.: Attributes of successful smoking cessation interventions in medical practice. JAMA 259: 2883-2889, May 20, 1988.
14. Hollis, J. F., et al.: Nurse-assisted smoking counseling in medical settings: minimizing demands on physicians. Prev Med 20: 497-507 (1991).
15. Cronan, T. A., and Conway, T. L.: Is the Navy attracting or creating smokers? Milit Med 153: 175-178, April 1988.
16. Conway, T. L., and Cronan, T. A.: Smoking and physical fitness among Navy shipboard personnel. Milit Med 153: 589-594, November 1988.
17. Conway, T. L., and Cronan, T. A.: Smoking, exercise, and physical fitness. Prev Med 21: 723-734 (1992).
18. Cronan, T. A., Hervig, L. K., and Conway, T. L.: Evaluation of smoking prevention and cessation programs in recruit training. Milit Med 154: 371-375, July 1989.
19. Cronan, T. A., Conway, T. L., and Kaszas, S. L.: Starting to smoke in the Navy: where, when, and why? Soc Sci Med 33: 1349-1353 (1991).

(Copies of the Naval Health Research Center technical reports referenced here, as well as the DoD and SECNAV instructions, can be obtained by writing to Dr. Terry L. Conway.)

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This study provides information regarding the implementation of Navy tobacco use policy and to document the extent to which tobacco use programs and activities are being conducted at commands throughout the Navy. Such information should help Navy health promotion policy makers develop more standardized and effective tobacco use prevention and cessation programs for Navy-wide dissemination. Commands were surveyed regarding tobacco use programs and activities they had conducted during the preceding year. A representative sample of Navy commands and all medical treatment facilities were targeted. Survey questions were oriented primarily toward gathering information about the prevalence and types of programs and activities being conducted. Surveys to medical treatment facilities included a separate section regarding physicians' tobacco-related practices with patients. The vast majority of Navy commands provided some type of educational materials or programs related to the cessation of tobacco use; the most common activities were placing announcements in the "plan-of-the-week," circulating flyers, and displaying posters. However, these activities were typically rated as only "somewhat useful" in helping to curb tobacco use.

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Approximately half of all commands offered some type of psychological or behavioral tobacco use cessation program. As a result of the cessation programs, it was estimated that approximately one-third of those individuals who attended stopped their tobacco use and about one-half reduced their tobacco use. Over-the-counter smoking cessation aids were not widely available at Navy exchanges, individual commands, or medical treatment facilities. Furthermore, only about 60% of all commands reported that they had a written tobacco use policy modeled after SECNAVINST 5100.13A. Several command subgroup differences were found.

In general, large commands, shore commands, and medical treatment facilities more often provided both educational materials/programs and psychological/behavioral cessation programs than did small commands, sea commands, and nonmedical treatment facilities. One-third of medical treatment facilities had a routine system for identifying tobacco users by glancing at their medical records. However, it was estimated that approximately 80% of medical treatment facility physicians routinely ask their patients about their tobacco use.

Findings from this survey suggest three primary recommendations for reducing the prevalence of tobacco use among Navy personnel:

(1) all Navy commands should take a more active role in motivating tobacco users to make serious quit attempts; additionally, all commands should be required to have a written instruction delineating both the Navy's and the command's policies regarding tobacco use;

(2) special efforts should be directed toward sea commands (especially surface ships) to reduce tobacco use, as they currently have higher rates of tobacco use but fewer prevention/cessation programs; and

(3) standardized guidelines for Navy health care providers to help patients stop using tobacco should be prepared and disseminated Navy-wide.

Furthermore, a standardized, routine system for identifying tobacco users simply by glancing at a patient's records should be adopted by all medical treatment facilities.