

Award Number: MIPR 1FCDMGM1085

TITLE: Effectiveness of an Alcohol Abuse Secondary Prevention Program Among Marine Corps Aviation Personnel

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REPORT DATE: May 2002

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Approved for Public Release;  
Distribution Unlimited

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# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 074-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 2002	3. REPORT TYPE AND DATES COVERED Annual (1 May 01 - 30 Apr 02)	
4. TITLE AND SUBTITLE Effectiveness of an Alcohol Abuse Secondary Prevention Program Among Marine Corps Aviation Personnel			5. FUNDING NUMBERS MIPR 1FCDMGM1085	
6. AUTHOR(S) Suzanne L. Hurtado, M.P.H. Cynthia M. Simon-Arndt Laura Patriarca-Troyk				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Naval Health Research Center San Diego, California 92186-5122  E-Mail: hurtado@nhrc.navy.mil			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)  U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT  Approved for Public Release; Distribution Unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 Words)  The purpose of this study is to develop an enhanced alcohol misuse secondary prevention training program for Marine Corps aviation personnel and to evaluate its effectiveness in reducing drinking levels and alcohol-related negative consequences. The evaluation will be conducted with Marine Corps personnel in aviation squadrons using a repeated-measures study with a control group. Alcohol-related problems will be monitored during a 6-month baseline period and then an anonymous survey of alcohol use will be administered prior to the intervention. The training program will be given to the intervention squadrons followed by an anonymous post-intervention survey, and two follow-up surveys for all participants. Alcohol-related problems will continue to be monitored during the 6-month follow-up period. During the first year, contacts within the 3rd Marine Aircraft Wing were made and support was granted by the Commanding General. Available squadrons were identified for participation in the evaluation and the first two months of pre-intervention, alcohol-related incident data were collected. Modifications to the educational program content have begun and the development of a computerized self-assessment and feedback tool was integrated into the program. Focus groups were conducted with aviation personnel at several Marine Corps Air Stations to identify aviation-specific factors that may affect drinking behavior.				
14. SUBJECT TERMS alcohol use, alcohol abuse, drinking, secondary prevention, military			15. NUMBER OF PAGES 13	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT Unlimited	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)  
Prescribed by ANSI Std. Z39-18  
298-102

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### **III. Introduction**

#### Subject

Alcohol use in the United States Marine Corps remains an important health concern given the high percentage of heavy use and the associated negative consequences. The percentage of heavy drinkers in the Marine Corps was 23% in 1998, the highest among all of the military services (Bray et al. 1998). Findings from a large Department of Defense survey indicated that the percentage of Marine Corps personnel in the lower pay grades who experienced one or more serious consequences due to alcohol use was 21% in 1998 and 25% reported losses in work productivity due to alcohol use (Bray et al. 1997).

#### Purpose and Scope

The purpose of the present study is to develop an enhanced alcohol misuse secondary prevention training program for Marine Corps aviation personnel and to evaluate its effectiveness in reducing drinking levels and alcohol-related negative consequences. The program is a cognitive-behavioral, small group training program designed to challenge Marines to examine their own drinking. The evaluation will be conducted with Marine Corps personnel in aviation squadrons using a repeated-measures study with a control group. Alcohol-related problems will be monitored during a 6-month baseline period and then an anonymous survey of alcohol use will be administered prior to the intervention. The training program will be given to the intervention squadrons followed by an anonymous post-intervention survey, 3-month follow-up and 6-month follow-up survey for all participants. Alcohol-related problems will continue to be monitored during the 6-month follow-up period. The goal of this research is to produce an effective alcohol abuse secondary prevention training program which can be implemented in the Marine Corps aviation community to reduce heavy drinking and enhance operational readiness.

#### Additional Background Information

One of the primary tasks during this first year of the project was to modify and enhance the intervention program, with an emphasis on addressing alcohol-related issues relevant to the Marine Corps aviation community. As part of making modifications to the program, we have also developed a new mechanism for delivering alcohol misuse information, which is an internet-based, personalized feedback program. Additional background information on this aspect of the modified intervention is described below.

Brief interventions that incorporate personalized feedback have shown significant promise in terms of changing health behavior (Hester & Miller, 1995, DiClemente et al. 2001). Several studies have shown the efficacy of the use of computerized, personalized feedback as a health promotion tool in conjunction with other health promotion efforts (Baer, Kivlahan, Blume, McKnight & Marlatt, 2001; Walters, Bennett & Miller, 2000; Walters, 2000). Scott Walters (2000) found that personalized feedback used alone was associated with a decrease in alcohol use. Dimeff and associates at the University of Washington (1999) found that college students were receptive to receiving feedback related to their specific drinking habits in a format that they could take with them for later review. Hester and Miller (1995) concluded that personalized feedback was associated with lower incidences of several drinking consequences, although the feedback was given in an in-person format in their study. Dijkstra, DeVries and Roijackers (1998) found that there was some long-term effect in providing computerized feedback as part of

a smoking cessation intervention. These studies on self-assessment and feedback suggest that providing this personalized information, based upon individual alcohol use, holds promise for modifying behavior. The personalized feedback tool for the present study will be designed to be used as part of the modified alcohol misuse educational training for Marines in this evaluation.

#### IV. Body

Tasks outlined in the approved Statement of Work for Year 1, covering the period from May 2001 to April 2002, are listed below in italics with the associated research accomplishments below.

1. *Establish points of contact at the study site. Develop contacts and conduct focus group interviews to gain in-depth understanding of the structure and alcohol-related issues in the aviation community.*

Contacts within the 3rd Marine Aircraft Wing were made in Fall 2001 and support was granted by the Commanding General (Appendix A). Collaboration with the Wing Substance Abuse Control Officer (SACO), unit SACOs, and Drug Demand Reduction Coordinator led to modifications and finalization of the study plan. Ten focus groups were conducted with aviation personnel at several Marine Corps Air Stations to identify aviation-specific factors that may affect drinking behavior. Marines in the focus groups indicated that the small group training approach would be beneficial because it would encourage open conversations about alcohol use. Additionally, Marines in the focus groups thought that the best person to lead the training groups should be someone whom they respect and who has had past experiences with alcohol. They also indicated that the aviation community is less strict and works longer hours than infantry battalions, but that reasons for drinking are probably similar between the communities. Officers indicated that pilots have the "work hard, play hard" stereotype and also gave valuable input on aspects of the training.

2. *Squadrons that are available for the study will be identified and training schedules for survey administration and intervention implementation will be determined.*

Ten available squadrons were identified by the Current Operations Office at 3<sup>rd</sup> MAW for participation in the evaluation. The selected squadrons include 5 logistics and support squadrons, 3 jet squadrons, and 2 helicopter squadrons. A group presentation and discussion was held with the CO and SACO of each participating unit in January 2002 at which time the study requirements, in terms of training time and schedules, were discussed.

3. *The intervention curriculum will be modified to specifically address alcohol-related issues relevant to the Marine aviation community. In addition, the senior leadership component of the intervention will be significantly modified.*

Modifications to the educational program have begun based on information collected from the focus groups. Modifications are also in progress on the senior leadership component of the training. The major modifications include: emphasis on measures that are most important to leaders such as lost man-hours and costs of alcohol-related incidents, incorporating specific rules and orders from the aviation community, restructuring the discussion of alcohol-related consequences in terms of the effect on an aviation career, addressing the long hours and high operations tempo of the aviation support crew in terms of how to combat stress and plan alternate activities and decrease risks for negative consequences, more background explaining individual,

environmental, and social factors that affect alcohol use, making the training materials easy to use, and simplified statistics.

As part of making modifications to the intervention, we have developed a new mechanism for delivering alcohol misuse information, which is an internet-based, personalized feedback program. This feedback tool has been integrated into the program. The content of the computerized assessment was finalized and it includes items on frequency and quantity of use, binge drinking, drinking pattern, alcohol-related incidents, the Alcohol Use Disorders Identification Test, and blood alcohol level calculation items. In addition, the appropriate platform for the computerized tool was determined.

4. *Baseline (pre-intervention) 6-month data collection of alcohol-related negative consequences including alcohol-related legal incidents and substance abuse referrals will begin.*

The group presentation in January 2002 was followed by an individual training session with each unit's SACO for pre-intervention data collection. Data collection forms were created and distributed to facilitate standardized data collection of substance abuse counseling referrals, alcohol-related legal incidents, and unit-level alcohol-related incidents recorded in duty log books. The first 2 months of pre-intervention aggregate data for the 10 participating squadrons were collected starting in April 2002.

5. *Subjects will complete a self-report baseline questionnaire just prior to the implementation of the intervention; the intervention will be implemented during the last quarter of Year 1, project staff will train the senior leadership personnel and the small group leaders at the study site using the modified intervention curriculum, the group leaders will then train their small groups using the curriculum; a post-intervention questionnaire will be administered to all subjects.*

The administration of the baseline questionnaire and the training implementation did not occur during Year 1 due to scheduling considerations on the part of the participating squadrons. These tasks will be completed during Year 2 of the project. The baseline questionnaire is scheduled to occur in August 2002. The intervention will be implemented beginning in September 2002. The project staff will provide the initial training in September and the small group leaders will provide the training to their junior Marines in October 2002. The post-intervention questionnaire is scheduled to occur at the beginning of November 2002.

## **V. Key Research Accomplishments**

- Contacts within the 3rd Marine Aircraft Wing were made and support for the study was granted by the Commanding General.
- Ten focus groups were conducted with aviation personnel and the findings were summarized.
- Ten squadrons were identified for participation in the evaluation. Meetings with the commanding officer and substance abuse control officer (SACO) of each participating unit were held, as well as, individual data collection training sessions.
- The first 2 months of pre-intervention data were collected beginning in April 2002.
- Modifications to the educational program to make the program aviation-specific have begun.
- A computerized self-assessment and feedback tool was developed and integrated into the program.

## **VI. Reportable Outcomes**

At the end of Year 1, the research project is in the pre-intervention data collection phase. Thus, there is not sufficient data for analysis on any outcomes.

## **VII. Conclusions**

At the end of Year 1, the research project is in the pre-intervention data collection phase. Thus, there is not sufficient data for analysis to provide any conclusions.

## VIII. References

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**IX. Appendices**

Appendix A. LETTER OF SUPPORT



**UNITED STATES MARINE CORPS**

3D MARINE AIRCRAFT WING MARFORPAC  
MCAS MIRAMAR  
P O BOX 452038  
SAN DIEGO CA 92145-2038

IN REPLY REFER TO:

6200


G-3

23 Apr 02

From: Commanding General, Third Marine Aircraft Wing  
To: Head, Operational Readiness Research Program, Naval Health  
Research Center, P.O. Box 85122 San Diego, Ca. 92186-5122

Subj: THIRD MAW ALCOHOL STUDY AUTHORIZATION

1. Alcohol misuse in the United States Marine Corps represents a significant health problem in terms of alcohol-related incidents and its impact on readiness. Alcohol misuse prevention efforts are important to reduce the serious adverse effects of risky alcohol use and promote responsible decision making regarding drinking.
2. The Naval Research Center's Operational Readiness Research Program has proposed to conduct a study to develop and evaluate an alcohol misuse prevention program for Marines in the aviation community. Authorization is given to Naval Health Research Center (Principal Investigator: Suzanne L. Hurtado) to perform this study with approximately 2,500 personnel from selected 3d Marine Aircraft Wing squadrons located at MCAS Miramar, MCAGCC Twenty-nine Palms, MCB Camp Pendleton, and MCAS Yuma from January 2002 through June 2003.
3. Point of contact is LtCol M.V. Dillard (DSN) 267-1920.

  
M. L. SAWYERS  
By direction

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