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14. ABSTRACT Military personnel have a smoking rate of approximately 30%, and recent evidence indicates this rate is no longer decreasing. Given the costs in terms of health care expenditures and decreased troop readiness, more must be done to decrease smoking in the military. The primary objective of the study is to evaluate whether implementation of a specialized intervention program based on the recommendations of the DoD Tobacco Cessation Policy Working Group and the VHA/DoD Clinical Practice Guidelines for tobacco interventions will result in lower smoking cessation rates among active duty personnel and TRICARE Prime beneficiaries (i.e., individuals who receive their medical care primarily from military installations). The project intervention combines state-of-the-art components from community trials with empirically supported clinical interventions to form a unique, comprehensive tobacco control program for military installations. Specifically, it focuses on three areas of intervention: expanding pharmacotherapy as a benefit, providing training to both medical and non-medical personnel regarding brief interventions with tobacco users, and using a social marketing approach to develop a targeted media campaign to reduce tobacco use among junior enlisted personnel.					
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INTRODUCTION:

The study is designed to test a community intervention that adheres to the Department of Defense clinical practice guidelines on tobacco use cessation. Originally, this study was developed to evaluate the efficacy of an intervention on smoking prevalence in the Air Force, Navy, Marines, and Army. However, after numerous administrative delays which were out of the control of the project team, which have been noted elsewhere, the Navy and Marines were removed from the study. In order to maintain the scientific integrity of the research, additional sites were selected from the Air Force and Army.

Even given lengthy and costly delays, our goal is to provide the Department of Defense with a plan for tobacco reduction that could subsequently be disseminated throughout the DoD system. It is of great importance to us to be able to complete the study. Although we have done everything we can to reduce our rate of spending, to obtain additional resources, and to conduct the study as originally designed, last year we received approval from you to alter the original design of the study due to administrative issues, financial considerations, political situations, and scientific integrity issues.

As a reminder, we modified the study by dropping the baseline and 18-month follow-up survey. Given that we were only able to recruit and maintain 12 sites, the time lag between the 4 original Air Force sites and the remaining 8 Air Force and Army sites, our ability to conduct the randomized clinical trial was compromised. Not only is the statistical power to conduct the randomized trial with the given number of sites not feasible based on the expected effect size of the intervention (which was likely to be an overestimate since historically the rates of smoking have increased during times of war), the time delays have made the comparisons invalid. In addition, even using the “Gold Standard” of surveying techniques, we experienced an approximately 40% response rate for the baseline survey. This response rate is comparable to other large scale epidemiological surveys recently published, however, it is not as high a response rate as we were expecting based on our other studies with the military. Therefore, our estimates for number of participants needed for our cohort of smokers were too optimistic, resulting in lower numbers of smokers than needed for meaningful statistical analysis. In conclusion, even under the best case scenario, we do not have the statistical power to examine our original endpoint using the current survey methodology. Although we considered the use of alternative proxy measures of smoking cessation, there were none that allowed a reasonable conclusion to be drawn. Therefore, we have decided to eliminate the baseline and 18-month survey from the study protocol.

This past year we focused on three areas for the remainder of the study by; 1) providing and evaluating the pharmacotherapy benefit to installations, 2) providing the 3 modules of training and continuing to make modifications to the training as needed and evaluate the effectiveness with respect to improvement in tobacco cessation assessment and intervention-related knowledge, skills, and attitudes, and 3) focusing on the social marketing aspect by continuing the development and testing of targeted messages for 18-24 year-olds in the military. A brief discussion of each area and its reason for emphasis is provided below.

- 1) Pharmacotherapy: This is one of the main issues we were funded to evaluate via this project for the Department of Defense. In addition to being an important issue, this benefit of the study has been considered by many to be the main reason installations volunteered to

participate. We have offered donated product in the form of nicotine patches (which is the only form of NRT on formulary) or have paid for tobacco cessation pharmacotherapy to our intervention sites. This allows for the site to provide an expanded benefit to its patients by allowing for smokers to access NRT without having to attend the smoking cessation class on the installation (which interferes with the duty day and is more difficult with deployments) or having to restrict its prescription to one time within a calendar year per person. By choosing this as one area of intense focus, we can provide more of the project resources to this important issue. Evaluating the cost-benefit of expanded provision of pharmacotherapy will provide extremely important information to the Department of Defense and may aid in the decision to adopt a more comprehensive tobacco cessation medication benefit for the Department of Defense members and their families.

- 2) Tobacco Basic Skills Training: This aspect of the project is well-received by military members. In addition, it has been shown to be extremely effective in other populations. This training component has 3 modules. The first is a series of over 500 PowerPoint slides that can be inserted into already existing briefings or combined into a stand-alone briefing. Topics of the slides include all aspects of tobacco use from finances, to medical issues, to prevalence rates, to cessation techniques. These professionally designed presentations are provided to anyone who wants to use them. The second module is a two hour training that teaches anyone to intervene with a tobacco user in a respectful manner and refer them to specialized services. This training is designed for anyone who wants or needs to be able to talk to a tobacco user about their habit. For example, in addition to medical staff, chaplains, SP's and unit supervisors have completed this training. The third module is a two hour training designed for those individuals who will be working with the tobacco user directly during their quit attempt. This training focuses on providing the intervener with the skills necessary to motivate a tobacco user to quit and to assist them in their efforts. The combination of these training modules provides the necessary knowledge and skills to all individuals interested in tobacco prevention and cessation and increases the awareness of tobacco as an important health issue on military installations. By focusing more of the project resources on this area, we can produce a package of training materials that has undergone several iterations and evaluations that are tailored specifically to the military.
- 3) Social Marketing: Social marketing, which is the planning and implementation of programs designed to bring about social change using concepts from commercial marketing, is a new and exciting one in the realm of health. Its use with tobacco has been documented in other settings, most notably the "Truth" campaign in Florida that used social marketing to reduce the tobacco initiation rates among adolescents. This aspect of the project is targeted toward the junior enlisted personnel who have the highest rates of tobacco use in the military. In addition to focusing on a segment of the population at highest risk, it also is one of the most well received aspects of the project. This area of the project focuses on developing messages and themes surrounding tobacco that resonate with our young troops. We are working with a communications company to develop targeted messages about tobacco use prevention and cessation through the use of focus groups. In addition, we are developing these themes into a military specific media campaign across the installation. By focusing on this aspect of the project we are capitalizing on new techniques in the field of health promotion that have promising preliminary results.

BODY AND KEY RESEARCH ACCOMPLISHMENTS:

At the end of the sixth year of the study, several milestones have been achieved which will benefit the military's efforts to reduce tobacco use. The following is a summary of our significant accomplishments to date.

1. Successful recruitment of the following military installations into the study:

Table 1: Military Installations Selected for the STAR Project

Installation	First	Last	Phone	Email
Hill AFB	Carolyn S.	Bennett	801-777-1215	carolyn.bennett@hill.af.mil
Tinker AFB	Brenda	Irwin	405-734-5505	Brenda.irwin@tinker.af.mil
Whiteman AFB	Janet	Rudderham	660-687-1199	Janet.Rudderham@whiteman.af.mil
Minot AFB	Dianna	Skidmore	701-723-2990	dianna.skidmore@minot.af.mil
Hurlburt Field AFB	Garren	Medeiros	850-884-4292	Garren.Medeiros@hurlburt.af.mil
Pope AFB	Nelta	Jean-Pierre	910-394-4292	Nelta.jean-pierre@pope.af.mil
Goodfellow AFB	Inez	Smith	325-654-5686	Inez.smith@goodfellow.af.mil
Altus AFB	Jeanine	Hatfield	580-379-5647	Jeanine.hatfield@altus.af.mil
Fort Jackson	Patricia	Hick	803-751-5251	patricia.hick@se.amedd.army.mil
Fort Leonardwood	Cindy	Plank	573-596-0491	cynthia.planl@cen.amedd.army.mil
Fort Carson	Bridget	Minihane	719-526-3848	bridget.minihane@cen.amedd.army.mil
Fort Riley	Jennifer	Fenti	785-239-7520	jennifer.a.fenti@us.army.mil

2. Development and initial evaluation of tools and products which will be given to the DoD.

- a. DoD Comprehensive Community Tobacco Plan. The plan includes detailed guidance and resources for intervention in the following areas: (i) leadership and policy; (ii) community action teams, (iii) primary care and dentistry, (iv) junior enlisted, (v) community based tobacco intervention training, and (v) social marketing. The plan was developed with input from military leaders and tobacco control scientists and has been field tested on 2 military bases. This plan has the potential of forming the basis of tobacco control programs for military installations worldwide.
- b. A tailored training program consisting of three modules: (1) a set of “awareness raising” briefings – over 500 slides total; (2) An “Intervention and Referral” 2-hour skills building course, and (3) “Motivation and Assist” 2 hour skills building course. This training has been

adapted based on feedback from the installations. It has become one of the favorite components of this project from participating installations.

- 3. Pharmacotherapy has been supplied to sites to support increased military installation interventions.** We have developed an algorithm for ordering, shipping, and distribution of the both the nicotine gum and the nicotine patch.
- 4. Utilized funding from the American Legacy Foundation to help support an additional component to the study which is allowing us to develop a marketing campaign targeting 18-24 year olds in the military.** This additional funding allows us to conduct focus groups with several groups of individuals in order to identify key themes for our marketing campaign. We have conducted all of the initial focus groups in the Air Force and Army. We are currently taking the information gleaned from the initial focus groups and testing these messages in a second round of focus groups. We hope to develop targeted media messages and develop a social marketing campaign at our intervention installations.
- 5. We have successfully implemented the project at 4 Air Force installations** (Whiteman, Tinker, Minot, and Hill). Progress has been made in each of the six areas of intervention outlined in the community plan. These four original sites completed the intervention component and follow-up survey during the past year. Key accomplishments included:
 - ✓ Reducing tobacco use a clear priority for installation
 - ✓ An increase in the number and quality of tobacco related newspaper articles and information materials
 - ✓ Medical personnel and leadership more keenly aware of DoD Tobacco Practice Guidelines
 - ✓ Increased number of brief interventions occurring in primary care
 - ✓ Engaging junior enlisted in tobacco control efforts
 - ✓ Securing the consultation of media/marketing experts to design social marketing efforts which convince junior enlisted that tobacco use is inconsistent with military service
 - ✓ Conduct of focus groups to determine messages/themes that resonate with junior enlisted personnel regarding tobacco
 - ✓ Hundreds of installation personnel trained in brief tobacco interventions and tobacco control advocacy
 - ✓ Highly visible leadership support for tobacco control efforts
 - ✓ Produced a large volume of tobacco control briefings, tailored materials, informational sheets, and clinical materials for installation personnel
 - ✓ Whiteman AFB established a walk-in clinic for smokers in primary care
 - ✓ Sponsored conferences at military installations focusing on tobacco control
- 6. Implementing the project in the 4 additional AF sites.** We have completed the baseline survey in the 4 additional AF sites (Altus, Goodfellow, Hurlburt Field, and Pope). We are currently implementing the intervention at the two intervention sites (Goodfellow and Hurlburt Field) by focusing on three areas for the remainder of the study; 1) provide and evaluate the economic and clinical impact of expanding the pharmacotherapy benefit at military installations, 2) further evaluate and tailor the modularized tobacco intervention training program, and 3) develop a tailored tobacco

social marketing program for 18 to 24 year old military members. A brief discussion of each area and its reason for emphasis is provided below.

- 1) **Pharmacotherapy:** This is one of the main issues we were funded to evaluate via this project for the Department of Defense. In addition to being an important issue, this benefit of the study has been considered by many to be the main reason installations volunteered to participate. We have offered donated product in the form of nicotine patches (which is the only form of NRT on formulary) or have paid for tobacco cessation pharmacotherapy for our intervention sites. This allows for the site to provide an expanded benefit to its patients by allowing for smokers to access NRT without having to attend the smoking cessation class on the installation (which interferes with the duty day and is more difficult with deployments) or having to restrict its prescription to one time within a calendar year per person. By choosing this as one area of intense focus, we can provide more of the project resources to this important issue. Evaluating the cost-benefit of expanded provision of pharmacotherapy will provide extremely important information to the Department of Defense and may aid in the decision to adopt a more comprehensive tobacco cessation medication benefit for the Department of Defense members and their families.
- 2) **Tobacco Basic Skills Training:** This aspect of the project is well-received by military members. In addition, it has been shown to be extremely effective in other populations. This training component has 3 modules. The first is a series of over 500 PowerPoint slides that can be inserted into already existing briefings or combined into a stand-alone briefing. Topics of the slides include all aspects of tobacco use from finances, to medical issues, to prevalence rates, to cessation techniques. These professionally designed presentations are provided to anyone who wants to use them. The second module is a two hour training that teaches anyone to intervene with a tobacco user in a respectful manner and refer them to specialized services. This training is designed for anyone who wants or needs to be able to talk to a tobacco user about their habit. For example, in addition to medical staff, chaplains, SP's and unit supervisors have completed this training. The third module is a two hour training designed for those individuals who will be working with the tobacco user directly during their quit attempt. This training focuses on providing the intervener with the skills necessary to motivate a tobacco user to quit and to assist them in their efforts. The combination of these training modules provides the necessary knowledge and skills to all individuals interested in tobacco prevention and cessation and increases the awareness of tobacco as an important health issue on military installations. By focusing more of the project resources on this area, we can produce a package of training materials that has undergone several iterations and evaluations that are tailored specifically to the military.
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and themes surrounding tobacco that resonate with our young troops. We are working with a communications company to develop targeted messages about tobacco use prevention and cessation through the use of focus groups. In addition, we are developing these themes into a military specific media campaign across the installation. By focusing on this aspect of the project we are capitalizing on new techniques in the field of health promotion that have promising preliminary results.

7. Reconnaissance visits to each of the remaining Army posts to brief leadership and assess tobacco control infrastructure. These trips included introduction to the community plan, motivating bases about the project, identifying the main point of contact, briefing the command, and touring the base. The presentation of the community plan was tailored to be service-specific. No intervention components or assessment instruments were implemented during the visit – it was informational and motivational only. We have learned that given the very long delays which occur from base recruitment until IRB approval, significant loss of installation motivation for the study occurs without the reconnaissance trips.

8. Publications and presentations to date at national and international scientific conferences.

1. Taylor, J.E., Poston, W.S.C., Haddock, C.K., Peterson, A., & Lando, H. (October, 2006). Does administrative mission creep impact scientific results? 2006 Symposium at the Society for Research Administrators (SRA) International Annual Meeting, Quebec City, Quebec, Canada.
2. Haddock, C.K., Parker, L.C., Taylor, J.E., Poston, W.S.C., Lando, H., & Talcott, G.W. An analysis of messages about tobacco in military installation newspapers. *American Journal of Public Health*, 95, 1458-1463.
3. Taylor, J.E., Poston, W.S.C., Pyle, S.A., Haddock, C.K., Lando, H., & Talcott, W.G. How well do health care providers document tobacco use? A Review of Medical and Dental Charts from the Air Force. *Proceeding of the 12th World Conference on Tobacco or Health*.
4. Lando, H.A., Taylor, J.E., Haddock, C.K., Poston, W.S.C., Talcott, W.G., & Schmidt, L. (November 2003). A Comprehensive Approach to Reducing Tobacco Use among Young Adults in the Military. Presented at the *American Public Health Association 131st Annual Meeting and Exposition, San Francisco, CA*.
5. Taylor, J.E., Poston, W.S.C., Pyle, S.A., Haddock, C.K., Lando, H., & Talcott, W.G. How well do health care providers document tobacco use? A Review of Medical and Dental Charts from the Air Force. Presented at the 12th World Conference on Tobacco or Health, Helsinki, Finland.
6. Lando, H., Haddock, C.K., Talcott, G.W., Schmidt, L.A., Muramoto, M.L., Xaverius, P.K., Poston, W.S.C., & Taylor, J.E. (November 2002). Department of Defense Comprehensive Tobacco Intervention Program: Project STAR. *Proceedings from the 2002 National Conference on Tobacco or Health, San Francisco, CA*, p. 128.
7. Lando, H., Xaverius, P., Haddock, C., Poston, C., Talcott, G., Schmidt, L. A comprehensive approach to reducing tobacco use among young adults in the military. Presidents' Symposium: Tobacco use by young adults: Challenges and opportunities for intervention. Society for Research on Nicotine and Tobacco, New Orleans, LA, February 2003.

8. **Comprehensive media analysis of tobacco control messages (includes the Navy and Marine bases in addition to the newly selected sites).** Using a structured and reliable coding system, we conducted a content analysis of health information in 12 military installation newspapers. We will continue this analysis in the newly recruited installations. This information will be used as process data to determine if the project impacts how tobacco-related information is disseminated.
9. **Held several conferences and team meetings.** In addition to the above milestones, several conferences were hosted throughout the year to unite key researchers and discuss critical components of the project.
10. **Team Communication.** In the ongoing effort to monitor the progress of the grant, military and research representatives participate in regular teleconferences.

REPORTABLE OUTCOMES:

1. Haddock, C.K., Parker, L.C., Taylor, J.E., Poston, W.S.C., Lando, H., & Talcott, G.W. An analysis of messages about tobacco in military installation newspapers. *American Journal of Public Health*, 95, 1458-1463.
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CONCLUSIONS:

Since the project is still ongoing, we do not offer any conclusions to report at this time. We are currently beginning the evaluation and analysis of the data and information gathered as a result of this project.

APPENDICES:

None