

Abstract: Predictors of Smokeless Tobacco and Dual Use in the US Military

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The current application is in response to PAR-12-010 entitled “NIH Competitive Revision Applications for Research Relevant to the Family Smoking Prevention and Tobacco Control Act” (R01). The application will significantly expand the aims of a currently funded parent grant via RFA-CA-08-024 (“Measures and Determinants of Smokeless Tobacco (ST) Use, Prevention, and Cessation”) entitled “Predictors of smokeless tobacco and dual use in the military” (R01CA141567). The grant is tracking 30,000 Air Force Airmen (they are called “Airmen” regardless of gender or rank and curiously, Airmen is always capitalized) to determine the onset of ST use, smoking and dual (ST and cigarettes) use through 2 years of follow-up. Four years of funding remain for this project as of the funding date of this Program Announcement (9/30/2012). The current application, like the parent grant, is a collaborative effort of the University of Tennessee Health Science Center, the Mayo Clinic, and the United States Air Force. Remarkably, the parent grant would have been highly responsive to PAR-12-010 and the information learned from the current proposal will be more than additive. The Principal Investigator is the same for the parent and the revision (Dr. Klesges)

Our proposal will address three important components of the Program Announcement: (1) “What are the tobacco use behaviors of individuals using new and emerging tobacco products, including the multiple use behaviors of consumers using traditional and new and emerging tobacco products?” (2) “What are individual cognitive and affective factors (i.e., perceptions, attitudes, beliefs, and emotions) associated with new and emerging tobacco products...?”; and (3) “What is the population impact... (of) other tobacco products on tobacco use behavior..., including initiation and cessation, switching of products and multiple product use?”

The Program Announcement specifies we include “**A one page introduction that describes the nature of the revision and how it will influence the specific aims, research design, and methods of the current grant.**” While this is specified in detail throughout the grant proposal, a summary of these proposed changes follow.

In terms of **Specific Aims**, the parent grant was funded to evaluate the (1) determinants of smokeless tobacco onset; and (2) the determinants of dual use onset (smokeless tobacco + cigarette smoking) in a cohort of 30,000 Airmen. In the revision, we will expand the scope of the baseline questionnaire to include questions about new and emerging tobacco products, the perceived health benefits and harm reduction of these new and emerging products, and how military personnel are learning about these new and emerging products. A detailed list of aims follow in the Specific Aims section.

In terms of **Research Design and Methods**, the original design involved evaluating smokeless tobacco and cigarette smoking behavior in a cohort of 30,000 Airmen. The original application proposed to track these Airmen at both a one and two year follow-up to determine the predictors and determinants of ST and dual use (with cigarettes) onset in this very high risk population. We are currently accruing the cohort and will still be accruing participants during the years of funding of the revised project. Our cohort is accruing at a very rapid pace, as our consent for the study is currently at 86%, a high rate of consent by just about any standard.

In the revision, we will:

- (1) Conduct focus groups to guide and inform our research team regarding use of new and emerging tobacco products as well as advertising patterns and where these products are being purchased.
- (2) Administer the expanded questionnaire to those being accrued in the parent grant (i.e., expanding the original questionnaire to address the new aims). We anticipate the expanded questionnaire will be administered to approximately 7000 Airmen.
- (3) Accrue an additional cohort of 5000 armed services personnel at Fort Sam Houston, a very large Army base in San Antonio. This is a base that trains both Army and Air Force personnel. In the nine months that will be devoted to recruitment (see Timeline), we should have data with the expanded questionnaire and cohort on a total of 12,000 armed service personnel.
- (4) Conduct a one year follow-up on the expanded cohort of 12,000 using the expanded questionnaire. This will be conducted both on the cohort accrued in the parent grant as well as those accrued in the revision. This will allow us to determine changes in prevalence as well as changing beliefs and attitudes regarding these products. We have documented in our previous studies that cigarette smoking and smokeless tobacco onset is extremely high in the military (see Methods). The additional information about new and emerging tobacco products will be invaluable for determining the degree of risk and to inform intervention and policy efforts.

In summary, the parent grant would have been, coincidentally, highly responsive to this announcement. The revision will take advantage of the existing parent grant infrastructure to allow us to collect additional information on new and emerging tobacco products in a highly cost effective manner.