



# Development of Community Kit for Tobacco Prevention

Grant Number: R44CA73348-03

## Abbreviated Abstract

This project will develop a Community Kit for Tobacco Prevention and Control that is congruent with the unique culture of Appalachia, a region where one in 12 Americans live. This region has a high rate of tobacco use and tobacco related health problems. In its Phase I research, Toborg Associates developed criteria to measure the cultural relevance of materials to prevent and control tobacco use in the region. It collected materials in use across the region, and analyzed and applied the cultural criteria to them. Based upon these analyses and comments in focus groups, staff determined that the region lacks culturally congruent materials for tobacco prevention and control. The firm seeks to develop a culturally congruent kit that uses the focal role of women in the Appalachian family as the access point. It will develop materials that use appropriate images and messages to empower women to prevent tobacco use among their children, encourage women to prevent secondhand smoke at home, and assist them to discuss cessation of tobacco use with husbands and other family members. Toborg Associates will conduct rigorous experiments that test hypotheses related to the effects of the materials and finalize the kit by the end of the grant.

## Primary Investigator

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Mary A. Toborg is the founder of Toborg Associates, Inc., a woman-owned small business incorporated in 1980. A graduate of Harvard University's Kennedy School of Government and The University of Texas at Austin, she has served as Principal Investigator, Project Director, or Deputy Project Director for more than 40 studies for component agencies of the U.S. Department of Health and Human Services, other Federal departments, State and local government agencies, and community-based organizations in many parts of the nation. A primary emphasis of her work has been the prevention, control, and treatment of the use of tobacco, alcohol, and illegal drugs. She is currently the Principal Investigator of a Phase II SBIR investigation into culturally congruent health education materials to prevent and control the use of tobacco in Appalachia.

## Research Team & Affiliations

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Mary Mande, Toborg Associates, Inc.;  
Mary Shepherd, Johns Hopkins University.

## **Total Budget**

\$789,428.00

## **Research Objectives**

The firm's specific aim for its proposed Phase II research was to develop and test a Community Kit for Tobacco Prevention and Control that is congruent with the culture of the Appalachian mountain region.

## **Theory/Hypothesis**

Theorists broadly concur about the need for messages and approaches in health education that are congruent with the cultures of targeted audiences. The literature on Appalachian culture long has observed that the proximity, reliability, and durability of family relationships represent the focal point of life in the mountains. We had three hypotheses: Hypothesis 1: Providing women with effective prevention educational materials will lead to a significant reduction in the initiation and extent of tobacco use by their young children. Hypothesis 2: Providing women, who have children aged 13 and under, with effective prevention educational materials will lead to a significant reduction in smoking in their homes. Hypothesis 3: Providing women who do not use tobacco with effective prevention educational materials will lead to a significant reduction in the extent of tobacco use among other adult members of their family.

## **Experimental Design**

In addition to 12 focus groups of Appalachian women, Toborg Associates, Inc. conducted three rigorously-controlled, pre-test/post-test design experiments, one of its youth prevention materials, one of its secondhand smoke materials, and one of its cessation materials.

## **Final Sample Size & Study Demographics**

(1) 103 women participated in the secondhand smoke experiment. The median age of these women was 28; 72% of them were White, and 27%, African American. (2) A total of 197 women participated in the youth prevention experiment. The median age of these women was 38 years; 96% of them were white, 2% were African American, and 2%, other. The experiment included fifth- and sixth-grade children of the mothers, of whom 51% were girls; 97%, White; and 55%, in the fifth grade. (3) 154 women participated in the cessation experiment; the median age was 38 and 96% were White. (4) 148 women participated in the focus groups.

## **Data Collection Methods**

Qualitative data were collected from transcriptions of digitally-recorded focus groups. Quantitative data are being collected from pencil and paper pre-test/post-test surveys conducted onsite.



## Outcome Measures

A decrease in tobacco use by those children who used tobacco at baseline; a reduction in the number baseline non-users in the experimental group who initiate tobacco use as compared to the control group; a decrease in the incidence of mothers smoking tobacco in the presence of their children; and a decline in smoking among spouses of women who received the tobacco cessation materials.

## Evaluation Methods

In each experiment, the intent of the materials being tested was to change the knowledge, attitudes, and behaviors of the women who are exposed to the materials. Thus, one level of analysis tested whether these changes in fact occurred. However, the underlying premise of each experiment was that women can be empowered actively to affect the tobacco-using behaviors of other family members. Hence, a second level of analysis considered whether these other family members in fact changed their knowledge, attitudes, and in particular, their behaviors around tobacco use.

## Research Results

Secondhand Smoke: Median percentage of correct answers on a knowledge test significantly higher ( $p=.007$ ) for experimental group than control group; significant decrease ( $p=.048$ ) in the amount of smoking in the home around young children in the experimental group when compared to control group; significant decrease ( $p=.007$ ) in smoking in the car around young children in the experimental group when compared to control group. Youth Prevention: Significant increase ( $p=.01$ ) in the number of things mothers in experimental condition said to prevent tobacco use among children when compared to control condition; significantly less ( $p=.04$ ) number of times young smokers in the experimental group reported smoking when compared to young smokers in the control group. Cessation: The experimental women, but not the control women, made significant changes in their behavior around helping their family members quit using tobacco between baseline and follow-up. The family members of women in the experiment made significantly more ( $p=.04$ ) attempts to cut back tobacco use.

## Barriers & Solutions

## Product(s) Developed from This Research

Appalachian Community Kit for Tobacco Prevention