

Supporting Statement B For:

**NEXT SERIES OF TOBACCO USE SUPPLEMENTS TO THE
CURRENT POPULATION SURVEY (TUS-CPS) (NCI)**

**[Formerly titled: American Stop Smoking Intervention Study for Cancer Prevention Final
Evaluation: Tobacco Use Supplement to the 1998-99 Current Population Survey]**

**Reinstatement with Change Request of
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Anne M. Hartman, Health Statistician
Risk Factor Monitoring and Methods Branch/Applied Research Program
Division of Cancer Control and Population Sciences
National Cancer Institute/NIH
Executive Plaza North, Room 4005
6130 Executive Boulevard MSC 7344
Bethesda, MD 20892-7344
(301) 496-4970
FAX (301) 435-3710
E-Mail: hartmana@mail.nih.gov or ah42t@nih.gov

Table of Contents

B.	STATISTICAL METHODS	
B.1.	RESPONDENT UNIVERSE AND SAMPLING METHODS.....	1
B.2.	PROCEDURES FOR THE COLLECTION OF INFORMATION.....	2
B.3.	METHODS TO MAXIMIZE RESPONSE RATES AND DEAL WITH NONRESPONSE.....	5
B.4.	TEST OF PROCEDURES OR METHODS TO BE UNDERTAKEN.....	6
B.5.	INDIVIDUALS CONSULTED ON STATISTICAL ASPECTS AND INDIVIDUALS COLLECTING AND/OR ANALYZING DATA.....	8

Attachments

- ATTACHMENT 1 Main 2010-2011 Tobacco Use Supplement (TUS-CPS) Questionnaire
- ATTACHMENT 2 May 2011 Follow-Up Questionnaire items
- ATTACHMENT 3 Interagency Agreement (IAA) between the National Cancer Institute and the Census Bureau for the TUS-CPS Supplements
 - ATTACHMENT 3A: IAA
 - ATTACHMENT 3B: IAA (includes addition of May 2011 Follow-Up Questionnaire)
- ATTACHMENT 4 Reports and Publications Using the Tobacco Use Supplement to the CPS
- ATTACHMENT 5 Experts Consulted
 - ATTACHMENT 5A: Experts Consulted Outside of NCI
 - ATTACHMENT 5B: Experts Consulted Regarding the Statistical Aspects of TUS-CPS
- ATTACHMENT 6 CPS Advance Letter
- ATTACHMENT 7 Confidentiality Brochure
- ATTACHMENT 8 Statement of Non-applicability of the Privacy Act (ATTACH)
- ATTACHMENT 9 Letter of Exemption to 45 CFR 46 (ATTACH)
- ATTACHMENT 10 Overview of Sample Selection Design and Methodology
- ATTACHMENT 11 Current Population Survey Tobacco Use Supplement Brochure
- ATTACHMENT 12 Spanish Translation of Main 2010-2011 Tobacco Use Supplement (TUS-CPS) Questionnaire (ATTACH)
- ATTACHMENT 13 Letter received in response to 60-day Federal Register Notice

B. STATISTICAL METHODS

B1. Respondent Universe and Sampling Methods

a. Respondent Universe

The universe for the CPS is 119 million households. From this universe, a sample of approximately 72,000 households have been selected each month. For each month of May 2010, August 2010, and January 2010, of the 72,000 assigned households, 60,000 are eligible and interviews will be obtained from 55,000 households. All household members aged 18 and over who complete the CPS are eligible for the "Tobacco Use" supplement items.

b. Response Rates

The overall response rate for the 2006-07 Tobacco Use Supplement (TUS) to the Current Population Survey (CPS) (OMB #0925-0368, exp. 4/30/09) was 83%. That is, 83% of eligible individuals (those 18 years or older in households interviewed for the CPS) responded to the supplement. In addition, there was approximately a 92.7% response rate to the Basic CPS. We expect a similar response rate for this survey based on our experience with our previous supplements.

c. Sampling Methods

Attachment 10 contains an overview of the sample selection design, estimation procedures, and weighting methodology for the Current Population Survey.

One of the primary goals of the "Tobacco Use" supplement to the CPS is to allow reliable estimates of state-specific tobacco use prevalence and the change in prevalence over time. The criteria of choice in determining if the sample size is sufficiently large to accurately estimate change is a small Relative Sample Error (RSE). Using the standard that the National Center for Health Statistics adopts for their publication use, an RSE of less than 30-35 percent would be necessary to publish estimates, therefore we require the RSE of the change between two time points to be less than this nominal value.

The formula for RSE is:

$$\text{RSE} = \frac{\text{SQRT} [D.F.((P_b(1-P_b)) + (P_a(1-P_a)))/n]}{P_b - P_a}$$

where D.F. is the design effect (we assume a design effect of 1.6 for the Current Population Survey), and P_b and P_a are the independent prevalence estimates from the 2006-07 estimate and follow-up surveys and n is the sample size at each time point.

Based on the 2006-07 TUS-CPS data, the smoking prevalence for adults (age 18 and older) is 17.6%. As a result, we assume that P_b is about .18. The RSE's for a sample size of 2100 is 0.23 for a difference in proportion of 0.06 (e.g., difference between 2003 estimate and the 2010 goal of 12%). For a sample size of 1000 the RSE is 0.33. Thus, we need approximately 1000 or more individuals for an accurate estimate of the desirable change in prevalence for a difference of 0.06 for the smallest state. The CPS will provide state and sex specific estimates of this size; no other national study will provide this level of precision. Thus, we need approximately 1000 of each male and female interviews in each state. The smallest state-specific sample size provided by CPS for 3 months of data collection is over 2000 which should provide us with the ability to detect the desirable prevalence change quite accurately. For demographic subgroups across the nation and for large states, smaller differences will be accommodated. Also new point estimates of factors potentially related to cessation behavior and cessation behavior itself will also be accommodated since changes in estimates as illustrated by the change in prevalence requires greater sample sizes and thus is rate limiting as compared to individual point estimates.

Likewise the May 2011 Follow-Up will provide 1,000 or more respondents in various subgroups of interest including groups of states with similar tobacco control, groups varying on socioeconomic level, etc. Thus we will also have adequate reliability to obtain answers to our questions from the May 2011 Follow-Up and changes between May 2011 and May 2010. In fact, the reliability will be better since variances for changes within the same group of people are smaller than variances for changes between independent groups of people.

B2. Procedures for the Collection of Information

The Bureau of the Census interviews about 59,000 households each month, scientifically selected on the basis of address to represent the nation as a whole, individual states, and other specified areas. Interviews are conducted during the week (Sunday through Saturday) containing the 19th day of the month either in person or by telephone. The Bureau interviews each

household once a month for 4 consecutive months in a year and again for the corresponding time period a year later. During the first and fifth months (one quarter of the sample each month) a personal interview is conducted; all other interviews can be conducted by telephone. This technique provides month-to-month and year-to-year comparisons of labor statistics, while reducing the inconvenience to any one household. During personal interviews, if a respondent has questions regarding the "Tobacco Use" supplement to the CPS, the respondent is given a brochure entitled, "Current Population Survey Tobacco Use Supplements" (**Attachment 11**). For the 2010-2011 Tobacco Use Supplement, the interviews will be conducted in May 2010, August 2010 and January 2011, 3-4 months apart, resulting in only two panels of the 8 panels of households potentially being in our sample more than once during this period of time. The May 2011 Follow-Up panels 5-8 will have also been interviewed during May 2010 as panels 1-4 (See Supporting Statement A1.). In order to reduce response burden during this period we will not interview panel 4 in August 2010 so that panel 4 will only be contacted two times during the three year clearance period which includes the May 2011 Follow-Up (the response burden table in Supporting Statement A reflects this).

a. Respondent Advance Notification of Interview

Approximately 1 week before the start of interviewing each new or returning sample household receives an advance letter (**Attachment 6**). This letter explains the voluntary nature of the survey and cites the legal authority for conducting the survey. Additionally, CPS procedures require that the field representatives (interviewers) ask if the respondent received the letter. If not, the field representative provides a copy to the respondent and allows sufficient time for the respondent to read the contents. For supplements, such as this one, field representatives inform the returning respondents (those Census has previously interviewed based on the CPS panel design), that this month they have some additional questions to ask besides the usual questions.

b. Self Response/Proxy Interviews

Proxy interviews are accepted for the labor force questions from a knowledgeable household respondent, aged 15 years and older (yield 50% self-response and 50% proxy-response). We plan to maximize self-response interviews for the "Tobacco Use" supplement. The supplement questionnaire will follow the Basic Current Population Survey and will be part of

the same file on the CAPI/CATI system. Interviewing for the supplement will be extended into a second week. Proxy interviews for the supplement from a knowledgeable household respondent, aged 15 years and older, will be accepted after four callbacks¹ (5 contacts). Use of CAPI/CATI and extension of the interviewing into the second week significantly increases self-response (from previous experience with the tobacco use supplement an increase from 70% to about 80-83%), thereby increasing the validity of the data. Self-respondent data is more reliable than proxy data for some tobacco use information (especially younger ages), and all attitude and social norm information being collected with the supplement will be collected by self-response only.

c. Non-English Speaking Respondents

We plan to utilize a single data collection instrument, but provide field representatives with a Spanish translation of the "Tobacco Use" supplement (**Attachment 12**) to use as needed. Generally, when a respondent who speaks Spanish does not understand English, a Spanish speaking interviewer from the Regional office is sought if one is available, or a Spanish speaking person from a nearby university or a household member is sought. This will still be the procedure with the "Tobacco Use" supplement, with the only difference being the Spanish speaking person's use of the Spanish translation for questioning (**Attachment 12**). Interviews conducted in other languages will be conducted as described above but without the use of a standard translated questionnaire. Field representatives will indicate whether interviews were carried out in English, Spanish, or some other language.

d. Interviewer Training

Standard CPS field representative training procedures will be followed during the 2010-2011 supplement survey period. New field representatives undergo an initial training program which includes a home-study exercise before each of the first 6 months of interviewing. Before the first month the field representative is given 4.5 days of classroom study by the supervisor and 24 hours of home-study exercises to complete both before and after the classroom training. This initial training includes comprehensive instruction on the use of a computer to collect survey data, with special emphasis on the CPS instrument. Additionally, and as a minimum, the field representative is observed by the supervisor or supervisory field representative during 2 of the first 3 days of interviewing the first assignment. The field

¹ The callback script is a standard script that the Census Bureau uses for callbacks. It would be substituted for the general language in the Attachment 1(p. 2-3) and would not incur additional burden.

representative's work is also observed for at least 1 day during the second month and at least 1 day during either the fourth, fifth, or sixth month.

As part of each monthly assignment, the trained field representative is required to complete a home-study exercise consisting of questions concerning concepts including a full understanding of the supplement questions, and survey, and coverage procedures. The response to questions about the legal authority for the Tobacco Use Supplement portion of the information collection (42 USC § 241, or § 281-286) is included as part of the supplement-specific interviewer training. Once a year, the field representatives are gathered in groups for 1 day of refresher training covering both regular CPS and supplemental survey procedures. The work of the field representative is monitored on a continuing basis by regular programs of re-interview, observation, and edits. In addition to regularly scheduled annual observations, the supervisor schedules special visits for observation for field representatives shown to require it. For the second and third waves of the Tobacco Use Supplement, the supervisor will have the response rates of the prior waves to use to identify field representatives who require additional training on the supplement.

B3. Methods to Maximize Response Rates and Deal with Nonresponse

Response rate is expected to be 83% as stated in Section B1.b. This response rates is based on our previous response rates for the most recent surveys in 2003 and 2006-07 and is applied to the number of eligible respondents (eligible number is 265,000). The CPS maintains a high response rate and level of data accuracy through clerical edits, interviewer instruction and training, and close monitoring of the data. Please refer to paragraph 5 “Non-response in CPS” of **Attachment 10**, page 4 for a discussion of CPS non-response. The interviewer informs regional office staff if a respondent is unwilling to participate in CPS. The reluctant respondent is sent a letter explaining CPS in greater detail and urging cooperation. After the letter is sent, the respondent is re-contacted by the interviewer for an interview. If this procedure fails, a Supervisory Field Representative contacts the household in an attempt to convert the reluctant respondent. For interviews conducted within the household, respondents are given the brochure, "Current Population Survey Tobacco Use Supplements" (**Attachment 11**) to help answer possible questions. To increase the Tobacco Use Supplement response rate the survey is fielded a few

days longer than the basic CPS and we allow four call-backs (total of 5 contacts) an increase over the 2001-02 submission to try to improve not only supplement response rate but to increase supplement self response.

We believe any potential non-response bias is minimal given our several comparisons of construct and criterion validity against data from other national surveys such as the NHIS NHANES and BRFSS. For example, we have compared frequency distribution patterns for the TUS-CPS and NHIS for 2003 and 2005, respectively and found similar relative and absolute patterns for use of different cessation treatments. Also our home smoking rules and workplace smoking bans reflect big increases from 1992 to 2006-07 which are consistent with large decreases in serum cotinine levels on NHANES. A previous analysis of differences in response rates between TUS-CPS and BRFSS did not reflect an association with differences in smoking prevalence rates between the two surveys, respectively.

B4. Tests of Procedures or Methods To Be Undertaken

Attachment 10 provides general information on testing of the CPS questionnaire. In addition, we conducted specific cognitive testing during the winter-spring of 2009 which tested questions on 9 persons that varied with respect to race/ethnicity, age, gender, and education level. Most of the questions on the 2010-2011 TUS-CPS have been asked on past TUS-CPS series and those questions had several rounds of cognitive testing and were pre-tested with behavior coding in 1991 and 2002. Earlier versions of the TUS-CPS also had cognitive interviewing and pretesting for both language versions of the Tobacco Use Supplement to the CPS (Willis et al. 2008 Nicotine and Tobacco Research). The pretesting conducted in 1991 and 2002 was done under the Census Bureau umbrella clearance for pretests. The purpose of cognitive interviewing was to find out what was going on in the minds of respondents during an interview. When evaluating a questionnaire, one may be interested in investigating understanding of the questions, in observing the recall process, and in determining how respondents make judgments based upon their recall and their interpretation of questions.

A pretest for the 2003 TUS-CPS was administered to 649 respondents in Philadelphia in April 2002 and a smaller pretest (99 respondents) was conducted in May 2002 in the Miami/Dade area to test the Spanish version of the 2003 supplement. This pretesting was quite novel in that it

indicated the importance of subgroup disparities and helped determine general concepts and the accuracy of the Spanish translation.

2010 Calibration Study. A further test of procedures will be built into the fielded 2010 TUS-CPS, involving the evaluation of some re-wordings of several key items asking about the respondent's tobacco use. First, we will compare two wordings related to age of initiation of regular smoking. Because the wording asking the respondent when he/she first started smoking "fairly regularly" has been criticized as vague, we will compare estimates to an alternative asking about when they first started smoking "every day"; and obtain a measure of reliability of historical reports of the "every day" version. For one panel of CPS respondents receiving the TUS in May 2010, two versions of the items will be included (first the existing version will be presented, and later in the TUS survey, a potential revision will be administered). Then, the revised version will be re-administered to the same respondents in August 2010. In this way we can examine the point-in-time differences in estimates obtained between new and old wordings (within May) as well as the reliability of responses to the new wording (within-respondent response variance between May and August).

Besides the "fairly regularly" versus "every day" issue, we also propose to explore three additional areas within the calibration study. However, because it would be unduly burdensome and repetitive to ask two sets of the same questions in one administration for these, we will slightly modify the above scheme, to conduct these additional calibrations. For these, we will administer the new version alone in May 2010, and then the old version alone in August 2010, to the same respondents. To assess the effects of wording changes, we will simply compare the revised versions to the old version, for each of these areas.

Specifically, we will address the following:

- (a) We will calibrate a revised version asking about smoke-free workplace policies;
- (b) We will assess a potentially more efficient and less burdensome way of obtaining a measure of the length of time a smoker smoked every day during their smoking history; and finally;
- (c) We will assess use of cigars, smokeless cigarettes and pipe smoking by comparing new and existing versions of relevant items.

Overall, the calibration study will involve only about 9-15 items taking from 40 seconds to less than 2 minutes to administer. About 60 % of respondents will take less than one minute to respond. The results of this calibration study will serve to bridge old wordings with new wordings for purposes of understanding trend differences and also inform item selection for future administrations of the TUS-CPS.

B5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

The individuals listed in **Attachment 5B** were consulted on the statistical analysis and data collection operations, and/or will analyze the results.