Supporting Statement B For:

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

Reinstatement with Change for

OMB No. 0925-0368, Exp. 3/31/2013

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Yellow highlights indicate additions from previous submission in 2010.

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B. STATISTICAL METHODS

B1. Respondent Universe and Sampling Methods

B1a. Respondent Universe

The universe for the Current Population Survey (CPS) is 119 million U.S. households from the civilian non-institutionalized population. From this universe, a sample of approximately 72,000 households is selected each month. For the months of July 2014, January 2015, and May 2015, of the 72,000 assigned households each month, 60,000 are expected to be eligible and CPS interviews will be obtained from about 54,000 to 55,000 households. All household members aged 18 and over who complete the CPS are then eligible for the "Tobacco Use" supplement items and thus it is expected that about 100,000 CPS respondents to be eligible for the TUS each month (**Attachment 11**).

B1b. Response Rates

During the months of the 2010-2011 TUS-CPS, there was approximately a 92% response rate to the Basic CPS. Since recent CPS response rates are a bit lower, we expect between 90-92% of households to be interviewed and thus yield a lower total number of eligible members for the TUS. The overall response rate for the 2010-11 Tobacco Use Supplement (TUS) to the Current Population Survey (CPS) (OMB #0925-0368, exp. 3/31/13) was 82%. That is, 82% of eligible individuals (those 18 years or older in households interviewed for the CPS) responded to the supplement. We expect a similar response rate or better for this survey based on our experience with our previous supplements and changes in sampling self-respondents within households described in Section B1c below.

B1c. Sampling Methods

Attachment 12 contains an overview of the sample selection design, estimation procedures, and weighting methodology for the Current Population Survey. In order to reduce response burden, maintain or improve accuracy and precision, we have made some minor but important changes to TUS data collection design features within households for the 2014-2015 fielding. In the past, our attempts to interview all eligible respondents in a household by self response and only accept

a proxy for a shorter set of questions after the fifth household contact has resulted typically in our sample being composed of 80% self-responders and 20% proxy responders.

Instead of attempting to interview all eligible household members by self response, we plan to conduct self-response interviews (full questionnaire) for the following:

a) For households that have 1 or 2 eligible members: select all eligible members;
b) For households that have 3-4 eligible members: randomly select two eligible members;
c) For households that have 5+ eligible members: randomly select three eligible members.

The remaining eligible members will be interviewed by proxy (shorter questionnaire) from a knowledgeable household member age 18+. From our analysis of the 2010-11 TUS-CPS data, we found that this change has the capacity to reduce household respondent burden while having a minimal impact on sample size, reducing the number of self-respondents by about 5% and maintaining or improving the overall self + proxy response rate. The new design would likely result in having about 70-75% self responses and 25-30% proxy responses. We also simulated survey estimates for the new design using our 2010-2011 sample and saw little or no change in important estimates.

One of the primary goals of the TUS-CPS is to allow reliable estimates of state-specific tobacco use prevalence and the change in prevalence over time. Also, both FDA and NCI are interested in national estimates within finer demographic categories such as by race/ethnicity and age group. The criteria of choice in determining if the sample size is sufficiently large to accurately estimate change is a small Relative Standard Error (RSE). Using the standard that the National Center for Health Statistics adopts for their publication use, an RSE of less than 30% would be necessary to publish estimates, therefore we require the RSE of a point estimate (P_0) to be less than this nominal value. It is also important to determine the minimal detectable absolute change or difference (MDAD) between two independent cross-sectional estimates over time (P_0 and P_1) that

we are likely to detect given our sample size estimates (n) from past TUS survey fieldings and a reasonable power of 80%.

The formula for RSE_0 is:

$$RSE_0 = \frac{SQRT\,[DEFF\,(P_0\,(1-P_0)\,)\,/\,n]}{P_0}$$

where DEFF is the design effect (we assume design effects as estimated from our most recent 2010-2011 TUS-CPS data), and P_0 are the independent prevalence estimates from the 2010-2011 survey and n is the approximate sample size of any group or subgroup of interest.

We present below in Table 1 a number of RSEs and MDADs for various groups of interest for three examples of the types of high priority analyses for NCI and FDA. These examples demonstrate the ability to make reliable current prevalence estimates and to detect change over time for state cigarette smoking; smokeless tobacco use, any non-cigarette tobacco use, and dual use (cigarette + one or more other tobacco product use) for young adults; and use of menthol cigarettes among current cigarette smokers for various race/ethnicity groups.

For example, Table 1 shows that the median state smoking prevalence for adults (age 18 and older) is 17% (P_0), the median state DEFF is 1.79, and the median state sample size is 2594. The RSE for this example is 5.8% and the MDAD is 4.1%. The MDAD (4.1%) is slightly smaller than the difference (5%) between the current median state cigarette smoking prevalence and the HP2020 goal of reducing current cigarette smoking prevalence to 12% or lower. The CPS will provide reliable direct state specific estimates and measures of change in these estimates over time, while no other national cross-sectional survey currently reaches this level of precision. For large states, and for national demographic subgroups-- as illustrated by the latter two examples in Table 1-- greater precision and generally smaller differences will be accommodated.

Table 1.

For self respondents*:

Variables	sample size	DEFF	prevalence (%)	RSE (%)	MDAD (%)
Current cigarette smoking all adults 18+	161,946	2.29	16.1	0.9	0.5
State level Current cigarette smoking adults 18+	2,594	1.79	17.0	5.8	4.1
Current smokeless tobacco use among age 18-24	12,864	1.78	2.2	7.8	0.7
Current smokeless tobacco use among age 18-34	39,701	1.67	2.1	4.4	0.4
Current other tobacco use among age 18-24	12,852	1.27	6.0	3.9	1.0
Current other tobacco use among age 18-34	39,670	1.52	5.3	2.6	0.6
Cigarettes plus at least one other tobacco products use among age 18-34	12,852	1.69	2.9	6.6	0.8
Cigarettes plus at least one other tobacco products use among age 18-25	39,670	1.89	2.3	4.5	0.4
Menthol use among current Black smokers	2,472	1.48	75.6	1.4	4.0
Menthol use among current White smokers	19,990	1.58	23.3	1.6	1.5
Menthol use among current Hispanic smokers	1,814	1.73	29.7	4.8	5.7

*Note: the sample size, DEFF and prevalence were based on the 2010/2011 data.

B2. Procedures for the Collection of Information

The Bureau of the Census interviews about 54,000 to 55,000 eligible households each month, scientifically selected on the basis of mailing 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 within a year, and again for the corresponding time period a year later. During the first and typically the 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 TUS, the respondent is given a brochure entitled, "Current Population Survey Tobacco Use Supplements" (**Attachment 13**). For the 2014-2015 Tobacco Use Supplement, the interviews will be conducted in July 2014, January 2015, and May 2015, 4 to 6 months apart.

B2a. 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 the TUS, 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 ones on labor force participation.

B2b. Self Response/Proxy Interviews

Proxy interviews are accepted for the Basic CPS Core labor force questions from a knowledgeable household respondent (yield 50% self-response and 50% proxy-response). We plan to maximize self-response interviews for the TUS-CPS while reducing response burden to the household (as described in Section B1c). The supplement questionnaire will follow the CPS questionnaire 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 will be conducted for those eligible for interview but not randomly selected for self-response interview, and for those selected for self-response interview after four callbacks[1] (5 contacts). Use of CAPI/CATI and extension of the interviewing into the second week significantly increases both self-response and proxy response rates (from previous experience with the tobacco use supplement). Self-respondent data is more reliable than proxy data for some tobacco use information, and all attitude and social norm information being collected with the supplement will be collected by self-response only.

[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.

B2c. 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 14**) 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; otherwise a Spanish speaking person from a nearby university or another household member is sought. This will still be the procedure used with the TUS-CPS, with the only difference being the Spanish speaking person's use of the Spanish translation for questioning (**Attachment 14**). 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.

B2d. Interviewer Training

Standard CPS field representative training procedures will be followed during the 2014-2015 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 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 TUS-CPS 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

TUS-CPS response rate is expected to be 82% as stated in Section B1b. This response rate is based on our previous response rates for the most recent surveys in 2006-07 and 2010-2011 and is applied to the number of eligible respondents from CPS (total eligible number is 300,000). 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 12**, 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 13**) to help answer possible questions. In addition, a re-design of the TUS for 2014-15 to involve interviewing of 2-3 randomly selected self-respondents, and the remainder by a shorter proxy interview, should reduce the household burden and increase cooperation and overall response rate.

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 National Health Interview Survey (NHIS), and National Health and Nutrition Examination Survey (NHANES). 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. Further, our home smoking rules and workplace smoking bans reflect large

increases from 1992 to 2010-11, consistent with large decreases in serum cotinine levels on NHANESand increases in smoke-free workplace laws, respectively. Our estimates for the prevalence of menthol smoking in 2006-07, and 2010-2011 are consistent with those from National Survey of Drug Use and Health (NSDUH), NHIS, and the Tobacco Industry Maxwell Sales Reports.

B4. Tests of Procedures or Methods to be Done

Attachment 12 provides general information on testing of the CPS questionnaire. Most of the questions on the 2014-2015 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 earlier years. Earlier versions of the TUS-CPS also received cognitive interviewing and pretesting for both language versions of the TUS-CPS (Willis et al. 2008 Nicotine and Tobacco Research). The purpose of cognitive interviewing was to assess 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.

Most of the new or modified questions to be fielded in 2014-2015 have been taken directly from the Population Assessment of Tobacco and Health (PATH) Study baseline measures and National Adult Tobacco Survey (NATS) or adapted as appropriate for the TUS-CPS context, thus increasing harmonization among these surveys. In addition, in compliance with OMB recommendation for collaboration and sharing of methodology/testing information among HHS sister agencies, we took advantage of the pool of recent information available from the PATH Study, NATS, and NHANES cognitive testing and field testing rather than conduct our own separate cognitive testing. This has been very efficient for developing our 2014-2015 TUS and has resulted in response burden and cost reductions than had we not taken this approach.

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.