

**SUPPORTING STATEMENT FOR THE  
NATIONAL QUITLINE DATA WAREHOUSE**

**PART B**

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## 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.....	3
B.4	Tests of Procedures or Methods to be Undertaken.....	3
B.5	Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data.....	4

## **LIST OF APPENDICES**

- A-1. Authorizing Legislation: American Recovery and Reinvestment Act of 2009
- A-2. Authorizing Legislation: Public Health Service Act
- B. Federal Register Notice
- C. Summary of Public Comments and CDC Response
- D. Consultants on the Development of the Quitline Data Warehouse
- E-1. National Quitline Data Warehouse Intake Questionnaire
- F-1. National Quitline Data Warehouse Follow-up Questionnaire
- F-2. Advance Letter for the Follow-up Questionnaire
- G-1. National Quitline Data Warehouse Quitline Services Questionnaire
- G-2. Advance Email Notification
- G-3. Reminder Email for Non-Respondents
- H. Sample Table Shells

## **B. Statistical Methods**

### **B.1 Respondent Universe and Sampling Methods**

#### **National Quitline Data Warehouse Intake Questionnaire**

In 2008, state quitlines provided services to 604,494 telephone clients through the 1-800-QUIT-NOW number and other state-specific quitline numbers; 408,819 of these quitline clients were calling for themselves and requested help in quitting, and 195,675 were either calling to help someone quit smoking or were calling for general information. Based on recent cuts to state budgets for tobacco control programs including the quitlines and newly released Recovery Act funds to states to enhance their quitline capacity - which may either off-set their program cuts or slightly increase calls to the quitline - substantial increases in call rates to 1-800-QUIT-NOW and the other state-specific quitline telephone numbers are not expected.

Basic information about why callers are calling the quitline and how they heard about the quitline will be collected from all callers. Data from the 2008 North American Quitline Consortium's Annual Survey of state quitlines indicate that 32.4% of callers are from those calling to help others quit or from tobacco users who want general information. For these callers (approximately 195,675 completed surveys – includes persons who call multiple times for information) the only information to be collected will be reason for call (two questions) and referral source (one question). This information is important to judge how well promotional efforts are working to drive calls to the quitline. The remaining 67.6% of callers (approximately 408,819 unique persons per year) will complete the entire intake questionnaire consisting of three questions above, questions assessing their tobacco use (27 questions) and demographic information (six questions). Persons who seek assistance with quitting more than one time per year will only complete one intake questionnaire (36 questions in total) per year. The tobacco use questions and demographic information is now being routinely collected by state quitlines to tailor their counseling/treatment strategies to the needs of the tobacco user. All quitlines are currently able to identify those who have already completed one intake questionnaire (37 questions) per year and they do not re-administer the intake questionnaire to these persons in a given year. Overall, assuming a moderate 15% increase in demand with Recovery Act funds and other planned promotional efforts, it is estimated that 730,000 state quitline clients will respond to the intake survey (230,000 callers will respond to three questions on reason for calling and referral source and 500,000 callers will respond to 36 questions on reason for calling, referral source, tobacco use, and demographic questions) (see Supporting Statement A, Section A.12, Table A.12-1 – Estimated Annualized Burden Hours).

#### **National Quitline Data Warehouse Seven-Month Follow-Up Questionnaire**

Follow-up data collection to assess quit status on quitline callers who called for themselves and received a quitline service (i.e., counseling and/or medication), conducted at seven-months post-intake, will be done on an annual sample of 800 respondents per state as recommended by the North American Quitline consortium (NAQC, 2009). The North American Quitline Consortium has determined that 800 completed surveys will ensure an adequate sample size to determine quit rates by type of treatment received (counseling and medication) (NAQC, 2009). CDC seeks to

achieve an adequate seven-month follow-up (seven months post intake; six month post-intervention given the quitline counseling is typically conducted within a one-month time period) quit rate per state to aid in evaluating the effectiveness of each state's quitline service, as described in the Recovery Act FOA, "Communities Putting Prevention to Work," Component III – Quitlines (CDC-RFA-DP09-90101ARRA09). The 2008 update to the PHS Clinical Practice Guideline for Treating Tobacco Use and Dependence estimates that 12.7-13.1% of persons who use a quitline quit smoking at six-months and 28.1% of persons who receive both quitline counseling and medication quit smoking at six-months (Fiore, 2008). More recent data from quitlines have estimated six-month quit rates at 16-23% for those who receive counseling and 30-36% for those who receive counseling and medication (NAQC, 2009). If we assume that the quit rate will be approximately 20%, conducting 800 completed interviews will give us power of 80% to detect that prevalence within  $\pm 4.2$  percentage points. This is a conservative estimate given that states can use Recovery Act funds for cessation medications. If we further assume that the quit rate will be approximately 33% for those who receive quitline counseling and medication, 800 completed interviews will give us a power of 82% to detect that prevalence within  $\pm 4.2$  percentage points.

To ensure that a random sample for the seven-month follow-up survey is drawn from each state to achieve 800 completes per year, CDC will draw the sample from those that completed an intake, received a service (i.e., counseling and/or medication), and consented to follow-up. The random sample will be drawn on a monthly basis requiring the states to send a list of qualifying caller IDs (that contain no personal identifying information) for possible follow-up selection to CDC each month. CDC will then select the random sample and send the selected IDs back to each state within one week. The number sampled per month will be large enough to ensure that each state will achieve 800 completed interviews within one-year after commencing data collection. Typical follow-up response rates currently being reported by the 80% of states that are collecting this data range from approximately 45% - 50%. The North American Quitline Consortium has developed best practice recommendations to achieve a recommended response rate of 50% for the seven-month follow-up survey including (1) sending a letter stating that a person will be calling to follow-up (we will ask the states to send this letter within one month after intake – Appendix F-2) on the services provided as well as (2) attempting to contact the sample person a total of 15 times before abandoning (NAQC, 2009). For this data collection, CDC will ask that the states follow these procedures for the seven-month follow-up survey. It is anticipated that CDC will sample approximately 133 callers/month for each state. For small states (i.e., Guam, Rhode Island, Kansas, Nevada), if they cannot reach the 800 completes per year recommended by CDC then a quit rate will not be computed until they reach 800 completes and will be for a longer time interval than 12 months. See Supporting Statement A, Section A.12, Table A.12-1 – for estimated annualized burden hours.

### **National Quitline Data Warehouse Quitline Services Questionnaire**

The Quitline Services Survey will be completed online by the state tobacco control managers or their designees from the 50 states health departments, the District of Columbia, Puerto Rico, and Guam. The survey contains 58 questions, 53 of which are Recovery Act-related measures and five ask about how 7-month follow-up survey is conducted (these five questions will be asked only once during the entire data collection period to ensure procedures are being followed). However, we anticipate that the average respondent will answer approximate 27

questions because the majority of quitlines have only distributed nicotine replacement patches and no other types of medication (NAQC, 2008). See Supporting Statement A, Section A.12, Table A.12-1 – for estimated annualized burden hours.

## **B.2 Procedures for the Collection of Information**

Data will continue to be collected using the Quitline Intake Questionnaire (Appendix E-1), the Quitline Seven Month Follow-up Questionnaire (Appendix F-1), and the Quitline Services Questionnaire (Appendix G-1) by quitline personnel from state personnel or service providers/vendors each state has contracted to run their state-based quitline. All states and their vendors have already implemented the NAQC MDS survey questions at intake for all quitline callers and the NQDW survey is very similar to the NAQC MDS suggested intake questions. Our follow-up questionnaire is very similar to the NAQC MDS seven-month follow-up questions and we have already asked all states to conduct a seven-month follow-up survey as part of their Recovery Act funding with a target of conducting 800 completed interviews from a random sample of callers who received a service each year. States also contract with either their quitline vendors or other evaluation organizations to conduct the follow-up surveys. We will initiate weekly phone-calls with states to ensure that they are using both surveys for their data collection.

Telephone quitline specialists will continue to collect the smoking intake information at the beginning of the telephone interaction as part of the needs assessment process for determining appropriate counseling messages. Much of this information will be collected passively as clients naturally share information about their smoking/tobacco use and history. Telephone quitline specialists will actively ask questions as necessary, using a conversational style whereby questions will be woven into the conversation rather than asked in a highly structured format. The demographic questions are also asked at naturally-occurring and appropriate points in the conversation, or at the conclusion of the conversation when the customer service questions about scheduling a repeated counseling call are made. Quitline experts agree that this format is best for collecting the necessary information in a respectful manner to the original intention of why the caller called the quitline – for assistance in quitting. It prevents callers from becoming fatigued with the interview and discontinuing the call before they received their cessation counseling. Quitlines always try to place necessary data collection in the context of the fact that the callers are calling for help with quitting and the callers' expectation that that help be provided on a timely basis. Missing intake data has not been an issue for quitlines who are using this strategy to collect intake data from their callers using the NAQC MDS suggested intake questions. In contrast, the seven month follow-up questions will be asked in a structured manner – question-by-question as on the survey - as they are being collected for evaluation purposes including caller satisfaction.

Concerning the Quitline Services Survey, we will send an e-mail (Appendix G-2) to all state tobacco control managers (as part of our ongoing technical assistance through the National Tobacco Control Program we keep an updated contact information) one week prior to making the survey available on our CDC website. We will ask the manager to complete the survey within two weeks and will send one reminder e-mail (Appendix G-3) if they do not have it completed in two weeks and follow-up with up to five telephone calls to ensure completion.

## **B.3 Methods to Maximize Response Rates and Deal with Nonresponse**

The National Cancer Institute has estimated the response rate for the intake questions has averaged approximately 80 percent (Collection of Customer Service, Demographic and Smoking/Tobacco Use Information from NCI Cancer Information Service (CIS) Clients, OMB No. 0925-0208, exp. 8/31/2012), while Free & Clear (the largest provider of state quitline services) does not calculate a refusal rate because people are providing information as part of counseling (a process similar to NCI).

Each state quitline monitors calls and reviews transcripts of quitline caller sessions to ensure that telephone quitline specialists are providing services and collecting data in an appropriate manner. Any issues of concern related to the proposed data collection will be addressed through technical assistance provided by CDC to the state health departments and their vendors. We have proactively planned 21 site visits to the states to be conducted before the end of FY2010 as well as monthly phone calls on this issue. Concerning the quitline services survey we do not anticipate having a problem with non-response as the 50 state tobacco control managers, plus the District of Columbia, Puerto Rico, and Guam, will be required to report these measures as part of the Recovery Act Communities Putting Prevention to Work funding.

#### **B.4. Tests of Procedures or Methods to be Undertaken**

As indicated in Supporting Statement A, Section A.1 and other sections of this justification statement, CDC will use this data for planning and evaluation purposes including meeting the goals of the Recovery Act Communities Putting Prevention to Work Component III – Quitlines. Data are also reported in documents written at the request of CDC leadership or Congress. For these purposes, CDC will use descriptive statistics to characterize user populations (e.g., callers) based on demographic questions, and smoking cessation intake questions. We propose running frequency counts and performing limited cross tabulations with data collected at intake and follow-up (see Appendix H for sample table shells). Information for the Quitline Services Questionnaire will be posted to the Recovery Act website and descriptive statistics will be posted to CDC State Tobacco Activities Tracking and Evaluation system (<http://apps.nccd.cdc.gov/statesystem/>).

#### **B.5 Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data**

CDC will consult with NCI researchers and CDC partners including the North American Quitline Consortium as appropriate. Data management and analysis will be performed by the Office on Smoking and Health at CDC. No research will be conducted with this data.

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