National Survey of Residential Care Facilities

New OMB Application

Part B

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<u>Part B</u>

B. Collections of Information Employing Statistical Methods

1. Respondent Universe and Sampling Methods

The primary goal for the National Survey of Residential Care Facilities (NSRCF) is to provide a general purpose database on residential care facilities for adults that researchers and policymakers can use to address a wide variety of questions. As a general purpose survey, it will provide broad descriptive data and does not presuppose any particular typology of facilities or residents. The main focus is on facilities, with the survey gathering as much information about residents as is possible within the budget constraint.

The design will be a multi-staged national probability survey, where residential care facilities are sampled at the initial stage(s) and residents within sampled and responding establishments are sampled at subsequent stages. At a minimum, stratification variables will include establishment size (bed/residents, establishment location (e.g., urban/rural), facility structure (e.g., freestanding, proprietary/nonproprietary). Other stratification variables such as measures of state regulatory environment (e.g., resident acuity level, Medicaid reimbursement policy) will also be considered.

Facilities

The following criteria will be used to determine the universe of residential care facilities which are eligible for selection in the NSRCF:

"Residential care facilities are places that are licensed, registered, listed, certified, or otherwise regulated by the state and that provide room and board with at least two meals a day, around-the-clock on-site supervision, and offer help with personal care such as bathing and dressing or health related services such as medication management as needed. These facilities provide housing and services to adults. Facilities licensed to serve persons with mental illness or individuals with mental retardation or developmental disabilities exclusively are excluded."

The eligibility definition encompasses all types of residential care facilities, including assisted living facilities that arrange for personal care services from an outside vendor, as in Connecticut and Minnesota. Excluded are nursing facilities; facilities that predominantly serve people with mental retardation/developmental disability; group homes and residential care facilities predominantly serving persons with mental illness; and other residential care settings where personal care or health related services are not arranged for or provided. Unregulated facilities are also excluded.

The original scope of the survey was to include only facilities that served the predominately elderly population. However, while conducting cognitive interviews with a sample of 8 facilities, we were alerted to a potential issue concerning facilities whose residents are not predominately elderly. Several small facilities contacted served adult residents who were mostly under age 65. The decision was made to expand the target population to include adult residents in the 18-65 age group. The definition of residential care facilities being used for this survey

reflects this decision.

The NSRCF sampling frame will be constructed from lists of licensed residential care facilities (i.e., facilities that are licensed, registered, listed, certified, or otherwise regulated by the state) acquired from the licensing agencies in each of the 50 states and District of Columbia. Data on the number of licensed beds for each facility and the licensure categories will be used to determine the list of eligible facilities. The lists of residential care facilities from state licensing agencies will be checked for duplicate facilities and concatenated to form a list of all residential care facilities. The sampling frame for the NSRCF will contain all of the state-licensed residential care facilities that are licensed for 4 or more beds. Based on a frame developed by Social and Statistical Systems, Inc. (SSS) for AHRQ, we estimate that there are 55,538 RCFs nationally with 1,310,697 beds.¹

The SSS sampling frame will be used for the 75-case pretest (discussed in A.12), but a new, updated sampling frame derived from state licensing and other lists will be developed for the full-scale national survey. For the pretest, a stratified sample of approximately 110 residential care facilities will be selected with approximately 28 facilities selected from each bed size stratum. A random sample of residents will be selected from within each participating facility for the pretest, for an estimated sample of approximately 380 residents. Since the pretest will be used to test the recruitment and data collection procedures for the main study, the residents will be selected from each facility participating in the pretest according to the same sampling scheme described below for the national survey. Pretest cases will not be included in the national sample.

The three sample design options under consideration for the national survey differ in the amount of data that will be collected from small facilities (i.e. licensed for 4 to 10 beds). Exhibit 3 displays the expected number of completed interviews to be obtained from facilities and residents under each design option. The final design option choice will depend on the amount of funds available to conduct the data collection. Each sample design option involves a stratified systematic sample of facilities. Under Options 1 and 2, approximately 3,300 facilities will be selected for the sample. Under Option 3, approximately 2,400 facilities will be selected for the sample. The facility sample size estimates assume a 75% eligibility rate and a 90% response rate. The pretest will be used to refine the assumed facility eligibility and response rates. For burden calculations, the largest sample size was used.

¹ This estimate is for all residential care beds, including those in facilities with apartments or of other types of private and semiprivate units.

oata Collection Mode	Strata Definition		Number of Facilities ¹	Number of Residents (per facility/total) ¹
	Optio	n 1		
In-person	Very large facilities (> 100 beds)		350	9/3,150
In-person	Large facilities (26 to 100 beds)		650	5/3,250
In-person	Medium facilities (11 to 25 beds)		650	3/1,950
In-person	Small facilities (4 to 10 beds)		600	3/1,800
	· · · · · ·	Total	2,250	10,150
	Optio	n 2		
In-person	Very large facilities (> 100 beds)		350	9/3,150
In-person	Large facilities (26 to 100 beds)		650	5/3,250
In-person	Medium facilities (11 to 25 beds)		650	3/1,950
Telephone	Small facilities (4 to 10 beds)		600	0
-		Total	2,250	8,350
	Optio	n 3		
In-person	Very large facilities (> 100 beds)		350	9/3,150
In-person	Large facilities (26 to 100 beds)		650	5/3,250
In-person	Medium facilities (11 to 25 beds)		650	3/1,950
		Total	1,650	8,350

Exhibit 3: Strata and Expected Sample Size 2009 National Survey of Residential Care **Facilities, by Option**

¹ Completed interviews

Residents

Within each of the participating residential care facilities, a facility staff person will obtain or create a list of current residents as of midnight the day before the interview. After cleaning the list of duplicates and other residents not current as of midnight, the Field Interviewer will enter into the CAPI system the total number of current residents on the list and the CAPI system will return the line numbers of the residents sampled for NSRCF. The number of residents sampled by size of facility is displayed in Exhibit 4. Details of the resident sampling methods are discussed in Section B.2.

Exhibit 4: Resident Sample for Option 1 by Facility Size				
Facility Size	Residents to Select			
Very large (> 100 beds)	9			
Large (26 to 100 beds	5			
Medium (11 to 25 beds)	3			
Small (4 to 10 beds)*	3			

*Residents are sampled from small facilities only under option 1.

Within each pretest facility, Field Interviewers will select the number of residents to participate in the survey based on the facility size up to a maximum of nine (9) residents per facility (Exhibit 4).Because the pretest will be used to test all procedures used in the national survey, sample selection for the pretest will mirror that described below for the national survey.

In the national survey, selection of the resident sample in each facility will employ Chromy's method for sequential random sampling (Chromy, 1979; Williams and Chromy, 1980). The use of Chromy's method for sequential random sampling will allow the flexibility of using any list that the facility has available for indexing the current residents to facilitate the resident sample selection, and a simplified version of the sampling method can be programmed into the CAPI application without sacrificing the ideal properties of the selection method.

Chromy's method divides the sampling frame into *m* zones and randomly selects a single sampling unit within each zone. In the NSRCF, *m* will be equal to 9, 5, or 3, depending on the specified resident sample size for that facility (see Exhibit 3). Chromy's method is similar to systematic random sampling; however it will minimize bias that might occur in a systematic random sample. If there is an underlying pattern among the units in the sampling frame that coincides with the skip intervals of the systematic random sample selection procedure, the procedure could systematically skip certain types of residents. Even though the probability of obtaining a biased sample from systematic random sampling may be small, the use of sequential sampling will make the occurrence of a biased sample less prevalent.

This method has properties similar to systematic random sampling, as used in the 2004 National Nursing Home Survey, in that it will produce a sample that is spread throughout the sampling frame, but Chromy's method has a lower potential for producing a biased sample of residents.

In order to track the completion of the resident questionnaires, the CAPI will create a roster of the selected residents.

The administrator will identify a facility staff member who is knowledgeable about each selected resident. Examples of knowledgeable staff include a personal care aide or a nurse assistant who regularly cares for the resident, an LPN on duty at the time of the interviewer's visit, a floor or desk supervisor, or the administrator. Because the questionnaire about residents will be conducted with facility staff after the facility administrator has agreed for the facility to participate in the study, we are assuming a 100% response rate for the resident survey.

The general target specified for the sampling design of the NSRCF is to produce statistics for 1 percent of all residents with relative standard errors of 30 percent or less if funds permit. Otherwise, the specifications call for the maximum precision levels possible for the available funds. Since the NSRCF is the first of its kind and is to be a general purpose survey, no specific outcomes were used to prepare the sample size and precision requirements, but rather conservative estimates of the subgroup comparison tests were calculated.

2. Procedures for the Collection of Information

Initial Contact with Sampled Facilities

Initial contact with the sampled facilities will be a packet of materials including an advance letter introducing the survey, frequently asked questions (FAQ) about the survey on the back of the letter, and endorsement letters from professional organizations. This cover letter for the packet will be personalized with the name of the Facility Administrator listed in the sample frame or obtained during the pre-screening call to get updated information on administrator's name and correct mailing address. If the specific name of the administrator is not available from the frame or the pre-screened call, the letter will be addressed to "Administrator."

The cover letter will inform the administrator of the purpose and content of the survey, and its voluntary nature and confidentiality provisions. The FAQs have been designed to address what are expected to be the primary concerns of facility administrators and staff such as concerns about confidentiality and response burden. The letter also informs facility administrators that a Field Interviewer will call to verify information, explain the study to them and to ask their permission to visit the facility to conduct the survey. A draft copy of this letter and FAQs are in **Attachment E**.

The endorsement letters will be requested closer to the actual implementation of the national survey. Feedback from cognitive testing, the Pilot test and Pretest of the instruments and survey procedures will provide useful information for professional associations as they tailor endorsement letters to address the concerns of facilities.

All advance material has been or will be provided to the Ethics Review Board (ERB) at NCHS and the Institutional Review Board at RTI for review prior to any data collection. In anticipation of confidentiality concerns, the letter also emphasizes that data collected about the facility and its residents will never be linked to their names or other identifying features. Such information may not be published or released in any form if the individual or establishment is identifiable unless the individual or establishment has consented to such release.

Within a week after the letters have been mailed, an interviewer will contact the sampled facility by telephone. During the call, the interviewer (1) will use a screening questionnaire to confirm that the facility is eligible for the survey, (2) set up an appointment for the in-person data collection, and (3) tell the administrator what will be involved in their participation in the survey (i.e., that facility staff will be asked to assist with sample selection and complete an interview about sampled residents). All elements of consent will have been covered with the facility administrator by this point in the process; therefore if the administrator agrees to set an appointment for the in-person interview the facility administrator has effectively consented to participate in the survey and we will verify with the ERB that written consent is not necessary.

The Screening Questionnaire (**Attachment F**) is designed to verify information in the sample frame. This screening questionnaire is programmed into the CAPI system and will also be used to determine if the sampled facility is part of a larger complex that may include out-of-scope units, such as a nursing home or hospital.² This information will help determine the appropriate

² A Microsoft Word version of all questionnaires is submitted with this request for clearance. CAPI specifications

respondents for the interview. The screener is currently estimated to take 10 minutes to administer. Facilities that do not meet the eligibility criterion will be dropped from the survey and coded as "ineligible."

Once the administrator has agreed to participate in the survey, the interviewer will arrange for an appointment for the in-person interview. As part of this conversation, the Field Interviewer will explain that she will mail a subset of the questions that should be completed in advance (see **Attachment G**). These questions will address topics, such as resident fees, that might require a respondent to refer to other sources in the facility or require some simple calculation. Completing this information in advance of the in-person interview is expected to reduce survey administration time during the in-person visit. The intention is to provide facility staff an opportunity to prepare responses to certain items in the questionnaire that may require investigation of records or other information sources.

During this call, the interviewer will also explain the need to interview facility staff about a sample of residents. She will explain the need for a private place to conduct interviews so that the confidentiality of the residents is not compromised.

At the close of the Screening/Appointment Setting Interview, the Field Interviewer will mail a confirmation letter to the participating facility. The letter will note the date and time of the scheduled in-person visit. The packet will also include the Advance Data Collection Form and instructions for its completion.

In large facilities or facilities that are part of corporations offering residential care at several locations, responsibility for the decision to participate may not be made at the facility level. In these situations, the interviewer will gather information about the appropriate persons who can give consent for survey participation at the corporate or other level. Gaining cooperation from these facilities will include an additional mailing of all advance materials to the administrator or other official who can give consent, using FedEx or some other high visibility method. Project staff with knowledge of the residential care industry may make personal phone calls to confirm receipt of the materials, explain the purpose of the study and provide answers to any concerns raised, and attempt to gain cooperation.

For some facilities, approval from the facility's IRB may be required. This situation will be managed by the contractor's Regional Supervisor on the project who will coordinate contact between a facility's IRB and appropriate IRB staff at RTI.

These procedures will be tested as part of a pilot test with 9 or fewer facilities and as a part of a pretest with 75 facilities. Prior to the national study, revisions will be made, if necessary, to refine the procedures and reduce respondent burden.

Conducting the Interviews

Both the facility and resident questionnaires are programmed into the CAPI system and collected during the onsite interview.

Upon arrival at the facility, the interviewer will explain the data collection procedures. Ideally the interviewer will then complete the facility questionnaire with the administrator or a designee.

for all instruments will be submitted to OMB after programming is completed.

However, to further reduce burden on facilities, the interviewer will remain flexible in arranging interviews and the CAPI system will allow the completion of the interviews in any order. The facility questionnaire collects data about facility characteristics (size, age, types of rooms), services offered, characteristics of the resident population, facility policies and services, costs of services, staffing, and background of the administrator. The facility questionnaire is included in **Attachment H** with affiliated showcards in **Attachment J**.

After completion of the facility questionnaire, the interviewer will explain the procedure for sampling residents. The administrator or designated staff person will obtain or create a list of current residents as of midnight the day before the interview. After removing duplicates and other names that were not current residents as of midnight the day before the interview from the list, the Field Interviewers will sequentially number each resident on the list. The Field Interviewers will enter only the total number of current residents on the list and the CAPI system will return the line numbers of the residents sampled for the survey based on the facility size. Other information about sampling is explained in detail in Section B1. All lists with names or identifiers will be retained by the facility; however, in order to track the completion of the resident questionnaires, the CAPI system will create a roster of the sampled residents.

Once the resident sample has been selected, the interviewer will ask the administrator for the name of the staff caregiver who knows the sampled residents best and will ask to be introduced. Examples of knowledgeable staff caregivers include a nurse assistant who regularly cares for the resident, an LPN on duty at the time of the interviewer's visit, a floor or desk supervisor, or the administrator. Interviewers will be encouraged to complete all resident questionnaires in a private place, such as an office or a conference room. Staff caregivers will be interviewed during the least disruptive times, allowing for breaks between interviews as needed.

The resident questionnaire collects information on resident demographics, current living arrangements within the facility, involvement in activities, use of services, charges for care, health status, and cognitive and physical functioning. Because health and administrative records will vary greatly across facilities, the resident questionnaire asks only a few items that might require referring to a resident's records. We anticipate that almost all of the items can be answered from the respondent's personal knowledge of the sampled resident. Results of the pilot test and the pretest of the instrument will better inform our assumptions. The resident questionnaire is included in **Attachment I** with affiliated Showcards in **Attachment K**.

Interviewers assigned to this study will be carefully selected to ensure they have prior establishment survey experience, a professional demeanor and judgment necessary to work with facility executives and professional staff, and experience with CAPI interviewing. To the extent practical, field staff assigned to the study will also have had experience on surveys of long-term care facilities. These criteria are important to ensure the data collection is conducted as accurately as possible.

Interviewers will also receive extensive project related training. They will be trained to read all questions verbatim to the respondent and that remarks printed in capital letters are for interviewer use only. Skip patterns are incorporated into the CAPI system. Showcards will be used for questions that have several alternative answers. Instructions on when to use showcards will be clearly provided to interviewers.

Interviewers will rely on instruction received during interviewer training, the interviewer manual, and the CAPI programmed instructions to answer respondent questions, provide detailed definitions of items, and ensure accurate entries on the instrument. Besides the core statements read to each respondent on the purpose of the survey, procedures to protect confidentiality and the voluntary nature of the survey, the interviewer will also be able to explain the interview process to respondents.

Quality control of the survey responses is handled within the CAPI system itself. CAPI will check for completeness and consistency of responses and will ensure the proper skip patterns are followed. Field observations will be conducted by field supervisor staff. During each observation, the interviewer will be rated on items such as reading questionnaire text verbatim, using correct probing techniques, and answering respondent's questions. NCHS staff may also observe both facility and resident interviews. Retraining of Field Interviewers will occur as needed.

At the end of the interview, a script in the CAPI will have the interviewer inform the respondent that they may be called from the contractor's office to verify their participation in the survey. This minor burden is included in the facility questionnaire's burden. This procedure is designed primarily to serve as a deterrent to interviewer falsification. The data collection contractor will make sure the data verification sample of about 10% all interviews is representative across interviewers and facilities.

When all data collection tasks are complete, the interviewer will thank the respondents and exit the facility. After the data have been processed, and edit checks have been completed, a public use data file will be created. All data are weighted to national estimates using the inverses of selection probabilities, and adjusting for non-response within facility category. Sampling errors will be computed using the SUDAAN software package.

3. Methods to Maximize Response Rates and Deal with Non-response

To maximize response rates, methods similar to those used in previous establishment surveys (e.g., National Survey of Assisted Living, National Study of Board and Care Facilities, National Home and Hospice Care Survey) will be used. These methods will include advance materials that will lay the foundation for addressing administrators' concerns over data privacy, confidentiality, and respondent burden. However, field staff must be ready to provide additional information in any contact with the facility staff.

Initial contact with the sampled facilities will be an advance packet of materials including an advance letter introducing the survey, endorsement letters from professional organizations (see list below), and a brochure containing responses to frequently asked questions about the survey. The cover letter for this packet will be personalized with the name of the facility administrator listed in the sample frame or obtained during a pre-screening call to the facility to verify the correct name and mailing address for the facility.

We will seek endorsements from the following organizations:

- American Association of Homes and Services for the Aging
- American Seniors Housing Association
- Assisted Living Federation of America
- Consumer Consortium on Assisted Living
- National Center for Assisted Living, and
- Center for Excellence in Assisted Living (an umbrella organization including the previous five as well as others).

The advance letter and accompanying materials explain the purpose and sponsorship of the survey and describe what participation will entail. All advance material will be provided to the Ethics Review Board at NCHS and the Institutional Review Board at RTI for review prior to any data collection. In anticipation of confidentiality concerns, the letter emphasizes that data collected about the facility and its residents will never be linked to their names or other identifying features and that no information collected in this survey may be used for any purpose other than the purpose for which it was collected. Such information may not be published or released in any form if the individual or establishment is identifiable unless the individual or establishment has consented to such release.

Within a week to ten days after the letters have been mailed, the assigned interviewer will contact the sample facility by telephone to make an appointment. If the administrator refuses to participate, he/she will be re-contacted about a week later by a supervisor who will attempt to persuade him/her to participate in the survey using, when appropriate, letters and phone calls.

4. Tests of Procedures and Methods to be Undertaken

The initial test of the questionnaires was performed in May 2007 using cognitive interviews in eight facilities. Respondents were encouraged to give critical comments and opinions about terms used, vague questions, and other aspects of the process. Recommendations were incorporated into the current version of the questionnaires.

Prior to a live test in any facility, two internal iterative testing rounds are planned. An alpha test will confirm all the components of the questionnaires are programmed correctly. The beta test will incorporate lessons learned from the alpha test and test the complete system.

A pilot test is planned to test the questionnaire and the recruiting methods planned for the survey. The pilot test will be undertaken with 9 facilities of various sizes. This test will focus on questionnaire logic, question and response category wording, and timing, and the overall ease of administration of the questionnaire.

A pre-test of the questionnaire and all data collection methods is planned with 75 facilities. Recruiting methods, screening procedures, CAPI software applications, and questionnaire content will be tested and assessed for quality, timeliness, and minimization of respondent burden. The sample management and data transmission systems will be fully employed for the pre-test and challenged for functionality and utility. Data collected during the pre-test will be reviewed for item non-response issues and data quality.

Changes from the pilot test to the pretest are expected to be minimal and will primarily involve minor wording changes and correction of skip patterns. Some questions may be deleted if they result in poor quality data. No additional questions are anticipated and the final facility screener is included in **Attachment F** and the final facility questionnaire is included in **Attachment H**. Showcards for the facility questionnaire are in **Attachment J**. The final resident questionnaire is included in **Attachment I**. Showcards for the resident questionnaire are in **Attachment K**.

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

The following government employees are responsible for oversight on the design and data collection procedures for the National Survey of Residential Care Facilities:

<u>NCHS</u>

Lauren Harris-Kojetin, PhD. Chief, Long-term Care Statistics Branch National Center for Health Statistics 3311 Toledo Road, Room 3431 Hyattsville, Maryland 20782 Phone: (301) 458-4369 Fax: (301) 458-4350 E-Mail: fti3@cdc.gov

<u>ASPE</u>

Emily Rosenoff, M.A. Policy Analyst Department of Health and Human Services Office of the Secretary Room 424-E 200 Independence Avenue, SW Washington, DC 20201

RTI International was awarded a contract for the design and data collection of the National Survey of Residential Care Facilities. The following persons were responsible parties:

Design phase

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Data collection phase

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LIST OF ATTACHMENTS

- Attachment A: NCHS Legislation Section 306 of the Public Health Services Act (42 USC . 242k)
- Attachment B-1: Federal Register Notice
- Attachment B-2: Comment on Federal Register Notice
- Attachment C: List of TEP Members
- Attachment D: Instrument Reviewers
- Attachment E: Advance Letter and Frequently Asked Questions
- Attachment F: Facility Screener
- Attachment G: Advance Data Collection Form
- Attachment H: Facility Data Collection Instrument
- Attachment I: Resident Data Collection Instrument
- Attachment J: Facility Questionnaire Showcards
- Attachment K: Resident Questionnaire Showcards
- Attachment L: Ethics Review Board Approval Documentation