B. Collections of Information Employing Statistical Methods

The proposed study consists of the administration of two surveys. The first is a process evaluation survey the sample of which will be all Aging and Disability Resource Centers (ADRC) and 20 Area Agencies on Aging (AAA). The second is an outcome evaluation survey of older adults (60 years and older) and individuals with disability (18 years and older with a disability) seeking services from the sample of 23 ADRCs plus the 20 AAAs that participated in the process evaluation survey. The following sections describe the procedures for sampling and data tabulation.

B.1. Respondent Universe and Sampling Methods

<u>Process Evaluation</u>

The target population for the process evaluation study is all ADRC programs funded since 2003. The data for the evaluation will be collected through a web-based survey administered to ADRC directors at the state- and local-levels. All ADRC programs will be contacted and, therefore, there will be no sampling of ADRCs. Based on the reported 70% response rate for the ADRC Semi-Annual Reporting Tool administered by the Lewin Group, and the 70% – 80% response rate for the annual Aging Services Network survey of AAAs conducted by the National Association for Area Agencies on Aging, we expect a 70% response rate to the survey. We propose to keep track of the response rates by AoA defined geographic region and urban/rural status and will look at the frame characteristics of non-respondents to determine whether there is any bias in the results of the study. In addition, the 20 AAAs selected for participation as comparison sites in the outcome evaluation will receive the web-based, process evaluation survey. A higher response rate is expected from these organizations since they will have already agreed to participate in the study during outcome evaluation site recruitment. We expect a 90% response rate.

<u>Outcome Evaluation</u>

For the outcome evaluation, the target population is older adults and individuals with a disability seeking services from ADRCs and AAAs during the defined study enrollment period of approximately six months. First a probability sample of 23 ADRCs will be selected and from the selected ADRCs a sample of older adults and a sample of individuals with disabilities will be selected. A participant experience survey (PES) will be administered to all the selected individuals. The results from the survey of older adults in the sample of ADRCs will be compared to results from the survey of older adults in a sample of AAAs. The results from the survey of individuals with disabilities in ADRCs will be compared with the results from the survey of individuals with disabilities in a sample of AAAs.

AAAs were selected to provide the comparison group because AAAs are established agencies operating throughout the nation and offer services similar to those offered by ADRCs, we selected AAAs as the most appropriate comparison group for the outcomes study. In selecting AAAs for the comparison group, we will eliminate from the pool of eligible AAAs those that are located in communities that are also served by an ADRC in order to avoid contamination by competing programs. While AAAs have traditionally focused on providing services to older adults and ADRCs were designed to serve both older adults and individuals with disabilities regardless of age, depending on the service referenced between 30% and 52% of AAAs offer services to younger individuals with disabilities (Data from the 2010 AAA Survey conducted by N4A and Scripps Gerontology Center). Therefore, the research team has a reasonable expectation that younger consumers with disabilities can be recruited from AAAs for the comparison group.

The sampling procedure for selecting sites and individuals is described below,
Outcome Evaluation Site Selection. For the selection of a sample of older individuals and also for the selection of individuals with disability, a two-stage sampling design will be adopted. At the first stage of sampling, a sample of 23 ADRCs will be selected from the population of ADRCs. Three large statewide ADRCs were identified in the population. These ADRCs are likely to be different from other non-statewide ADRCs with regard to characteristics of interest in the survey. Therefore, the 3 ADRCs located in the states of Arkansas, Minnesota and New Mexico will be included in the sample with certainty. A probability sample of 20 ADRCs will be selected from the remaining population. For selection of the sample, the population of ADRCs will be stratified by AoA's 10 geographic regions. Within each region, the population of ADRCs will be further stratified into two groups based on population densities— rural or urban. One ADRC will be selected at random from each of the resulting 20 stratum. Table 1 shows the distribution of ADRCs by the 10 AoA regions. The sample of ADRCs to be selected from each stratum is also shown.

Table 1: Distribution of Population and Sample of ADRCs by Strata
(excluding ADRCs selected with certainty)

Region	Number of ADRCs	Sample
1	38	2
2	6262	2
3	49	2
4	67	2
5	62	2
6	19	2
7	4	2
8	20	2
9	22	2
10	10	2
Total	353	20

An additional selection constraint will be used to increase the distribution of study sites across as many States as possible. Since within each region ADRCs are stratified by rural and urban, it is possible that some ADRCs in a state could be rural and some ADRCs could be urban. If we make independent selections within each stratum, then it is possible that ADRCs from a state could be selected for both the rural and urban strata in a region. To ensure maximum representation of states, it is desired not to select more than one ADRC from any state. This means that if an ADRC from a specific state in a region is selected in the urban stratum, then the ADRCs from that state in the rural stratum will not be eligible for selection. To ensure that each selected ADRC has a known probability of selection, the following procedure will be adopted. In each region, a rural or urban stratum will be selected at random. An ADRC will be selected with probability proportional to size where size is the number of consumers served by the ADRC. When an ADRC is selected the selection of the second ADRC from the remaining stratum in that AoA region will be conducted after excluding any remaining ADRCs in the same state as the first ADRC selected from that region.

With regard to the selection of comparison AAAs the preferred option, which will make the comparisons more precise, is to select AAAs from matched communities. First, a list of all AAAs in each of the 20 strata used to select ADRCs will be developed. AAAs in communities also served by an ADRC will be eliminated. Then the list of AAAs in each stratum will be ranked based on the degree of match to the ADRC in that same stratum. The match will be based on a few key characteristics such as the availability of Long Term Supports and Services (LTSS) in the service area, Medicaid rules, availability of Medicaid Home and Community Based Services waivers, and demographic characteristics of the community such as age distribution and average educational attainment. From the list of highly matched AAAs in each stratum one will be randomly selected for participation in the study. This means that some AAAs will have a zero probability of selection.

If the preferred option is not feasible the research team will select a probability sample of AAAs using a sampling design similar to the one used for the selection of ADRCs. The selected AAAs will match the selected ADRCs with regard to region and rural/urban status. One concern with this approach is that differences detected in consumer outcomes could be due to differences in unmatched site characteristics. If the distributions of populations of ADRCs and AAAs by these characteristics are available, then post-stratification weights based on the number of ADRCs and AAAs will be used as estimates in each category to reduce any conditional bias in the estimates for the groups.

Table 2 shows the distribution of AAAs outside of ADRC service areas by the 10 AoA regions. The sample of AAAs to be selected from each stratum is also shown.

Table 2: Distribution of Population and Sample of AAAs outside of ADRC service areas by Strata

Region	Population	Sample
1	4	2
2	22	2
3	88	2
4	56	2
5	48	2
6	35	2
7	18	2
8	37	2
9	34	2
10	26	2
Total	368	20

Participant Sampling. The consumers of ADRCs and AAAs will fall into one of the following three categories: 1) Age 60 or older and disabled; 2) Age 60 or older and not disabled; and, 3) Age less than 60 and disabled. ADRCs serve all three groups. It is planned to select a total sample of 3,389 individuals for this study based on power calculation and budgetary considerations. More detail about the selection of individuals for this study is presented below.

Older Adult Outcome Evaluation Study

As shown in Table 3, the sample size for older adult consumers[1] of ADRCs or AAAs is 1,565 individuals in each group. If we were to select a simple random sample of older adults in each group, we would be rejecting the hypothesis of no difference in population percentages with 80% power when there is actually a difference of 5 percentage points. This assumes a two-sided statistical test at 5% level of significance. Under the sampling design used for sample selection, the detectable difference will be higher than 5 percentage points. If we assume a design effect of 1.5, then the detectable difference would be 6 percentage points. We consider a difference of 6 percentage points with 80% power to be reasonable.

The population of individuals from which the sample will be drawn includes all persons who contact these organizations for service within six months of the starting date of the data collection period. For the selection of older adults, we need to select an average of

[1] *"Consumer" refers to the individual who contacted the ADRC/AAA—i.e., either the older adult or person with a disability OR that individual's spouse, family member, or other caregiver who made the contact.*

70 older adults from each participating ADRC. The actual allocation of the sample will be determined at the time of sample selection in proportion to the estimated number of older adults served during a time period of six months. A similar procedure will be followed to select approximately 78 older adults from each AAA site. For the selection of older adults from each participating ADRC and AAA, we plan to use the following procedure. Based on the volume of consumers served by these organizations and the target sample size, a sampling interval for the selection of persons will be determined. Although all persons contacting the organizations during the six month study enrollment period will be asked to participate in the study, actual participants will be selected by the research team based on a predefined sampling interval. For example, if the volume is 200 persons and the required sample is 50, then we plan to select every 4th person who contacts the organization. We will adjust this procedure if we expect some non-response to the study. We anticipate that in the smaller sites it will be necessary to include 100 percent of eligible respondents across the full six months to reach our target sample size. Therefore, it is expected that the sampling interval will be applied only to larger sites to ensure that the target sample is drawn across the same months as in the smaller sites. However, if it appears that the target sample size will be reached sooner than six months in the smaller sites, we will recalculate the sampling interval for the larger sites so that there is consistency across all sites in terms of the months of study enrollment.

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<u>Adults with Disabilities Outcome Evaluation Study</u>

As shown in Table 3, the sample size for persons with a disability(s) who are consumers[2] of ADRCs or AAAs is 1,261 individuals in each group. With this sample size we can detect a difference of 6.8 percentage points in population percentages with 80% power. Again this is based on the assumption of a design effect of 1.5.

To maintain the same age distribution in the ADRC sample of disabled persons, an independent sample of 1,261 individuals with disabilities will be drawn from the participating ADRCs. Specifically, we plan to select a sample of 857 persons who are less than 60 years of age with a disability and 404 persons who are aged 60 or older with a disability. If the proportion of older adults with disabilities in ADRCs is very different from the one assumed we will use post-stratification weight adjustments to correct the proportion and use these to get the overall estimates for the ADRC group. We plan to select an average of 63 individuals with disabilities from each selected AAA. An additional average of 43 individuals who are less than 60 years old with a disability will be selected from each ADRC. The sample will be allocated in proportion to the number with disabilities and the selection of individuals will be similar to the methods used for older adults.

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[2] *"Consumer" refers to the individual who contacted the ADRC/AAA—i.e., either the older adult or person with a disability OR that individual's spouse, family member, or other caregiver who made the contact.*

Table 3. Populations and Sample Sizes

Population	Sample Size	Detectable Difference with 80% Power
Older Adults*		
ADRCs	1,565	6 percentage points
AAAs	1,565	
Persons with a Disability(s)**		
ADRCs	1,261	6.8 percentage points
AAAs	1,261	

*Person for whom contact was made to the ADRC/AAA is aged 60 and older.
**Person for whom contact was made to the ADRC/AAA is an adult of any age (i.e., an "older adult" or an adult younger than age 60 with a disability(s) as defined in Question 6 of the "Client Screening Tool" (Attachment C)). Because this group includes adults of any age, it will be possible for the same individual to be selected for the "older adult" sample as well as for the "persons with a disability(s)" sample.

<u>Population-Based Estimates</u>

For obtaining population-based estimates each selected ADRC will be assigned a sampling weight. This weight will be used for statistical analyses. We will also examine whether weights could be assigned to AAAs, and individuals selected within these first stage sampling units. We may also assign sampling weights to selected individuals based on the total population size and the sample size.

B.2. Procedures for the Collection of Information

The process evaluation data collection will be conducted according to the following procedures:

- A letter of support (LOS; see Attachment H) will be sent to all 365 local ADRC sites and 43 state level ADRC sites. In addition, a LOS will be sent to the 20 AAA sites that are participating as comparison sites in the outcome evaluation. The LOS will inform participants about the study, notify them of an email (see Attachment I) that they will receive inviting them to participate in a web-based survey, and provide contact information at the LOS originating organization. An outline of the survey topics will accompany the LOS. All sites will receive the LOS from AoA.
- An email that includes an introduction to the study, instructions for accessing the web-based survey, a link to the survey, and unique password will be sent to all process evaluation participants.
- Once the web-based survey data are submitted by a participant, they will be automatically stored in a secure database system that can easily be exported to SAS, Stata or Excel for statistical analyses.

The outcome evaluation data collection will be conducted according to the following procedures:

- A LOS (see Attachment J) will be sent to the 85 sites that will be selected for recruitment. Although the target number of participating of sites is 40 (plus the 3 sites selected with certainty), we estimate a response rate of approximately 70 percent (85 recruitment calls). The LOS will inform organization directors and staff of the study, and notify them that they will be receiving a telephone recruitment call from research staff.
- Research staff will contact selected agencies via telephone to read the recruitment script (see Attachment K). They will continue telephone recruitment until a sample of 20 each ADRC and AAA is obtained.
- Site staff will be trained by research staff to screen consumers for study eligibility (see Attachment C), inform them of the study and obtain agreement to participate (see Attachment D), and to collect a minimal amount of data (see Attachment E). Once an organization has been recruited, the procedures listed below will be followed:
  a. A consumer contacts the organization (ADRC or AAA) either in-person or by telephone.
  b. The consumer speaks with an Information and Assistance (I & A)/Information and Referral (I &R) specialist as would normally occur.
  c. Once rapport has been established, the I & A/I & R specialist administers an eligibility screening tool (See attachment C). Some screening questions will have been answered during the routine conversation; others will need to be asked directly.
  d. If consumer is eligible for the study the I & A/ I & R specialist describes the study to the consumer and invites him/her to participate in a 20 minute survey at a later date, and requests permission to share his/her contact information with the research team.
  e. If the consumer agrees to participate in the study, the I & A/ I & R Specialist will collect a minimal number of additional data elements (See attachment E) that will be used to contact the participant approximately one month later.
  f. Approximately once per month, the I & A/ I & R Specialist will forward the eligibility screening tool, the agreement to participate form, and the organization data collection tool to Abt Associates either through a secure web portal or by FedEx using the pre-paid envelope.
  g. For sites with high volume in which the sampling interval applies (see B.1 for description) the Abt team will apply the interval and select only a sample of respondents for survey participation. However, the limited data collected by the organization from respondents who were not selected for survey inclusion also will be analyzed and findings reported.
  h. Abt Associates will prepopulate the screening data into the CATI system.

i. Participants will be contacted by telephone by highly trained and experienced survey administrators. Participants will be read an informed consent statement (See attachment G) and their willingness to participate will be confirmed. If the individual is willing to participate at that time the 20 minute survey will be administered (see attachment B), otherwise another time will be arranged.

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

We will engage several methods to maximize response rates. At the first stage of sampling, the organization level, response rates will be maximized through a number of strategies. First, once a site has been selected, a letter of support will be sent to them from AoA describing the study and asking for them to participate. Second, in-depth training, a research manual, and technical assistance will be provided to front line staff from all participating organizations. The research team will present a 30 to 45 minute webinar training program that will be offered multiple times to accommodate the varying schedules of target organization staff. The training webinars will instruct organization staff on how to: 1)screen for eligibility, 2) describe the study, 3) invite eligible consumers to participate in the study, 4) obtain informed consent, 5) collect a minimal amount of pre-survey data, and 6) store and transfer the data to Abt Associates. In addition, the research team will provide each of the 43 organizations with a training manual containing detailed instructions on each of the six components listed above. Finally, research staff will provide ongoing technical assistance to participating sites in the form of a dedicated e-mail box and telephone line where participating organizations can relay questions.

To maximize respondent response rates in the second stage of sampling, the research team will utilize several strategies. First, eligible participants will receive a call from research staff within one month of their contact with a participating ADRC or AAA to improve the chances of respondent recall and sample retention. Second, the survey was designed so that it can be administered in 20 minutes and with minimal burden. Given that the study sample consists of older adults and persons with a disability(s), a short, clearly written survey will increase the likelihood of response rates (feedback provided during focus group telephone interviews with ADRC , AAA, and Centers for Independent Living stakeholders, June 2011).

Furthermore, an interviewing strategy with the following major components will be followed. The initial contact script has been carefully developed and refined to be persuasive and appealing to the sample. Only thoroughly trained and experienced interviewers, highly motivated and carefully monitored, will conduct the interviewing. Interviewers will be trained on how to overcome initial reluctance, lack of interest or hostility during the contact phase of the interview. The interviewing corps will include Spanish-speaking interviewers to ensure that Spanish language is not a barrier to survey participation. Twenty-five call attempts will be made to ring-no-answer numbers, and interviewers will leave an approved message on answering machines.

The CATI program will record all refusals and interview terminations in a permanent file, including the nature, reason, time, and the interviewer. This information will be reviewed on an ongoing basis to identify any problems with the contact script, interviewing procedures, questionnaire items, etc. Also, the refusal rate by interviewer will be closely monitored. Using these analyses, a "Conversion Script" will be developed. This script will provide interviewers with responses to the most common reasons given by persons for not wanting to participate in the survey. The responses are designed to allay concerns expressed by the telephone contacts.

A refusal conversion plan will be implemented in which each person selected for the sample that refuses to participate will be re-contacted approximately one-to-two weeks following the refusal. A conversion script will be utilized in an attempt to convince the individual to reconsider and participate in the survey. Only the most experienced and skilled interviewers will conduct the refusal conversions. Exceptions to refusal conversion will be allowed on an individual basis if for some reason the refusal conversion effort is deemed inappropriate.

There will be maintenance and regular review of data in the sample reporting file, derived from both the sample control and CATI files, so that patterns and problems in both response rate and production rates can be detected and analyzed. Meetings will be held with the interviewing and supervisory staff and the study management staff to discuss problems with contact and interviewing procedures and to share methods of successful persuasion and conversion.

<u>Non-Response Analysis</u>
A comparison of the characteristics of the completed and non-completed cases will be conducted to determine whether there is any evidence of significant non-response bias in the completed sample.

Finally, we expect there will be a small percentage of terminated interviews throughout the course of data collection. A terminated interview is one in which the designated respondent begins the interview (answers at least one question) but refuses to complete the interview at some point after the first question. Differences in characteristics can be analyzed at this stage between those who terminate the interview and those who complete the interview.

This process of analyzing the characteristics of respondents and non-respondents should identify whether there is any evidence of significant non-response bias related to the characteristics of most interest for this evaluation (e.g., age and type of disability). Demographic data are collected routinely when consumers contact the ADRC and AAA, and health-related data will be collected during screening. If there are differences, we will examine survey responses for a small sample of respondents to see if there are differences in responses based on these characteristics and then try to estimate the non-response bias.

Reasons for non-participation among consumers who initially agree to participate but decline when contacted by the survey team are included in the introduction to the PES. These data will be analyzed in relation to the characteristics of interest to determine non-response bias.

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

The process evaluation survey has been vetted with multiple experts in the field including the ADRC Technical Assistant contractors and a technical expert panel comprised of health services researchers and organization directors.

The PES has also been shared with and revised based on feedback from researchers and experts in the field. In addition, the PES will undergo a combined cognitive (40 respondents) and pilot test (70 respondents) once OMB approval has been obtained. We expect that any revisions that may result from the cognitive and pilot testing will result in a survey of greater clarity and reduced burden for the respondent. We do not expect the pilot test of the PES to alter the study design; rather, it may inform non-material, non-substantive changes to the PES. If material or substantive changes to the survey are indicated from the results of the pilot study we will resubmit the revised PES to OMB and request an expedited review for final approval that is linked to the original approval and will not restart the approval clock.

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

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