

**Sampling Plan and 18-Month  
Follow-Up Survey Plan for the  
National Evaluation of PROMISE  
Demonstration Programs**

January 3, 2014

Karen CyBulski  
Thomas Fraker  
Eric Grau  
Holly Matulewicz



**MATHEMATICA**  
Policy Research

Contract Number:  
SS00-13-60044

Mathematica Reference Number:  
40304.08A

Submitted to:  
Social Security Administration  
7111 Security Blvd., Rear Entrance  
Baltimore, MD 21244

Attention:  
Jeffrey Hemmeter

Submitted by:  
Mathematica Policy Research  
1100 1st Street, NE  
12th Floor  
Washington, DC 20002-4221  
Telephone: (202) 484-9220  
Facsimile: (202) 863-1763

**Sampling Plan and 18-Month  
Follow-Up Survey Plan for the  
National Evaluation of PROMISE  
Demonstration Programs**

January 3, 2014

Karen CyBulski  
Thomas Fraker  
Eric Grau  
Holly Matulewicz

---

**MATHEMATICA**  
Policy Research

---

## CONTENTS

I	INTRODUCTION.....	1
II	SAMPLING PLAN .....	2
	A. Sampling in the California Site: Base Assumption of No Complications .....	2
	1. Planned Number and Timing of Evaluation Enrollees .....	2
	2. Stratification.....	2
	3. Random Sampling.....	3
	4. Sampling Weights .....	3
	B. Sampling in the California Site: Potential Complications.....	3
	1. Completion of Enrollment Is Delayed .....	3
	2. Enrollment Goal Is Not Met .....	4
	C. Implications for the Impact Analysis.....	5
	1. Analysis of Survey Data .....	5
	2. Analysis of Administrative Data .....	5
III	SURVEY PLAN .....	6
	A. Clearance from OMB and Other Entities.....	6
	B. Instrument Development.....	7
	C. Instrument Pretesting.....	9
	D. CATI/CAPI Programming and Testing .....	10
	E. Interviewer Training .....	11
	F. Data Collection .....	12
	G. Minimizing Attrition and Maximizing Response Rates .....	26
	H. Coordination with Grantee Surveys for Formative Evaluations.....	29
	I. Imputation Methods .....	30
	J. Preparing Weights, Files, and Documentation.....	19
	REFERENCES.....	33

## TABLES

III.1	Youth and Parent/Guardian Instruments for the 18-Month Survey: Domains and Measures of Interest .....	8
III.2	Survey Interviewer Training Modules .....	12

## I. INTRODUCTION

This report presents Mathematica's plans for selecting the survey samples for the national evaluation of PROMISE demonstration programs and conducting the first of two planned follow-up surveys, at 18 months after youth enroll in the evaluation and are randomly assigned to treatment or control groups. A subsequent report will present our plans for a second follow-up survey five years after enrollment and random assignment.

Our sampling plan, presented in Chapter II, is brief because sampling of enrollees will not be necessary in five of the six PROMISE program sites. In those sites, we will attempt follow-up interviews with all, or virtually all, youth who enroll in the evaluation. In the California site only, it is anticipated that the number of enrollees will substantially exceed 2,000, which is the number that Mathematica is contractually obligated to include in its survey sample for each site. If enrollment proceeds as planned in the California site, then the sampling procedures will be straightforward. These are presented in the brief first section of Chapter II. Two subsequent sections of the chapter address modifications to the basic sampling procedures that would be necessary if either of two potential complications were to arise during the enrollment process.

Chapter III presents our plan for the 18-month follow-up survey of PROMISE enrollees and their parents or guardians. This plan is quite comprehensive, covering such critical topics and instrument development and testing, interviewer training, data collection via telephone and in-person field efforts, and preparation of final data files. In large measure, our plan remains as originally presented in our proposal for the PROMISE evaluation contract. However, there are several components of our current plan that reflect new information we have obtained about the PROMISE demonstration programs since being awarded the evaluation contract. These include an expanded discussion of how we will deal with sample members whose primary languages are other than English or Spanish, our plans for interviewing Native Americans and residents of very thinly populated areas of the mountain west and northern plains states, and our strategy for coordinating the 18-month survey with the surveys that several PROMISE grantees plan to conduct as part of their own formative evaluations.

## II. SAMPLING PLAN

The purpose of sampling on the PROMISE evaluation is to ensure that the level of effort for the follow-up surveys remains within the parameters specified in SSA’s RFP and Mathematica’s contract proposal. Sampling offers a methodologically sound way for Mathematica to limit its survey effort by attempting no more than 2,000 interviews, even though a site may enroll more youth in the evaluation.

Sampling for the PROMISE evaluation’s follow-up surveys will be necessary only in those sites where more than the required 2,000 SSI youth will be enrolled and assigned to treatment or control status. Based on our review of applications for cooperative agreements for PROMISE programs, California is the only site where substantially more than 2,000 youth are likely to be enrolled. The Maryland site proposed to enroll 2,059 youth.<sup>1</sup> For that site, and any other site that may slightly exceed the required number of enrollees, we will select only the first 2,000 into our survey sample. Some of the sites may be at risk of falling short of enrolling 2,000 youth. If that occurs, we will attempt to interview all of the youth who do enroll.

The remainder of this chapter focuses on the sampling procedures that we will implement for the California site.

### A. Sampling in the California Site: Base Assumption of No Complications

#### 1. Planned Number and Timing of Evaluation Enrollees

As described in its proposal for a PROMISE cooperative agreement, California plans to enroll 3,172 youth in the PROMISE evaluation over a 15-month period. According to the terms of Mathematica’s contract with SSA, we are to attempt follow-up interviews with 2,000 of those youth and complete interviews with no fewer than 1,600 (80 percent) of them.<sup>2</sup> The fact that the recruitment period will be less than 18 months means that enrollment will have been completed before it is time to conduct the 18-month follow-up interview with the first California youth who entered the evaluation. This will simplify the design for drawing the sample because it means that the final population of enrollees will be known at the time that we select the survey sample.

#### 2. Stratification

We would like the relative distribution of sample cases across key dimensions to mirror that of all enrollees. To ensure that result, we will conduct stratified random sampling, with the strata defined by the key dimensions, as follows:

- Local education agency (LEA): 19 strata
- Treatment/control status: 2 strata

---

<sup>1</sup> During Mathematica’s November 19, 2013, “data meeting” with representatives of the Maryland PROMISE program, they indicated that they have adjusted their enrollment target upward, to 2,263 youth, to allow for attrition.

<sup>2</sup> Based on our experience with YTD, we anticipate that about 3 percent of PROMISE evaluation enrollees will be nonresearch cases, that is, they will be deliberately assigned to the same treatment or control status as their siblings who enrolled before them. In the California site, the survey sample of 2,000 enrollees will not include any nonresearch cases; they will be excluded prior to selecting the sample.

These strata define 38 cells, which will be the basis for the random selection of cases for the survey sample.

### 3. Random Sampling

The probability that an enrolled youth will be selected into the survey sample will be equal to the budgeted sample size (2,000) divided by the achieved number of enrolled youth who will be randomly assigned, which we assume for now will be the California program's proposed total number of enrollees, less the approximately three percent of enrollees who will be nonresearch cases:  $3,172 - 95 = 3,077$ . Under this assumption, the selection probability would be  $2,000/3,077 = 0.650$ . We will array the research enrollees across the 38 cells and then randomly select cases from each cell with a probability of 0.650. This will ensure that each cell is represented in the sample in the same proportion that it is represented in population of enrollees.

An alternative to random sampling would be to attempt follow-up interviews with the first 2,000 youth who enroll in the evaluation of California's PROMISE program and are randomly assigned. However, implementation of this strategy would likely mean that few, if any, cases from final third of the enrollment period would be interviewed. Under the assumption that a more mature program is likely to have larger impacts on youth and family outcomes than a less mature program, this alternative strategy would result in smaller impact estimates than our proposed strategy of randomly selecting cases with a fixed probability less than 1 regardless of when they enroll in the evaluation.

### 4. Sampling Weights

All research enrollees in the California PROMISE evaluation will have the same probability of being selected into the survey sample, so the sample will be self-weighting and it will not be necessary to calculate sampling weights.<sup>3</sup> However, it will be necessary to calculate weights to correct for nonresponse to the follow-up surveys.

## B. Sampling in the California Site: Potential Complications

Possible failure of the California program to complete enrollment on a timely basis or to achieve its planned number of evaluation enrollees could complicate what otherwise would be a very simple sample design. Since we do not anticipate either of these complications, we are just going to sketch their implications for the sample design rather than fully develop them.

### 1. Completion of Enrollment Is Delayed

We first consider the implications of the program failing to complete enrollment before the scheduled date for the first 18-month survey interview, notwithstanding its planned 15-month enrollment period. The follow-up survey must begin 18 months after the first youth enrolls in the evaluation. If the enrollment process has not been completed at that time, then it would be necessary to select an initial survey sample based on the incomplete population of enrollees, so as to not delay the interviews with the early enrollees.

---

<sup>3</sup> Another way of looking at this is that every case in the sample would have the same sampling weight, equal to the inverse of the probability of selection:  $1/0.650 = 1.538$ . And because they would have the same sampling weight, the sample would be self-weighting.

Assuming that the enrollment process takes X months to complete, where X is greater than 18, we would take the following steps to select the survey sample. In this discussion, all month numbers refer to months since the start of enrollment.

- **Step i.** In month 18 we would use the procedures described in Sections A.1-A.3 to select a stratified random sample from among all youth who had been enrolled as of that month. We refer to this as the primary sample. The selection probability would be the same as that discussed in Section A.3: 2,000 divided by the California program’s planned total number of enrollees, less nonresearch cases.
- **Step ii.** In month 19, we would begin releasing cases from the primary sample and contacting them to complete the 18-month survey interview. We would release each individual case 18 months after it enrolled in the evaluation.
- **Step iii.** After the California program completes enrollment in month X, we would select a secondary stratified random sample of cases from among the cases that enrolled between month 18 and month X. The selection probability would be the same as in Step i.
- **Step iv.** We would combine cases in the secondary sample with those in the primary sample and continue the interview process as described in Step ii.

Under this scenario, the probability of selection would be the same constant, 0.650, as under the base assumptions.

## 2. Enrollment Goal Is Not Met

If the California program were to fall short of its enrollment goal, then the enrollment period would likely need to be extended beyond 18 months. Thus, we assume that the problem of an enrollment shortfall would occur in conjunction with an extended enrollment period.

- **Step i.** In month 18, we would use the procedures described in Steps 1-3 to select a stratified random sample from among all youth who had been enrolled as of that month. We refer to this as the primary sample. The selection probability would be 2,000 divided by an estimate of what the California program’s total number of research enrollees (total enrollees less nonresearch cases) is likely to be.<sup>4</sup> This estimate would presumably be smaller than the original planned number of research enrollees, 3,077 (Section A.3), which would imply a larger selection probability than under the base assumption of no complications.
- **Step ii.** Same as Step ii, above.

---

<sup>4</sup> The month 18 estimate of what the total number of research enrollees is likely to be will be generated by a three-step process: (Step 1) In month 18, Mathematica will request that the managers of the California PROMISE program provide an estimate of when enrollment will be completed and how many total youth will be enrolled. (Step 2) After consulting with the program managers and SSA, Mathematica may adjust the estimate from Step 1 up or down to reflect, for example, a consistent pattern of over optimism on the part of program managers regarding enrollment results. (Step 3) Mathematica will apply a correction factor to the estimate from Step 2 to account for nonresearch cases, thus arriving at a final estimate of the total number of research enrollees.



- **Step iii.** Upon completion of enrollment in month Z, we would select a secondary stratified random sample of cases from among the cases that enrolled between month 18 and month Z. The selection probability would be:

$$(2,000 - \text{the number of research enrollees selected into the primary sample}) \\ / (\text{the number of research enrollees since month 18})$$

- **Step iv.** Same as Step iv, above.

Under this scenario, the probability of selection into the secondary sample might differ from that for the primary sample. This would be the case if the actual total number of research enrollees were to differ from the month 18 estimate of what that number would be. If the actual number were to exceed the estimated number, then the probability of selection into the secondary sample would be smaller than the probability of selection into the primary sample. And if the actual number were to fall short of the estimated number, then the probability of selection into the secondary sample would be larger than the probability of selection into the primary sample. In either case, there would be one sampling weight for cases in the primary sample and a different sampling weight for cases in the secondary sample.

### C. Implications for the Impact Analysis

The sampling procedures outlined in Sections A and B have implications for the analysis of the impacts of the California PROMISE program. Here we discuss those implications, first for the analysis that will be based on the follow-up survey data and then for the analysis that will be based on the administrative data that we will obtain from SSA and other sources.

#### 1. Analysis of Survey Data

Under the second of the two complicating scenarios in Section B (enrollment goal is not met), there would be two different sampling weights for cases in the unified survey sample. The final analysis weights would be calculated by taking the product of the sampling weights and the survey nonresponse weights. Having two different sampling weights for cases in the unified sample would likely result in a larger design effect (and more loss of power to detect impacts) due to unequal weighting than would be the case with the nonresponse weights alone.<sup>5</sup>

#### 2. Analysis of Administrative Data

The additional cost of obtaining and analyzing administrative data on enrolled cases in excess of the number required for the follow-up surveys will be essentially zero. Therefore, we propose to include all youth who enroll in the California evaluation (less the nonresearch cases) in the impact analysis of administrative data. This will increase the power of the analysis to detect impacts on administratively measured outcomes.

---

<sup>5</sup> The size of the design effect due to unequal final analysis weights would depend upon how close the month 18 estimate of the total number of enrollees is to the actual number.

### III. SURVEY PLAN

We will conduct follow-up surveys of enrollees in the PROMISE evaluation at 18 months and 5 years after random assignment. The surveys will gather data critical to the evaluation's impact analysis. The PROMISE programs will collect youth and parent/guardian contact data, which will facilitate administration of the surveys, just prior to random assignment as part of the consent process. Below, we describe the follow-up surveys, including the data items we will collect, the mode of collection, and the methods we will employ to ensure that the data are of high quality. As specified in our contract with SSA, the focus of our discussion is the 18-month survey, with occasional references to the 5-year survey. A subsequent report will flesh out our plans for the 5-year survey.

#### A. Clearance from OMB and Other Entities

We anticipate receiving OMB approval for the 18-month follow-up survey in September 2015. OMB clearance is good for 36 months and we do not anticipate needing an extension. We base this on three assumptions.

1. Each program will complete enrollment within 18 months of its enrollment starting date and all programs will complete enrollment within 24 months or by March 2016. We anticipate enrollment to begin in January of 2014.
2. Each enrolled youth will have four months to respond to the 18-month survey, meaning that a youth will complete the survey by the end of the 22<sup>nd</sup> month following his or her enrollment in the evaluation. This assumption, together with the previous assumption of a 24-month enrollment period, implies a 28-month survey field period.
3. The process for obtaining OMB approval will not exceed nine months of elapsed time after we submit a draft notice of data collection for publication in the *Federal Register*.

We will submit for approval from the New England institutional review board (IRB) in December 2014, after the survey instruments and supporting materials have been finalized. We expect that the OMB and IRB submissions will occur simultaneously.

To further protect youth from forced disclosure of identifying information, SSA may want to obtain a certificate of confidentiality from the National Institutes of Health.<sup>6</sup> Such a certificate would allow the staff of Mathematica and SSA to refuse to disclose identifying information on PROMISE study enrollees in civil, criminal, administrative, legislative, or other proceedings, whether at the federal, state, or local level. By protecting researchers and institutions from being compelled to disclose information that would identify research subjects, certificates of confidentiality help achieve research objectives and promote participation in studies by helping to ensure confidentiality and privacy for enrollees. Should SSA agree that such a certificate would be beneficial, it would need to be obtained after IRB approval and before enrollment begins. Certificates of confidentiality take

---

<sup>6</sup> Assuming the characteristics of PROMISE participants are likely to be similar to those of former child SSI recipients after age 18, approximately one fifth could be arrested by the five-year follow-up survey. Specifically, based on data from the 2000 National Survey of SSI Children and Families, 22 percent of former child SSI recipients (ages 19 to 23) had been arrested (Wittenburg 2011). These trends are consistent with other reports that indicate 30 to 50 percent of incarcerated youth have disabilities that could qualify them for other services, such as special education services (National Council on Disability 2003).

three months to obtain. The time required to obtain a certificate of confidentiality is incompatible with SSA's goal for enrollment in the PROMISE evaluation to begin by February 2014. Unless otherwise directed by SSA, we will not pursue obtaining a certificate, despite its potential benefits to the survey effort.

Because we anticipate achieving at least an 80 percent response rate on the 18-month survey (as noted in Section III.G, our target response rate is 85 percent) we do not expect to submit a nonresponse bias analysis to OMB. We will, however, use SSA lists and administrative data to assess the extent of differences between evaluation enrollees and nonenrollees at baseline and between survey respondents and nonrespondents at follow-up. We will calculate survey nonresponse weights and determine how well they perform with respect to reducing differences between survey respondents and nonrespondents.

## **B. Instrument Development**

The two follow-up surveys of PROMISE evaluation enrollees will focus on outcomes that might be affected by the demonstration programs and collect information that cannot be obtained readily from administrative data files and other sources. The outcomes will include both intermediate outcomes, such as the receipt of services, as well as longer-term outcomes, such as educational attainment, employment, earnings, and benefit receipt. For the 18-month follow-up only, we will develop two 30-minute survey instruments, one for the youth enrollees, and the other for their parents. Those instruments will be administered by interviewers rather than self-administered. In the remainder of this chapter, we generally use "instruments" (plural) to refer to the youth and parent instruments for the 18-month survey. However, in a few instances we use "instruments" to refer collectively to the various instruments for the 18-month and 5-year surveys.

In developing the 18-month instruments, we will draw on previous surveys of youth with disabilities and their parents, including: The Youth Transition Demonstration (YTD) evaluation, the National Survey of SSI Children and Families, the National Health Interview Survey (NHIS), and the National Longitudinal Transition Study (NLTS). When our research needs are not met by existing items from these surveys, we will craft and cognitively test new items. Further, we will be guided by the work of Dr. Erik Carter of Vanderbilt University and Dr. Karrie Shogren of the University of Kansas. Dr. Carter's work on the roles that student, family, and schools play in determining postsecondary school employment (Carter, Austin, and Trainor 2011) will inform the selection of parental expectation measures, measures of the youth's social skills, self-care, and participation in household responsibilities. Dr. Shogren's structural equation modeling to compare the different self-determination scales (Shogren et al. 2008), and her work on the individual and ecological predictors of self-determination will be of critical importance in evaluating how PROMISE services educate, support, and empower youth (Shogren et al. 2007).

Table III.1 provides a list of domains and topics for the 18-month instruments, roughly in the order that the items will be covered during the interviews. With the exception of service receipt, most of the youth items will be repeated in the 5-year survey. Social Security Numbers, which would provide a mechanism to collect and link administrative data for enrollees, are not included in the domains of interest. These data will be captured during enrollment only as part of the consent process and only for the youth enrollee and his or her parent or guardian. We do not plan to capture these data for additional household members during the 18-month interview because of the complexity involved with making contact with and securing participation of all household members. Further, there are no plans to duplicate any of the topics covered in the 18-month or 5-year surveys with administrative data.

**Table III.1. Youth and Parent/Guardian Instruments for 18-Month Survey: Domains and Measures of Interest**

Domains	Measures
<b>Education</b>	
Secondary education	School enrollment status; type of school attended; intensity of educational activity; 504/ IEP status; grade completion; high school completion; type of diploma; receipt of a General Educational Development credential
Postsecondary education	Postsecondary school enrollment type (degree or certificate program) and completion, by type of institution
<b>Employment Credentials</b>	
Parents' or guardian's education	Secondary school completion (diploma, GED); any postsecondary education; any postsecondary degree, certificate, or license; type of highest degree, certificate or license achieved
Youth's work-based experience	Job shadowing, apprenticeship/internship; participation in skills training, by type (basic skills training, computer classes, problem solving training, and social skills training) and overall work-based experience
<b>Employment</b>	
Youth's employment experience	Employment in paid and unpaid jobs; hours of work; earnings; employment status at the time of survey
Parents' or guardian's employment and earnings	Each parent or guardian's employment and tenure in paid jobs; hours of work; earnings; employment in jobs with fringe benefits
<b>Service Receipt</b>	
Transition services	Receipt of transition services, by type (education, employment, benefits counseling, financial literacy, other non-employment, case management) and overall receipt of transition services; extent of services used; unmet service needs; type of service providers used
Parent/guardian training and information	Receipt of family support services, by type (outreach, training, employment, information) and overall parent/guardian training and information; extent of services used; unmet service needs; type of service providers used
<b>Health</b>	
Health status	Self-assessment of health status; functional limitations
Health insurance	Any, private and public health insurance coverage
<b>Self-Determination and Expectations</b>	
Self-determination	Index of self-determination; sub-indices of autonomy, self-regulation, psychological empowerment, and self-realization
Expectations	Youth's expectations about future education and employment; parent's expectations about youth's performance of household chores; parent's or guardian's expectations about youth's future education, employment, and independence; youth's perceived barriers to work
<b>Risky Behavior</b>	
Contact with the justice system	Ever convicted or plead guilty to a charge; type of charge (violent, property, drug-related, or other crimes); currently incarcerated (in jail, prison, or detention home); currently on probation or parole
Substance abuse	Smoking, drug abuse; alcohol abuse
Teen parenthood	Became a teen parent
School Discipline	Detentions, suspensions for youth during current academic year
<b>Individual and Family Well-Being</b>	
Income	Parent's income; youth income; household income
Program participation	Participation and benefits in SSA disability programs; participation in other public- assistance programs; connection to adult services
Living arrangement	Lives alone or with friends, with family, in group home or other institution; married or cohabiting

The instruments will be designed to accommodate a wide range of disabilities. We will build in breaks in case a youth's disability causes stamina limitations. Questions will be worded as simply as possible to be accessible to those with mild cognitive disabilities. While we cannot design instruments that will address every possible disability that we may encounter, these basic design characteristics will enable us to interview most youth in the study without the use of proxies.<sup>7</sup> We will, however, design proxy wording for circumstances in which a youth cannot complete an interview independently. The instruments will contain items specific to the youths' ages, disabilities, and to the PROMISE interventions tested. Following best practice, the instruments will begin with easy-to-answer, non-sensitive items and continue with harder-to-answer, more sensitive items. They will end with a section that collects contact information that will facilitate reaching the evaluation enrollees in the future. Because high item-response rates will be as important as high unit-response rates, we will designate those questions that will be most critical for the impact analysis. An interview will not be deemed complete until all of them have been answered. To the extent feasible, we will place the critical items towards the beginning of the instruments to avoid having missing data on those items for respondents who cannot or will not finish an interview.

Once the instruments have been designed, tested, approved by the contracting officer's representative (COR), and deemed to be in near final state, we will translate them into Spanish.<sup>8</sup> We will employ a team-based approach to the translation process. Our team will consist of a group of translators with different talents and functions to ensure the mix of skills and expertise needed to produce an optimal Spanish translation. Each stage of the team translation process builds on previous steps and uses the documentation required for the previous step to inform the next. In addition, each phase of translation engages the appropriate personnel for that particular activity (that is, multiple translators, reviewers, adjudicators, pretest interviewers, and CATI testers). One or more adjudicators will decide when the translation is ready for fielding.

Early in the evaluation, we will share the topics for the instruments (Table III.1) with the PROMISE grantees, which may need that information for their IRBs or other human subjects review committee applications. Later, we will share the actual instruments. Any feedback from these review processes will be filtered back to the instrument design team by our evaluation site leads.

### **C. Instrument Pretesting**

After incorporating feedback from the COR on draft versions of the instruments, we will conduct pretest interviews with up to nine youth and nine parents to gauge respondent burden, assess the question skip logic, and gather feedback from the respondents regarding their understanding of the questions. Potential pretest respondents include youth who are nonresearch cases or who otherwise meet the eligibility criteria for PROMISE but are not part of the experimental sample.<sup>9</sup>

We will compare the responses of youth and parents for consistency and conduct at least one pretest interview with a proxy respondent for a youth. Interviewers will administer the entire instruments to collect complete data on administration time and respondent reactions. Then we will

---

<sup>7</sup> Most youth with disabilities can provide more accurate data on their school and work activities than can potential proxy respondents. If necessary, parents could assist youth rather than completing the entire interview for them.

<sup>8</sup> In Section III.F, we describe how we plan to administer the survey instruments to youth and parents who speak languages other than English and Spanish.

<sup>9</sup> Nonresearch cases will be eligible youth who apply to a PROMISE program and are nonrandomly assigned to the same treatment or control status as their siblings who applied and were randomly assigned before them.

ask the respondents to tell us about their interview experiences overall and with respect to specific questions. Highly trained staff will conduct cognitive testing of new items in-person to observe body language and non-verbal communication. If possible, pretest interviewing and cognitive testing will take place in the Baltimore-Washington area to allow the COR and other interested parties to attend. Participants in the pretest interviewing and cognitive testing will be paid \$20.

We will submit plans for pretest interviewing and cognitive testing of the hard-copy survey instruments to the COR, as well as a memo report on the findings from those activities. The report will provide both individual and summary-level statistics regarding burden for specific groups and for particular sections of the instruments. It will include a discussion of any difficulties with the data collection process, internal consistency of the responses, and our recommendations related to: item sequencing, modifications to specific items, or definitions and standardized probes to be added. Based on these findings and subsequent revisions, additional testing may be necessary. Therefore, we propose to include five cases from each of the two respondent groups at the onset, leaving four cases in reserve. This would be especially important if we were to find that the administrative burden exceeds the intended 30 minutes for administration. We will keep SSA informed during the testing phase if any unforeseen circumstances surface, such as the instrument administration time being too long, certain questions failing to work as intended, or inconsistency in youth and parent responses.

#### **D. CATI/CAPI Programming and Testing**

Once the instruments have been developed, pretested, approved by SSA, and translated into Spanish, they will be programmed into Blaise<sup>®</sup> software and thoroughly tested.<sup>10</sup> This multi-mode platform enables interviews to be conducted via telephone in Mathematica's Survey Operations Center (SOC) in New Jersey using CATI, or in person by field interviewers using a tablet device connecting to web-based CAPI versions of the same instruments. Blaise<sup>®</sup> multi-modal software is designed to ensure consistency in the deployment of both versions of the instruments. It has all of the advantages found in CATI/CAPI administration, including: range and logic checks, pre-programmed skips based on item responses, dynamic text fills, and more. To help facilitate high quality design, Mathematica has created a standard template to use when creating Blaise<sup>®</sup> versions of survey instruments. Mathematica's survey staff will review the template as applied to the PROMISE instruments to ensure each item contains all the necessary specifications that our systems analysts will need to program the instrument as intended. Further, these same specifications will be used for testing the instruments (once programmed) and for reviewing the resultant test data to ensure that all appropriate logical paths through the instruments are being followed.

The testing plan will include basic testing, such as ensuring the text on the computer screen matches the text in the specifications document (including fills for particular respondents), and more advanced features, such as practice case scenarios designed to ensure testers have passed through the full range of possible paths through the instruments. This includes testing to ensure proxy-responses populate only items designed for proxy administration and that questions intended only for youth of certain ages are working as intended. These testing scenarios will later be used during interviewer training. SSA staff will be able to access the instruments electronically and test them directly, if they wish. Results of this testing of the Blaise<sup>®</sup> versions of the instruments will be submitted to SSA in a memo report.

---

<sup>10</sup> Blaise<sup>®</sup> is a computer-assisted interviewing system and survey processing tool developed by Statistics Netherlands for the Windows<sup>®</sup> operating system and the Internet.

Blaise® can toggle between English and Spanish during an interview. While it is necessary to check that the Spanish language on the screen is accurate, it is not necessary to test skip logic and consistency checks in both languages, as both languages are supported by the same underlying system logic. Finally, in addition to system testing conducted prior to the launch of data collection, we will review data from the first 50 interviews as a beta test. This test will include a detailed review of the response frequencies for logic and consistency and to determine if any closed-ended categories can be formulated from verbatim text.

## E. Interviewer Training

A critical underpinning of any high quality survey data collection effort is identifying and training a team of skilled interviewers to administer the survey. It is also critical to ensure that enough of these staff will be available to adequately cover the number of interviews that are likely to be conducted at any one time. The telephone interviewing staff for the PROMISE evaluation will be work out of our New Jersey SOC. The number of interviewers trained to conduct youth or parent interviews will fluctuate across the survey period, in alignment with the volume of available sample to contact, which will reflect the evaluation's enrollment rate 18 months earlier. We expect there to be a minimum of 10 telephone interviewers working in any given week to ensure coverage across all shifts and each day of the week. We expect to have up to two locally-based field interviewers per site for the five single-state evaluation sites and up to six, dispersed by regions of clustered sample, for the ASPIRE site. We anticipate that only a small number of cases will need field interviewer attention at any time. This staffing model is based on our YTD survey experience and assumes the majority of sample members will be able to complete the interview by phone, with appropriate supports and assistive technologies. Field efforts will focus on locating individuals we are unable to contact by telephone and interviewing those who cannot respond by telephone.

After the 18-month survey instruments have been programmed, tested, and cleared by OMB, we will proceed with training the data collection team to conduct the youth and parent interviews. The field interviewers will travel to Princeton to train with the telephone interviewers in the SOC. All of the interviewers will have previously completed Mathematica's basic interviewer training prior to attending the PROMISE-specific training. The telephone interviewers will be trained to use the Blaise® CATI system to administer the 18-month youth and parent instruments. They will also be trained to use assistive technologies (e.g., text messaging, voice magnification software, and engagement with relay operators) and to pace their work with respondents who may need to complete interviews over multiple sessions. The field interviewers will be trained to use tablet devices with a web-based interface to manage their assigned samples, track their contacts, and use the Blaise® CAPI system to conduct the PROMISE interviews. During training, they will use the tablet devices when they pair-off with each other to complete practice interviews. The training will take place across three days, with approximately five hours of training each day. Training will occur in discrete modules, as shown in Table III.2. Given our assumption of a 28-month survey period, we anticipate holding at least two supplemental trainings to offset interviewer attrition.

We will prepare an interviewer training manual and provide it to the COR prior to the initial training. The manual will include both PowerPoint slides that the trainers will use in their presentations to the interviewers, as well as a detailed supporting narrative. Staff of SSA and the other federal agencies that are partnering on the PROMISE initiative will be invited to attend the training, either in-person, by telephone, or through video-based conferencing.

All of the trainee interviewers will be assessed continuously during the training, with additional support, attention, and coaching provided to them as needed. Further, at the end of the training, the

**Table III.2. Survey Interviewer Training Modules**

Modules for All Trainees	Modules for Field Staff Only
<ul style="list-style-type: none"> <li>• Study background</li> <li>• Data collection procedures and goals (includes security and confidentiality)</li> <li>• Conducting interviews with persons with disabilities and use of assistive technologies</li> <li>• FAQs and refusal-aversion responses</li> <li>• Conducting the parent and youth interviews (including review of question-by-question specifications)</li> <li>• Round-robin style practice of parent and youth interviews with trainer</li> <li>• Paired practice using the Blaise<sup>®</sup> CATI/CAPI systems</li> <li>• Performance evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• Case delivery and sample management</li> <li>• Interactive exercise on field-specific scenarios for confidentiality and security</li> <li>• Interactive exercise on field-specific strategies for locating and refusal conversion</li> <li>• Using the tablet device for GPS navigation, case management, and interviewing</li> <li>• Use of Mathematica's system for labor and expense reporting</li> </ul>

trainees will be formally evaluated. This will ensure that they: (1) have the knowledge necessary to share the purpose of the study, persuade people to take part, and answer basic questions about the programs and the evaluation; (2) are able to correctly navigate the Blaise<sup>®</sup> CATI/CAPI systems to conduct the interviews; (3) demonstrate understanding of the voluntary nature of participation in the survey by enrollees and their parents; and (4) are able to apply Mathematica's high standards for collecting data by using skills such as probing without introducing bias, reading verbatim and deploying appropriate modulation of their voice, and engaging all sample members in a dignified manner.

## F. Data Collection

The survey data collection efforts will span 28 months, with a rolling release of sample that will mirror the presumed 24 months of study enrollment. The sample cases will be aggregated into cohorts and released by month to simplify the sample management process. Assuming a roughly even pace of enrollment, each cohort will contain approximately 500 cases.<sup>11</sup> We will use Mathematica's sample management system (SMS) to: (1) release eligible cases and ensure they are worked as intended; (2) mail invitation and reminder letters and incentive payments; and (3) track and store sample cases' updated contact information. The interviewing period for each cohort will be four months. Over the full 28-month survey period, Mathematica's data collection managers will use a range of production reports to monitor the data collection and ensure it aligns with production goals, anticipated costs, and to ensure the data collected are of the highest quality. Response rates will be carefully monitored for each site, as well as for different groups of sample within each site (e.g., such as treatment and control groups, age groups, alternate languages, etc.).

The survey process for an individual sample case will begin with an advance notification letter from Mathematica, inviting the youth and a parent to contact us. The letter will offer each of them \$10 gift card for completing their respective 30-minute interview. It will offer an additional incentive of \$10 to those who call Mathematica to complete the interview within 10 days of receiving the letter (\$20 total, conveyed in a single gift card).<sup>12</sup> Mathematica had great success with this strategy on

<sup>11</sup> We realize that enrollment is unlikely to be evenly paced; it probably will be higher at the beginning and end of the enrollment period for each program.

<sup>12</sup> The evaluation's second round of focus group discussions, scheduled for winter 2016, will occur while the 18-month survey is taking place. Participants in the focus groups will receive \$10 gift cards so, in principle, they could receive two gift cards (one for completing the survey and another for participating in a focus group) in the same calendar

*(continued)*



the recent Healthy Indiana Plan Evaluation. By deploying a differential incentive, resources can be targeted to sample cases that otherwise are likely to require intensive efforts to locate, contact, or gain cooperation for interviews. We anticipate that 20 percent of the cases completing the 18-month interview will do so by calling Mathematica's SOC in response to our advance notification letter and follow-up e-mail messages. Mathematica has justified similar differential incentives to OMB. We will send subsequent mailings sent during the remaining weeks of the survey period to all outstanding sample cases to: (1) notify them that an interviewer will be contacting them soon by telephone or in-person, (2) encourage them to participate in the survey, (3) respond to any concerns they may have about the survey and the study, and (4) notify them the survey will be ending soon and that their unique experiences and input is critical to the success of the study. In all of our contacts with the sample cases we will stress that their participation in the survey is voluntary and their benefits will not be affected regardless of whether they participate in it or not.

The target respondent for the parent survey will be the parent or guardian who is "most knowledgeable about the services received by the enrolled youth," mirroring the approach used on the YTD evaluation. This is likely to be the same parent or guardian who helped the youth enroll in PROMISE and signed the enrollment consent form. It is also likely to be the parent or guardian who is most engaged in the youth's receipt of PROMISE services (if the youth is in the treatment group). Because the individual satisfying this description may change over time, we do not plan to target a specific named individual for the parent survey, but we will have access to that information in the RAS for the parent or guardian who signed the enrollment consent form should we need it.

Based on our recent experience conducting the NLTS-2012 survey of transition-aged youth and their parents, we expect to complete the youth and parent interviews in the same call for approximately 40 percent of the sample cases. The Blaise<sup>®</sup> CATI/CAPI system for the PROMISE evaluation will be designed to allow either the youth or the parent interview to be completed first. In addition to ensuring a high overall response rate, we will carefully monitor progress with the youth and parent subsamples to ensure completion of both the youth and parent interviews for as many cases as possible. We anticipate that the majority of interviews (80 percent) will be completed via CATI in our New Jersey SOC. The SOC is open seven days a week and can accept call-ins at any time it is open. We will make outbound calls from 9 a.m. to 9 p.m. on weekdays, from 10 a.m. to 5 p.m. on Saturdays, and from 12 p.m. to 9 p.m. on Sundays (sample members' time).

Some sample cases will be extremely difficult to locate or contact, or will require an in-person interview due to a disabling condition. Field staff will use CAPI to completed interviews with such cases. We anticipate completing approximately 20 percent of all interviews via CAPI. Field follow-up will occur at the end of the interviewing period for each monthly cohort of sample cases, with three weeks of field work following nine weeks of work in the SOC. Once a case is sent to the field, it will be retired from outbound calls from the SOC. Field staff will conduct interviews using tablet computers, either in the sample member's home or at an alternate location agreed to in advance. If, for a given sample case, the parent interview has not yet been completed at the time of the youth interview, or vice-versa, the field interviewer will capitalize on the rapport established with the

---

*(continued)*

quarter or in two consecutive months without regard for the quarter. If that were to happen, the amounts could be considered countable income under SSI rules. To eliminate that possibility, we will avoid recruiting into a focus group any sample member who has completed or is scheduled to complete the 18-month survey in the same quarter as the month in which the focus group will occur. Further, we will avoid recruiting into a focus group any sample member for whom the focus group and the survey interview would be in consecutive months.

respondent to solicit information and assistance in locating and contacting the other member of the case.

Interviews will be conducted primarily in English and Spanish, with a Spanish version of the instrument available in the CATI system. We anticipate completing approximately 10 percent of the 18-month interviews in Spanish. All of our Spanish-speaking interviewers will have completed professional certification to ensure they are qualified to interview in Spanish. We propose to ascertain a respondent's preferred language at the earliest point in the interview process. Upon learning that a sample member prefers the Spanish language, we will assign the case to a Spanish-speaking interviewer. That may entail handing off an active interview to an available Spanish-speaking interviewer, or making arrangements for the interview to be completed in Spanish at a later time.

Some sites may enroll youth and parents or guardians who speak neither English nor Spanish. Because we seek to deploy a responsive design for the survey administration, we plan to gauge the need for non-English and non-Spanish speaking interviewers based on the sites' feedback on the ways in which they are conducting outreach, gathering consent, and providing services to non-English and non-Spanish speaking populations. If these activities are not being conducted in alternate languages, then we would anticipate not conducting the survey in alternate languages. However, we will maintain flexibility to conduct interviews in alternate languages if we discover that it is necessary, as discussed in the following paragraph.

Should additional languages be necessary, we will hire and train interviewers who speak those languages prior to the launch of the 18-month survey. Mathematica has approximately 65 bilingual interviewers and supervisors on staff who could complete interviews in other languages using ad-hoc translation of questions when respondents' limited skills in English or Spanish would preclude them from participating in the 18-month survey. If a study enrollee or parent does not speak English or Spanish, we will first turn to our cadre of certified bilingual interviewers to conduct the interview. Mathematica has staff who have been certified to conduct interviews in Mandarin, Cantonese, Korean, Vietnamese, Farsi, Hindi, Tagalog, Japanese, Hmong, and Russian, among other languages. If we do not have a particular language capacity in-house, we will determine if there is an English-speaking individual in the sample member's household who can assist the youth or parent in completing the interview. We may engage outside translation service providers to translate a survey instrument into another (non-Spanish) language if that is the only way to avoid a situation in which multiple cases that cannot be interviewed. However, we may decide to accept very small numbers of non-interviews to avoid prohibitively expensive translation costs associated with such service providers. To ensure as much standardization as possible in how questions are asked and terms are communicated in the non-translated languages, all of the bilingual interviewers will be trained to conduct the 18-month survey in English. When conducting interviews in languages other than English or Spanish, these interviewers will interpret from and code the survey responses directly into the English version of the CATI instrument. This approach will ensure that all interviews are subject to the same rigorous data quality checks regardless of the language of administration.

All interviewers will receive regular, ongoing feedback on their work during the survey period. This will include monitoring their performance in engaging sample members and conducting the interviews, as well as providing them with statistics on their productivity relative to the entire team of interviewers (such as attendance, rates of refusal, and hours per completed case). Mathematica's SOC managers, many of whom are highly skilled former interviewers, will provide this feedback to the telephone interviewers. Field interviewers will also meet with their managers to receive ongoing

feedback on their production statistics and to debrief on challenging cases. Additionally, a portion of the field interviews will be validated. The validation process will occur in several formats: (1) SOC staff will contact a random subset of respondents who completed field interviews and confirm that the interviews took place and were conducted in a professional manner; (2) the CAPI system will generate a report on the length of interview administration, flagging outlier cases; and (3) the CAPI system will be programmed to record (with the respondents' permission) random segments of interviews. Finally, managerial review of frequency distributions of critical data elements and open-ended responses may identify field interviewers who are in need of retraining.

Our review of the winning applications for PROMISE cooperative agreements identified some unique features of the ASPIRE program that may necessitate special survey strategies for sub-populations of enrollees. These features and the proposed strategies are as follows:

- Enrollees in the ASPIRE program will include Native Americans, who may reside on reservations. Native Americans are considered a hard-to-survey population for several reasons, including: (1) mistrust of outside researchers, who may be perceived as judgmental; (2) concerns about how the survey data will be used; (3) high concentrations of poverty and other household complexities; and (4) reduced access to telephone service due to limited household resources or cultural norms (Basto, Warson, and Barbor 2012; Brugge and Missaghian 2006; Getrich et al. 2013; Gilder et al. 2013; Hodge et al. 2010; Israel et al. 2008; Jones 2008; Ver Ploeg, Moffitt, and Citro 2002). To address these challenges, we will collaborate with the program implementation team and build upon the positive outreach they will have conducted with tribal leaders. We will seek to obtain endorsements for the survey by the tribal leaders and, having done so, will work with them to determine how best to conduct outreach to reservation-based sample cases.
- The ASPIRE program will serve not only rural, but also “frontier” populations (geographic areas with extremely low population density), for which exceptionally long distances may exist between households. For these sample cases, we will attempt to complete the 18-month interview by telephone, using whatever accommodations may be necessary. When necessary and feasible, we will use alternative means of communication, such as Skype, to connect with sample cases using a video-based computer exchange. If cases are unreachable by telephone and have no computer access, we will determine whether there exists a sufficient concentration of them to make efficient use of field interviewers. We will work with ASPIRE program staff to proactively respond to this challenge by aligning our hiring of field interviewers with areas where concentrations of sample cases are anticipated.

### **G. Minimizing Attrition and Maximizing Response Rates**

The survey samples for the PROMISE evaluation are expected to include 2,000 youth per grantees (site), of whom half will be randomly assigned to a treatment group and half to a control group. There are six grantees, so there will be 12,000 youth in the combined survey sample. For each sample case, we will seek to interview the enrolled youth and (at 18 months only) one parent or guardian. Mathematica's contract with SSA for the PROMISE evaluation specifies that we will complete interviews with 80 percent of the sample cases at 18 months and also at 5 years after random assignment. To allow for attrition of sample cases between the two surveys, we are targeting a response rate of 85 percent for the 18-month survey. This translates to obtaining responses from 1,700 sample cases per site, for a total of 10,200 18-month interviews. Five years after random assignment we will obtain responses from 1,600 cases per site, or 9,600 in total. These targets are

effectively doubled when one considers that we will be interviewing both enrollees and their parents. In addition to achieving these challenging response rates, we must also ensure that: (1) response rates do not vary by more than 5 percentage points between the treatment and control groups for a given site and (2) questions on the instruments that are critical to the impacts analysis are answered in order for an interview to be classified as complete.

We anticipate that one of the biggest challenges to achieving high survey response rates will be out-of-date contact information on sample cases due to high mobility of the low-income target population. The physical addresses of sample cases could change between their enrollment in the study and the 18-month survey and also between the 18-month survey and the 5-year survey. Our proactive approach to addressing this challenge includes the following strategies:

- We will collect multiple types of contact information for a sample case—land line telephone number, cell phone number, e-mail address, and physical address—at enrollment (though the grantee consent forms) and again in the 18-month interview. In general, cell phone numbers and e-mail addresses will not change when sample members move from one physical address to another.
- We will collect contact information for one or more individuals who would be able to assist us in contacting a sample case at a later date. It would be desirable to collect this information prior to random assignment; however, that appears to be infeasible due to restrictions on the content of the grantee consent forms. We will collect this information during the 18-month interview for use in contacting a case for the 5-year survey.
- When completing an interview with a youth, we will ask to complete an interview with the parent or guardian, and vice-versa, during the same telephone call or in-person visit. When that is not possible, we will ask the responding party to assist us in contacting the party who has not yet responded.
- We will use interim contacts at nine months after enrollment and one and two years after the 18-month interview to keep in touch with mobile sample members. This strategy will include the use of text messages, post cards, letters, and (as expanded on in the next bullet) social media. It will expand our opportunities to obtain updated contact information for sample cases.
- We will use social media, such as Facebook, to engage youth enrollees between interviews and also to contact them for their interviews. We anticipate using the grantee consent forms to obtain permission from the enrollees for us to engage with them on this platform. While telephone numbers, addresses, and e-mail addresses may fluctuate over time, a person's Facebook name usually remains constant. Mathematica pioneered the use of this tool for locating and engaging with young adult sample members (Matulewicz et al. 2012a; Mook et al. 2013).
- Our offer of a \$10 supplemental incentive (described in Section III.F) will motivate some sample cases to call our SOC to complete their interviews within ten days of receiving their advance notification letters. This strategy has proven to be effective on previous Mathematica surveys in generating call-ins from sample members for whom no working telephone number could be found through extensive locating efforts.
- Our locating efforts will be informed by efficient deployment of web-based search engines such as Accurint and National Change of Address (NCOA).

- Twice a year, SSA will provide us with updated contact information on sample cases from its automated records. We will copy the updated information into our Blaise<sup>®</sup> system.
- To minimize nonresponse bias due to the inability of sample members with significant hearing impairments to participate in telephone interviews, we propose using Instant Messenger (IM) with secure applications that we will make available to the sample members. This technology is highly accessible and presents significantly greater opportunities for dynamic engagement than more antiquated technologies such as teletype (TTY). Using IM, an interviewer copies and pastes questions from the CATI survey instrument and toggles between IM and CATI to input the responses and move to the next question. Mathematica developed expertise in deploying this modality on the NLTS 2012 survey (Matulewicz et al. 2012b).
- SSA plans to exclude SSI recipients who are living in institutions from the lists of PROMISE-eligible youth that it will provide to the grantees. Notwithstanding this exclusion, we may find enrolled youth who are living in institutions the time of the follow-up survey. When such a case arises, we will contact the manager of the facility, describe the study, and explain how we received parental consent to contact the youth. We will send the manager a cover letter accompanied by a redacted copy of the signed evaluation consent form<sup>13</sup> (which we will request from the PROMISE program on an as-needed basis). We will follow up to ensure that these materials were received and to work with the facility staff to contact and interview the youth.

## H. Coordination with Grantee Surveys for Formative Evaluations

Based on our review of the winning applications for PROMISE cooperative agreements, we have identified two grantees (New York and the ASPIRE consortium) that have proposed to incorporate surveys of youth enrollees into their own formative evaluations. While the grantee surveys are likely to capture valuable information, they present substantial issues for the national evaluation. Overlap of the samples for the grantees surveys Mathematica's surveys for the PROMISE national evaluation surveys could lead to increased response burden on those youth and parents who are approached by both entities. Those individuals could broadly confuse the roles of the grantees and Mathematica, or feel that they are being asked to provide excessive and duplicative feedback on their experiences in PROMISE. Of even greater concern are those youth who, as part of their total experience of being a person with a disability, may feel that they have been singled out because they didn't do well on one survey so are being asked to repeat the exercise. These issues have the potential to negatively impact response rates to both data collection efforts.

We question whether it will be necessary for any grantees to survey PROMISE enrollees in order to satisfy their reporting requirements to the Department of Education. However, given their teaming arrangements, it may be difficult for the New York and ASPIRE grantees to drop the analysis of survey data from their research and reporting plans. In light of this, we propose offering those grantees the opportunity to collaborate with us to design a module of questions that would be added to the national evaluation's 18-month survey specifically for their respective sites. Further, they could select a subset of variables from the national survey that they would like to use in their

---

<sup>13</sup> Because Social Security Numbers for youth and their parents or guardians are not necessary for documenting informed consent for the managers of institutional homes for youth with disabilities, we will request that the PROMISE programs redact this information from copies of consent forms that they may provide to Mathematica.

evaluations (in addition to the variables from their modules). Guided by the programming logic imbedded in the Blaise® CATI/CAPI system, Mathematica’s survey interviewers would ask the site-specific questions only of the sample members in a designated site. Mathematica would deliver the site-specific data files to the grantees for their analysis.

Mathematica would work with any grantee that accepts our offer of a site-specific survey module to develop questions that meet the grantee’s needs. We would use questions that have been tested in previous surveys when possible and develop new questions as needed. Following the drafting of a site-specific module, we would test it by telephone on up to nine individuals prior to OMB review.<sup>14</sup> We would use the testing to ensure that the respondents understand the intent of the questions and to determine the additional burden of the module. We anticipate that any site-specific module would appear at or near the end of the survey instrument in order to minimize the potential for the site-specific questions to undermine the core survey.

SSA would not bear the cost for the development and deployment of any site-specific survey modules. The grantees would be expected to compensate Mathematica for the costs associated with developing, testing, and administering a longer survey instrument and for processing and delivering the data to the grantees. However, we believe this approach would result in substantial savings for the grantees, as the majority of survey costs are associated with contacting sample members, not interviewing them. The contact costs would be incurred only by Mathematica and would not be passed on to the grantees. Notwithstanding this cost advantage for the grantees, we suspect that they will not accept this offer. Another potential barrier to implementing this plan is that SSA may not legally be able to authorize Mathematica to provide elements of the core raw data to the grantees. If either of these barriers arises and cannot be resolved, then we will coordinate with the grantees to minimize concurrent survey activities.

## I. Imputation Methods

In the impact analysis, we will deal with missing data on outcome measures from the 18-month and 5-year surveys (arising due to item nonresponse) using either of two approaches. Our basic approach will be to exclude cases with missing information on outcome measures from the impact analysis of those respective outcomes. However, for some outcomes, the elimination of cases with missing information could introduce bias. This could occur when an outcome is known to have a specific value or range of values conditional on the value of another outcome. Consider the following examples based on a sequence of two survey questions: (1) “Have you worked for pay in the last year?” and (2) How much did you earn during the year?”

- Cases with “no” values for Question 1 would not have been asked Question 2 so, in principle, there would be missing data on earnings for these cases. However, because cases that did not work for pay could not have had any earnings, the analyst would assign those cases a value of zero for earnings.
- Cases with “yes” values for Question 1 would have been asked Question 2 and some of them may have been unable to report their earnings, resulting in missing data on earnings for those cases. Those cases did work for pay, so it is virtually certain that they

---

<sup>14</sup> For testing purposes, we would expect to administer just the module, not the core survey instrument, to up to nine individuals in a given site. However, if it were to be the case that those same individuals would also be the basis for testing the core instrument, then we would administer both the core instrument and the module to them.

had positive earnings, but because those earnings are unknown, a naive analyst might drop those cases. Doing so would bias the final measure of earnings toward zero because only cases known to have positive earnings would be at risk of being dropped.

To reduce the risk of bias in outcome measures that could result from the exclusion of cases with conditionally missing data, such as illustrated in the above example, we will use a multiple imputation procedure (Puma et al. 2009). This procedure will assign such cases credible values for conditionally missing outcomes and allow us to retain the cases in the analysis, thus avoiding potential bias.

## **J. Preparing Weights, Files, and Documentation**

Mathematica researchers, SSA, and the public will need clean, well-documented data files for the 18-month survey that satisfy SSA's Disclosure Review Board (DRB) guidelines. To meet this need, we will perform data processing activities with as much care as we will take in collecting the data. We will clean and edit the data to ensure consistency and completeness. The file will contain weights to account for survey nonresponse by sample members and possible differential sampling rates in the California site (see Section II.B).

Mathematica will provide SSA with a restricted access file (RAF) for the 18-month survey data that will contain identifiers to allow internal, security-cleared SSA researchers to conduct future analyses. We will also prepare a public use file (PUF) and documentation. Preparing microdata files for public dissemination is a complex process that involves balancing the potential consequences of disclosure of information with its availability from other sources, its analytic value, assurances regarding confidentiality that may have been given to survey respondents or program participants, and legal consequences of disclosure. We anticipate that preparation of the PUF will be an iterative process. Variables that threaten disclosure of individuals (geographic identifiers, income levels, contextual variables, verbatim responses, created variables, and subpopulation identifiers) will be recoded or removed. We will then turn our attention to an assessment of the incidence of readily observable respondent attributes. These attributes, or keys, are characteristics such as gender, race/ethnicity, and age that are generally known to potential data intruders that could potentially be used to re-identify a survey respondent—thus compromising the confidentiality of the information provided. We will prepare a list of attribute keys and identify combinations of these keys that pose a disclosure risk. We then will suggest procedures for altering the data to minimize the risk. Many techniques can be used to reduce the likelihood of data disclosure for cases with rare combinations of attribute keys, including top-coding or grouping responses; blanking, imputing, or suppressing values; data modification, blurring or scrambling; data swapping; and controlled, fixed, or random rounding.

The PUF and RAF for the 18-month survey data will each be accompanied by a codebook and data dictionary containing: (1) a general description of the data file, (2) a description of each data field in the file, including the data field name, definition, and field width, (3) the n, mean, standard deviation, minimum and maximum value for numeric data fields, (4) the n, category label, frequency count, and frequency percentage for categorical data fields, and (5) information related to missing data such as data indicators for the reason for missing data. We will also provide computer programs to convert the flat files into Statistical Analysis System (SAS) and Stata formats, including a label for each data field that will provide an adequate description of the field.

## REFERENCES

- Basto, E., E. Warson, and S. Barbour. "Exploring American Indian Adolescents' Needs Through a Community-Driven Study." *The Arts in Psychotherapy*, vol. 39, 2012, pp. 134-142.
- Brugge, D, and M. Missaghian. "Protecting the Navajo People Through Tribal Regulation of Research." *Science and Engineering Ethics*, vol. 12, 2006, pp. 491-507.
- Carter, E., D. Austin, and A. Trainor. "Factors Associated with the Early Work Experiences of Adolescents with Severe Disabilities." *Intellectual and Developmental Disabilities*, vol. 49, 2011, pp. 233-247.
- Getrich, C., A. Sussman, K. Campbell-Voytal, J. Tsoh, R. Williams, A. Brown, M. Potter, W. Spears, N. Weller, J. Pascoe, K. Schwartz, and A. Neale. "Cultivating a Cycle of Trust with Diverse Communities in Practice-Based Research: A Report from PRIME Net." *Annals of Family Medicine*, vol. 11, 2013, pp. 550-558.
- Gilder, D., J. Luna, J. Roberts, D. Calac, J. Grube, R. Moore, C. Ehlers. "Usefulness of a Survey on Underage Drinking in a Rural American Indian Community Health Clinic." *American Indian and Alaska Native Mental Health Research*, vol. 20(2), 2013, pp. 1-26.
- Hodge, F., M. Cadogan, T. Itty, B. Cardoza, and S. Maliski. "Learning How to Ask: Reflections on Engaging American Indian Research Participants." *American Indian Culture and Research Journal*, 2010, vol. 34, 2010, pp. 77-90.
- Israel, B, A. Shulz, E. Parker, A. Becker, A. Allen, and J. Guzman. "Critical Issues in Developing and Following CBPR Principals." In M. Minkler and N. Wallerston (eds.), *Community Based Participatory Research for Health: From Process to Outcomes (second edition)*. San Francisco: Jossey-Bass, 2008, pp. 47-66.
- Jones, L. "The Distinctive Characteristics and Needs of Domestic Violence Victims in a Native American Community." *Journal of Family Violence*, vol. 23, 2008, pp. 113-118.
- Matulewicz, H., S. Boraas, D. Friend, A. Ciemnecki, and A. DeGraff. "Respondent Permission to Contact or Locate on Facebook: Findings from the National Longitudinal Transition Study 2012." Paper presented at the American Association for Public Opinion Research Annual Meeting, Orlando, FL, 2012a.
- Matulewicz, H., D. J. Friend, A. Ciemnecki, and A. DeGraff. "Technologies Used to Interview Youth Who Are Deaf or Have Hearing Impairments: Results from the National Longitudinal Transition Study 2012." Paper presented at the American Association for Public Opinion Research Annual Meeting, Orlando, FL, 2012b.
- Mook, K., S. Harrington, and A. Skaff. "Capabilities and Considerations for Using Facebook in Survey Research." Paper presented at the American Association for Public Opinion Research Annual Meeting, Boston, MA, 2013.
- National Council on Disability. "Addressing the Needs of Youth with Disabilities in the Juvenile Justice System: The Current Status of Evidence-Based Research." 2003. Available at <http://www.ncd.gov/newsroom/publications/2003/juvenile.htm>. Accessed July 22, 2013.



- Puma, M., R. Olson, S. Bell, and C. Price. "What to Do When Data Are Missing in Group Randomized Controlled Trials (NCEE 2009-0049)." Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, October 2009.
- Shogren, K., M. Wehmeyer, S. Palmer, J. Soukup, T. Little, N. Garner, and M. Lawrence. "Examining Individual and Ecological Predictors of the Self-Determination of Students with Disabilities." *Exceptional Children*, vol. 73, no. 4, 2007, pp. 488–509.
- Shogren, K., M. Wehmeyer, S. Palmer, J. Soukup, T. Little, N. Garner, and M. Lawrence. "Understanding the Construct of Self-Determination: Examining the Relationship Between the Arc's Self-Determination Scale and the American Institutes for Research Self-Determination Scale." *Assessment for Effective Intervention*, vol. 33, 2008, pp. 94–107.
- Ver Ploeg, M., R. Moffitt, and C. Citro. *Studies of Welfare Populations: Data Collection and Research Issues*. Committee on National Statistics, Division of Behavioral and Social Sciences and Education, National Research Council. Washington, DC: National Academy Press, 2002.
- Wittenburg, D. Testimony for Hearing on Supplemental Security Income Benefits for Children." Presented at the Subcommittee on Human Resources Committee on Ways and Means U.S. House of Representatives. Washington, DC: Mathematica Policy Research, 2011.

**MATHEMATICA**  
**Policy Research**

[www.mathematica-mpr.com](http://www.mathematica-mpr.com)

Improving public well-being by conducting high quality, objective research and surveys

Princeton, NJ ■ Ann Arbor, MI ■ Cambridge, MA ■ Chicago, IL ■ Oakland, CA ■ Washington, DC

Mathematica® is a registered trademark of Mathematica Policy Research