



ARF Online Research Quality Council

Foundations of Quality Project **Overview to Support RFPs**

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Introduction

This document provides an overview of the research design for an industry-wide research-on-research project being commissioned by the Steering Committee of The ARF's Online Research Quality Council.

An overview of the research design was presented at the February 2008 ARF Online Research Quality Council meeting and at the March 2008 ARF annual conference. Since that time, the research design has been broken into two separate parts that will be discussed below.

The research was designed by the Define Quality subcommittee of the ARF ORQC, which is co-chaired by Tom Evans, ESPN; Efrain Ribeiro, IPSOS Interactive; and, Renee Smith, Harris Interactive. Members of the Define Quality subcommittee include:

Name	Title	Company
Amanda Abry	Senior Interactive Research Manager	Meredith Corporation
Lew Alpert	CEO	Chilmark Digital
Risa Becker	VP, Research Operations	Mediamark Research Inc.
Chad Bohnert	VP, Marketing and e-Commerce	Zogby International
Don Bruzzone	President	Bruzzone Research
Jennifer Cripe	Sr. Res. Analyst, Consumer Insights	Fox Interactive Media
Mike Donatello	Director of Research	USA Today
Thomas C. Evans	VP, Audio Research and Special Projects	ESPN
Dan Fitzgerald	VP, Americas and Global Accounts	GMI
Justin Fromm	Sales and Strategy Research	ABC Television Network
Ellen Jacobs	Sr. Analyst, Strategy and Evaluation	Salt River Project
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Steve Schwartz	Group Res. Manager, Quality and Vendor Mgmt.	Microsoft
Paul Shellenberg	Director of Sales	Bruzzone Research
Renee Smith	VP, Panel Quality	Harris Interactive
Chris Stevens	Chief Research Officer	Lightspeed Research
Jeff Stewart	Director, Panel Management & Development	MarketTools Inc.
Andrew Susman	CEO	Studio One Networks
Bruce Tedesco	Chief Research Officer	OTX
Gordon Wyner	Executive Vice President	Millward Brown

Background

The ARF ORQC was formed in August 2007 with the goals of being client- and knowledge-driven; that is, the goal of the ARF ORQC is to provide knowledge-driven answers to client questions about the quality of online research. The ORQC leadership consists of a supplier Steering Committee (SC) and a Client Advisory Board (CAB).

In conversations with the CAB, as well as with other clients, a diverse range of questions about the quality of online research arose. A stakeholder survey was conducted and confirmed that data and sample quality issues including replicability, accuracy, representativeness, survey length, response rates, and undesirable respondent behavior were areas of concern.

Given the diversity of client needs and concerns, the ARF ORQC recognized that some issues might have to be addressed in later phases. For example, the ARF ORQC Steering Committee determined that its initial focus would be on online consumer samples with expansion into mobile panels/samples or business-to-business samples at a later date.

With respect to online consumer samples, the ARF ORQC determined that among the first areas it would investigate are:

- Replication and the reliability/consistency of results across waves;
- Effects of multi-panel membership on survey results;
- Effects of respondent motivations and engagement on survey results; and,
- Connections between proposed or commonly used metrics and data quality

Other topics may be addressed in later phases of the Council's work. As with any research, we recognize that the design cannot answer all questions that have been raised and that the analysis will likely yield further questions for investigation. The feedback we have received to date indicates that clients and suppliers think this design can add to our knowledge base and will serve as a useful starting point.

Part A: Core Study

Foundations of Quality Goals

The key goals of the proposed US industry-wide research on research are to:

- Measure the degree to which duplication occurs in samples when multiple sample sources are used in both a national sample and for a smaller geographic area;
- Compare the wave-over-wave consistency (reliability) of survey results for independent samples from the same provider/mode;

- Compare survey results for consistency across sample providers and across modes;
- Compare survey results to external benchmarks to assess comparability;
- Measure multi-panel membership or multi-source participation;
- Measure respondent motivations, attentiveness, and reporting accuracy;
- Assess how respondent segments based on motivation and attention vary in terms of survey-taking behavior;
- Assess the effects of survey length on survey results and on respondent survey-taking behavior; and,
- Identify correlations among survey length, multi-panel membership, and levels of undesirable responses and investigate the effects on survey results.

The online portions of the proposed study will rely on sample provided by online sample providers who agree to participate. Results from the study will be presented without identification of sample providers.

Research Design: Key Dimensions

The proposed research design will allow us to collect the types of data that an analyst can use to achieve the goals listed above. Key dimensions within the research design include:

- Mode of data collection – Online, telephone, in-person, mail;
- Sample frame – RDD, access panel (online or offline), intercept (in-person or online), aggregation, database;
- Provider – Full service, third party, other;
- Observed respondent behavior – Historical activity (recency and frequency) and survey-taking tenure;
- Survey length – 15 and 30 minutes;
- Geographic area --national and market-level;
- Measures to detect duplicate respondents – technology-based, real-world identifiers, other;
- Waves – two independent national cross sections.

Survey Design

The Define Quality committee has yet to finalize the survey instrument but has agreed that the survey instrument will include:

- Measures for number of panel memberships and recency and frequency of survey taking by mode;
- Core demographics;
- Behavioral measures with aggregate external benchmarks;
- “Trap” questions to measure errors or inattentiveness;
- Behind-the-scenes measures of elapsed time;

- Attitudinal and behavioral measures expected to be correlated with fraudulence or dishonesty;
- Attitudinal and behavioral measures expected to be correlated with attentiveness or cognitive abilities;
- Respondent motivations for survey taking.

Those interested in the rationale behind the inclusion of these types of measures can refer to *Table A1 in Appendix*. We welcome suggestions for measuring the concepts listed above and we especially seek any evidence from research on research you may have conducted that allows us to determine if certain measures are better than others.

The survey instrument for all modes will also be designed to collect personally identifiable information (PII) so that we can identify duplicates based on name, physical address, zip plus four, and zip plus last four digits of the home phone. These survey questions will be non-mandatory and respondents will be clearly informed that the data will be used only for the internal purposes associated with cleaning the data. Precise language for this informed consent will be developed as the survey instrument is finalized.

In lieu of collecting this information in the survey, sample providers who store this information may submit it to the central host for appending provided the information:

- Is complete for all fields;
- Has been collected or updated within the past 12 months to ensure it is relatively accurate;
- Is submitted in a format acceptable to the central host/DP vendor.

Note: PII collected during the survey will be handled only by the vendor selected as the central host who will use it to flag duplicates but who will remove all PII before the data file is released to the analysis team.

The design includes 4 versions of the survey instrument. Most respondents will be given the same 15-minute core survey. Respondents assigned to the 30-minute survey will either receive the core survey plus an additional 15 minute set of items, or they will receive one of two variants of a 30-minute survey.¹ See *Table A2 in Appendix* for more details or the graphical depiction below.

¹ We are limiting the degree of experimentation to ensure that robust sample sizes are available to measure duplication within sample sources as compared to overall duplication. Given the numerous combinations of survey modes and samples, we also decided to limit the amount of experimentation within the survey to avoid a situation in which too many experimental conditions cause the effects to confound each other so that reporting and analysis can be as transparent as possible rather than requiring highly advanced analytics.

The core survey will serve as a control when it is presented to half of the Wave 1 respondents assigned to complete a 30-minute interview. The other half of those assigned to complete a 30-minute interview will be randomly assigned to one of two other survey variations. See the graphical depiction in Figure 1 below or *Table A2 in Appendix* for more details.

Sample Design					
Wave 1				Wave 2	
National	1000 Resp's	500 Resp's	250 Resp's	250 Resp's	1000 Resp's
	15 mins	15 mins core 15 mins other	30 mins Var 1	30 mins Var 2	
New Recruits <i>(oversample)</i>	250 Resp's				
	15 mins				
Frequent Resp's <i>(oversample)</i>	250 Resp's				
	15 mins				
Metro <i>(oversample)</i>	150 Resp's				
	15 mins				
Total:		3650 Respondents			

Figure 1 Sample design schematic and number of respondents per cell

Sample Specifications

The sampling unit for this study is the individual, not households. Each provider will be asked to provide samples that meet the following specifications:

Wave 1

- 1,000 national 15-minute interviews among US adults 18+
- 1,000 national 30-minute interviews among US adults 18+
- 150 market-level 15-minute interviews among US adults 18+ in the Tampa-St. Petersburg CBSA (#43500)

These national and market-level samples of completed interviews should match the general populations on key demographic variables. Sample providers should draw or recruit these samples following the best practices they use in typical consumer research.

The Tampa-St. Petersburg CBSA was chosen because the demographic composition of this market is similar to the demographic composition of the nation and will allow us to compare duplication levels across demographically matched populations – one larger and one smaller. For a comparison of the demographic profiles, see *Table A3 in Appendix*. Those interested in the rationale behind other elements of the sample design can refer to *Table A4 in Appendix*.

Online sample providers only:

- 250 national 15-minute interviews among US adults 18+ who have joined your panel, database, or list within the three months prior to field start
- 250 national 15-minute interviews among US adults 18+ who are frequent survey responders

If possible, these two over samples of completed interviews should match the US national 18+ population on key demographics and should minimally aim for a 50-50 male-female distribution. To the degree possible, sample providers should draw or recruit these samples following the best practices they use in typical consumer research.

The precise definition of a frequent survey responder is under development by the committee, which seeks input from sample providers to ensure that the threshold is meaningful across a wide range of sample sources yet still allows us to achieve the goals of measuring duplication levels and the effects of more frequent exposure to survey content on survey results.

Wave 2

- 1,000 national 15-minute interviews among US adults 18+ with sample drawn or recruited based on provider’s best practices to achieve a census-balanced sample

Sample sizes were chosen to allow for relatively robust comparisons as well as to allow for the detection of duplicates, while also allowing companies with smaller lists or panel sizes to participate. For more information on the sample sizes for various comparisons, refer to *Table A5 in Appendix*.

Table 1 below provides an illustration of the number of duplicate respondents we would expect to observe in a single study based on 15 sample providers (including 12 online sample providers) for the sample sizes above and for various rates of duplication.

Table 1. Example with 15 sample providers (including 12 online providers)

	<i>If the duplication rate for a single study is ...</i>					
		1%	5%	10%	25%	50%

	<i>Then the number of duplicates we expect to observe is ...</i>					
	Total N					
Wave 1 National	30,000	300	1,500	3,000	7,500	15,000
Wave 1 metro	2,250	23	113	225	563	1,125
New panel recruits	3,000	30	150	300	750	1,500
Frequent responders	3,000	30	150	300	750	1,500
Wave 2 national	15,000	150	750	1,500	3,750	7,500
Total	53,250	533	2,663	5,325	13,313	26,625

Historical Respondent Activity

In addition to the quantities specified above, sample providers will also be asked to provide the following historical respondent-level activity (for the six months prior to field start) or other stored data that will be appended to the respondent records for those who respond to the survey:

- Number of survey invitations sent or survey contacts initiated
- Number of survey responses received (includes break offs, suspends, abandonments, drop-outs, closed survey hits or any activity associated with attempting to enter the survey but does not include non-response)
- When relevant, number of times a survey-taker responded but the survey was closed (closed survey hits)
- Number of surveys completed regardless of completion status and
 - Number of surveys completed as qualified and quota not filled
 - Number of surveys completed as qualified but quota filled
 - Number of surveys completed as not qualified
- Month and year respondent joined panel or first interaction with respondent for non-panel sources
- Category/topic for each of the last three qualified completed interviews
- Stored demographics – sex, year of birth, household income, marital status, race, ethnicity, education level
- Types of recruitment/sample source – a list of categories will be provided

The historical data will be used as appropriate to conduct analyses such as the effects of types of recruitment source on survey results, the effects of prior category participation on survey results, correlations between observed and reported number of surveys completed for a single panel and for consistency checks across stored and reported demographics. Reports comparing historical data across sample providers will contain the phrase “Sample provider does not store these data” for instances in which historical data is not submitted.

Process Overview

All providers will feed data to a central hosting and data processing vendor. Online sample providers will send invitations or initiate actions that will direct respondents to this centrally hosted survey. Sample providers will handle all direct contact with respondents. Requests for assistance or to unsubscribe will be routed to each online sample provider for handling. If possible, data collected by phone or in-person will also be entered into the centrally hosted survey.

The central host will provide respondents with a survey experience that has the same look and feel as those to which respondents are typically invited. Respondents will be offered the typical incentives to which those particular respondents are accustomed.

Technology solutions used to identify duplicate respondents across multiple sample sources such as time/date stamp cookies, machine id, or digital fingerprinting will be implemented by the central host in conjunction with any vendors selected to provide technology solutions for de-duplication. The central host and data processing vendor will turn any duplication measures (technology based or other) into duplication flags.

Note: All support system vendors and consultants are required to sign mutual non-disclosure agreements and will have received instructions indicating that confidentiality, data security, and respondent and company anonymity are crucial to the success of this project.

Respondent Privacy

Sample providers whose privacy policies may not currently allow the use of certain technology solutions should indicate this and plan for respondents to be notified at the start of the survey that additional measures are being used to monitor quality. Precise language for informing respondents will be developed as the survey instrument is finalized.

Since informing respondents that additional measures are being used to monitor quality could change their behavior within the survey, sample providers whose privacy policies do not allow for the use of certain technology measures may want to consider providing double the amount of sample. Those who do so will be allowed to have half of the sample informed and the technology measures applied while the other half will not have the specific technology measure applied and so informed consent will not be needed.

Field Period, Reminders, and Callbacks

The field period for all modes (except mail) will be 14 days long excluding any preliminary slow start used for testing the survey programming and process. The

field period for mail will be 28 days with field start to coincide with field start for all other methods.

Online and mail sample providers can send a maximum of one reminder mailing to respondents. Telephone sample providers will be allowed to conduct whatever number of callbacks they would typically use for consumer research. The number of callbacks to be used should be specified before field start and must be recorded in such a way that the subsets of the data can be analyzed based on the number of callbacks. Online sample providers will be allowed to release a maximum of three batches of sample during the field period. Online sample providers may also choose to release fewer batches.

Sample Balancing and Hard Quotas

With respect to achieving samples of completed interviews that match the population on key demographics, all sample providers are asked to specify and then follow their typical best practices for consumer research.

All sample providers regardless of mode or type of sample recruitment (panel, intercept, etc.) who desire to use screening and hard quotas to achieve a balance sample are strongly encouraged to have any desired quotas set up within the survey programmed by the central host and to avoid pre-screening of sample on the provider's internal systems. For example, all online sample providers are encouraged to "drive traffic" to the central host without conducting any prior routing or pre-screening or quota management on supplier-specific internal systems. This will help to ensure that the sample balancing practices and processes used for this specific project are as transparent as possible.

In cases where a sample supplier feels strongly that pre-screening or quota management using supplier-specific internal systems is part of its best practice methods, we encourage those suppliers to provide double the total amount of sample and to send one half of the sample directly to the central host with any desired quotas programmed by the central host.

Sample providers will submit any desired quota plan to the research analysts hired to consult on the survey design. These analysts will ensure that supplier-specific quotas are included in the survey script provided to the central host.

Table A3 in Appendix shows the national and metro population profiles as measured in the 2007 CPS March supplement. These profiles are provided for informational purposes but are not provided as a prescription about any specific quota or balancing scheme.

Use of Proprietary, Best Practices Techniques

The use of proprietary methods or best practices such as special weighting schemes, pattern recognition algorithms, or other measures to enhance data quality or accuracy can be used by sample providers under the following guidelines:

- Any proprietary survey measures that are to be presented to respondents must be presented after the overall survey ends (including after any demographics) to ensure that question order remains the same for all sample providers.
- Behind-the-scenes computations that are not visible to respondents can be built into the survey design at any point but can be used only to flag respondents. No respondents will be disqualified from the remainder of the survey content on the basis of these flags
- If the application of a proprietary technique involves statistical estimation or modeling, the sample supplier will be allowed to do the estimation or weighting but the only data that will be released for this purpose will be the subset of variables needed to conduct the modeling. Any weights, scoring variables, or quality flags produced by the estimation must be submitted to the central host/DP vendor who will append them to the original data.
- Any proprietary or best practice techniques used must be accompanied by a methodology statement that explains the method in as much detail as possible.

Sample providers will submit any desired survey measures or behind-the-scenes computations to the research analysts hired to consult on the survey design. These analysts will ensure that supplier-specific best practices are included in the survey script provided to the central host.

Data Analysis and Reporting

The data analysis will be conducted by two research consultants – one practitioner and one academic – who will work in conjunction with the Chief Research Officer from the ARF. All respondent PII and any company identifying information that would link a sample source to a specific company will be removed by the central host/DP vendor prior to release of the data file to the statistical analysts.

Weighting or sample balancing needed to ensure that the data match population targets or to ensure valid comparisons across subsets of the data may be conducted by the central host/data processing vendor under the guidance of the research analysts. Sample providers for all modes of data collection should be aware that a portion of the reporting and analysis may be based on

unweighted data or may be based on non-proprietary weighting or sample balancing schemes devised by the research analysts.

The research analysts will also determine whether any across-the-board data cleaning will occur prior to certain types of analysis. For example, for some parts of the reporting, the analysts might choose to eliminate ineligible cases such as any that might report being non-US or younger than 18. Sample providers for all modes of data collection should be aware that a portion of the reporting and analysis may be based on raw data with no cleaning rules applied.

Research analysts will also analyze and report findings based on any proprietary or supplier-specific best practices provided those best practices are implemented following the guidelines above. This will allow the analysts to assess and report upon the effects of various best practices on accuracy or other aspects of quality.

Sample providers will submit any specifications related to best practices for data scanning or cleaning to the research analysts hired to consult on the data analysis. These analysts will ensure that supplier-specific best practices are correctly implemented as needed when the data are processed.

Release of Results

A preliminary report will be reviewed by the Steering Committee and the ARF prior to release of the results. The final report will be released at a meeting of the ARF Online Research Quality Council in Q1 of 2009.

Approximately two weeks before the release of the final report, each sample supplier will be provided with a report that shows how the results from your company compared to the overall results. The reports will be prepared in an anonymous fashion by the statistical analysts who will send the reports to the central host/data processing vendor. The central host will link the reports back to a specific company name and will then mail them to the appropriate representative from each company. At this point, each sample provider will also receive a data file containing the full set of survey responses and any created variables associated with the respondents supplied by that company.

The data collected will be jointly owned by the ARF and the Steering Committee for the ARF Online Research Quality Council. Follow-up publications or use of the data can only occur with the express written permission of these two groups.

Part B: Supplemental Study: Measurement of Observed Multi-Source Participation (Online Sample Providers Only)

The goal of the supplemental research is to provide the industry with an estimate of the degree of practical overlap that exists across online sample sources based on observation (rather than self reports).

By practical overlap we mean overlap based on recent and actively participating survey takers. It is these recent and actively participating individuals who are relevant to questions about data quality or bias. Although non-responders or lapsed responders might contribute to the *appearance* of overlap if they were included in the matching exercise, non-responders or lapsed responders have no practical effects on client survey results.

Process Details

Each sample provider will be asked to submit one-way hashed (encrypted) email addresses from a pre-defined set of US zip codes to a third party support organization. Each sample provider will be asked to submit 100% of all records associated with recent and actively participating survey takers within these zip codes.

For the purposes of this project, a recent and actively participating survey taker is defined as respondent whose email address is associated with any form of survey response within the past 30 days.

The third party organization will compare the hash codes to identify records that are part of more than one sample source. The support vendor will produce a report that shows the percentage of overlap across sample sources. No company names will be attached to the results of the report.

Each company will receive a report showing how that company's sample source compares to the overall overlap statistics. These company-specific overlap reports will be made available at approximately the same time that company reports from the core study are made available. The overall report will be forwarded to the research analysts so that results can be reported upon in conjunction with the results from the core study.

The list of zip codes has not yet been devised but we expect the selection of US zip codes to be based on proportionate to population size sampling. The number of zip codes selected will be such that each supplier will submit approximately 1,000-2,000 records. The specific hashing or encryption algorithm will be chosen and announced once the support vendor is selected.

Appendix

Table A1. Rationale for Survey Design Elements

Table A2. Survey Instrument Variations

Table A3. Demographic Profile: National and Tampa-St. Petersburg CBSA

Table A4. Rationale for Sample Design Elements

Table A5. Expected Sample Sizes for Comparisons by Sample Provider

Table A1. Rationale for Survey Design Elements

Survey Design Element	Rationale
Number of panel memberships	Will allow us to examine effects of self-reported multi-panel membership on survey results and survey taking behavior
Recency and frequency of survey taking in any mode	Will allow us to examine effects of self-reported survey taking behavior on survey results
Benchmark questions	Will allow us to compare aggregate survey results to external benchmarks to assess comparability
“Trap” questions	Will allow us to identify respondents who make certain types of errors or who are dishonest or inconsistent
Expected correlates of fraud or dishonesty	May allow us to develop segmentation or other models to predict respondent types most likely to be fraudulent or dishonest
Expected correlates of attentiveness or cognition	May allow us to develop segmentation or other models to predict respondent types most likely to be inattentive or error prone
Motivations for survey taking	Will allow us to examine effects of self-reported motivations on survey results and survey taking behavior and may also be used in segmentation or predictive modeling
Core demographics	Will allow for reporting and analysis by demographic groups; will also allow for comparison of collected demographics to those stored by the sample provider to assess consistency
15- and 30-minute lengths	Will allow us to examine effects of survey length on drop-out rates, survey results, and on survey taking behavior
Survey completion times	Will allow us to examine correlations between elapsed time (overall or by question or section) and the likelihood of respondent errors

Table A2. Survey Instrument Versions and Variations

Instrument Version	Length	Description	Respondent Base
A	15 minutes	Core Survey Items	Core used in all 15 minute surveys including Wave 1 national, the three oversamples, and Wave 2 national.
B	30 minutes	First 15 minutes employ the Core survey; last 15 minutes will serve as a control instrument to which variations #1 and #2 below can be compared	N=500 Wave 1 national respondents from 30-minute length group
C	30 minutes	Variation #1 – experimentation with question wording, formats, etc.	N=250 Wave 1 national respondents from 30-minute length group
D	30 minutes	Variation #2 – experimentation with question wording, formats, etc.	N=250 Wave 1 national respondents from 30-minute length group

Table A3. Demographic Profile: National and Tampa-St. Petersburg CBSA

Adults 18+

	US National, CPS 2007 %	Tampa-St. Petersburg CBSA Rank = 17, CPS 2007 %
<u>Education - 5 Level</u>		
HS Graduate or less	47	44
Some College	19	17
Associates Degree	8	11
College 4 years	17	19
Post Graduate	9	9
<i>Total</i>	100	100
<u>Age by Sex</u>		
Male 18-29	11	8
Male 30-39	9	8
Male 40-49	10	10
Male 50-64	12	13
Male 65+	7	9
Female 18-29	11	7
Female 30-39	9	9
Female 40-49	10	11
Female 50-64	12	13
Female 65+	9	12
<i>Total</i>	100	100
<u>Race/Ethnicity</u>		
Hispanic	13	12
Black (Not Hispanic)	11	10
All Other (Not Hispanic)	71	75
Asian (Not Hispanic)	5	3
<i>Total</i>	100	100
<u>Household Income</u>		
\$14,999 or less	9	7
\$15,000 to \$24,999	10	11
\$25,000 to \$34,999	10	10
\$35,000 to \$49,999	14	12
\$50,000 to \$74,999	20	24
\$75,000 to \$99,999	13	11
\$100,000 or over	24	24
<i>Total</i>	100	100
<u>Region</u>		
Northeast	19	
Midwest	22	
South	36	
West	23	
<i>Total</i>	100	

Table A4. Rationale for Sample Design Elements

Sample Design Element	Rationale
Two waves	Will allow us to examine consistency of results from independent samples from the same source
Frequent responder oversample	Will allow us to compare survey results, survey-taking behavior, and degree of duplication for samples with a 100% concentration of frequent responders to general samples
New recruit oversample	Will allow us to compare survey results, survey-taking behavior, and degree of duplication for samples with a 100% concentration of newly recruited responders to general samples
Market-level oversample	Will allow us to determine if the degree of duplication that occurs when multiple sample sources are used is the same or different for a smaller subset of the US population
Respondent contact type	Will allow us to examine the degree to which results vary by method of contact (e.g., online panel recruitment, offline panel recruitment, online intercept, offline intercept, etc.)
Data collection mode	Will allow us to examine the degree to which results vary by mode
Sample providers, all modes	Will allow us to examine the degree to which results, including the accuracy of results compared to benchmarks, vary by sample provider
Multiple waves	Will allow us to examine the degree to which sample suppliers produce consistent results from wave to wave

Table A5. Sample Sizes for Comparisons for Single Provider

Comparison	Group A	Group B
15 vs. 30 minute core survey, national wave 1	1,000	,500
National vs. metro oversample, 15 minutes, wave 1	1,500	150
Wave 1 vs. Wave 2, national, 15 minutes	1,500	1,000
National vs. new recruit oversample, wave 1, 15 minutes	1,500	250
National vs. frequent responder oversample, wave 1, 150 minutes	1,500	250
30 minute control group vs. any 30 minute variation	500	250