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Abstract

A major long-term problem for household surveys is their rising costs. An important contributing factor to increased costs is the greater level of effort needed to combat declining response rates. A responsive design is one way of addressing the issue. For the Medical Expenditure Panel Survey (MEPS), a responsive design strategy of subsampling interim nonrespodents is one option for potentially increasing the general response rate while reducing the overall level of effort and costs of data collection. This report describes and evaluates a pilot study implementing that strategy on a limited scale for the MEPS 2011 data collection.

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Introduction

This report describes the effort carried out to evaluate the application of a responsive design feature in the 2011 MEPS household data collection. The term "responsive design" has been used to characterize a range of activities whose common feature is the use of information about an ongoing data collection effort to inform modification to the data collection operation in order to affect survey outcomes in some positive way. An intervention could be targeted, for example, to improve response rates across an entire sample or for some part of the sample that is of particular interest, to achieve a desired level of precision with key outcome measures, or to reduce the overall level of effort and cost for the data collection.

For MEPS, the intervention was seen as a possible strategy for addressing the trend of increasing costs and declining response rates in household surveys. In recent years MEPS has experienced increased difficulty achieving targeted response rates. Where response rates have not declined from year to year, the effort and cost required to avoid further decline has increased. On MEPS, these difficulties have been particularly acute in the first round of data collection for new panels and an intervention in which interim nonresponse cases were subsampled during the Round 1 field period was seen as an option for reducing Round 1 costs. Subsampling would reduce the number of cases to be worked during the latter weeks of the field period. These cases tend to be the most difficult and costly to complete, often requiring multiple in-person follow-ups to contact the difficult to locate and to persuade reluctant respondents to participate in the study. Subsampling would reduce the total remaining workload and make it possible to work

those cases more effectively, allowing supervisors to concentrate more of the remaining work in the hands of the most skilled interviewers.

General Approach

After a series of planning meetings in the fall of 2010, a decision was made to implement interim nonresponse subsampling during Round 1 operations for Panel 16, fielded in January 2011. Because interim nonresponse subsampling had not been tried before on MEPS, it was decided that the effort be limited in size and scope and designed in a way that would focus on the practical requirements of subsampling cases during an ongoing field period and generating descriptive statistics to provide insight on the impact of the interim subsampling on costs and response rates. The focus was to be on ways of identifying the cases to be included and excluded from data collection, procedures for extracting those cases from interviewer assignments with minimal disruption to the operation, and monitoring the progress of the test during data collection. The test was also intended to provide insight into how the subsampling would affect field management decisions relating to interviewer assignments and the use of travelling interviewers.

Planning, Implementation, and Management

In this section, we discuss the size and scope of the interim nonresponse subsampling test, specifically how we chose PSUs for inclusion, why we chose the specific number of PSUs, and the determination of the timing of the implementation of the subsampling. We also discuss sampling issues, including definition of interim nonresponders, criteria for RU exclusion, and carrying out the subsampling process in advance (only fielding those subsampled who were both

selected and deemed eligible to be part of the subsample at a designated time). . Finally, we describe implementation and monitoring of the interim nonresponse subsampling.

Criteria for selecting PSUs. Several criteria were used to select the PSUs. The selected PSUs were geographically diverse. All but two were selected because they had experienced problems achieving response rate targets in prior panels and were seen as candidates that might benefit most from the intervention; two PSUs were selected based on staffing considerations. These were smaller PSUs where, as a result of attrition, the number of interviewers available to work locally was insufficient, leaving a substantial portion of the work to be completed by traveling interviewers.

Scale. With the focus on assessing the operational feasibility of the subsampling, it was decided that the test would be limited to 11 of the MEPS PSUs and yield about 500 reporting units (RUs) at the point of subsampling. See Table 1A for a summary of the distribution of the RUs in these 11 PSUs by status and eligibility. Statuses are divided up into interim nonresponse and final statuses. RUs were divided into three categories of eligibility: not eligible for subsampling; eligible, subsampled-in,; and eligible, subsampled-out. Estimates for these groups in the summary tables are weighted by factors of 1,2, and 0, respectively to account for the subsampling. Note that 901 of the RUs were defined as eligible for subsampling, slightly less than the 1,000 RUs expected. (See Table 1A and Table 2).

Timing. For operational simplicity, it was determined that subsampling would be implemented at the point when the completion rate in the 11 PSUs was close to 50 percent and an average of four in-person contacts had been made with RUs remaining in the active sample in those PSUs. Active sample was defined as the RUs with a pending disposition of 21 – 34 (see Table 1A for

definition of these codes) or a status code of 1 (case started/opened by interviewer). Supervisors were notified of this implementation strategy several weeks in advance, so that they could make or adjust plans for assigning staff, plan the use of travelling interviewers in the test PSUs, and ensure that interviewers completed all updates to the record of calls in the cases in their assignments before the date set for subsampling.

The project developed a special PSU level monitoring report that allowed weekly monitoring of this data as well as other key items. In week 12 of the round 1 data collection, the subsampling was implemented in a single test PSU followed a week later by implementation in the remaining 10 PSUs. The completion rates and average number of in-person contacts with active sample just prior to subsampling are summarized below.

Table 1: Completion Rates and Average Number of In-Person Contacts by PSU

PSU	Completion Rate	Avg. # of I-P Contacts (for Active Sample)
1	56.6%	4.3
2	39.1%	3.1
3	50.0%	3.8
4	48.1%	4.5
5	50.8%	4.0
6	35.9%	4.4
7	44.3%	3.2
8	47.6%	5.3
9	44.3%	3.0
10	50.0%	5.8
11	50.5%	4.5

Eligibility for Inclusion in the MEPS Interim Nonresponse Subsampling Test. An interim nonresponder for purposes of this implementation of interim nonresponse subsampling was defined as any MEPS RU that had not completed an interview, become an out-of-scope RU, or

become a final nonresponder at the time of the subsampling. In other words, an interim nonresponder was a MEPS RU that had one of the following pending statuses at the time of subsampling:

- not home
- eligible R not available
- entire RU moved, tracking
- temporary refusal
- callback (no appointment)
- broken appointment
- locating problem
- unable to enter structure
- language problem
- second + refusal
- interview started – breakoff
- RU moved too far to interview

RUs Ineligible for Subsampling. RUs that were defined as ineligible for subsampling included:

- those in the Cancer sample domain,
- any RU in a DU that had a final status
- any RU that was scheduled for an appointment
- those that had not been worked at all by the interviewers
- those that had experienced a 'split' since the start of Round 1, and
- NHIS multi-RU DUs.

Selecting the Subsample in Advance. The subsampling procedure was relatively straightforward. Before the start of data collection, the full sample for the test PSUs was sorted on region, PSU, segment, and domain and half of the RUs were subsampled, designating them to be fielded if and only if they were eligible at the time of subsampling. The advantage of identifying the subsample before data collection began was that it would save time at the point of implementation. A disadvantage is that the sample size was subject to variability. That is, while the expected percentage of RUs selected for the study was 50 percent, the actual percentage included in the study could vary somewhat from that expected percentage. When the subsampling was implemented after week 13 of data collection, 901 RUs were eligible for subsampling. Of those, 473 were subsampled-in, representing 52.5 percent of those eligible (See Table 1A).

Implementation. A central concern in planning for the intervention was the amount of time that would be required to post the outcome of the subsampling to the cases on the interviewers' laptops. Posting the cases would require the suspension of active data collection for some period of time, and a key planning concern was to minimize disruption to the ongoing field data collection. Implementation of the subsampling required a mechanism for removing the deselected cases from the interviewers' laptops so that they could not be worked further, while still keeping them accessible for inclusion in reports. The early concern that implementation would seriously disrupt the ongoing data collection was not borne out. Programs to identify and flag the appropriate cases were in place and tested in advance. A special out of scope status (73) was programmatically loaded into the electronic records of call in the Basic Field Operating System (BFOS). QC files were prepared and reviewed, interviewers were alerted to transmit, so

that the RUs with the new out of scope status could be removed from their laptops. Interruption of the work of the interviewers in the affected PSUs was limited to about three hours.

Monitoring subsampled cases throughout data collection. Because of the limited scope of the feasibility test, existing field management reports were not revised to reflect the subsampling weight of 2. The project monitored production in the test PSUs through a combination of special weekly runs from the survey management data base, a weekly region level report that included both weighted and unweighted completion and response rates, and ad hoc report calculations and preparation.

Results

The desire to attribute observed changes in level of effort or response rates to the subsampling was complicated by several factors. The amount of the payment given to RUs completing the MEPS interview was increased from $30 to $50 for Panel 16 and the Round 1 field period was modified to begin three weeks earlier than in prior years but keeping the same end date. It is our sense that the combination of these changes contributed to the increased round 1 response rate and decreased hours per case.

Table 1B provides a snapshot of how cases ended up at the end of Panel 16 Round 1 data collection. It shows the final distribution of the RUs in the subsampled PSUs by eligibility and final status (complete, out-of-scope, or final nonresponse). In the end among the subsampled-in RU group, interviewers completed interviews with 43.1 percent of the RUs. Among the final nonresponse statuses, 47.9 percent of the RUs ended up as final refusals. Note that the net sample size was impacted by both "splits" that are added and out-of-scope cases that are deleted. Nine "splits" were added in the not eligible for subsampling group and 10 "splits" were added in

the eligible, subsampled-in group. The not eligible for subsampling group lost 19 cases to out-of-scope situations and the eligible, subsampled-in group lost 7 cases.

Table 2 summarizes the subsampling and data collection outcomes in the 11 PSUs. The weighting adjustments in the table reflect only the adjustment associated with the subsampling. For all of the PSUs in the interim nonresponse subsampling test, the weighted response rate (73.3 percent) was 3 to 4 percentage points higher than that reached for the two preceding panels (69.5 percent for Panel 15 and 70.6 percent for Panel 14). Compared to the RUs with the $50 incentive in the Panel 13 incentive experiment, however, the response rate was essentially the same (73.3 percent versus 73.9 percent). These same differences appear for PSUs not affected by the subsampling: the response rate for Panel 16 (79.5 percent) was 3 to 5 percentage points higher than Panels 14 (76 percent) and 15 (74.5 percent), but similar to the response rate for the $50 group in Panel 13 (80 percent). This suggests that the difference in respondent payment was likely a more important factor than the nonresponse subsampling effort in achieving the higher response rates in these PSUs.

Table 3 shows refusal rates and refusal conversion rates for the subsampled PSUs for Round 1 of Panels 13 ($50 group) through 16. The Panel 16 weighted refusal rate for the 11 PSUs that were subsampled combined (32.7 percent) was higher than in any of the comparison years (20.4 percent in Panel 13 ($50), 29.8 percent in Panel 14, and 32.1 percent in Panel 15). Fortunately, the Panel 16 refusal conversion rate (33 percent) was higher than in any of the comparison years (25.4 percent in panel 13 ($50), 26.4 percent in Panel 14, and 27.9 percent in Panel 15). For the non-subsampled PSUs, the refusal rate (23.7 percent) was lower than in Panel 14 (25.5 percent) and Panel 15 (27.1 percent), but higher than in the $50 sample of Panel 13 (19.7 percent). For the non-subsampled PSUs the conversion rate in Panel 16 (31.3 percent) was

higher than in any of the comparison years (27.9 percent in Panel 13 ($50 group), 26.2 percent in Panel 14, and 27.9 percent in panel 15), suggesting factors other than the subsampling were at play in the increased refusal conversion rates.

Table 4 shows the comparison of the mean number of in-person contacts per PSU in Round 1 of Panel 13 $50 group, Panel 14, Panel 15, and Panel 16. Note that the total number of RUs in this table includes out-of-scope cases, because those cases involve contacts to determine their out-of-scope status. The total of 2,747 RUs for the 11 PSUs in Panel 16 Round 1 includes: 1,353 that were not eligible for subsampling (the original 1,344 plus 9 additional RUs added during the course of data collection); 966 eligible (weighted by factor of 2), subsampled-in; and, 428 that were eligible, but subsampled out. See the bottom panel of this table for the Panel 16 Round 1 breakdown across eligibility statuses. (Note that the eligible, subsampled-in RUs are based on the original 473 RUs subsampled-in plus 10 additional RUs added during data collection). See Table 1B for the final distribution of RUs by final RU statuses for these three categories of RUs.

This table shows some reduction in the mean number of contacts in the subsampled PSUs as a group in Panel 16 (4.9) compared to the other three comparison years (5.9 in Panel 13($50), 6 in Panel 14, and 7.1 in Panel 15).

Within the limited scale of the subsampling test, there is a pattern of slight improvement in response rate (Table 2), refusal conversion rate (Table 3), and level of effort measures (Table 4) for these PSUs as a group compared to the prior three panels. Note that response rates at the PSU level are only shown for Panel 14 and Panel 15, not for the Panel 13 ($50) group. However, given the confounding factors of an increased respondent gift ($50 vs. $30), the earlier start date

of Round 1 in Panel 16, and the longer data collection period, it is not possible to isolate the contribution of interim nonresponse subsampling to these improvements.

Lessons Learned

Feasibility. The pilot test was generally successful with respect to its operational goals. The project was able to design and implement the subsampling at an appropriate point in the Round 1 field period. Cases to be excluded were identified and removed from interviewer assignments. Cases subsampled for continuing work were identified for focused efforts by the field staff. The application of the subsampling was accomplished with minimal disruption to the ongoing data collection operation. Avoiding the possible disruption did, however, require a substantial planning effort on the parts of both home office and field supervisory staff.

Sample selection and Variance Estimation. For the test, sample selection in the 11 PSUs included the following steps: preparation of a file for identifying the subsampled RUs among all RUs potentially eligible for the study; determination of eligibility for subsampling based on RU status/disposition codes and sample characteristics; creation of a new out-of-scope status code (73) to be applied to RUs subsampled-out; development and testing of the program for subsampling; selection, quality control review, and implementation of subsampling in one small PSU to evaluate the handoff between BFOS programmer and statistician and the duration of BFOS downtime; and, repeat of the process for the remaining 10 PSUs the following week.

Identifying in advance the sampled set of RUs designated to be part of the study, if eligible at the designated time for initiating fielding, minimized the time that it took to implement the subsampling at the specified time although it resulted in some variation from an expected 50-50 split of those subsampled-in and those subsampled-out/deselected. The

percentage of those subsampled-in from among those eligible to be subsampled varied across the test PSUs, ranging from 46 to 62 percent. Furthermore, due to sample variation, the percentage of those characterized as "interim refusals" also varied from an expected 50-50 split: among the subsampled-in group, 50 percent were "interim refusals"; among the subsampled-out/deselected group, 44 percent were "interim refusals". This is noted because the propensity to respond among RUs with a status of "interim refusal" is lower than among other interim status codes. For this test of interim subsampling we opted for the more conservative approach of carrying the subsampling out in advance as we did not know how long the BFOS system would have to be down for the subsampling process described above. In the future, if interim nonresponse subsampling were to be undertaken again, we would recommend that the full subsampling process be carried out at the time of designation of the "interim nonrespondents" eligible for subsampling.

An important tradeoff associated with the subsampling of interim nonrespondents is that each of the subsampled-in cases carries forward a weight of 2 and an increase in variance due to increased variability in the MEPS sampling rates. This is complicated by the fact that on MEPS the sampling rates across domains vary. For Panel 16 the nature of the domains changed somewhat with the addition of the Cancer domain and the partitioning of the "Other" domain into "Other, NHIS completes" and "Other, NHIS partial completes" where the "partial completes" were undersampled. The sampling rate for the "Other, NHIS partial completes" was about 60 percent of the sampling rate for the "Other, NHIS completes".

If one assumes that the distribution of completes and partial completes among the NHIS respondents eligible for MEPS is roughly the population distribution (it is not clear how accurate this assumption is), then, based on examination of the variation of the Panel 16 DU weights, the

design effect associated with this undersampling of the partials is about 1.06. The ratio of the design effects associated with variation in Round 1 DU level sample weights for the "Other" domain in Panel 16 to that of Panel 15 was about 1.15. Thus, the increase in the design effect associated with variable weights in the "Other" domain attributable to interim nonrespondent subsampling might be on the order of 10 percent (1.15/1.06=1.085). This evaluation is somewhat speculative but provides what might be considered a ballpark assessment of the additional impact on variability in the "Other" domain associated with the nonresponse subsampling.

Since the partials were already subsampled at a rate of less than .5 (.46), partials sampled among the interim nonrespondents had their weights increased by a factor of roughly 4 compared to those respondents not subject to the subsampling and in the domains outside the two "Other" domains. This is important because the final response rates for NHIS partials overall are usually between 10 and 15 percent lower than the final response rates for NHIS completes across domains. If "interim nonresponse subsampling" were to be undertaken in the future and if partials continue to be undersampled, we would recommend that the "partials" not be eligible for "interim nonresponse subsampling" since they already come into the field with a double weight.

Monitoring and Reporting. One important practical lesson was the level of planning and continuing effort needed to monitor and report on the test. For the Round 1 implementation, existing field reports were not revised to account for the doubled weight of the subsampled cases. A special PSU-level monitoring report was designed and programmed as was a weekly region-level summary report of weighted and unweighted completion and response rates. Tracking the weighted rates created an additional requirement for staff time throughout the field period. Comparable adjustments will be needed to monitor the status of the subsampled cases through

the remaining rounds of their data collection. Within the limited scope of this test – where most PSUs were not affected by the subsampling – the adjustments to existing reports were limited as much as possible. A substantially greater effort to adjust management systems would be needed to support a larger-scaled intervention.

Conclusion

Our evaluation of the costs versus benefits of interim nonresponse subsampling for MEPS is inconclusive. The tradeoff between savings from fielding fewer cases and additional costs associated with implementing the subsampling and working the subsampled cases harder could not be quantified. In addition, the effects on response rates of increased incentive payments in Panel 16 to respondents from the interim subsampling strategy could not be distinguished. Consequently, the complexities of administering an interim subsampling strategy on a broader scale do not appear warranted at this time.

Table 1A: Distribution of RUs in the 11 PSUs by Response Status, Prior to Removal of Subsampled-Out Cases
As of 4/6/11

	Not eligible for subsampling Weight = 1	Total Rus Eligible for Subsampling	Eligible, Subsampled-in Weight =2		Eligible, Subsampled-out Weight = 0		Total, Not-Eligible + Eligible for Subsampling
INTERIM NONRESPONSE STATUSES							
20-No action	15						15
21-Not home	18	232	114	49.1%	118	50.9%	250
22-Eligible R not available	7	30	11	36.7%	19	63.3%	37
23-Entire RU moved, tracking contact/attempt	12	50	25	50.0%	25	50.0%	62
24-Temporary refusal	24	329	182	55.3%	147	44.7%	353
25-Callback (no appointment)	4	51	25	49.0%	26	51.0%	55
26-Appointment	42						42
27-Broken appointment	1	56	28	50.0%	28	50.0%	57
28-Locating problem		32	20	62.5%	12	37.5%	32
29-Unable to enter structure		14	6	42.9%	8	57.1%	14
30-Language problem		6	4	66.7%	2	33.3%	6
31-Second+ Refusal	17	96	54	56.3%	42	43.8%	113
32-Interview started- Breakoff		1	1	100.0%		0.0%	1
33-Other pending		2	2	100.0%		0.0%	2
34-RU moved too far to interview		2	1	50.0%	1	50.0%	2
Total # RUs with Interim Nonresponse Status	140	901	473	52.5%	428	47.5%	1041
FINAL RU STATUSES							
Completed interviews							
60-Complete with RU member	1168						1168
63-Complete with proxy, other	7						7
Total # Completed Interviews	1175						
Out of Scope							
73- Removed from Sample in Field (new subsampled out code)							
81-Entire RU deceased before January 1	8						8
82-Entire RU is military before January 1	1						1
83-Entire RU is institutionalized before January 1	1						1
84-Entire RU left U.S. before January 1	1						1
86-Entire RU ineligible, nonkey NHIS student	4						4
Total # Out of Scope Rus	15						15
Final Nonresponse							
91-Final refusal	4						4
94-Entire RU military or left US on or after January 1	3						3
97-Home Office Use	4						4
98-RU moved too far to interview	2						2
99-Final other nonresponse	1						1
Total # Rus with Final Nonresponse Statuses	14						14
TOTAL SAMPLE IN 11 PSUs							
Total	1344	901	473	52.5%	428	47.5%	2245
Net Sample (Total minus out of scope Rus)	1329	901	473	52.5%	428	47.5%	2230

Not eligible for subsampling:
RUs in the Cancer domain, regardless of status
NHIS multi RU Dus, regardless of status
Appointment status (disp 26)
Completed status (disps 60 - 63)
Out of scope status (disps 73, 80-87)
Final nonresponse status (88 - 99)

Table 1B: Distribution of RUs in 11 Subsampled PSUs, by Final Response Status

As of 8/1/11 (after the close of Panel 16 Round 1 data collection)

	Not eligible for subsampling Weight = 1	Percent of Not Eligible for Subsampling Rus that finished in given final status	Eligible, Subsampled-in Weight =2	Percent of Eligible, Subsampled-in RUs that finished in given final status	Eligible, Subsampled-out Weight = 0	Grand Total
FINAL RU STATUSES						
Completed Interviews						
60-Complete with RU member	1258	94.3%	204	42.9%		1462
63-Complete with proxy, other	7	0.5%	1	0.2%		8
Total # Completed Interviews	1265	94.8%	205	43.1%		1470
Out of Scope Statuses						
73- Removed from Sample in Field (new out of scope code for subsampled-out cases)					428	428
80-RU merged with other RU			1			1
81-Entire RU deceased before January 1	8					8
82-Entire RU is military before January 1	2					2
83-Entire RU is institutionalized before January 1	1		1			2
84-Entire RU left U.S. before January 1	2		3			5
86-Entire RU ineligible, nonkey NHIS student	6		1			7
87- Reenum complete,ineligible			1			1
Total # Out of Scope Rus	19		7		428	454
Final Nonresponse						
88-Unavailable during field period	1	0.1%	4	0.8%		5
90-Physically/mentally incompetent, no proxy			2	0.4%		2
91-Final refusal	45	3.4%	228	47.9%		273
92-Final breakoff						0
93 - Final Unlocatable	13	1.0%	33	6.9%		46
94-Entire RU military or left US on or after January 1	3	0.2%	3	0.6%		6
97-Home Office Use	4	0.3%	1	0.2%		5
98-RU moved too far to interview	2	0.1%				2
99-Final other nonresponse	1	0.1%				1
Total # Rus with Final Nonresponse Statuses	69	5.2%	271	56.9%		340
Total Sample in 11 PSUs						
Total	1353		483		428	2264
Net Sample (Total minus out of scope)	1334		476		0	1810

Note: Split RU's account for the difference in total sample size at the end of Panel 16 Round 1 data collection in these 11 PSUs.

Nine split RU's were added in the not-eligible for subsampling group, increasing sample from 1344 to 1353.

Ten split RU's were added in the eligible, subsampled-in group, increasing the sample from 473 to 483.

Table 2: Summary of Subsampling and Data Collection Outcomes in 11 PSUs

	Not Eligible for Subsampling				Eligible for Subsampling						P16 Total (Not Eligible + Eligible and Sampled In/Selected)				Previous Panel response rates		
						Sampled Out	Sampled In										
PSU	# cases (Net sample prior to subsampling)	# cases worked (Net sample at end)	# responded (cc)	unwtd resp rate	Total cases eligible (net sample prior to subsampling)	# cases sampled out	# cases sampled in	# cases worked (Net sample at end)	# responded (cc's without factor of 2 applied)	unwtd resp rate	# cases worked (Net sample at end)	# responded (cc)	unwtd resp rate (if the sampled in cases were not worth 2)	wtd resp rate	P15R1	P14R1	P13R1 ($50 incentive)
1	205	204	192	94.1%	113	51	62	62	22	35.5%	266	214	80.5%	72.0%	67.1%	69.0%	68.6%
2	76	77	73	94.8%	72	30	42	41	28	68.3%	118	101	85.6%	81.1%	66.7%	72.6%	90.4%
3	114	116	113	97.4%	57	31	26	26	4	15.4%	142	117	82.4%	72.0%	72.9%	70.4%	70.4%
4	144	142	135	95.1%	97	45	52	51	24	47.1%	193	159	82.4%	75.0%	65.3%	61.1%	71.6%
5	127	124	115	92.7%	58	22	36	37	16	43.2%	161	131	81.4%	74.2%	84.5%	79.1%	81.6%
6	19	19	19	100.0%	20	9	11	11	8	72.7%	30	27	90.0%	85.4%	63.9%	75.0%	75.0%
7	40	39	37	94.9%	32	14	18	19	7	36.8%	58	44	75.9%	66.2%	62.7%	76.4%	90.9%
8	206	205	194	94.6%	169	82	87	88	33	37.5%	293	227	77.5%	68.2%	67.9%	69.0%	74.5%
9	138	138	132	95.7%	110	55	55	55	32	58.2%	193	164	85.0%	79.0%	68.3%	73.8%	72.2%
10	211	206	194	94.2%	124	66	58	60	22	36.7%	266	216	81.2%	73.0%	71.8%	71.7%	70.3%
11	64	64	61	95.3%	49	23	26	26	9	34.6%	90	70	77.8%	68.1%	61.0%	67.5%	72.5%
Total, subsampled PSUs	1344	1334	1265	94.8%	901	428	473	476	205	43.1%	1810	1470	81.2%	73.3%	69.5%	70.6%	73.9%
Total, non-subsampled PSUs														79.5%	74.5%	76.0%	80.0%
National Total, all PSUs														78.2%	73.5%	74.8%	78.7%

Note: On table 3 the P16R1 weighted "net sample" is equal to the Not eligible for subsampling # worked (net sample at the end) plus two times the eligible for subsampling, sampled-in # cases worked (net sample at end)

For example, for PSU 1 the P16R1 weighted “net sample” on table 3 = 328 which is the sum of 204 + (2*62)

The net sample numbers used in this formula for each PSU are highlighted above

Table 3: Refusal Rates and Refusal Conversion Rates, Interim Nonresponse Subsampling, Panel 16, Round 1

		Panel 13, Round 1 ($50)				Panel 14, Round 1				Panel 15, Round 1				Panel 16, Round 1 (Weighted)*			
		Net Sample	Ever Refused			Net Sample	Ever Refused			Net Sample	Ever Refused			"Net" Sample	Ever Refused		
			Refusals	Refusal Rate	Conversion Rate		Refusals	Refusal Rate	Conversion Rate		Refusals	Refusal Rate	Conversion Rate		Refusals	Refusal Rate	Conversion Rate
Subsampled PSUs	1	105	24	22.9%	20.8%	316	77	24.4%	15.6%	237	62	26.2%	32.3%	328	98	29.9%	24.5%
	2	52	5	9.6%	80.0%	146	36	24.7%	11.1%	126	36	28.6%	22.2%	159	56	35.2%	62.5%
	3	54	7	13.0%	0.0%	162	54	33.3%	24.1%	129	30	23.3%	16.7%	168	47	28.0%	12.8%
	4	74	14	18.9%	42.9%	221	86	38.9%	25.6%	190	72	37.9%	29.2%	244	80	32.8%	31.3%
	5	49	10	20.4%	50.0%	191	52	27.2%	38.5%	187	47	25.1%	42.6%	198	76	38.4%	40.8%
	6	8	2	25.0%	0.0%	44	13	29.5%	30.8%	36	10	27.8%	20.0%	41	16	39.0%	87.5%
	7	11	4	36.4%	75.0%	55	16	29.1%	31.3%	59	26	44.1%	19.2%	77	31	40.3%	29.0%
	8	94	19	20.2%	5.3%	352	130	36.9%	30.8%	274	108	39.4%	34.3%	381	144	37.8%	25.7%
	9	79	18	22.8%	27.8%	279	64	22.9%	20.3%	224	69	30.8%	18.8%	248	61	24.6%	42.6%
	10	111	25	22.5%	12.0%	318	88	27.7%	33.0%	298	92	30.9%	29.3%	326	100	30.7%	30.0%
	11	40	10	25.0%	30.0%	123	42	34.1%	28.6%	105	46	43.8%	19.6%	116	39	33.6%	25.6%
Total, Subsampled PSUs		677	138	20.4%	25.4%	2207	658	29.8%	26.4%	1865	598	32.1%	27.9%	2,286	748	32.7%	33.0%
Total, non-Subsampled PSUs		2,544	501	19.7%	27.9%	8,018	2041	25.5%	26.2%	7,392	2003	27.1%	27.9%	8,654	2,052	23.7%	31.3%
Total		3,221	639	19.8%	27.4%	10,225	2699	26.4%	26.3%	9,257	2601	28.1%	27.9%	10,940	2,800	25.6%	31.8%

Note: See table 2 for the components of the P16R1 weighted "net sample" in this table.is equal to the Not eligible for subsampling # worked (net sample at the end) plus two times This "net sample" is equal to the Not eligible for subsampling # worked (net sample at end) plus two times the eligible for subsampling, sampled-in # cases worked (net sample at end).
For example, for PSU 1 the P16R1 weighted "net sample" of 328 is the sum of 204 + (2*62)

Table 4: Mean Number of In-Person Contacts in Round 1,
Panels 13 ($50 group) through Panel 16

RU Count of P16R1, Eligible Subsampled-In RU's, is doubled
to reflect subsampling weight.

		Panel 13 ($50)			Panel 14			Panel 15			Panel 16		
		RUs	Contacts	Mean	RUs	Contacts	Mean	RUs	Contacts	Mean	RUs Wgt	Sum	Mean Wgt
Subsampled PSUs	**1**	105	545	5.2	320	1,694	5.3	241	1367	5.7	384	1,527	4.0
	2	52	165	3.2	149	850	5.7	132	1000	7.6	191	772	4.0
	3	56	338	6	164	915	5.6	130	810	6.2	199	984	4.9
	4	75	546	7.3	221	1,714	7.8	195	1,605	8.2	293	1,534	5.2
	5	51	272	5.3	194	976	5	188	934	5.0	224	1001	4.5
	6	8	46	5.8	44	213	4.8	38	247	6.5	50	246	4.9
	7	12	37	3.1	56	220	3.9	61	347	5.7	93	315	3.4
	8	95	422	4.4	354	1,934	5.5	277	1,943	7.0	467	2,610	5.6
	9	79	639	8.1	279	1702	6.1	228	1675	7.3	307	1217	4.0
	10	113	791	7	319	2,397	7.5	305	2,633	8.6	400	2,524	6.3
	11	40	239	6.1	124	808	6.5	106	905	8.5	139	710	5.1
Total, Subsampled PSUs		686	4,040	5.9	2,224	13,423	6	1,901	13,466	7.1	2,747	13,440	4.9
Total, non-Subsampled PSUs		2,619	12,810	4.9	8,141	44,080	5.4	7,513	45,626	6.1	8,755	51,473	5.9
Total		3,305	16,850	5.1	10,365	57,503	5.6	9,414	59,092	6.3	11,502	64,913	5.6

Table 4 (Cont.)

		Panel 16, Round 1											
		Total Sample			Not eligible for subsampling			Eligible, subsampled in			Eligible, subsampled out		
		All Rus									OOS		
			IP Contacts			IP Contacts			IP Contacts			IP Contacts	
		RUs*	Sum	Mean Wgt	RU	Sum	Mean	RU's x Subsample Wgt of 2	Sum	Mean Wgt	RU	Sum	Mean
Subsampled PSUs	1	384	1,527	4.0	205	706	3.5	128	549	4.3	51	272	5.3
	2	191	772	4.0	77	281	3.6	84	385	4.6	30	106	3.5
	3	199	984	4.9	116	505	4.4	52	303	5.8	31	176	5.7
	4	293	1,534	5.2	144	561	3.9	104	700	6.7	45	273	6.1
	5	224	1001	4.5	128	550	4.3	74	311	4.2	22	140	6.4
	6	50	246	4.9	19	102	5.4	22	104	4.7	9	40	4.4
	7	93	315	3.4	41	113	2.8	38	146	3.8	14	56	4
	8	467	2,610	5.6	207	837	4	178	1,266	7.1	82	507	6.2
	9	307	1217	4.0	140	478	3.4	112	541	4.8	55	198	3.6
	10	400	2,524	6.3	212	1074	5.1	122	961	7.9	66	489	7.4
	11	139	710	5.1	64	319	5	52	281	5.4	23	110	4.8
Total, Subsampled PSUs		2,747	13,440	4.9	1,353	5,526	4.1	966	5,547	5.7	428	2,367	5.5
Total, non-Subsampled PSUs		8,755	51,473	5.9	8,755	51473	5.9						
Total		11,502	64,913	5.6	10,108	56,999	5.6	966	5,547	5.7	428	2,367	5.5

Note: The total number of weighted Rus in this table include out-of-scope cases, because those cases were contacted and need to be included in the counts.