



**National Household Education Survey
2019 (NHES:2019)
Full-scale Data Collection**

OMB# 1850-0768 v.14

Appendix 6 – Web Test Report

June 2018



NHES:2017 Web Test Report

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Chapter 1: Introduction

The 2017 National Household Education Survey (NHES:2017) web test was the first time NHES responses were collected almost entirely online.¹ Sampled households were sent contact materials that included information about how to access the NHES web instrument; they did not have the option to complete a paper questionnaire. The intent of this test was to determine the feasibility of moving forward using web as a primary mode of data collection in the next full-scale NHES collection in 2019. The web test experimented with:

- strategies for contacting sample members;
- alternate presentation of the household screener to maximize the accuracy of screener responses and the overall usability of the screener instrument;
- asking respondents to complete two topical surveys instead of one; and
- alternate presentation of key Adult Training and Education Survey (ATES) items to maximize the quality of the responses received for these items.

This report presents the results of several methodological experiments embedded in the NHES:2017 web test (see exhibit 1.1 on the next page for more information about each experiment). It also includes a discussion of the effectiveness of the contact attempts included in both this administration and other recent NHES administrations. The overarching goal of this report is to determine which aspects of the NHES:2017 design worked well and which ones did not. In particular, the report addresses the following research questions, with a chapter of the report dedicated to each:

1. *Chapter 2:* What is the impact of using lower priced screener mailing strategies on the screener and topical response rates? Is there an effect on response timeliness or representativeness?
2. *Chapter 3:* What is the ideal way to administer the household screener online? Is there any benefit to using a redesigned screener more similar to the one the Census Bureau has developed for other household surveys in terms of response rate, respondent burden, response quality, or representativeness?
3. *Chapter 4:* Are sampled households willing to respond to two topical questionnaires online? Does asking households to do this have any negative impact on response rates, response quality, or representativeness?
4. *Chapter 5:* For the ATES topical questionnaire, is there a better way to ask the credential provider item that is used to differentiate between certifications and licenses? Are response order effects a concern for the “usefulness” items?

¹ Sample members who called into the Telephone Questionnaire Assistance (TQA) and completed the screener over the phone are the exception.

5. *Chapter 6:* Overall, how effective were the NHES:2017 contact attempts—particularly the newly piloted approaches (pressure-sealed envelopes and e-mail reminders)? How does the effectiveness of NHES:2017 contact attempts compare to other recent mail-based NHES administrations? Should any changes be made to the mailing schedule?

Each chapter includes an overview of the methods used in the experiment or for the survey contact efforts being analyzed, a discussion of the results of any analyses that were conducted, and a list of key takeaways.² The report concludes with a final Chapter 7, which summarizes the most important results from the earlier chapters and provides recommendations for the application of these findings to NHES:2019.

² Unless noted otherwise, all analyses in this report were conducted using base weights.

Exhibit 1.1: Experiments included in NHES:2017

Experiment	Survey stage	Description
Screeners split-sample	Screeners	Half of sampled households received the screener used in NHES:2016, which asks respondents to first indicate the number of people living in the household and then provide more detailed information person-by-person (e.g., all items for Person 1, all items for Person 2, and so on). The other half of the sampled households received a redesigned screener, which asks respondents to first list the names of all the individuals living in the household and then provide more detailed information item-by-item (e.g., date of birth for Person 1, date of birth for Person 2, sex for Person 1, sex for Person 2, and so on).
Screeners incentive	Screeners	Fifteen percent of the sample received a \$2 prepaid incentive with the first screener mailing, while the remaining 85 percent received the standard \$5 prepaid incentive.
Envelope size	Screeners	Ninety-seven percent of the sample was sent their first and second screener mailings in a full-size (BC-1776) envelope (standard NHES approach), while the other 3 percent was sent theirs in a small, letter-sized envelope (BC-1325).
FedEx / First Class	Screeners	Half of the sample was assigned to receive the third screener mailing in a FedEx envelope (standard NHES approach), while the other half was assigned to be sent the mailing using First Class mail in a cardboard priority mail envelope. Households with a PO box address could not be sent a FedEx mailing and thus were sent this reminder using First Class mail regardless of their experimental assignment.
Dual topical	Topical	Two-thirds of the sample was assigned to the standard single-topical condition. The other third was assigned to a dual-topical condition in which households that were eligible for two or more topical surveys were asked to complete two topical instruments (either a child and adult questionnaire or two child questionnaires).
ATES certification provider item	Topical: ATES	Half of the ATES respondents received the question wording used in NHES:2016 (version A), which asked respondents, “Is your certification or license required by a federal, state, or local government agency (such as a state board) in order to do that kind of work?” The other half received an alternate version B, which asked, “Is your certification or license required by a government agency (such as a state licensing board) in order to do that kind of work?”
ATES perceived usefulness items	Topical: ATES	Half of the ATES respondents received the version used in NHES:2016 (version A), in which the response options were listed as, “Not useful, useful, very useful, too soon to tell.” The other half received an alternate version B, in which the response options were listed as, “Very useful, somewhat useful, not useful, too soon to tell.”

Chapter 2: Screener Mailing Experiments

This chapter presents the results of three screener experiments that tested the effectiveness of alternate, less costly screener mailing strategies: (1) the incentive experiment, (2) the envelope size experiment, and (3) the FedEx/First Class experiment. Each section of the chapter begins with a description of the experiment and then presents the effect of the experiment on key outcomes.

2.1: Screener Incentive Experiment

This experiment randomly assigned 15 percent of the sample members to receive a \$2 prepaid cash incentive with the first screener mailing instead of the standard \$5 prepaid cash incentive. Using a \$2 incentive would present a potential large cost savings for future administrations. However, using a smaller incentive could have a negative effect on the response rate (e.g., Singer and Ye 2013; Mercer et al. 2015). This experiment also provides data that could be useful for conducting analyses of incentive sensitivity when a web option is offered (as prior incentive experiments have only been conducted among paper-only cases). This section of the chapter includes an analysis of the effect of the incentive value on the response rate, response timeliness, and respondent characteristics

Response rate and response timeliness

The first analysis in this section examines the screener response rate by incentive value, which is defined as the percentage of eligible households in each condition that returned the questionnaire (American Association for Public Opinion Research Response Rate 1 (AAPOR RR1)).³ T-tests are used to identify statistically significant differences between response rates.⁴

As shown in figure 2.1 on the next page, the screener response rate for the \$2 incentive group was significantly lower than the screener response rate for the \$5 incentive group (41 percent versus 44 percent).

We also compared the response rate for each topical survey in each condition to determine if the screener incentive had a carryover effect on the topical response rate (this seems especially likely when the NHES is administered online because sample members often experience the screener and topical phases in a single sitting).⁵ We also looked at the response rate for each topical

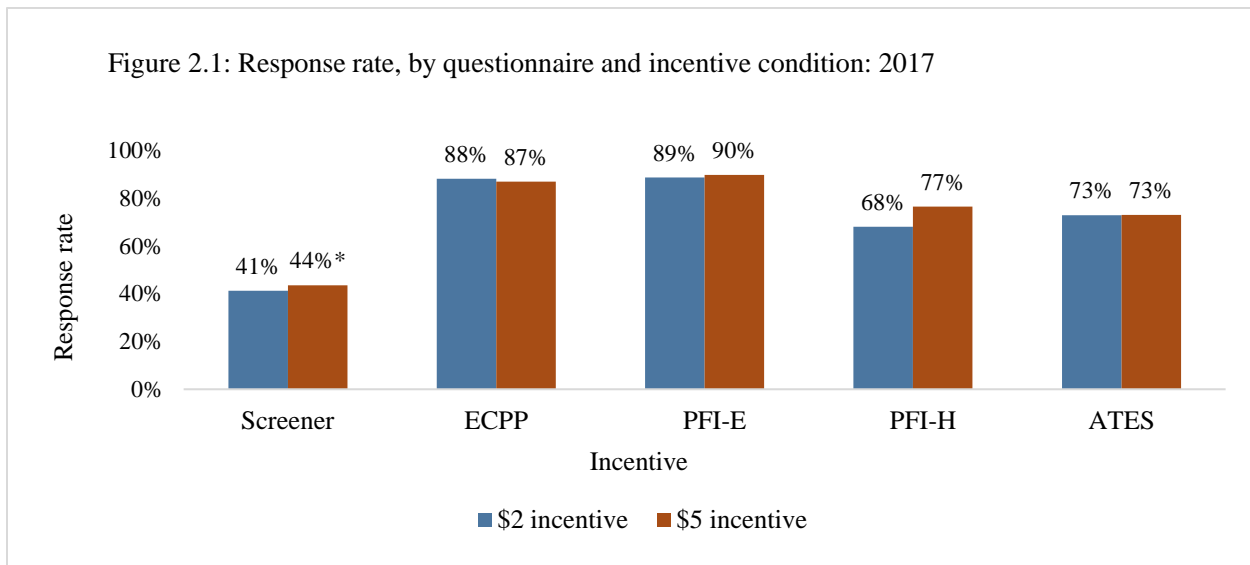
³ Typically, for production, the unit response rate is calculated using AAPOR Response Rate 3 (RR3), which estimates the percentage of addresses of unknown eligibility that are eligible. However, due to the difficulty of making statistical comparisons between response rates calculated using RR3, all unit response rates presented in this report are calculated using AAPOR RR1, which assumes that all addresses of unknown eligibility status are, in fact, eligible. Therefore, they represent the estimated response rate under the most conservative eligibility assumption and can be interpreted as the proportion of sampled cases (excluding cases known to be ineligible) that returned a completed questionnaire.

⁴ T-tests are used to identify statistically significant differences between experimental conditions in all tables presented in this report unless indicated otherwise. We do not make adjustments for multiple comparisons (e.g., Bonferroni correction).

⁵ All topical response rate analyses in this chapter are restricted to households where the screener was completed online because TQA screener respondents that were sampled for a topical were asked to complete the first topical item but were not asked to complete a full topical questionnaire.

separately for the single-topical condition and the dual-topical condition. In addition, we looked at the ATES results separately for households where the screener respondent was sampled for ATES and those where a different household member was sampled for ATES; when a different household member was sampled for ATES: (1) there was more of a separation between the screener and topical response requests and (2) an additional \$5 topical incentive was mailed to the ATES sample member (see table 2.1 in appendix A for the full set of results).

- There were no significant differences in the topical response rates by incentive condition. This was true regardless of whether the household was in the single- or dual-topical condition and regardless of whether the screener respondent was the household member sampled for ATES.
- Although there was a notable decline in the PFI-H response rate when the \$2 incentive was used (68 percent versus 77 percent), this is not a significant difference (likely due to the small number of cases sampled for PFI-H).



* $p < 0.05$.

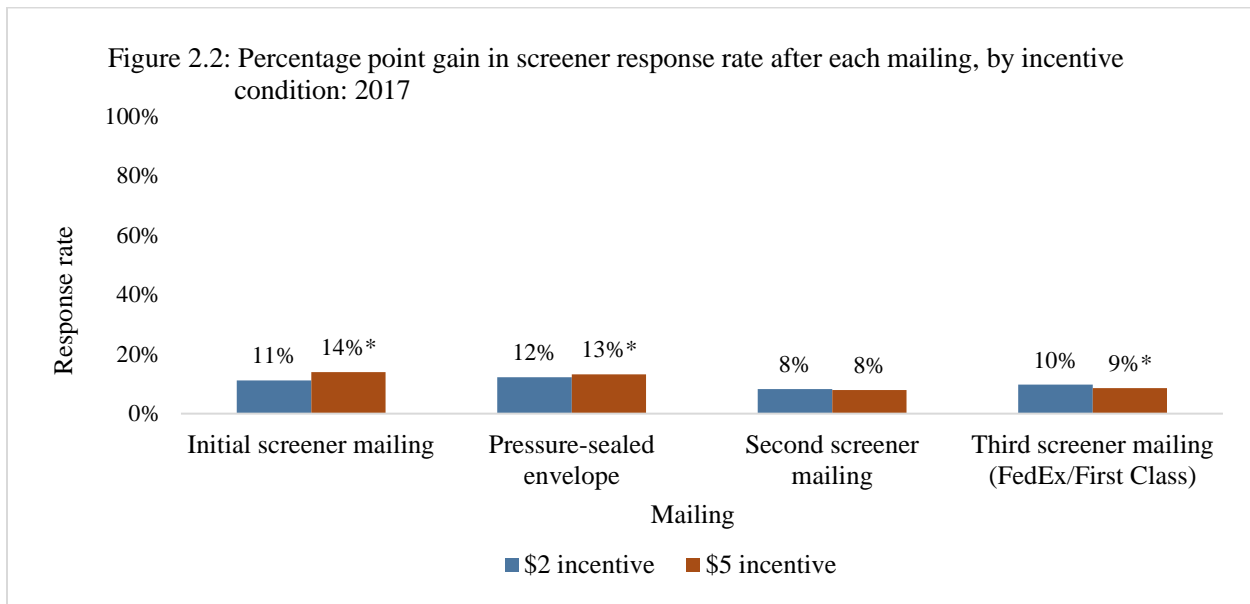
NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. For the \$2 condition, the unweighted eligible sample size was 13,400 for the screener, 390 for the Early Childhood Program Participation survey (ECPP), 890 for the Parent and Family Involvement-Enrolled survey (PFI-E), 30 for the Parent and Family Involvement-Homeschool survey (PFI-H), and 3,180 for the Adult Training and Education Survey (ATES). For the \$5 condition, the unweighted eligible sample size was 76,090 for the screener, 2,560 for ECPP, 5,270 for PFI-E, 190 for PFI-H, and 19,180 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

We next calculated the percentage point gain in the response rate after each screener mailing in each incentive condition to determine whether the incentive conditions differed in terms of how early in the field period sample members completed the screener by (see figure 2.2 on the next

page and table 2.2 in appendix A).⁶ Earlier screener responses lead to cost savings because they allow fewer follow-up mailings to be sent.

- The \$5 incentive appeared to have the greatest positive effect over the \$2 incentive early in the administration. It resulted in a significantly larger increase in the response rate than the \$2 incentive after each of the first two screener mailings (initial mailing and pressure-sealed envelope).
- However, incentive value did not have a significant effect on the magnitude of the gain in the response rate after the second screener mailing. The \$5 incentive also resulted in a significantly smaller gain in the response rate after the third screener mailing than did the \$2 incentive.
- Still, as noted previously, the final response rate in the \$5 incentive condition was significantly higher than the final response rate in the \$2 condition.



* $p < 0.05$.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible sampled households that had completed the screener after the specified mailing. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. Unweighted sample size (excluding ineligible addresses) was equal to 13,400 for the \$2 incentive condition and 76,090 for the \$5 incentive condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Respondent characteristics

Finally, we examined whether respondent characteristics differed by incentive condition (see table 2.3 in appendix A). This analysis used frame variables to determine whether the smaller incentive was less successful at getting hard-to-reach populations, such as younger, minority, lower-education, and lower-income individuals (and those missing frame data), to respond to the

⁶ Response is attributed to a mailing if the response was received three or more days after that mailing was sent (to allow time for the mailing to reach the household) and less than three days after the next mailing was sent.

survey. We also present the percentage of screener respondent households in each condition that reported having at least one household member who was eligible for each of the four topical surveys to determine whether the smaller incentive was less effective at getting households with eligible individuals to respond to the screener.

There were significant (although small) differences between the \$2 and \$5 incentive groups for only 4 of the 32 comparisons that were made, suggesting that incentive value did not have much of an effect on sample composition.

- The \$2 incentive group had a higher percentage of households with a White head of household (58 percent) compared to the \$5 incentive group (56 percent).
- The \$2 incentive group had a higher percentage of households with an annual income of \$85,001–\$120,000 (18 percent) compared to the \$5 incentive group (17 percent).
- The \$2 incentive group had a lower percentage of households with missing information on race/ethnicity of the head of household (22 percent versus 24 percent), education of the head of household (22 percent versus 24 percent), and age of the head of household (19 percent versus 21 percent). But it did not have a significant effect on the percentage of screener respondent households that had annual income or a phone number available on the frame.
- The incentive did not have a significant impact on the percentage of screener respondent households that reported at least one household member eligible for each of the four topicals.

Takeaways for the screener incentive experiment

- Using a \$2 screener incentive resulted in a significant (although relatively small) reduction in the screener response rate but had minimal effect on the topical response rate.
- The positive effect of the \$5 incentive over the \$2 incentive was greatest at the beginning of the administration; it was particularly effective at getting sample members to respond to one of the first two screener contacts (initial mailing and pressure-sealed envelope).
- There were very few significant differences in the characteristics of screener respondent households in the two screener incentive conditions, and those that did exist were small in magnitude.
- For a few variables, some evidence indicates that using a \$2 incentive reduced the prevalence of households that are missing frame data—a group that has been found in the past to be less likely to respond. But the incentive did not have a measurable impact on the likelihood that respondent households reported topical-eligible household members on the screener.

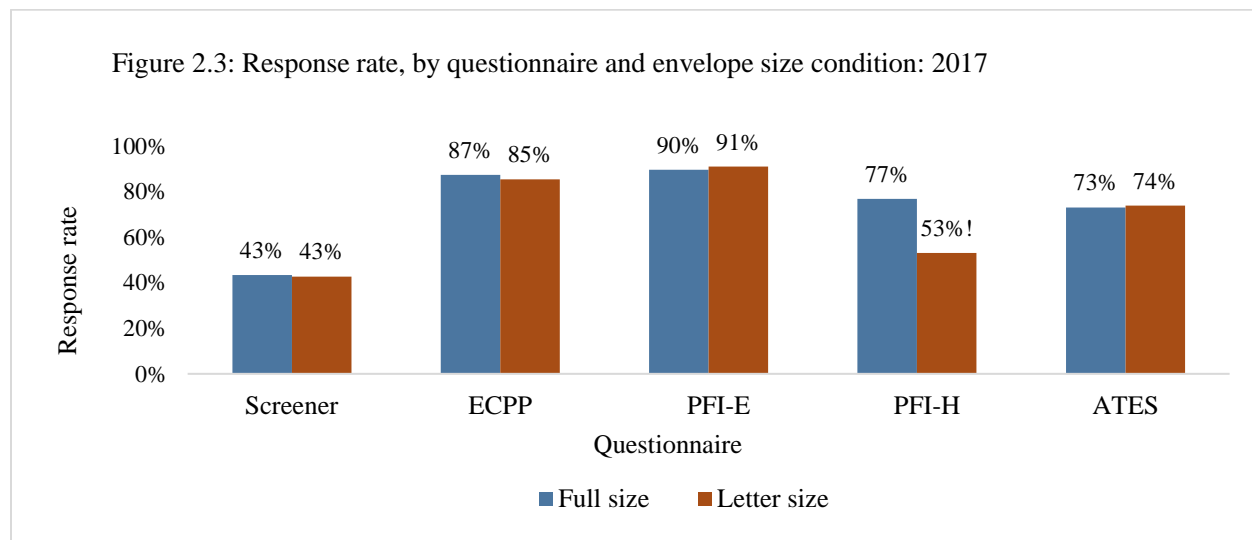
2.2: Envelope Size Experiment

Three percent of sample members were randomly assigned to receive a smaller, letter-sized envelope for the initial screener mailing and first screener reminder mailing instead of the larger, full-size envelope that is traditionally used in the NHES. Images of the envelopes are included in appendix E. Envelope size may influence people’s perception of the NHES, whether they notice the mailing, whether or not they think it is official mail, and their likelihood of responding. However, postage on the smaller envelope is roughly half that of the full-size envelope, presenting a potential cost-saving opportunity if the smaller envelope does not have a negative impact on the response rate. This section of the chapter includes an analysis of the effect of the envelope size on the response rate, response timeliness, and respondent characteristics.

Response rate and response timeliness

Figure 2.3 shows the response rates for the screener and each topical survey by envelope condition (also see table 2.4 in appendix A).

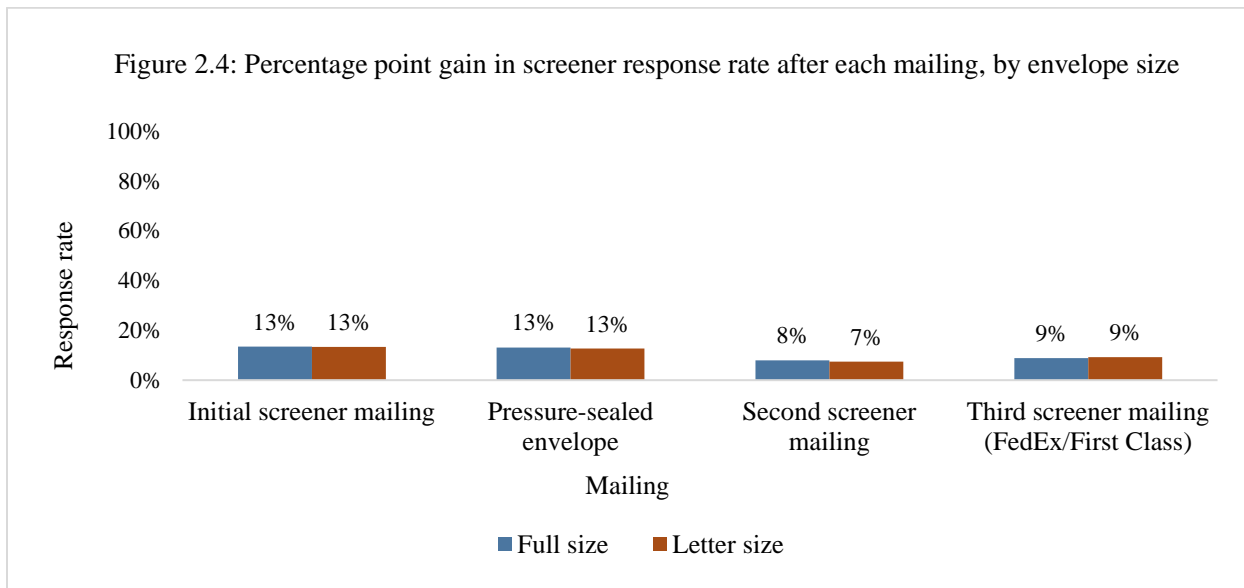
- Envelope size did not have a significant effect on the screener response rate (43 percent in both conditions).
- It also did not have a significant effect on the topical response rates. Except for PFI-H, the differences between the response rates in the two conditions ranged from 1 to 2 percentage points. Although there was a notable decline in the PFI-H response rate when the letter-size envelope was used, the estimates are not stable enough to warrant making a statistical comparison between the two PFI-H response rates.



! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. For the full-size envelope condition, the unweighted eligible sample size was 85,010 for the screener, 2,820 for ECPP, 5,830 for PFI-E, 210 for PFI-H, and 21,290 for ATEs. For the letter-size envelope condition, the unweighted eligible sample size was 4,480 for the screener, 130 for ECPP, 333 for PFI-E, 10 for PFI-H, and 1,070 for ATEs. Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

We next examined the effect of envelope size on screener response timeliness by comparing the gain in the response rate after each of the screener mailings in the two envelope conditions. As shown in figure 2.4 below, the gain in the response rate did not differ significantly by envelope condition after any of the four mailings (see also table 2.5 in appendix A).



NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible sampled households that completed the screener after the specified mailing. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. The unweighted sample size (excluding undeliverable addresses) was equal to 85,010 for the full-size envelope condition and 4,480 for the letter-size envelope condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Respondent characteristics

We also compared screener respondent households in the two conditions on the same household characteristics used in the screener incentive analysis and found almost no significant differences between the full- and letter-size envelope respondent households (see table 2.6 in appendix A). The only significant difference was for households with a head of household age 18–24, which were more prevalent in the full-size envelope condition (just over 1 percent) than in the letter-size envelope condition (about half a percent); however, the magnitude of this difference is very small, and, as noted in the table, the latter estimate should be interpreted with caution.

Takeaways for the envelope size experiment

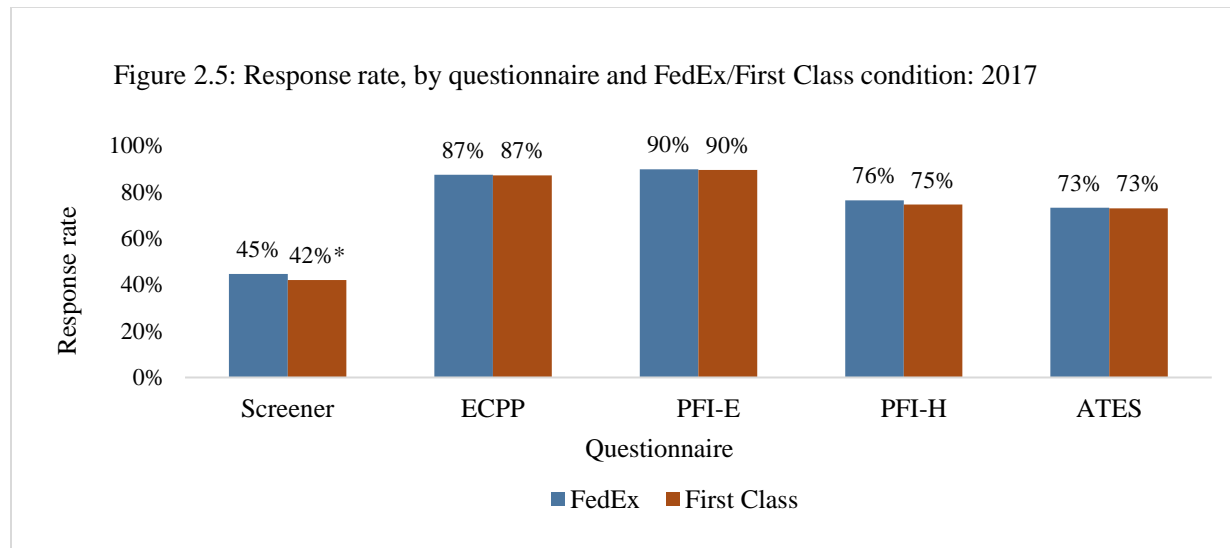
- Using a letter-size envelope instead of a full-size envelope for two of the screener mailings did not have a significant effect on the final screener response rate, or on the response rate after any specific screener mailing.
- It also did not have a significant effect on the topical response rate.
- Finally, it did not have a significant effect on the characteristics of the responding households or on their likelihood of reporting topical-eligible individuals on the screener.

2.3: FedEx/First Class Experiment

As part of this final screener mailing experiment, sample members were randomly assigned to be sent the third screener mailing using FedEx (as has typically been done in recent NHES administrations) or by First Class mail in a cardboard priority mail envelope, which is less expensive than FedEx.⁷ An image of the FedEx envelope is included in appendix E.⁸ Again, this analysis assesses whether the mailing method had an impact on the likelihood of response or the characteristics of those who responded.

Response rate

First, we compared the screener response rates in the FedEx and First Class conditions. The response rate was significantly lower in the First Class condition than in the FedEx condition (42 percent versus 45 percent, see figure 2.5 below and table 2.7 in appendix A). We also looked specifically at the gain in the response rate in each condition following the FedEx / First Class mailing and found that the gain was significantly larger in the FedEx condition than it was in the First Class condition (10 percent versus 7 percent; not shown in table 2.7). As seen for the other screener mailing experiments, there was not a significant difference in the topical response rates by condition.



* $p < 0.05$.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Households with PO box addresses are excluded because they cannot receive FedEx mailings. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. For the FedEx condition, the unweighted eligible sample size was 44,720 for the screener, 1,530 for ECPP, 3,230 for PFI-E, 130 for PFI-H, and 11,520 for ATES. For the First Class condition, the unweighted eligible sample size was 44,130 for the screener, 1,410 for ECPP, 2,900 for PFI-E, 90 for PFI-H, and 10,720 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

⁷ PO box addresses could not receive FedEx mailings; as a result, they were sent First Class mail regardless of their experimental assignment.

⁸ AIR does not currently have a copy of the First Class envelope, but this is something that could likely be requested from Census in the future.

Respondent characteristics

Finally, we compared the characteristics of the screener respondent households in the FedEx and First Class conditions (see table 2.8 in appendix A). Again, the respondent characteristics were almost identical in the two conditions, with only two significant (but small) differences (out of more than 30 subgroups tested). The FedEx condition had a lower percentage of households with an annual income of \$85,001–\$120,000 (17 percent) compared to the First Class condition (18 percent); it also had a higher percentage of households that were missing annual household income information (11 percent versus 10 percent).

Takeaways for the FedEx/First Class experiment

- Sending the final screener mailing using First Class instead of by FedEx resulted in a significant (although relatively small) reduction in the screener response rate. It did not have a significant effect on the topical response rates.
- It also had very little effect on the characteristics of screener respondent households and did not have a significant effect on the likelihood that they reported a topical-eligible household member on the screener.

Chapter 3: Screener Split-Sample Experiment

This chapter presents the results of the screener split-sample experiment, in which sample members were randomly assigned to receive either of the following:

- the NHES:2016 screener, which is a rather literal translation of the NHES paper screener and uses a person-by-person format, asking all of the questions about a single household member before turning to the next household member; or
- a redesigned screener that is more similar to screeners that the Census Bureau has developed for web administration of other household surveys, such as the American Community Survey, which uses a characteristic-by-characteristic format, asking about a single characteristic for all household members before turning to the next characteristic.

A few other differences between the two versions include the following: (1) the 2016 version starts by asking how many people live in the household, while the redesigned version starts by asking for the screener respondent's name; (2) the 2016 version uses the number provided in the first question (about how many people live in the household) to decide how many individuals to ask detailed questions about, while the redesigned version asks for all household members' names and uses that to determine how many individuals to ask detailed questions about; (3) the redesigned version only lets households report six names at first and then asks them if anyone else lives in the household (and, if so, allows them to report up to four additional names), while the 2016 version allows respondents to report up to 10 household members without including a question of this type; and (4) in the redesigned version, the characteristic-by-characteristic format allows the redesigned screener to identify earlier those households where no one is age-eligible for NHES (all household members over age 65) and thus permits skipping the enrollment and current grade items for these households.

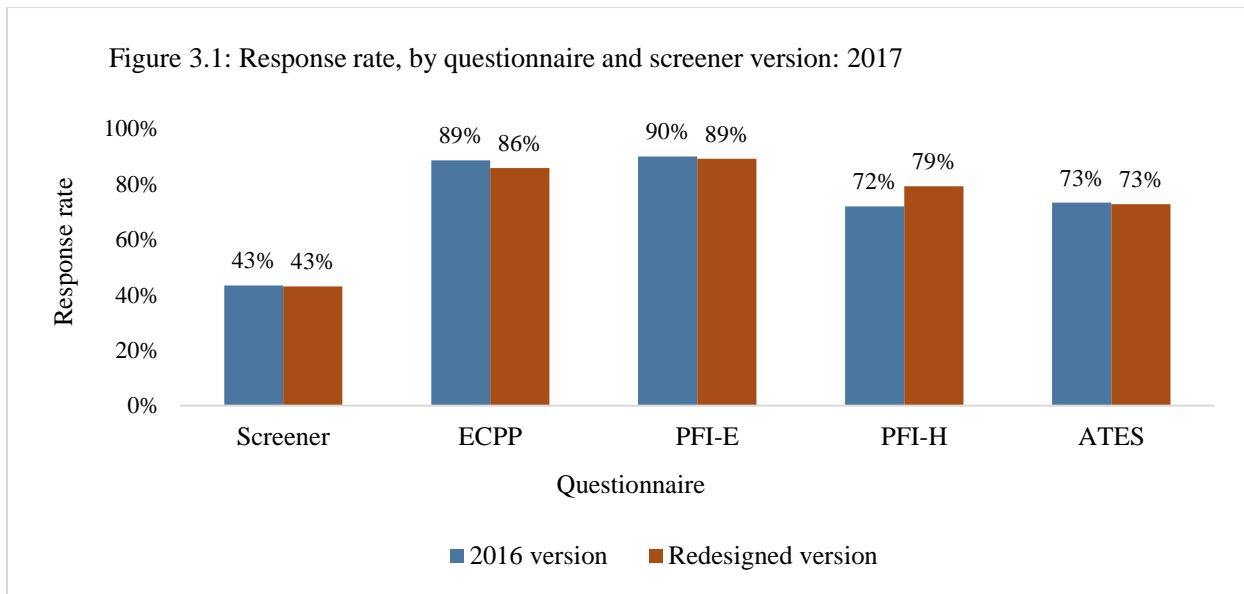
The goal of conducting this experiment with the redesigned screener was to see if it would be easier than the 2016 screener for respondents to complete (for example, is it easier for respondents to list all of the household members' names instead of providing a number of household members?), and whether it seemed to lead to more accurate screener responses. The key outcomes of interest were the response rate, response quality, response burden, respondent characteristics, and screener item responses (e.g., number of household members reported).

When applicable, all analyses in this chapter were conducted twice—first for web respondents and then for the 8 percent of screener respondents who completed the screener over the phone by calling into the TQA—to determine if the ideal screener format is different for interviewer administration than it is for self-administration.⁹ The web screener results are shown in this chapter, while the TQA results are shown in appendix C.

⁹ TQA respondents completed the same screener version over the phone to which they would have been assigned on the web.

3.1: Response Rate

We began by comparing the screener and topical response rates by screener condition. If one screener version resulted in much lower response rates, it might be preferable to avoid using that version in future administrations. However, as shown in figure 3.1, the screener response rates in the two versions were not measurably different from one another (43 percent in both conditions). In addition, there were no significant differences in the topical response rates by screener version (also see table 3.1 in appendix A).¹⁰ Although there was a noticeable decrease in the PFI-H response rate when the 2016 screener was used, this difference was not significant, likely due to small sample sizes for PFI-H (about 230 households were sampled for PFI-H).



NOTE: In the 2016 version, questions were asked in a person-by-person format. In the redesigned version, questions were asked in a characteristic-by-characteristic format. Response rates were calculated using AAPOR RR1. Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. For the 2016 version, the unweighted eligible sample size was 44,780 for the screener, 1,420 for ECPP, 3,020 for PFI-E, 120 for PFI-H, and 11,200 for ATEs. For the redesigned version, the unweighted eligible sample size was 44,710 for the screener, 1,530 for ECPP, 3,140 for PFI-E, 101 for PFI-H, and 11,160 for ATEs. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

3.2: Response Quality

It is also important to know if the screener version had an impact on the quality of the data that was collected – is it easier for respondents to report information in a person-by-person format or a characteristics-by-characteristic format? Is it easier for them to report the number of people living in the household by reporting a number or by listing out everyone’s names? Response quality was measured in terms of the screener breakoff rate, item missingness, and the prevalence of inconsistent responses.

¹⁰ As also noted in chapter 2, all topical response rate calculations are limited households that completed the screener on the web because TQA screener respondents were not asked to complete a full topical survey.

Screener breakoff rate

We first compared the breakoff rate in each screener condition—the percentage of households that accessed the screener instrument but did not complete it. Among those who accessed the web tool, there was not a significant difference between the two conditions in terms of the screener breakoff rate (3 percent in both conditions; see table 3.2 in appendix A).

We also conducted subgroup analyses using frame variables to assess the impact of screener format on subgroups that were expected to be particularly affected by burden:

- *by the educational attainment of the head of household*, with the hypothesis that lower education households might be more likely than higher education households to have trouble completing the screener (and that this would be more obvious in whichever screener was more burdensome);
- *by the number of adults in the household*, with the hypothesis that larger households might be more likely than smaller households to have trouble completing the screener; and
- *by whether or not the household was flagged as having children*, with the hypothesis that having child household members also might mean the household size is larger. In addition, it might make the questionnaire more burdensome to complete because it requires the household to answer additional questions that only apply to individuals who are enrolled in school.

However, for each of these subgroups, we found that there was not a measurable difference in the breakoff rate by screener version. We did see slightly higher breakoff rates in both conditions for households where the head of household had educational attainment of high school or less (as opposed to some college or more), but we did not see the expected pattern for breakoffs in terms of the number of adults in the household or whether the household had children in it. This may suggest these variables are not sufficiently related to burden to prompt breakoffs—or it may be that the frame variables are not actually accurate measures of these household characteristics (for example, the frame may say there are children living in the household when really there are not any present). We did, however, find that those who were missing data on the frame variables used for the subgroup analyses tended to be the most likely to breakoff, which makes sense given that these households also have been found to be less likely to participate in the NHES at all (Jackson and Medway 2017).

Item missingness

We next explored the extent of item missingness for each of the household member characteristic screener items: (1) name, (2) date of birth/age,¹¹ (3) sex, (4) school enrollment status, and (5)

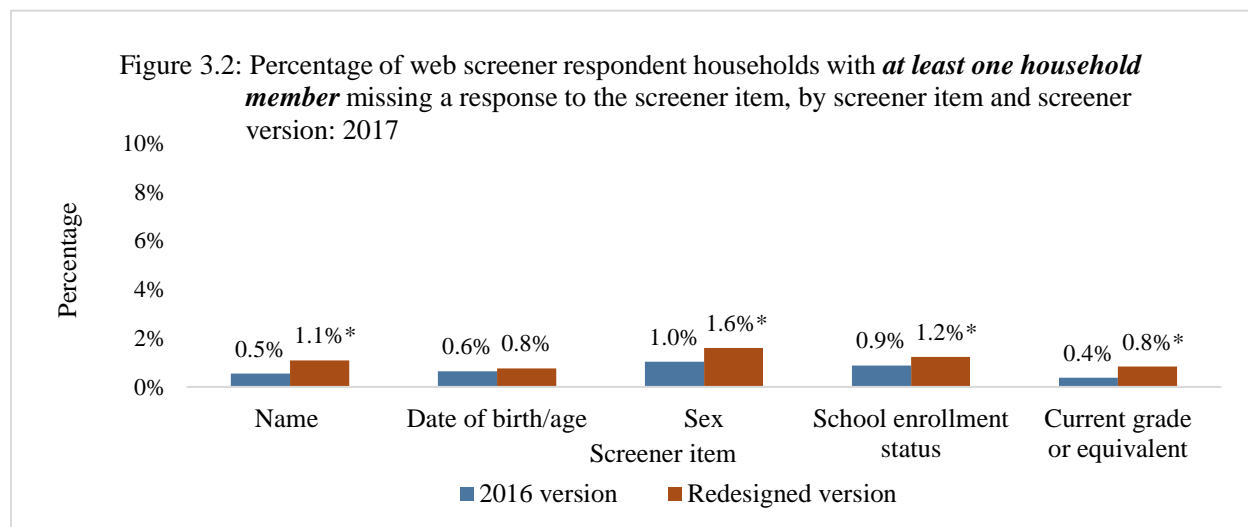
¹¹ Both screeners started by asking for month and year of birth and then asked for age if the screener respondent declined to provide month and year of birth. To be counted as missing for date of birth/age, a household member needed to be missing data for both of these questions.

current grade. For each of these items, we first looked at the percentage of screener respondent households where at least one household member was missing a response to the question.¹²

As shown in figure 3.2, households that responded online using the 2016 version were significantly less likely than those that responded using the redesigned version to have at least one household member missing a response for:

- name (0.5 versus 1.1 percent);
- sex (1.0 versus 1.6 percent);
- enrollment status (0.9 percent versus 1.2 percent); and
- grade (0.4 percent versus 0.8 percent) (see table 3.3a in appendix A).

Although the magnitude of these differences was quite small, the direction of the relationship was consistent across the four items (there was not a significant difference in the extent of missing data for date of birth/age by screener version). It also should be noted that, overall, the percentage of households with at least one person missing a response to key questions was quite low in both versions.



* $p < 0.05$

NOTE: In the 2016 version, questions were asked in a person-by-person format. In the redesigned version, questions were asked in a characteristic-by-characteristic format. Percentages represent the proportion of web screener respondent households with at least one household member missing a response to that screener item. Households that responded to the screener on the TQA are excluded from this analysis. The unweighted sample size was equal to 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

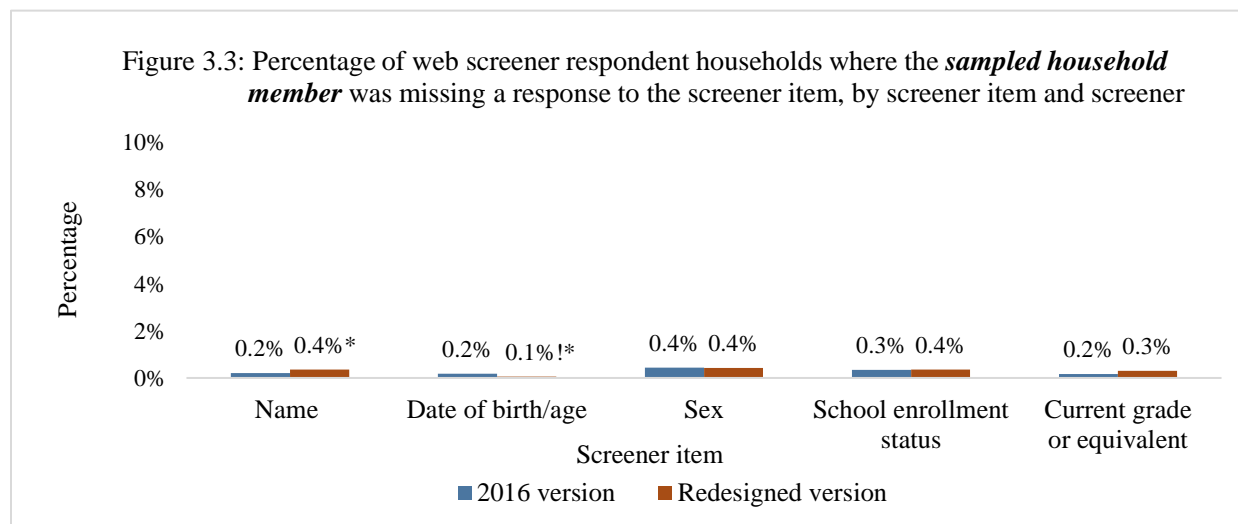
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

¹² There appear to be some irregularities in how the data from the redesigned version is output into a data file (for example, the name for a given household member might be listed under P3 while his or her other information is listed under P4). We are still researching this, and it may have at least small implications for any item-response results reported in this chapter.

We conducted the same subgroup analyses discussed in the previous section using frame variables (educational attainment of the head of household, the number of adults in the household, whether the household is flagged as having children).

- For name and sex, the difference between the two versions remained significant (although small) for almost all subgroups, with the exceptions tending to be the smaller subgroups where there may not have been sufficient power to detect small differences.
- For enrollment and grade, the difference between the two versions was *not* significant for most subgroups.
- For all subgroups for all of the variables, the direction of the relationship was consistent—a higher percentage of households had at least one person missing a response to key questions in the redesigned version, regardless of statistical significance.

Next, we looked at the percentage of web screener respondent households where *the sampled household member* was missing a response to the question. The rates were even lower for this analysis (all less than 1 percent; see figure 3.3 below and table 3.3a in appendix A), in part because excessive missing data would stop a household member from being sampled in the first place. The results for this outcome were less consistent than when we looked at whether any one household member was missing data. For example, households in the redesigned version were significantly more likely than those in the 2016 version to be missing a name for the sampled household member but less likely to be missing a date of birth/age; there was not a significant difference for sex, enrollment, or grade. Overall, screener version had little impact on item missing data for the sampled household member among web screener respondent households.



! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < 0.05$

NOTE: In the 2016 version, questions were asked in a person-by-person format. In the redesigned version, questions were asked in a characteristic-by-characteristic format. Percentages represent the proportion of web screener respondent households with the sampled household member missing a response to that screener item. Households that responded to the screener on the TQA are excluded from this analysis. The unweighted sample size was equal to 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Inconsistent responses

Next, we calculated the percentage of screener respondent households that provided inconsistent screener responses for at least one household member in each condition. Inconsistent responses were defined as:

- reporting an inconsistent pair of age and grade responses (for example, reporting that a five year old is in twelfth grade);
- reporting that the household member is currently homeschooled or in private school, public school, or preschool for the enrollment question and then reporting that the household member is in college, university, or vocational school for the current grade question; or
- reporting either that the household member is enrolled in school and is too old to realistically be in school (for example, reporting that a 25 year old is in public or private school) or that the household member is *not* enrolled and is too young to be finished with his or her schooling (for example, reporting that a 10 year old is not currently in school).¹³

The percentage of web screener respondent households that provided an inconsistent pair of responses for at least one household member was very low in both conditions (see table 3.4a in appendix A). However, respondents in the redesigned version were significantly more likely than those in the 2016 version to do so (3 percent versus 2 percent). We conducted the same subgroup analyses as discussed in earlier sections and found that the significant difference was limited to the following subgroups:

- households where the head of household had completed high school or less (3 percent in the redesigned versus 2 percent in the 2016 version);
- households with only 1 or 2 adults in them (rounds to 3 percent in both conditions); and
- households that were flagged as having children (5 percent in the redesigned version versus 4 percent in the 2016 version).

Unknown eligibility sampling status

Finally, we compared the percentage of screener respondent households in each condition where at least one household member received an “unknown eligibility” sampling status. This status was assigned when there was insufficient information to determine whether the household member was eligible for any of the topical surveys because (1) there was too much item nonresponse or (2) there were inconsistent screener responses.¹⁴ Household members that receive this flag are not eligible for topical sampling. A higher prevalence of households with unknown

¹³ The web tool was programmed to prohibit some potential inconsistent responses from occurring: (1) household members under the age of 10 could not have reported enrollment of “college, university, or vocational school,” and (2) household members over age 25 could not have reported enrollment of “homeschool” or “public or private school or preschool” (and thus could not be asked their current grade or equivalent).

¹⁴ Appendix D includes a table with the sampling decision rules based on all of the possible combinations of age, enrollment, and grade responses to the screener—including the conditions under which an unknown eligibility sampling decision would be made.

eligibility would suggest that respondents have more difficulty completing that version of the screener.

Web respondents to the redesigned screener were significantly more likely to have at least one household member end up with an unknown eligibility sampling status, although the magnitude of this difference was quite small (2 percent of households in the redesigned version and 1 percent in the 2016 version) (see table 3.5a in appendix A).

The same subgroup analyses as discussed in previous sections also were conducted here. The difference between the two versions remained significant for almost all subgroups—and the direction of the relationship was also consistent for nearly all subgroups (more households received an unknown eligibility status using the redesigned screener compared to the 2016 version).

3.3: Response Burden

The next section of this chapter explores the effect of screener version on response burden; it is possible that one ordering of the items or the other was more difficult for respondents to process and was thus more burdensome to complete. As a measure of burden, we calculated the mean number of minutes screener respondents spent answering the screener questions in each condition.¹⁵ Among web screener respondents, we found that there was a small but significant increase in the mean amount of time needed to complete the redesigned screener as compared to the 2016 screener (4.4 minutes versus 3.9 minutes; see table 3.6a in appendix A).

We again conducted the same subgroup analyses as described in earlier sections. We found that the significant differences by screener condition remained for almost all subgroups—and that the pattern of the relationship remained the same for all subgroups (the redesigned version took longer than the 2016 version). We also found that, as expected, the screener took longer to complete in both conditions when there were more people reported living in the household and when the household was flagged as having children (but it did not take longer when the head of household had lower educational attainment).

3.4: Respondent Characteristics

We next compared the following characteristics of the responding households in each condition using variables available on the frame to see if the two versions of the screener resulted in different types of households responding to the screener:

- whether there was a phone number available on the frame;
- the race/ethnicity, age, and education of the head of household; and
- annual household income.

¹⁵ Cases that completed the screener over multiple days, took more than 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis. One case was missing from the paradata file and is also excluded from this analysis.

There were no significant or notable differences in screener respondent households on these variables among web screener respondents (see table 3.7a in appendix A).

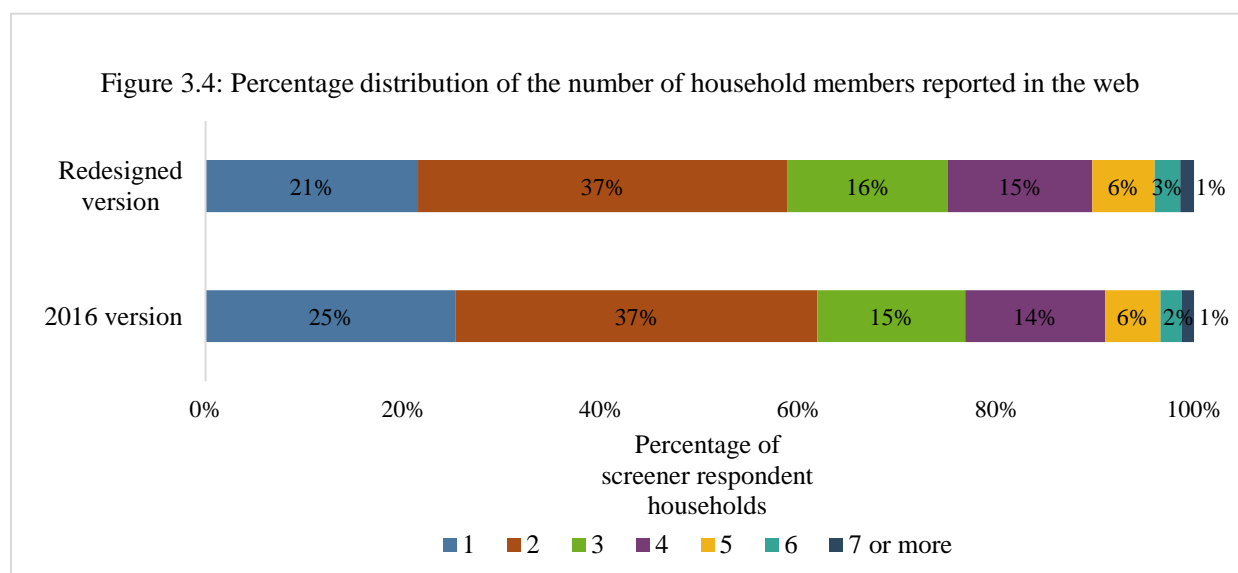
3.5: Screener Responses

Finally, we compared the responses received for the two versions of the screeners in terms of two screener response outcomes: (1) the number of people reported to be living in the household and (2) whether or not at least one household member was reported as being eligible for a topical survey.

Number of household members reported

Among the households that completed the screener online, there was a small but significant difference in the mean number of household members reported in each condition (2.5 in the 2016 version and 2.6 in the redesigned version). There were some significant differences in the percentage distribution number of household members reported by screener condition that drive the difference between these means; however, most of these differences also were quite small in magnitude (see figure 3.4 below and table 3.8a in appendix A):

- There was more likely to be only one household member reported in the 2016 version than in the redesigned version (25 percent versus 21 percent).
- Conversely, respondents in the 2016 version were less likely than those in the redesigned version to report three household members (15 percent versus 16 percent), five household members (rounds to 6 percent in each condition), or six household members (2 percent versus 3 percent).



NOTE: In the 2016 version, questions were asked in a person-by-person format. In the redesigned version, questions were asked in a characteristic-by-characteristic format. Percentages represent the proportion of web screener respondent households within each condition that reported that number of household members. Households that responded to the screener on the TQA are excluded from this analysis. The unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

After giving respondents the opportunity to report the names of the first six household members, the redesigned version of the screener included a question asking if any additional individuals lived in the household (conversely the 2016 version allows respondents to report up to 10 household members without including a question of this type; results in this section not shown in appendix tables).¹⁶

- Overall, 4 percent of web redesigned screener respondent households said “yes” to this question.
- We also looked at the response to this question by whether or not the screener respondent had already reported six household members in response to the initial question; for those respondents, this question may simply provide an opportunity to report additional household members who had not been listed previously due to a lack of space—while for those who had previously reported fewer than six household members, this question could provide an additional opportunity to report household members that the screener respondent may have initially forgotten to list. Thirty-five percent of those screener respondents who had already listed six household members replied “yes” to this question, while only 3 percent of those who had listed fewer than six household members did so.
- After providing an affirmative response to that question, respondents were given the opportunity to list up to four additional names. On average, web screener respondents listed 1.2 additional names, with those who had already listed six people adding 1.6 more names and those who had listed fewer than six added 1.0 names on average.¹⁷
- Somewhat surprisingly, 26 percent of web respondents who had said “yes” to the question about additional household members did not provide any additional names when given the opportunity to do so. This was especially common for screener respondents who had previously reported fewer than six household members (36 percent versus only 6 percent of households that had already listed six household members).
- When web screener respondents did provide names for the additional household members, they almost always also provided ages for these people (ages were reported for 96 percent of the people for whom names were provided). It was somewhat more likely for respondents who had initially listed fewer than six household members *not* to provide ages for the added household members (7 percent of added names were missing ages compared to only 1 percent among respondents who had previously listed six household members).
- Looking at the ages for those names that were added by web respondents, there was a large range in the reported ages, all the way from less than one year old up to 91 years

¹⁶ The exact wording of this question was: “Other than the people listed below, does ANYONE ELSE live in this household? For example, anyone who usually lives here who is temporarily away from home or living in a dorm at school, any babies or small children, roommates, foster children.”

¹⁷ Comparisons between households that initially listed six or more household members and those that listed fewer than six are based on general patterns, not statistical significance, due to relatively small sample sizes.

old. About half of the added individuals were adults (age 19 or older), about a quarter were children ages 6 to 18, and the final quarter were children ages 0 to 5.

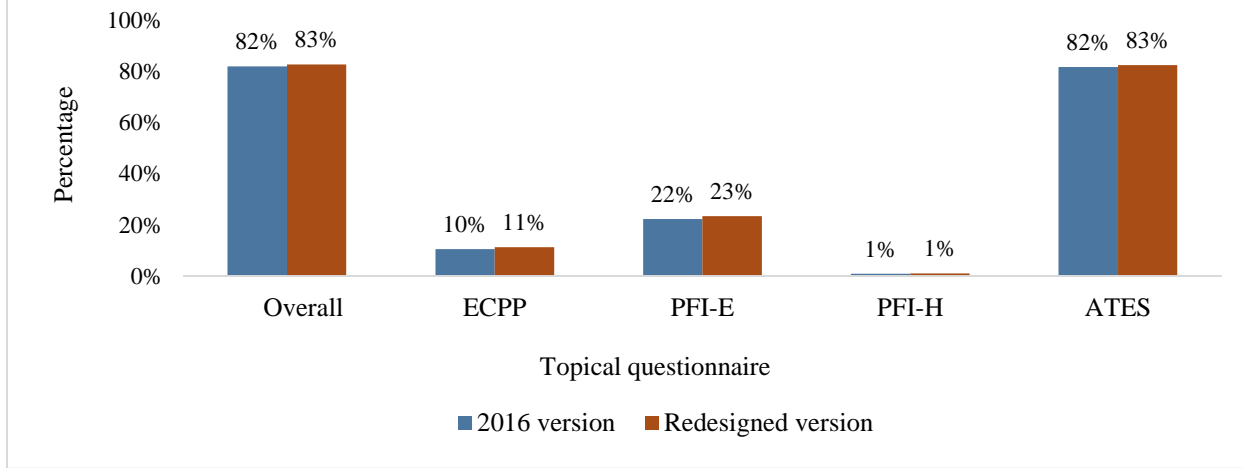
- Among respondents who had initially listed six household members, the added household members were especially likely to be children (35 percent were ages 0 to 5 and 37 percent were ages 6 to 18).
- However, among respondents who had initially listed fewer than six household members, the added household members were much more likely to be age 19 or older (65 percent of added household members, while 15 percent were ages 0 to 5 and 20 percent were ages 6 to 18). Ultimately, about 150 children in the eligible age range for ECPP and PFI (age 0 to 18) were listed on the screener who would not have been if the screener had only offered places to list six names and had not included a question about potential additional household members for those screener respondents who initially provided fewer than six names.

Reporting at least one household member eligible for a topical survey

Finally, we compared the percentage of screener respondent households in each condition that reported at least one household member who was eligible for a topical survey. This percentage did not differ significantly by screener version among web screener respondents (82 percent in the 2016 version and 83 percent in the redesigned version; see figure 3.5 on the next page and table 3.9a in appendix A).

We also looked at the percentage of web screener respondent households reporting at least one household member who was eligible for each of the specific topical surveys. Although there was not a significant difference between the two screener versions for ATES or PFI-H, there was a small but significant increase in the percentage of web screener respondents completing the redesigned version who reported at least one household member eligible for ECPP (11 percent versus 10 percent) or PFI-E (23 percent versus 22 percent).

Figure 3.5: Percentage of web screener respondent households that reported at least one household member eligible for each topical survey, by screener version: 2017



NOTE: In the 2016 version, questions were asked in a person-by-person format. In the redesigned version, questions were asked in a characteristic-by-characteristic format. Percentages represent the proportion of web screener respondent households for which at least one reported household member was eligible for a topical survey. Screener respondent households may have been eligible for more than one topical; as a result the topical-specific results do not sum to the overall result. Households that responded to the screener on the TQA are excluded from this analysis. The unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

3.6: Key Takeaways From the Screener Experiment

- Screener version did not have a significant impact on the screener response rate or breakoff rate. It also did not have a significant effect on the topical response rates.
- Screener version did not have a significant effect on the characteristics of web screener respondent households (as measured by frame variables, such as having a phone number available or the education or age of the head of household). But households in the 2016 version reported fewer household members on average and were significantly more likely than those in the 2016 version to only report one household member (and less likely to report three, five, or six household members); however, the magnitude of these differences is quite small and may not be of practical concern.
- Screener version did not have a significant impact on the percentage of web screener respondent households that reported at least one household member eligible for at least one topical survey, but households in the redesigned version were significantly more likely to report at least one household member eligible for ECPP or PFI-E, although the magnitude of these differences is again quite small and may not be of practical concern.
- For several other outcomes, the redesigned screener performed worse than the 2016 version among web screener respondents; however, again, the magnitude of most of these differences is very small and may not be of practical concern. Respondent households in the redesigned version:

- were more likely to have missing data for at least one household member for most screener items;
 - were more likely to provide an inconsistent response for at least one household member;
 - were more likely to have at least one household member receive an “unknown eligibility” sampling status; and
 - took longer on average to complete the screener.
- Among TQA screener respondents, there were very few significant or notable differences between the two versions in terms of key outcomes (see appendix C for more details).

Chapter 4: Dual-Topical Experiment

This chapter of the report presents the results for the dual topical experiment. In this experiment, one-third of the sampled households were randomly selected to receive two topical surveys instead of one.¹⁸ The intent of this experiment was to determine if households that were eligible to complete two or more topical surveys would be willing to provide more data as part of an online survey (building on the 2014 paper-only version of this experiment), so that future NHES collections could potentially sample a smaller number of households and still end up with a similar number of topical respondents.

The analyses presented in this chapter examine the effect of the dual topical request on the following outcomes: the response rate, response quality, respondent burden, and respondent characteristics. All analyses conducted in this chapter are limited to households that reported on the screener that they had household members that were eligible for at least two of the NHES topical surveys (ECP, at least one of the versions of PFI, or ATES) because households that did not meet this criteria in the dual-topical condition would only have been sampled for one topical. All analyses in this chapter also are restricted to households where the screener was completed online because TQA screener respondents who were sampled for a topical were asked to complete the first topical item but were not asked to complete a full topical questionnaire. The results of these analyses provide insight into the feasibility of requesting that households complete multiple topical questionnaires in future NHES administrations that include a web administration component.

4.1: Response Rate

The first section of this chapter assesses the impact of the dual-topical condition on the topical response rate; because the dual-topical condition can be more burdensome for households, it is possible it could result in lower topical response rates or that some households would decline to complete the second topical questionnaire.

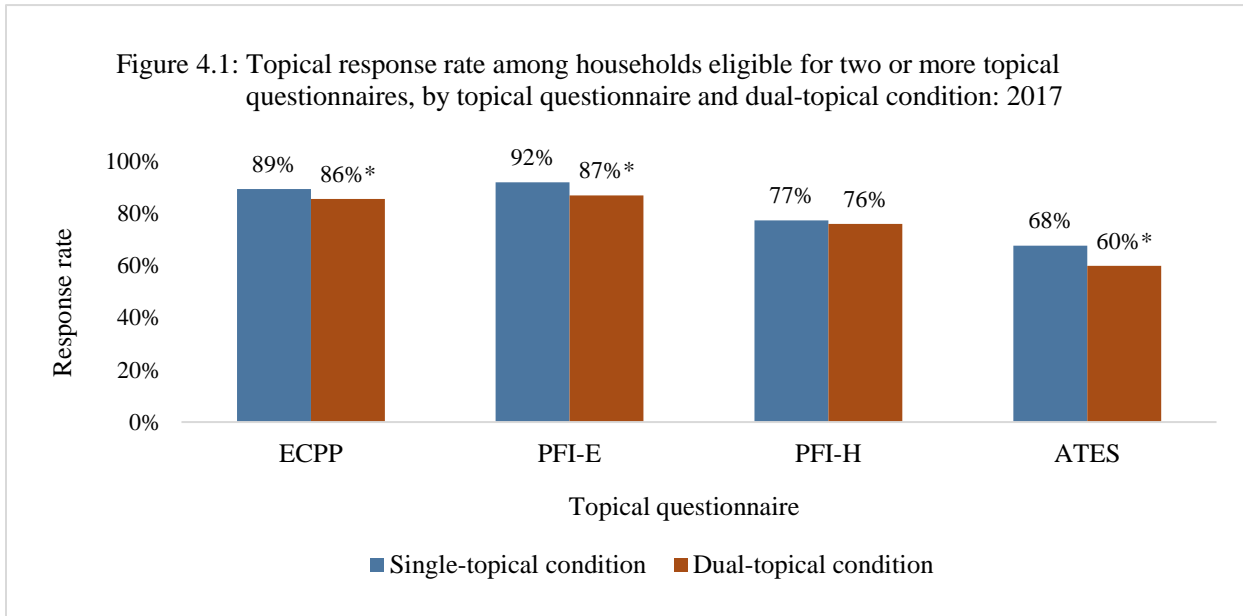
We started by comparing the topical response rate for each topical in the single and dual topical households (see figure 4.1 on the next page and table 4.1 in appendix A).

- For ECP, PFI-E, and ATES there was a significant decrease in the topical response rate in the dual-topical condition as compared to the single-topical condition. There was not a significant or notable difference between the two conditions for PFI-H.
- For ECP and PFI-E, the magnitude of the difference was 4 to 5 percentage points.
- The difference was larger for ATES, with an 8 percentage point decrease in the topical response rate in the dual-topical condition. There was a similarly sized decrease in the

¹⁸ In the dual household condition, all households with individuals eligible for at least two topicals were meant to be asked to complete two topicals. Each household could only get a particular topical one time (for example, ATES was only presented once even if the household was solely made up of adults who were eligible for ATES). In addition, dual topical households could only receive either PFI-E or PFI-H, not both. In conducting the analyses in this chapter, we found that 25 households flagged for the dual household condition that had members eligible for two or more topicals were *not* sampled for two topicals; this was likely a sampling error in the web instrument.

response rate in the dual-topical condition regardless of whether the screener respondent or a different household member was sampled for ATES.

- In addition, in both conditions, the response rate was much lower when another household member was sampled than it was when the screener respondent was sampled (more than 40 percentage points lower, likely due to the reduced topical mailing protocol used in 2017).¹⁹



* $p < 0.05$.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that were respondents to the topical questionnaire. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATES. In the dual-topical condition, the unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

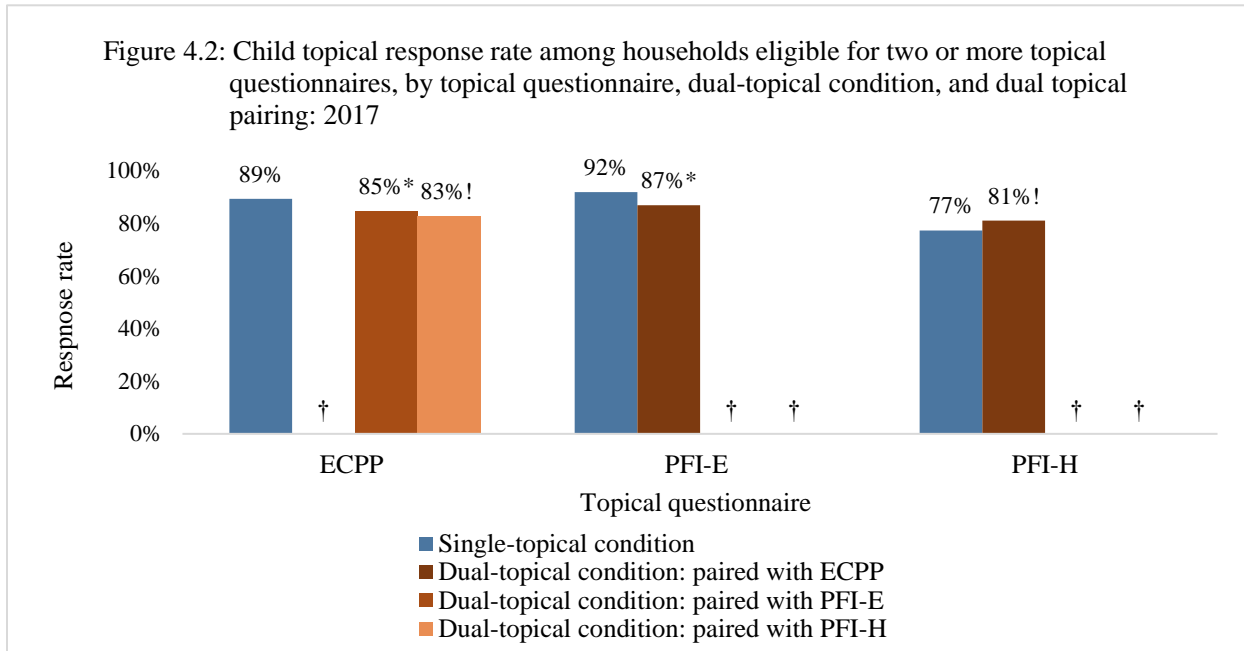
We also looked at the response rate separately for each of the possible combinations of the dual questionnaires, to determine if the response rate was impacted by the particular combination of questionnaires that the household received (see table 4.1 in appendix A).

We began by looking at the child topical response rates for all possible child-child topical pairings and compared those to the child topical response rates in the single-topical condition (see figure 4.2 on the next page).

- For both ECPP and PFI-E, the response rate was significantly lower when they were paired together in the dual-topical condition than it was when they were administered individually in the single-topical condition.

¹⁹ The 2017 topical protocol only included two mailings (and two e-mails, when following up with screener respondents who had provided their e-mail address), while earlier NHES mail administrations included five topical mailings.

- When ECPP and PFI-H were paired together, there was a slight pattern of the ECPP response rate being lower than in the single-topical condition—and the PFI-H response rate being higher compared to the single-topical condition; however, the paired estimates were not reliable enough to make statistical comparisons with the single-topical condition.²⁰



† Not applicable.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible households with two or more individuals eligible for ECPP and PFI (E or H) that were respondents to the topical questionnaire. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATEs. In the dual-topical condition, the unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATEs. Sample sizes have been rounded to the nearest 10.

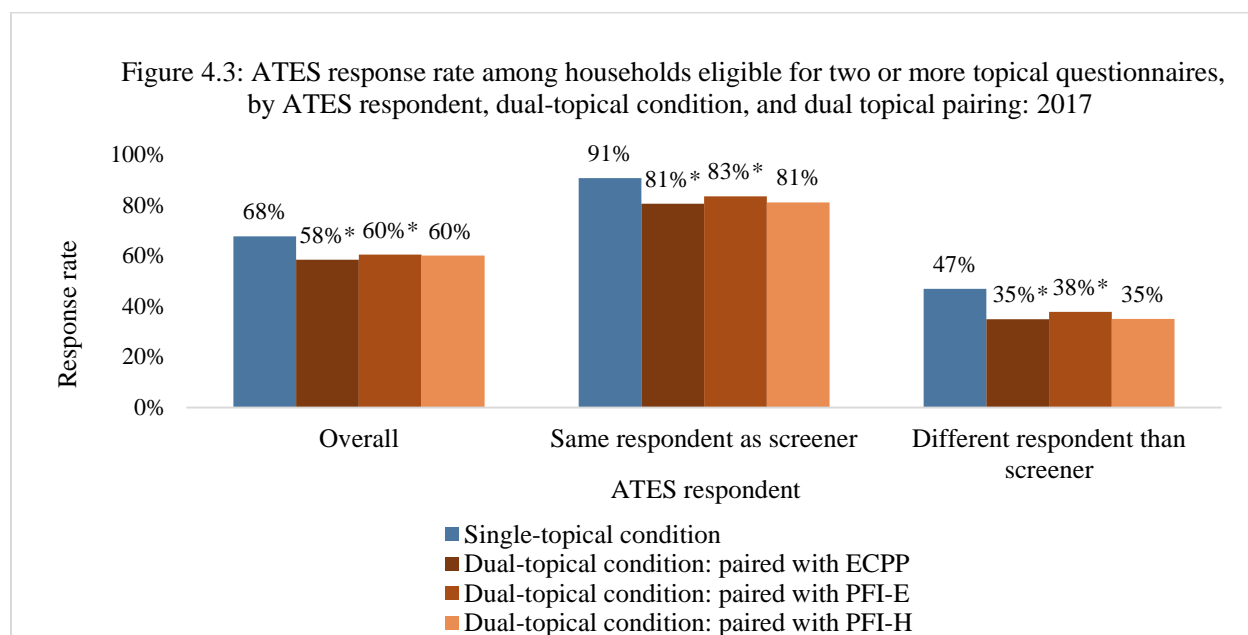
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

We next looked at the ATEs response rate in all possible adult-child dual topical pairings and compared it to the ATEs single-topical condition response rate (see figure 4.3 on the next page and table 4.1 in appendix A). We looked separately at households where the screener respondent was sampled for ATEs and at those where someone else was sampled because sampling a

²⁰ In order to provide NCES with as much information as possible for decision-making purposes, no estimates have been suppressed in this report. However, we have generally refrained from conducting statistical tests whenever at least one of the estimates would have been suppressed (due to the coefficient of variation being 50 percent or greater, (2) the numerator being less than 3 (other than for estimates that round to 0), or (3) the denominator being greater than 30); these t-tests have been replaced with daggers in all tables in appendix A. In addition, throughout this report, we have flagged estimates as unreliable/needing to be interpreted with caution if any of the following is true: (1) the coefficient of variation is 30 percent or greater, (2) the numerator is less than 3 (other than for estimates that round to 0), or (3) the denominator is greater than 30; these estimates have an exclamation point displayed next to them in all figures and tables.

different household member for ATES takes away the main benefit of dual topical sampling in a web administration (that the screener respondent could do both topicals right after completing the screener).

- When ATES was paired with ECPP or PFI-E in the dual condition, the ATES response rate was significantly lower than it was in the single-topical condition.
- There was also a notable decrease in the ATES response rate when it was paired with PFI-H (as compared to the ATES single-topical condition response rate); however, this difference was not statistically significant given the small sample size. These patterns were even observed when a different household member was sampled for ATES, though it is not immediately clear why the dual-topical condition would decrease the response rate among this group.
- In addition, regardless of dual-topical condition or topical pairing, the ATES response rate was lower when a different household member was sampled for ATES than it was when the screener respondent was sampled; this is likely due to the break in the response process when a different household member is sampled for ATES.

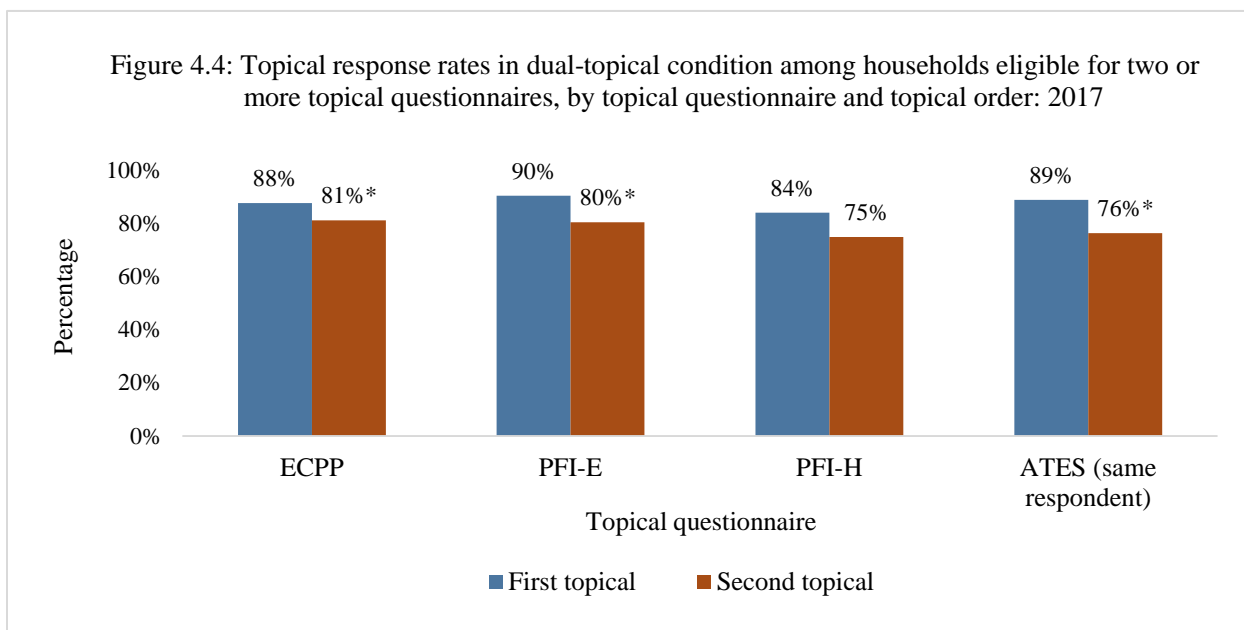


NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible households with two or more individuals eligible for ATES and either ECPP or PFI (E or H) that were respondents to the topical questionnaire. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size for ATES is 1,400. In the dual-topical condition, the unweighted eligible sample size was 2,860 for ATES. Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Finally, since the order of the topicals was randomized for households in the dual-topical condition that were asked to complete two topicals, we assessed whether the order that the topicals were presented had an impact on response rates in the dual-topical condition (see figure 4.4 on the next page and table 4.1 in appendix A). This analysis—and all subsequent analyses of topical order within the dual-topical condition—excludes households where someone other than

the screener respondent was sampled for ATES because that sampling scenario tended to result in two different people taking the topical at two different times (making topical order irrelevant).

- For ECPP, PFI-E, and ATES (when the screener respondent was sampled), the topical response rate was significantly lower when a topical was presented second than when it was the first topical presented.
- For ECPP and PFI-E, the magnitude of the difference was 7 to 10 percentage points, while for ATES it was about 13 percentage points.
- These differences persisted regardless of which topical the surveys were paired with.
- The same pattern was observed for PFI-H, but the difference was not significant (likely due to small sample sizes for PFI-H).



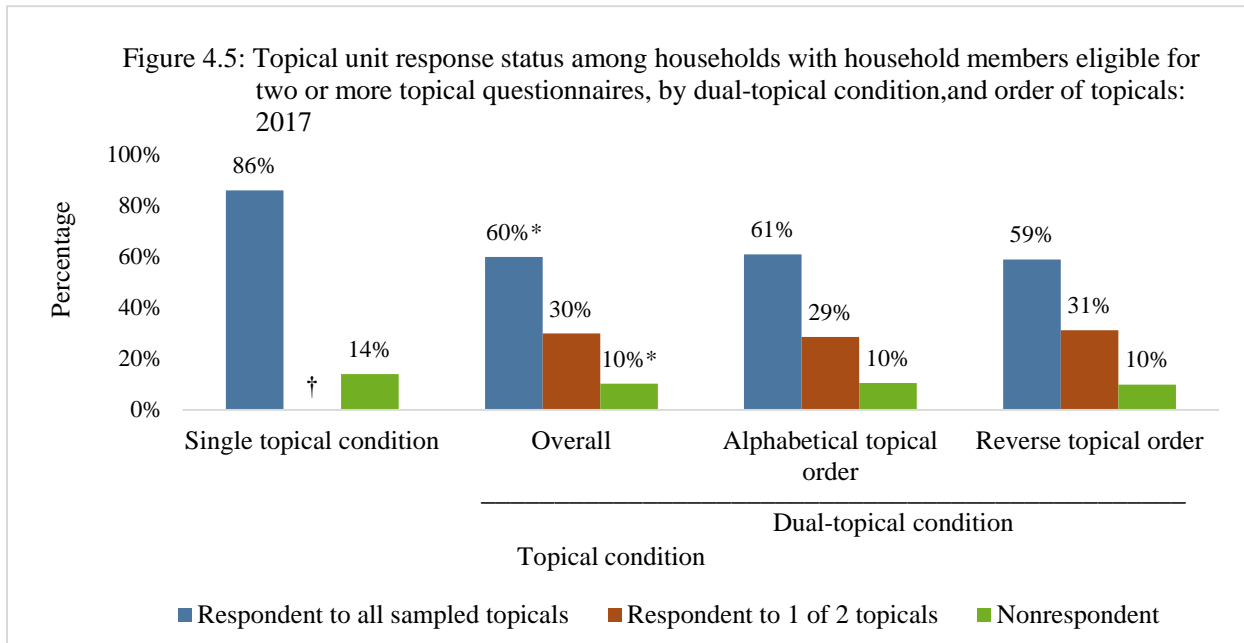
* $p < 0.05$.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible households in the dual-topical condition with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that were respondents to the topical questionnaire. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Households where someone other than the screener respondent was sampled for ATES are also excluded from the analysis. Unweighted eligible sample size was 870 for ECPP, 1,450 for PFI-E, 70 for PFI-H, and 1,430 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

We next determined whether each household completed all of the topicals that they were asked to complete, classifying all households in both conditions that had household members eligible for two or more topicals into one of three groups: (1) respondent to all sampled topicals (1 in the single-topical condition and 2 in the dual-topical condition), (2) respondent to one of two topicals (possible in the dual-topical condition only), and (3) nonrespondents to all sampled topicals.

- We found that households in the dual-topical condition were significantly less likely to complete all of the topical questions they were sampled for than were those in the single-topical condition (60 percent versus 86 percent, see figure 4.5 below and table 4.2 in appendix A).
- Households in the dual-topical condition also were significantly less likely than those in the single-topical condition to end up as nonrespondents to all sampled topical questions (10 percent versus 14 percent).



† Not applicable.

* $p < 0.05$ (compared to single-topical condition).

NOTE: Percentages represent the proportion of households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATEs that completed that number of topical questions (all, one of two, none). The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATEs. In the dual-topical condition, the unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATEs.

Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

We also looked at the results separately for each possible topical pairing in the dual-topical condition, to see if specific pairings (e.g., ECPP paired with PFI-E, ATEs paired with PF-H, and so on) had an effect on how likely dual topical households were to complete all of the topical questions for which they were sampled (see figure 4.6 to follow and table 4.2 in appendix A).

- In general, we found topical pairing not to be much of a factor for pairings where the screener respondent was asked to complete both topical questions.
- However, when a different household member was sampled for ATEs, households were much less likely to complete both topical questions than they were when the screener respondent was able to do both topical questions. This is likely due to the break in the response process

associated with sending a separate response request to a different household member (as well as due to the reduced topical mailing protocol used in 2017).

- Households were particularly likely not to complete either topical when the pairing was a different ATES respondent with PFI-H; however, this may be due to the lower response rate associated with each of these topical scenarios individually.

Finally, we looked at whether the order in which the topicals were presented in had an impact on whether dual-topical households completed both topicals (see table 4.2 in appendix A). We again found this not to be the case—with one exception: when ECPP was paired with ATES (and the screener respondent was the person sampled for ATES), households were significantly more likely to complete both topicals when ATES was presented first than they were when ECPP was presented first (81 percent versus 71 percent).

Topical yield

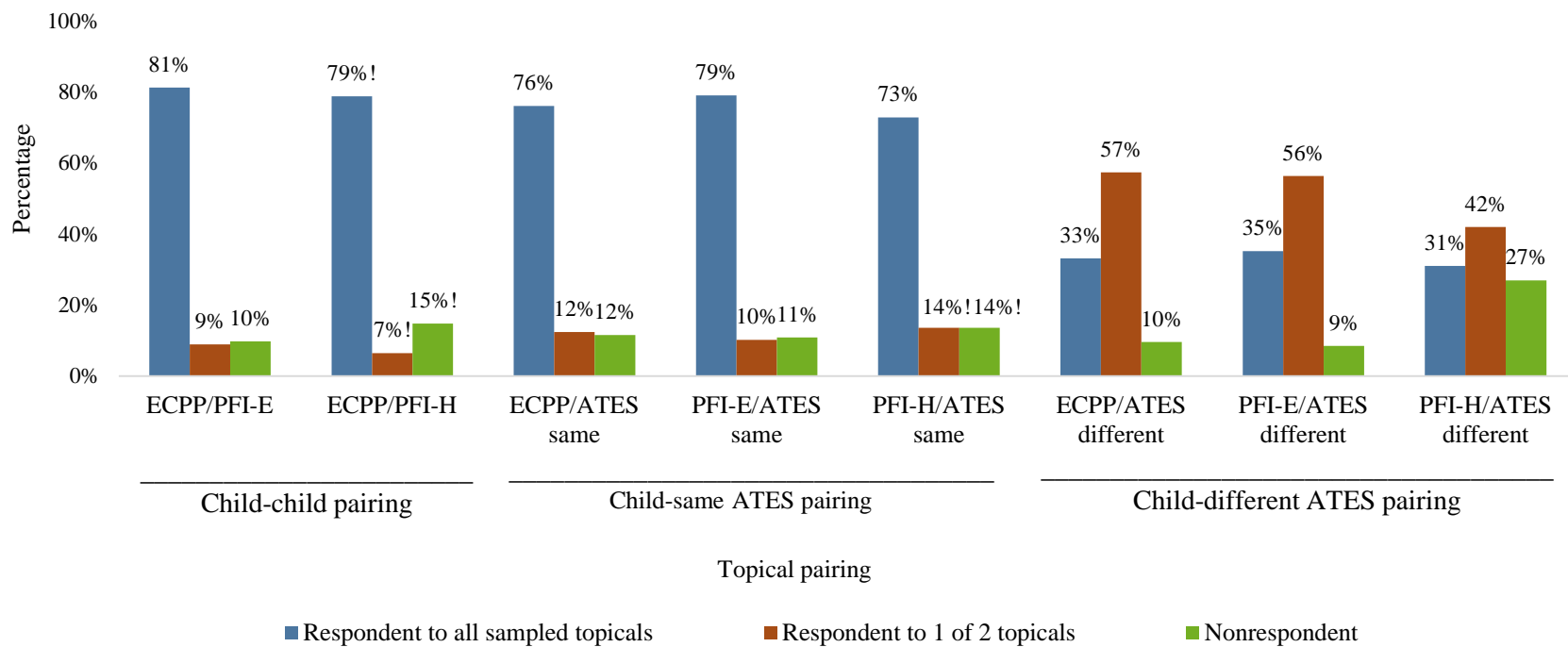
We also conducted an analysis of the topical yield in each condition—the number of screener cases needed to achieve a single topical complete. Even though the topical response rates were lower in the dual-topical condition, it is possible that getting two topicals from a sufficient number of households could cancel this out. If fewer screeners could be sent out in the dual-topical condition while still maintaining the same topical yield, this would present a cost savings opportunity for future NHES administrations. We also estimated the number of screener cases that would need to be sampled to end up with the same topical yield as 2016 (approximately 67,660 topical completes) in both the single and dual-topical conditions; this provides an estimate of whether using a dual topical design would allow for a smaller starting sample size in 2019. This analysis was conducted unweighted and includes all cases sampled for the NHES.²¹

- In the single-topical condition, a topical complete was achieved for every 4.3 screeners that were sent out. In the dual-topical condition, a topical complete was achieved for every 3.3 screeners that were sent out.
- To achieve 67,600 topical completes as was done in 2016, 291,206 screeners would need to be sent in the single-topical condition and 224,803 screeners would need to be sent in the dual-topical condition. This is a reduction of about 66,400 screeners in the dual-topical condition to end up with the same number of topical completes, suggesting that the dual-topical condition is still more efficient even though the topical response rates were lower in the dual-topical condition.

It is important to keep in mind that the 2017 web test had a much lower screener response rate than other NHES administrations, mostly due to only offering a web option. In addition, the topical yield is lower in 2017 because cases that completed the screener on the TQA were not asked to complete the entire topical survey. Therefore, although this analysis is useful for making comparisons between the two experimental conditions, it is not a good estimate of the exact number of screeners that would need to be sent in the next official NHES administration.

²¹ These results are only shown in the text, not in appendix tables.

Figure 4.6: Topical unit response status among dual-topical condition households with household members eligible for two or more topical questionnaires, by dual topical pairing: 2017



NOTE: Percentages represent the proportion of households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATEs that completed that number of topicals (all, one of two, none). Sample sizes have been rounded to the nearest 10. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. ATEs "same respondent" households are those where the screener respondent was sampled for ATEs; ATEs "different respondent" households are those where a household member other than the screener respondent was sampled for ATEs. In the single-topical condition, the unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATEs. In the dual-topical condition, the unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATEs. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

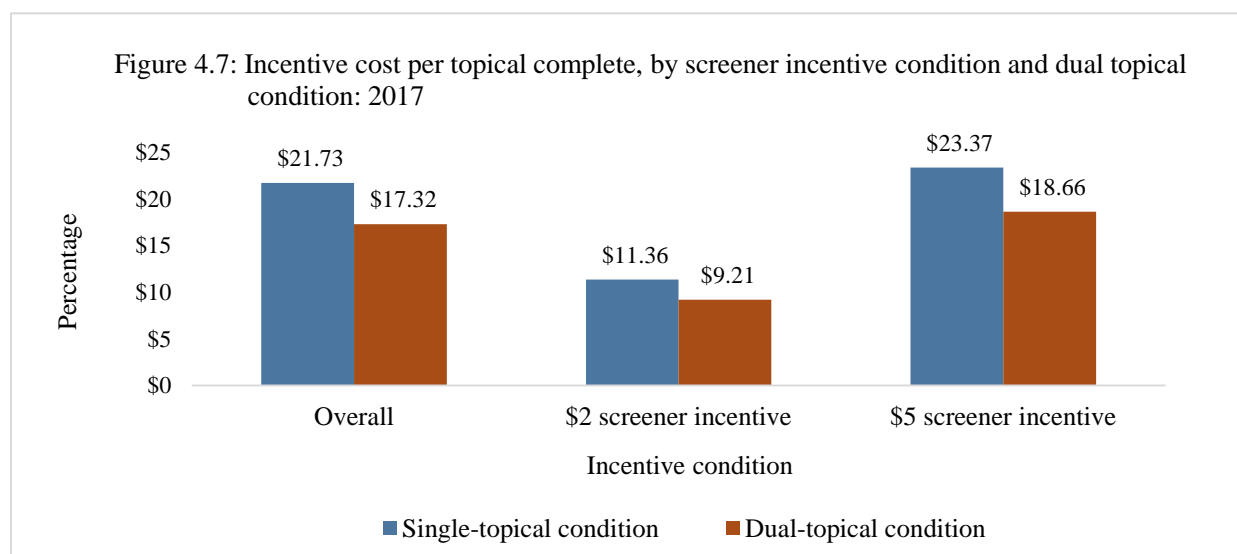
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017

Incentive cost per topical complete

Finally, this section includes an analysis of the incentive cost per topical complete in the single and dual-topical conditions. The analysis provides insight into the extent to which the dual topical design might reduce the incentive cost per completed topical survey, since dual-topical condition households received the same incentive as single-topical condition households. This analysis was also conducted unweighted and includes all cases sampled for the NHES.

- The incentive cost for each sampled household was determined based on the case's screener incentive condition (\$2 or \$5) and whether any topical mailings were sent to the household (additional \$5 incentive).
- The cost was then summed for all households in each of the four conditions (single-versus dual-topical by \$2 versus \$5 screener incentive). The number of completes in each condition was determined by summing up the number of completed topicals received in that condition.
- Finally, the cost per complete was calculated as the total incentive cost in that condition divided by the total number of completes. This analysis was conducted unweighted.

As shown in figure 4.7 (and table 4.3 in appendix A), the incentive cost per complete was lower in the dual-topical condition; the incentive cost per topical complete in the single-topical condition was \$21.73, while in the dual-topical condition it was \$17.32. We see the same pattern when we look at this result separately for those cases that were given a \$2 screener incentive and those that were given a \$5 screener incentive, although the magnitude of the difference is larger in the \$5 condition (about \$4.70 versus about \$2.20).



NOTE: The cost per topical complete was calculated as the total incentive cost in that condition (for both screener and topical incentives) divided by the total number of completed topicals received in that condition. In the single-topical condition, the unweighted sample size was 67,000. In the dual-topical condition, the unweighted eligible sample size was 32,500.
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Although not the main aim of this analysis, it also demonstrates that the \$5 incentive is much more expensive than the \$2 incentive per topical complete in both the single and dual-topical conditions (single-topical condition: \$23.37 versus \$11.36; dual-topical condition: \$18.66 versus \$9.21). This makes sense given that the \$5 incentive is 2.5 times the size of the \$2 incentive but only added 3 percentage points to the screener response rate (and had no effect on the topical response rate).

As noted for the yield analysis, while these results are useful for making comparisons between conditions in 2017, they are not likely to be useful estimates of incentive cost per topical complete in future NHES administrations due to differences in the methodology used in 2017 compared to what is likely to be used in future administrations.

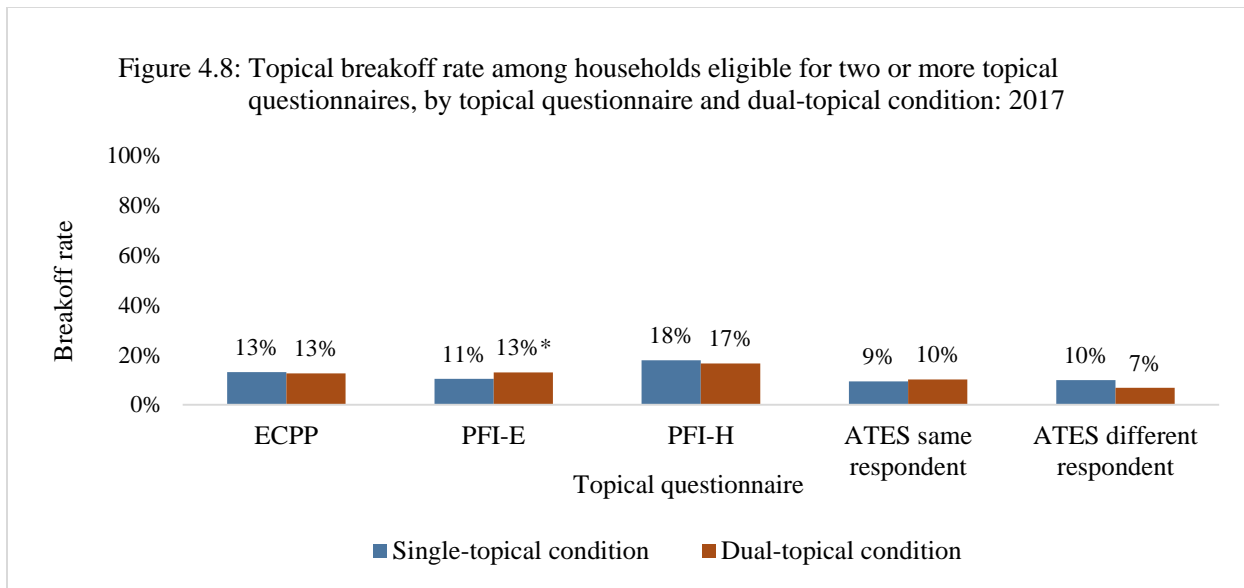
4.2: Response Quality

The next section of this chapter compares response quality in the two conditions—as measured by the breakoff rate and item missing rates—to determine if the additional burden respondents face in the dual-topical condition has a negative impact on response quality.

Breakoff rate

The first analysis in this section compares the breakoff rate for each topical in the two conditions (see figure 4.8 on the next page and table 4.4 in appendix A). If breakoff rates are measurably higher for dual questionnaire households, this might suggest that sending two surveys is too burdensome of a request.

- The breakoff rates in the single-topical condition ranged from single digits for ATEs (9 percent when the screener respondent was sampled, 10 percent when another household member was sampled) up to 18 percent for PFI-H.
- In most cases, dual-topical condition did not have a significant effect on the breakoff rate. However, there was a small but significant increase in the PFI-E breakoff rate in the dual-topical condition versus the single-topical condition (13 percent versus 11 percent).



* $p < 0.05$.

NOTE: Percentages represent the proportion of eligible households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that was sampled for and reached the first item in the questionnaire but broke off before completing it. ATES “same respondent” households are those where the screener respondent was sampled for ATES; ATES “different respondent” households are those where a household member other than the screener respondent was sampled for ATES. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size was 1,700 for ECPP, 3,580 for PFI-E, 120 for PFI-H, and 1,040 for ATES. In the dual-topical condition, the unweighted eligible sample size was 1,180 for ECPP, 2,420 for PFI-E, 100 for PFI-H, and 1,900 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Within the dual-topical condition we also looked at whether there was a higher breakoff rate for each topical when it was presented second (versus when it was presented first); however, we did not find any evidence that this was the case. Looking at this for specific topical pairings (e.g., when ECPP is paired with PFI-E or when ATES is paired with PFI-H) led to the same conclusion in general for all of the potential pairings, although it was not possible to conduct statistical tests of differences by order for some of the pairings due to unreliable estimates (particularly for pairings with PFI-H).

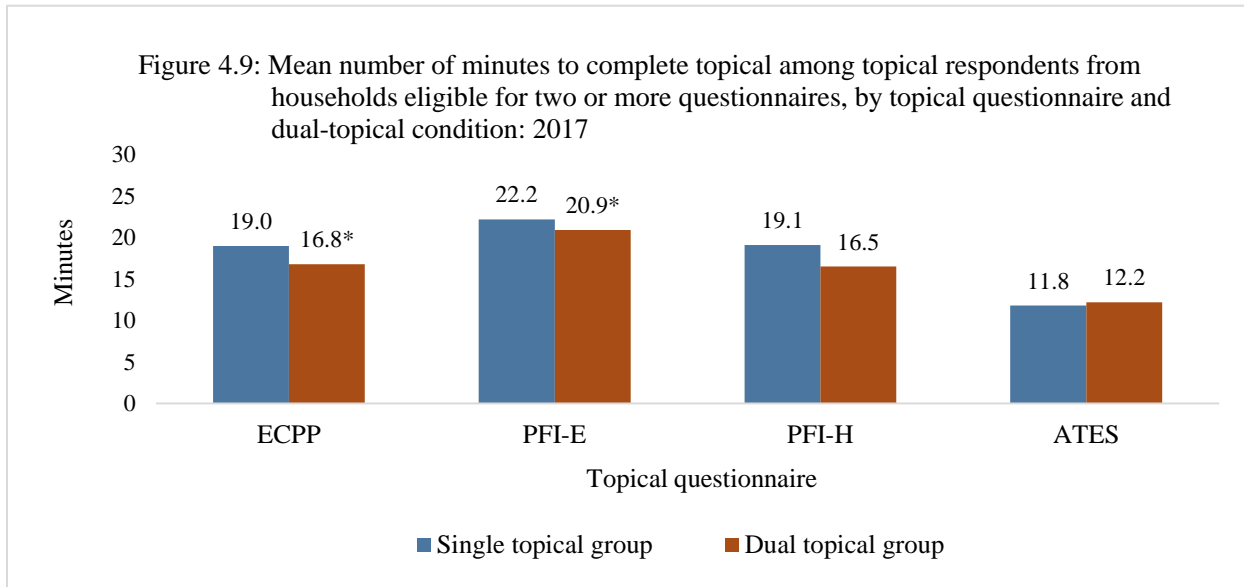
Item missing rates

We also compared the item missing rates for key items in the two conditions. Leaving questions blank is one indicator of poor response quality; this analysis provides insight into whether requesting that a household complete a second questionnaire has a negative impact on data quality.

The item missing rate was very low in both conditions for all items included in this analysis (see table 4.5 in appendix A). It was less than 4 percent for all items in both conditions—and less than 1 percent for most of them. Most of the estimates in this analysis are not reliable enough to comment on potential statistical differences between the two conditions, but, overall, topical condition appears to have had little impact on item missing rates for key items. This was also the case when looking at the effect of topical order within the dual-topical condition.

4.3: Respondent Burden

We next calculated the mean number of minutes respondents took to complete each topical survey.²² As shown in figure 4.9, it took respondents the most time to complete PFI-E (more than 20 minutes), in the high-teens to complete ECPP and PFI-H, and about 12 minutes to complete ATES (see also table 4.6 in appendix A). Respondents to ATES took a similar amount of time to complete the survey regardless of whether the screener respondent or a different household member was sampled.



* $p < 0.05$.

NOTE: Estimates represent the mean number of minutes for topical respondents to complete the questionnaire among respondent households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES. Cases that completed the topical over multiple days, took more than 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis. A small number of respondents (less than 1 percent) could not be included in this analysis because no information was available for them on the paradata file. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. In the single-topical condition, the unweighted eligible sample size was 1,470 for ECPP, 3,150 for PFI-E, 90 for PFI-H, and 920 for ATES. In the dual-topical condition, the unweighted eligible sample size was 1,000 for ECPP, 2,080 for PFI-E, 70 for PFI-H, and 1,650 for ATES. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Looking at response time by dual-topical condition:

- Respondents in the dual-topical condition completed ECPP and PFI-E in significantly less time on average in the dual-topical condition than they did in the single-topical condition (by 1 to 2 minutes). Respondents also completed PFI-H about 2 minutes more quickly in the dual-topical condition than in the single-topical condition, but this difference is not significant—probably due to the small number of cases sampled for PFI-H.

²² Cases that completed the topical over multiple days, took more than 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis. A small number of cases that were missing from the paradata file are also excluded from this analysis.

- However, the average ATES completion time was about the same in the single- and dual-topical conditions.

The shorter times for the child surveys in the dual-topical condition are likely caused by the removal of overlapping questions from the second topical when two child topicals were presented together (so that each household would only be asked these questions once). There were also a few ATES items that were removed when this topical was presented second in the dual-topical condition; however, much fewer items were removed, and so this would have minimal effect on completion time.

We also looked at whether specific topical pairings had a particularly large or small effect on mean response time in the dual-topical condition as compared to the single-topical condition. It seemed to take respondents less time to complete the child topical surveys when they were paired with another child survey than it did when they were paired with ATES (by about 1 to 3 minutes; likely because, as noted previously, overlapping parts of the child surveys were taken out of the second child topical in the child-child topical scenario so that they would only be asked once to each respondent).

Finally, we looked at whether topical order had a significant effect on response time in the dual topical condition.

- For ECPP, PFI-E, and ATES (when the screener respondent was sampled), the mean response time was significantly shorter when the topical was presented second than it was when it was first the first one presented (by about 3 to 5 minutes). The direction of the relationship was also the same for PFI-H but narrowly missed statistical significance.
- In particular, within the dual-topical condition, when ECPP and PFI-E were paired with another child topical, respondents completed them significantly more quickly when they were presented second than they did when they were presented first; about 8 to 9 minutes were saved on average by eliminating overlapping questions from the second topical when PFI-E and ECPP were presented together. The pattern is the same for PFI-H, but the estimates are not realizable enough to make statistical comparisons. By contrast, there was not a significant difference in time to complete the child surveys by presentation order when they were paired with ATES.

4.4: Respondent Characteristics

Similar to the previous chapters, this section compares the distribution of respondent characteristics in single and dual topical respondent households for each of the topical surveys using variables available on the frame (age, race/ethnicity and education of the head of household, annual household income, and whether a phone number was available on the frame). This analysis provides insight into whether requesting that households complete a second topical affected the characteristics of the responding households, and, in particular, whether one condition or the other was more effective at getting underrepresented groups to respond to the NHES.

Overall, there were very few significant differences between the respondents in the two conditions (table 4.7 in appendix A). Selected notable findings include the following:

- *Education*: For three of the four topical (ECPP, PFI-E, and ATES), the head of household was significantly less likely in the dual-topical condition to have educational attainment of “some college” than they were in the single-topical condition.
- *Annual income*: For two of the four topical (ECPP, and PFI-H), respondent households were significantly less likely to have an annual income of less than \$21,000 in the dual-topical condition than they were in the single-topical condition.

4.5: Key Takeaways From the Dual-Topical Experiment

- The dual-topical condition led to a significant decrease in the response rate for all topical except PFI-H. Although dual-topical condition households were less likely than single-topical condition households to complete all of the topical they were sampled for, they were more likely to complete at least one topical.
- Being presented second in the dual-topical condition had a negative effect on the topical response rate (as compared to being presented first) for all topical except PFI-H (although the pattern was in the same direction for PFI-H). Topical order generally did not have a significant effect on whether or not households completed all sampled topical.
- Specific topical pairings did not have an effect on response rates or the likelihood of completing all sampled topical—except when one of the requests was for a household member other than the screener respondent to complete ATES (which suppressed the ATES response rate and the likelihood of all topical being completed).
- The dual-topical condition led to significantly more breakoffs for PFI-E (but not for any of the other topical).
- However, the dual-topical condition was still more efficient in terms of (1) the number of screeners needed to yield a completed topical and (2) the incentive cost per complete.
- The item missing rate was very low for key topical items in both conditions.
- Respondents in the dual-topical condition completed ECPP and PFI-E significantly more quickly on average (and the pattern was in the same direction for PFI-H), but no effect was seen for ATES. In the dual-topical condition, topical tended to be completed more quickly when they were presented second than when they were completed first; this was likely due to items being removed from the second topical that had already been asked in the first topical (particularly notable for child-child topical pairings).
- The experiment did not have much of an impact on the characteristics of topical respondent households in terms of frame variables.

Chapter 5: ATES Split-Panel Experiments

This chapter presents the results of the ATES item-level experiments: (1) the certification provider item wording experiment and (2) the usefulness item response option order experiment. Each section of the chapter begins with a description of the experiment and then presents several analyses of the effect of the experimental conditions on key outcomes. All analyses in this chapter are restricted to households where the screener was completed online because TQA screener respondents who were sampled for a topical were asked to complete the first topical item but were not asked to complete a full topical questionnaire.

5.1: ATES Certification Provider Item Wording Experiment

In this experiment, sample members were randomly assigned to receive one of two wordings of the ATES certification provider item (see exhibit 5.1).

Exhibit 5.1. Certification provider item wording, by experimental condition

Version	Wording
Version A (NHES:2016 version)	Is your [most/second-most/third-most] important certification or license required by a federal, state, or local government agency (such as a state board) in order to do that kind of work?
Version B (new NHES:2017 test version)	Is your [most/second-most/third-most] important certification or license required by a government agency (such as a state licensing board) in order to do that kind of work?

The ATES certification provider item was asked in reference to the respondent’s most-important certification/license, second-most-important certification/license, third-most-important certification/license, and the most-important certification/license that he or she is currently working on getting. Respondents could be asked this item up to four times based on the number of certifications they said they had or were working on getting; each respondent saw the same version of the item every time they saw it.

The main purpose of this experiment was to determine if referring specifically to a “state licensing board” that specifically mentions the word “licensing” would be preferable to referring more generally to a “state board” because it would help respondents understand the meaning of “state board”. However, it was also possible that making the reference more specific might also backfire and lead to licensure underreporting if respondents were in fact more familiar with the term “state board”.²³

To determine which item version is preferable to use in the future, we examined response distributions and data quality indicators for the two versions of the item. For all analyses described in this section, we also conducted subgroup analyses to look specifically at the effect

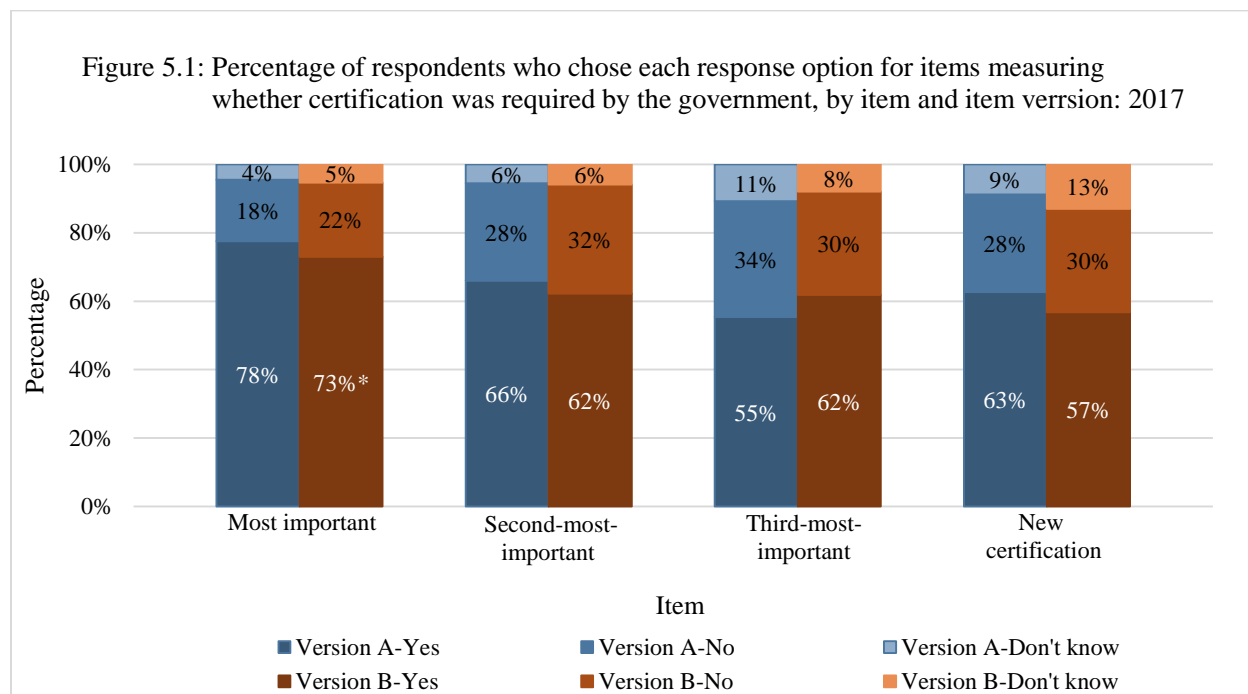
²³ In addition, there was concern that the 2016 “state board” wording might lead to licensure overreporting in some occupations if it caused respondents to incorrectly report their certifications as licenses (e.g., doctors who are “board” certified in medical specialties might incorrectly say their credential was required by a state board).

of item wording on respondents with higher or lower self-reported educational attainment (some college or more versus high school or less).²⁴ We also discuss how the results for each item version in 2017 compare to the web respondent 2016 results for version A.

Response distributions

We first compared the response distributions for each of the four certification provider items by item version to determine if item wording had an effect on the percentage of respondents reporting that their credential was or was not required by the government (or that they were not sure if it was required).

- Version A (2016 version) respondents were significantly more likely than version B (2017 version) respondents to answer “yes” for their most important certification (78 percent versus 73 percent, respectively) (see figure 5.1 below and table 5.1 in appendix A).
- No other significant differences were found in the response distributions for the four items by item version, and there was not a clear pattern to any observed differences in the responses to the other three items, with version A being endorsed more for some items and less for others.



* $p < 0.05$.

NOTE: Percentages represent the proportion of ATEs respondents who selected the response option out of those who answered the question. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

²⁴ We also had planned to do a second subgroup analysis to look separately at English and Spanish respondents. However, there were too few ATEs Spanish respondents in 2017 to make this analysis feasible. Only about 110 people responded to ATEs in Spanish (less than 1 percent of all ATEs respondents).

We also compared responses to versions A and B separately for those with lower and higher educational attainment.

- Among respondents with high school or less, those who saw version A were significantly more likely than those who saw version B to answer “yes” for the most-important certification question (78 percent versus 65 percent, respectively).
- There were no other significant differences in the response distributions for the four items by item version in the two educational attainment subgroups, and there was not a clear pattern to any observed differences in the responses to the other three items. Several of the results for respondents with high school or less are based on relatively small sample sizes and should be interpreted with caution.

Finally, we compared the 2017 results for each version to the web responses received in 2016, which only included version A (statistical tests were not conducted).²⁵ We found varied results across the three items. For the most-important certification, the 2016 results were more similar to the 2017 version B results, while for the second-most-important certification the 2016 results were more similar to the 2017 version A results. For the third-most-important certification, the 2016 results were not clearly closer to one 2017 version or the other. When interpreting differences between 2016 and 2017, however, it is important to remember that the surveys in the two years did not use the exact same methodology, and differences in data collection methods beyond question wording might also be driving responses to these items across years.

Item missing rates

We next calculated the item missing rate for the provider items by item version to assess whether question wording had an effect on the percentage of respondents who declined to answer the item. The item missing rate was defined as the percentage of cases that should have answered the item but did not.

- Overall, the item missing rates for the three items in the certifications and licenses section ranged from less than 1 percent to about 17 percent, with items later in the questionnaire having higher item missing rates (see table 5.2 in appendix A).²⁶
- Item version did not have a significant effect on the item missing rate for any of these items.
- Looking at the results separately by educational attainment, there still was not a significant or notable difference in the item missing rate for any of the three items by

²⁵ Questions about new certifications the respondent was in progress of getting were not asked in 2016, so this comparison could not be made for the “new certification” item.

²⁶ As compared to item missing rates from 2016, the item missing rates for some ATEs items are surprisingly high in 2017. We are still investigating what might be driving the higher item missing rates. In particular, the item missing rate for the “new certification” provider item was too high to possibly be correct; as a result, we do not show the item missing rate for that item.

item version. However, nearly all of the results for the high school or less group were too unreliable to make statistical comparisons between item versions.

We also compared the 2017 item missing rates to those for 2016 web respondents.²⁷ We found that the rates were very similar for the most-important certification item in both years (less than 1 percent missing). The item rate was slightly higher in 2017 than in 2016 for the second-most important certification question (4 percent for both versions in 2017 versus 1 percent in 2016) and notably higher for the third-most-important certification item (13-17 percent for the two 2017 versions versus 9 percent in 2016).

Takeaways for the certification provider item wording experiment

- Overall, item version typically did not have a significant effect on response distributions or the item missing rate for the certification provider items.
- However, for the most important certification item, respondents were significantly more likely to answer “yes” when presented with version A than when they were presented with version B.

5.2: ATEs Perceived Usefulness Items Response Option Order Experiment

In this experiment, respondents were randomly assigned to one of two versions of the items, which varied the order in which the response options were presented.

- In version A (the 2016 version), the response options were presented from least to most useful (“not useful,” “somewhat useful,” and “very useful”).
- In version B (the new version for 2017), the response options appeared in the reverse order, from most to least useful (“very useful,” “somewhat useful,” and “not useful”) in 2017.

In both versions, a fourth option of “too soon to tell” was the last response option. Respondents could be asked the battery of usefulness items up to three times (for a total of up to 10 individual items) based on which credentials they reported (in reference to their most-important certification or license, their last postsecondary certificate, and their last work experience program); they received the same version of the items each time they saw them. We compared the response distributions and data quality indicators for the two versions of the items. We conducted the same subgroup analyses by educational attainment as described in the previous section. This section also discusses how the results for each item version compare to the results obtained in 2016.

²⁷ Questions about new certifications the respondent was in progress of getting were not asked in 2016, so this comparison could not be made for the “new certification” item.

Response distributions

This section compares the response distribution for each item by item version to determine if response option order had an effect on the percentage of respondents reporting that their credential was useful.

- There were no significant differences in the percentage of respondents who chose each response option by item version for any of the 10 usefulness items (see figure 5.2 on the next page and table 5.3 in appendix A).

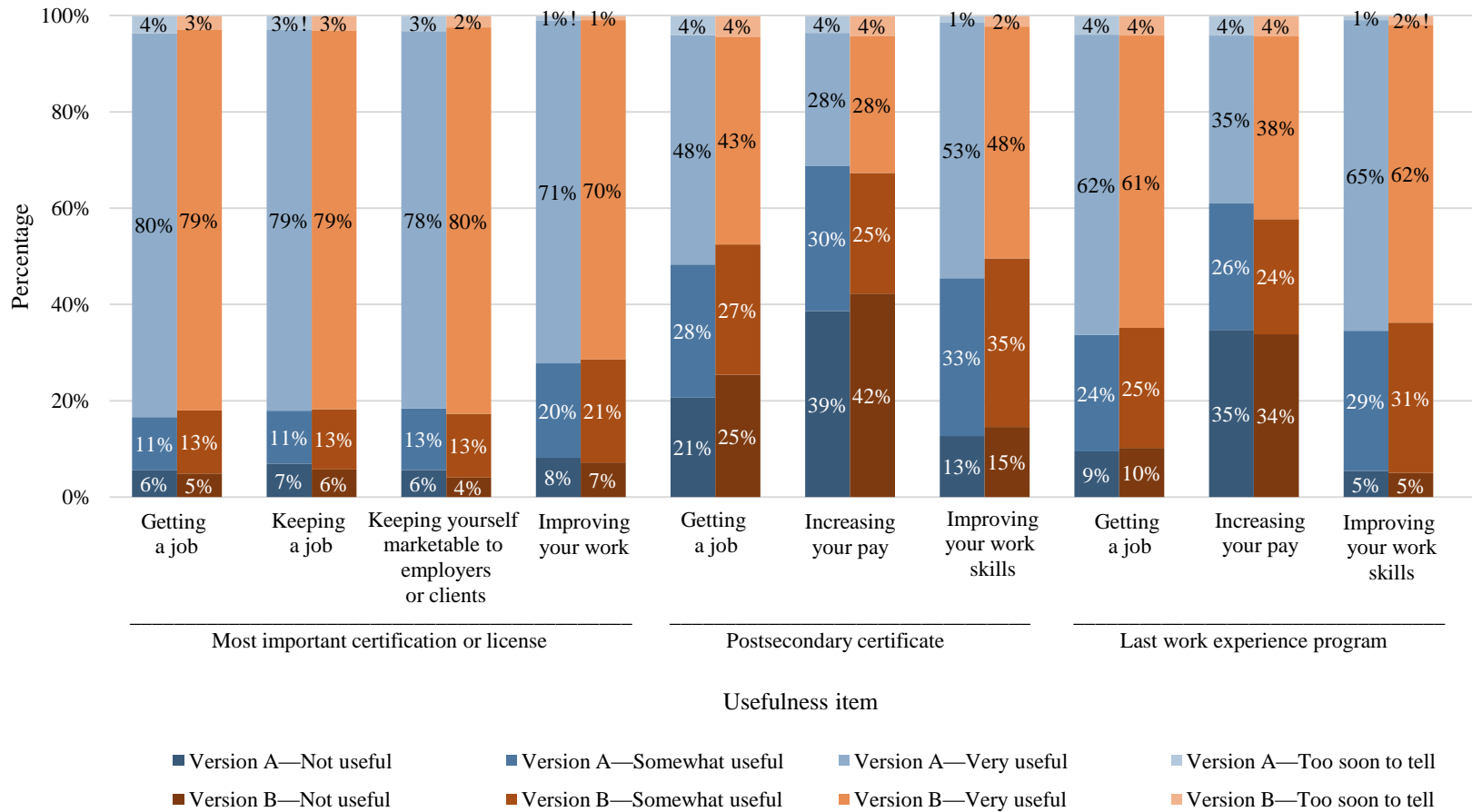
There were only two significant differences when looking at the results separately for respondents with a high school diploma or less and those with some college or more. Given that this amounts to a significant difference for only 1 of 40 response options for each education group, these differences could have occurred by chance.

The 2016 results were very similar to the 2017 results, both overall and by educational attainment; generally, the percentage of respondents selecting each response option did not differ by more than 5 percentage points between the three items (version A in 2016 and 2017, version B in 2017).

Item missing rates

We also assessed the impact of response option order on two key data quality indicators: the item missing rate and the straightlining rate. There were no significant or notable differences in the item missing rate by item version, either overall or by educational attainment (see table 5.4 in appendix A). However, many of the item missing rates for those with a high school degree or less should be interpreted with caution because of small sample sizes or unreliable estimates. The item missing rates were very similar in 2016 (among web respondents) and 2017 for the most-important certification or license and work experience program grids, but the rates were higher for the post-secondary certificate grid in both conditions in 2017 than they were in 2016.

Figure 5.2: Percentage of respondents who chose each response option, by item version and usefulness item: 2017



! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

NOTE: Percentages represent the proportion of ATEs respondents who selected the response option out of those who answered the question. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Straightlining

Finally, we compared the straightlining rates for each usefulness item grid by item version (see table 5.5 in appendix A). Straightlining was defined as the percentage of respondents who selected the same answer for the full set of items (e.g., marking “very useful” for all usefulness items that are presented together). A higher straightlining rate in one version could suggest that respondents are not taking the time to think carefully about their responses when presented with that version.

- The straightlining rates were relatively high for these grids (ranging from 38 percent to 62 percent of respondents).
- There were no significant or notable differences in the straightlining rate by item version for any of the usefulness items, either overall or by educational attainment.

We compared the 2017 results to 2016 (among web respondents), and they were generally very similar with one exception: for the usefulness of post-secondary certificate grid, the straightlining rate was about 10 percentage points lower in 2017 than it was in 2016.

Takeaways for the perceived usefulness items response option order experiment

- There was little difference in the results for the usefulness items by response option order in terms of response distributions, item missing rates, or straightlining.

Chapter 6: The Effectiveness of NHES Contact Attempts Across Administrations

This chapter of the report examines the impact of the various contact attempts used across the last three NHES administrations (2014, 2016, and 2017).²⁸ Of particular interest is the effectiveness of contact attempts that were newly tested in the NHES:2017 web test:

- The 2017 administration forewent an advance letter because this was hypothesized to not be necessary in a web-only administration.
- In both the screener and topical phases, the 2017 administration included the first test of a pressure-sealed envelope (instead of a postcard reminder), which allows for sample members' web tool access credentials to be included in the mailing (as compared to a postcard which serves as a reminder without providing a direct way to respond).
- In the topical phase, this administration also tested a reduced topical reminder protocol and included the first test of using e-mail reminders.

This chapter of the report also includes a comparison of the effectiveness of all contact attempts and mailing schedules for the last three NHES administrations that have used mail-based contact strategies.²⁹ The chapter concludes with an analysis of respondents' willingness to provide their own e-mail addresses, as well as their likelihood to respond to e-mails asking them to complete a topical survey. The results of these analyses are intended to inform the contact strategy for the 2019 administration of the NHES.

6.1: Effectiveness of Screener Contact Attempts

This section discusses the effectiveness of the screener contact attempts in 2014, 2016, and 2017. The contact attempts used in each administration are summarized in exhibit 6.1. There were several differences across administrations:

- In 2014 and 2016, there was an advance letter, while in 2017 there was not an advance letter.
- In 2014 and 2016, a postcard reminder was sent after the first screener mailing, whereas a pressure-sealed envelope was sent in 2017.
- In 2014 and 2016, three additional screener mailings were included after the postcard/pressure-sealed envelope, while 2017 only included two additional mailings.

²⁸ We had also hoped to include 2012 in this analysis, but AIR does not have the necessary data to calculate 2012 response rates in way that is consistent with the other years.

²⁹ This comparison focuses on general patterns, instead of statistical significance because comparisons between this many surveys and contact attempts could quickly become unwieldy. Statistical tests have not been conducted in this chapter except for the e-mail outcomes analyses.

- Finally, in 2016, a robocall was utilized as a final reminder for all households with a phone number available on the frame; this was not done in 2014 or 2017.

Exhibit 6.1: Screener contact attempts, by administration

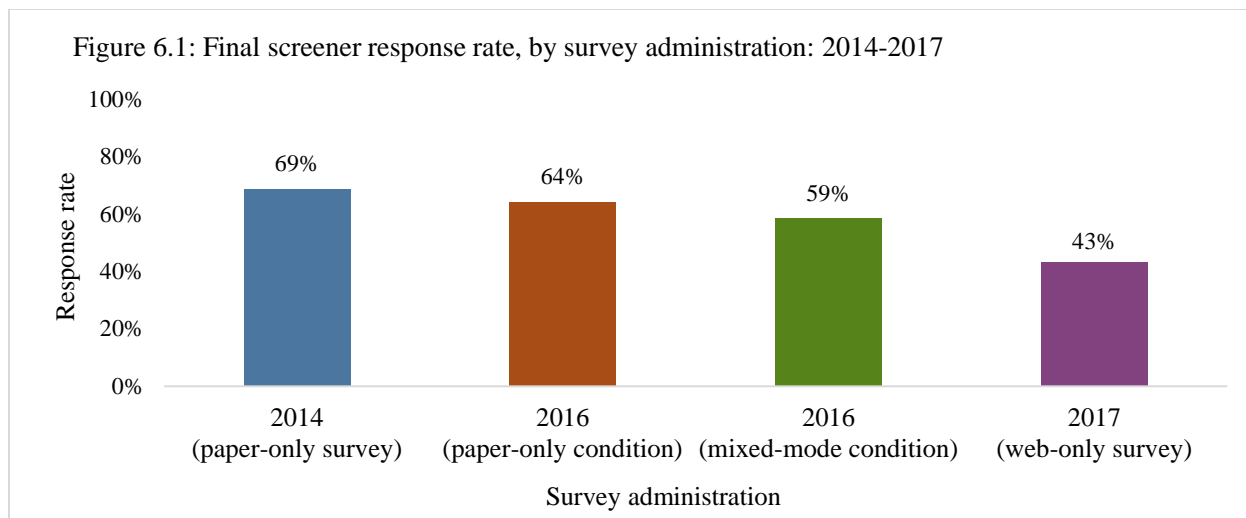
	2014 (paper-only survey)	2016 (paper-only condition)	2016 (mixed-mode condition)	2017 (web-only survey)
Advance letter	Yes	Yes	Yes	None
Initial mailing	Cover letter Paper qnaire.	Cover letter Paper qnaire.	Cover letter Offers web only	Cover letter Offers web only
Reminder postcard or pressure-sealed envelope	Postcard Offers paper only	Postcard Offers paper only	Postcard Offers web only	Pressure-sealed envelope Offers web only
Second mailing	Cover letter Paper qnaire.	Cover letter Paper qnaire.	Cover letter Offers web only	Cover letter Offers web only
Third mailing	FedEx Cover letter Paper qnaire.	FedEx Cover letter Paper qnaire.	FedEx Cover letter 1st paper qnaire.	FedEx/First Class Cover letter Offers web only
Fourth mailing	Cover letter Paper qnaire.	Cover letter Paper qnaire.	Cover letter 2nd paper qnaire.	None
Robocall	None	Yes (If phone available)	Yes (If phone available)	None

Final screener response rate

As in the earlier chapters of this report, we calculated the screener response rate using AAPOR RR1. This information is presented for the 2014, 2016, and 2017 NHES administrations separately and is broken down by mode condition in 2016 (paper-only versus mixed-mode).

The final screener response rate declined across the three years: from 69 percent in 2014 to 64 percent in the 2016 paper-only condition and 59 percent in the 2016 mixed-mode condition to 43 percent in 2017 (see figure 6.1 on the next page and table 6.1 in appendix A).³⁰ The lower response rates in 2017 and in the 2016 mixed-mode conditions are likely due to mode of administration. For 2017, this is likely due to this administration being web-only; similarly, the lower response rate for the 2016 mixed-mode condition is likely due to the delayed paper option (those respondents who did not want to do the survey online may not have opened later mailings, assuming that they too were only offering the option to do the survey online).

³⁰ In 2016, the response rate was 41 percent when the analysis is limited to people who responded online or using the TQA. This is not perfectly comparable to the 2017 response rate; in 2017, all mailings only offered a web option, while in 2016 the first two mailings offered a web option, and the final two mailings offered a paper option (so most of the later responses were received by paper).



NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,485 in 2017 (web-only). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Increase in screener response rate after each contact attempt

We also calculated the increase in the screener response rate after each contact attempt. Response was attributed to a screener mailing if it was received three or more days after that mailing was sent and less than three days after the next mailing was sent (see figure 6.2 that follows and table 6.1 in appendix A).³¹ Key findings include the following:

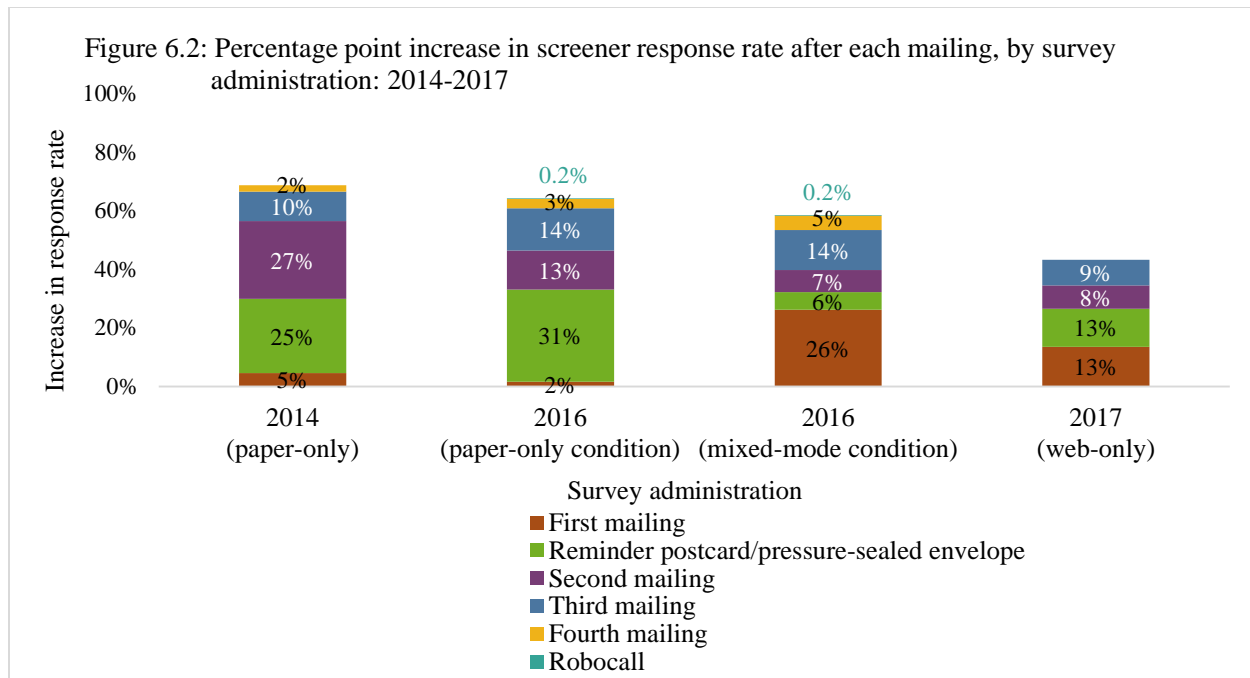
- The first screener mailing was more effective at increasing the response rate in administrations that included a web option; it led to a 26 percentage point gain in the response rate for the 2016 mixed-mode condition and a 13 percentage point increase in the response rate for the 2017 web-only administration (compared to only 5 percentage points in 2014 and 2 percentage points in the 2016 paper-only condition).
 - The differences between web and paper administrations are most likely due to the web option allowing for speedier response, while paper questionnaires need to be mailed back and processed by Census before they could be counted as respondents. For example, we see a large increase the 2016 paper-only response rate after the reminder postcard (31 percentage points), but it is likely that several of the responses attributed to that mailing are actually responses to the first screener mailing that were slower to get mailed back or processed.
 - Still, the response rate following the first mailing was much lower in 2017 than it was in the 2016 mixed-mode condition even though the two requests would have appeared similar at that point. This may have been because 2017 did not include an advance letter while 2016 did. It also could be due to small changes to the

³¹ For web respondents, the date of response is the date the screener or topical was completed. For paper and TQA respondents, the date of response is the date the form was scanned into the Census system.

introductory text of the initial mailing; for example, the 2017 introductory text was longer and included an extra appeal to sample members about the utility of the survey data that may have unintentionally backfired among some sample members.³²

- In the paper-only administrations, the reminder postcard was where the first large increase in response occurred (25 percentage points in 2014 and 31 percentage points in the 2016 mixed-mode condition); however, as discussed previously, it seems likely that many of these are actually responses to the first mailing that were slow to be mailed back or processed.
- The best comparison for determining the relative effectiveness of the pressure-sealed envelope in 2017 is the reminder postcard that was used in the mixed-mode condition in 2016, since both of these were web-only requests at this point. We see a larger percentage-point response to the pressure-sealed postcard in 2017 (13 percentage points) than we do for the postcard in the mixed-mode condition in 2016 (6 percentage points). It is important to take into account that the 2017 response rate was 13 percentage points lower than the 2016 response rate leading into this mailing, leaving more room for the pressure-sealed envelope to improve the response rate in 2017. However, at the very least, the pressure-sealed envelope does not seem to have backfired as compared to a postcard reminder.
- Across all years, the second and third screener mailings each continued to yield somewhat notable gains to the screener response rate (ranging from 7 to 27 percentage points, with most in the range of 7 to 14 percentage points). The third mailing tended to do just as well as the second (at least in 2016 and 2017), likely because this has typically been a FedEx mailing that may be more likely to catch respondents' attention (and in the 2016 mixed-mode condition, was the first opportunity sample members had to respond using a paper questionnaire)
- In 2014 and 2016, the fourth screener mailing yielded a noticeably smaller gain in the response rate, although in the 2016 mixed-mode condition, it did still lead to a 5 percentage point gain in the response rate (versus only 2 percent to 3 percent in the mail-only administrations). There was not a fourth screener mailing in 2016.
- The robocall, which was only conducted in 2016, generated less than half a percentage point increase in the screener response rate in both conditions.

³² In 2016, the letter started: "The U.S. Census Bureau is administering an important national research study for the U.S. Department of Education, and we need your help. This survey provides vital information that is used to improve education for people of all ages—this information is not available anywhere else." In 2017, the letter started: "I am pleased to inform you that your household has been selected to participate in the 2017 National Household Education Survey. This is a U.S. Department of Education survey administered by the U.S. Census Bureau. The study provides vital information that is used to improve education for people in the United States—information that is not available anywhere else. The results will help policymakers, researchers, and educators understand the educational needs of our diverse population in changing times. This survey is about all of us!"



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,485 in 2017 (web-only). SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Weekly screener response rate

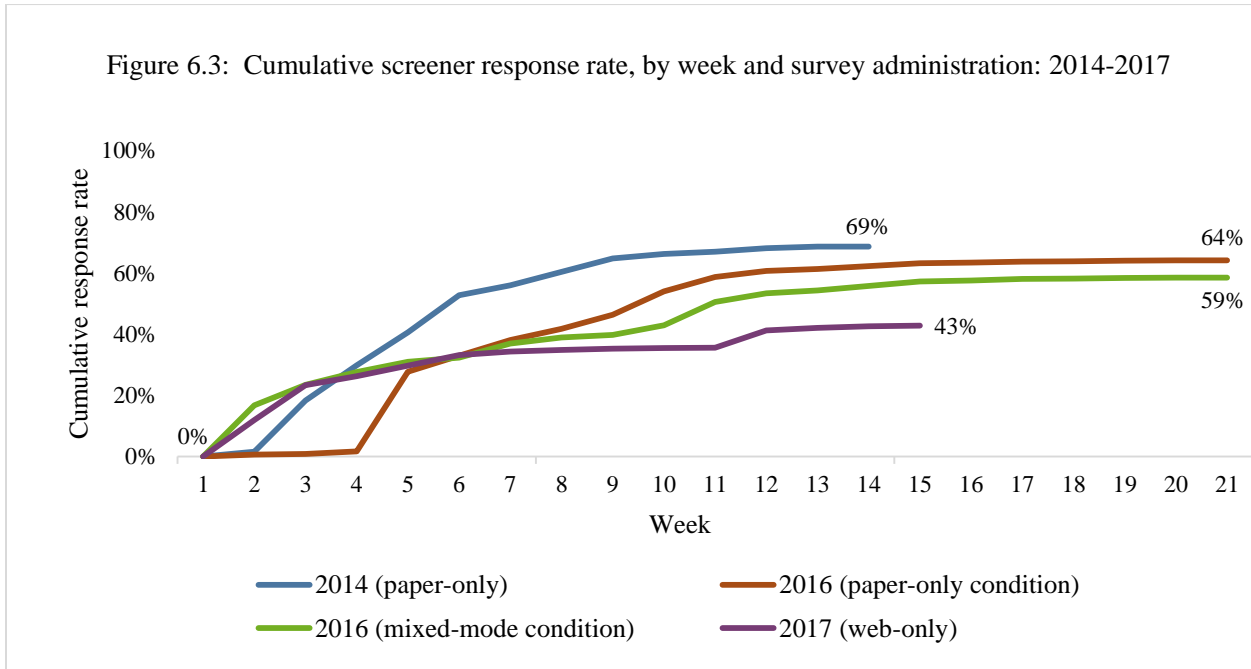
We next calculated the weekly gain in the screener response rate in each of the three years (again looking separately at the paper-only and mixed-mode conditions in 2016), as shown in figure 6.3 on the next page. The lines in figure 6.3 are shorter for some administrations than others due to shorter screener field periods in those administrations.³³

- As noted in the previous analysis, the response rate increased more quickly in the early weeks of the screener field period in administrations that started by offering a web option than it did for those that only offered a paper option. This was especially true in the 2016 paper-only condition, where there was not a noticeable increase in the screener response rate until week 5.
- In the two paper-only administrations, the 2014 response rate consistently tracked above the 2016 paper-only response rate, though the difference in the final screener response rates was only 5 percentage points. This may be due to slower processing of paper returns in 2016 because it was a much larger collection with a higher volume of paper forms being returned for processing.
- In the two administrations that offered web options, the response rates in early weeks were very similar to each other. However, around the seventh or eighth week of the field period, the 2016 mixed-mode condition response rate pulled ahead of the 2017 web-only response

³³ We considered the end of the screener field period to be the date when Census stopped accepting/keying screener forms for admission into a topical mailing group.

rate. This is likely due to the mid-collection switch to offering a paper option in 2016, which was not done in 2017.

- In all four administrations, gains in the response rate slowed dramatically several weeks before the end of the screener field period. This suggests that, if desirable to NCES, it may be possible to shorten the screener field period by a few weeks without much of a negative impact on the screener response rate.



NOTE: Response rates were calculated using AAPOR RR1. Lines are of differing lengths due to variation in the screener field period across years. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,490 in 2017 (web-only). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

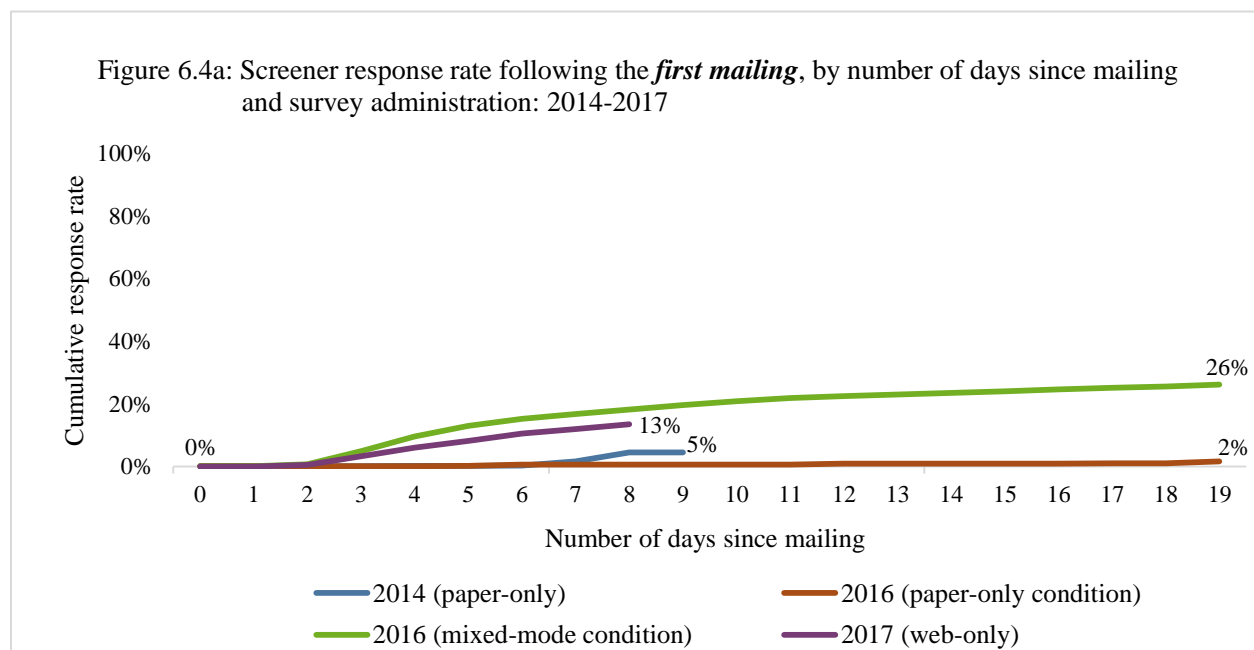
Screener response rate by day after each contact attempt

To gain a more fine-grained understanding of how each mailing impacted the screener response rate across administrations and whether mailings are spaced appropriately, an additional line graph was created for each screener mailing (figures 6.4a-e).³⁴ Each of these figures show the cumulative screener response each day following that specific contact attempt in 2014, 2016, and 2017 (2016 paper-only and mixed-mode results are again presented separately). The response rate on day 0 (the mailing day) is the screener response rate as of the day the mailing was sent. The final response rate shown for each line is the response rate the day before the next mailing was sent. The lines for some administrations are shorter than others because there were fewer days between mailings in some administrations.

³⁴ No figure was made for the robocall reminder because it was only conducted in one year and did not lead to any notable gain in the response rate.

First mailing

- We again see responses were slower to be received or scanned following the first mailing when only a paper option was provided (figure 6.4a). As a result, there was very little movement in the response rate before the next mailing was sent in 2014 or the 2016 paper-only condition in 2016. Given the relative speed with which responses were received when a web option was offered, this suggests the delays were due to backups in the processing of paper forms and that there is not necessarily a need to delay sending the next contact attempt.
- Even when a web option was provided, it took about 3 days for responses to start to be received. In the 2016 mixed-mode condition, the response period for the first mailing was 19 days, while in 2017 it was only about 8 days. In 2016, the response rate increased an additional 8 percentage points during those additional 11 days (beyond the 18 percentage points that were achieved in the first 8 days); this suggests that it may not be necessary to send the second contact as early as was done in 2017 (for example, the 2017 response rate increased an additional 5 percentage points on days 9-13).

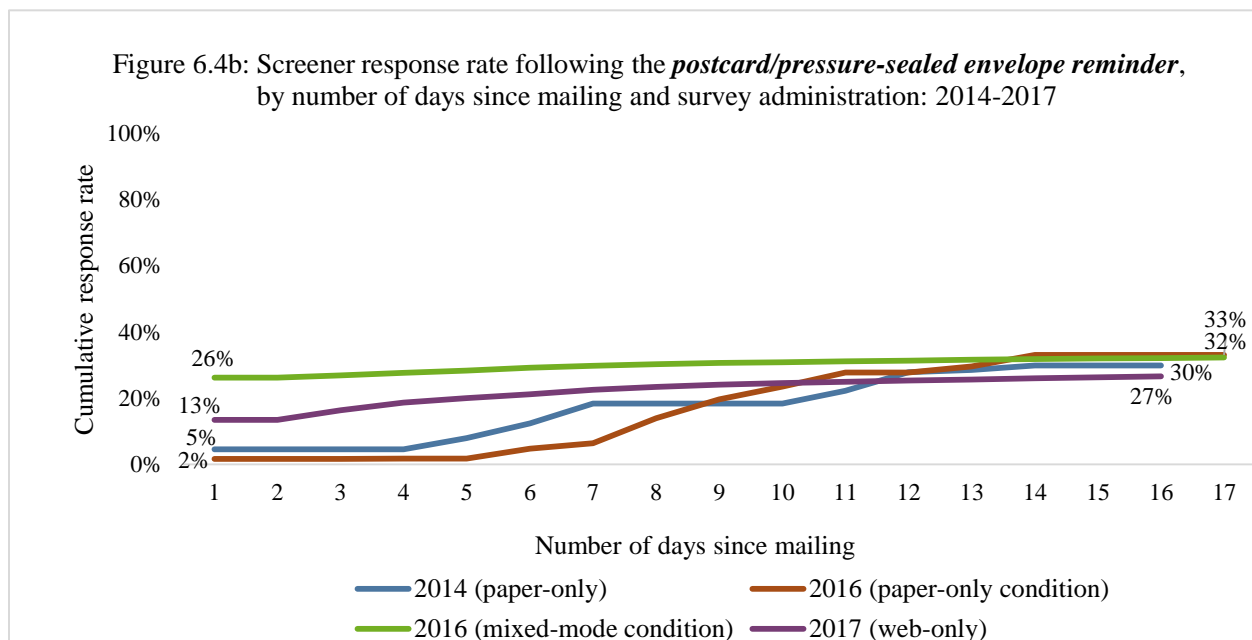


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,490 in 2017 (web-only). Sample sizes have been rounded to the nearest 10.
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Postcard/pressure-sealed envelope reminder

- In 2017, the response rate increased the most in the first week following the pressure-sealed reminder but then tapered off slightly, averaging out to about a percentage-point gain per day (figure 6.4b).

- In 2014 and the 2016 paper-only condition, there were relatively large increases in the response rate that mostly came later on (days 5-11); this is likely again due to delays in mailing back and processing forms.
- In the 2016 mixed-mode condition (which was only offering a web option at this point), the response rate did not increase as much following this reminder as it did in 2014 or 2017.
 - This may be because the postcard did not provide a direct way for the sample member to respond, while the pressure-sealed envelope used in 2017 did.
 - In addition, in years where a paper option has already been offered, it seems possible that sample members might be more likely to have noticed/saved/be able to find the previously sent paper questionnaire package than they would be for the single-page web invitation.
 - In administrations that offer a web option, it seems preferable to instead use a pressure-sealed envelope; in those that offer a paper option, it might be useful to the next mailing more quickly, so that the postcard is still fresh in sample members' minds when they receive the next mailing.

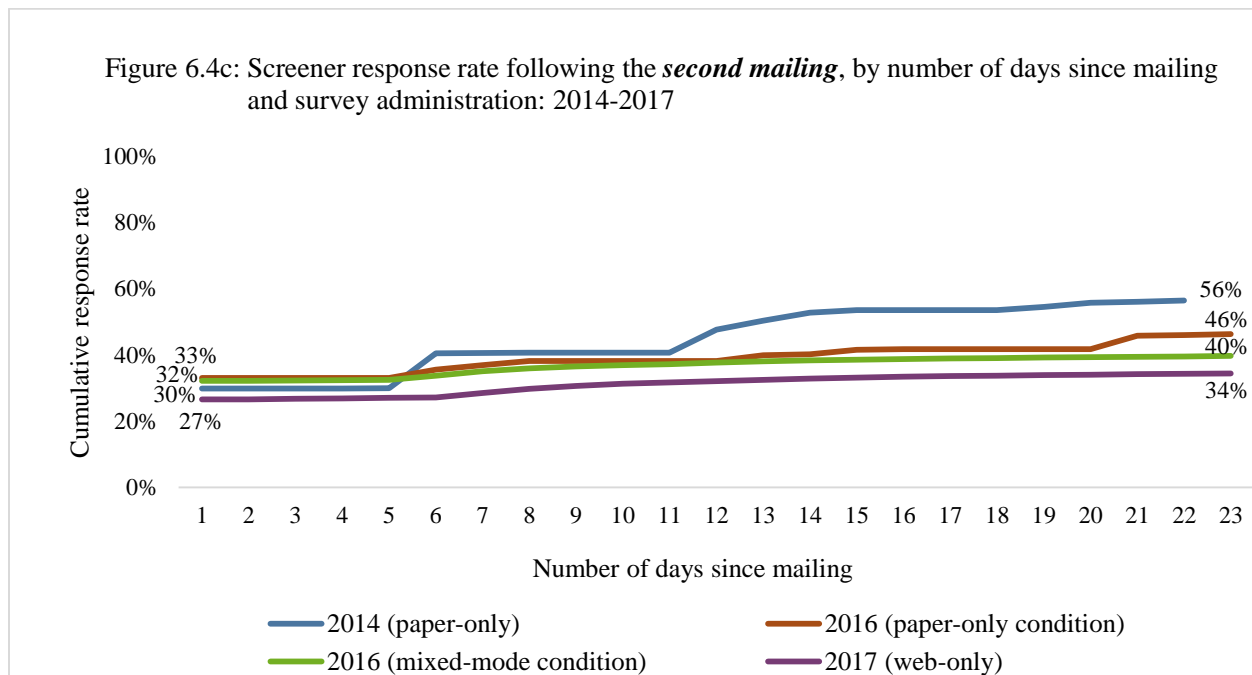


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. A postcard was sent in 2014 and 2016; a pressure-sealed envelope was sent in 2017. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,490 in 2017 (web-only). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Second mailing

- In the administrations that offered a web option (2016 mixed-mode and 2017), there was a small and gradual increase in the response rate following this mailing, likely because most sample members that were willing to respond online had already done so. It may be worthwhile to send the next mailing sooner in future administrations that offer a web option—especially if that next mailing adds a paper option.
- In the administrations that offered a paper option (2014 and 2016 paper-only), there were periodic bumps in the response rate throughout this window, suggesting the spacing between these mailing was reasonable.

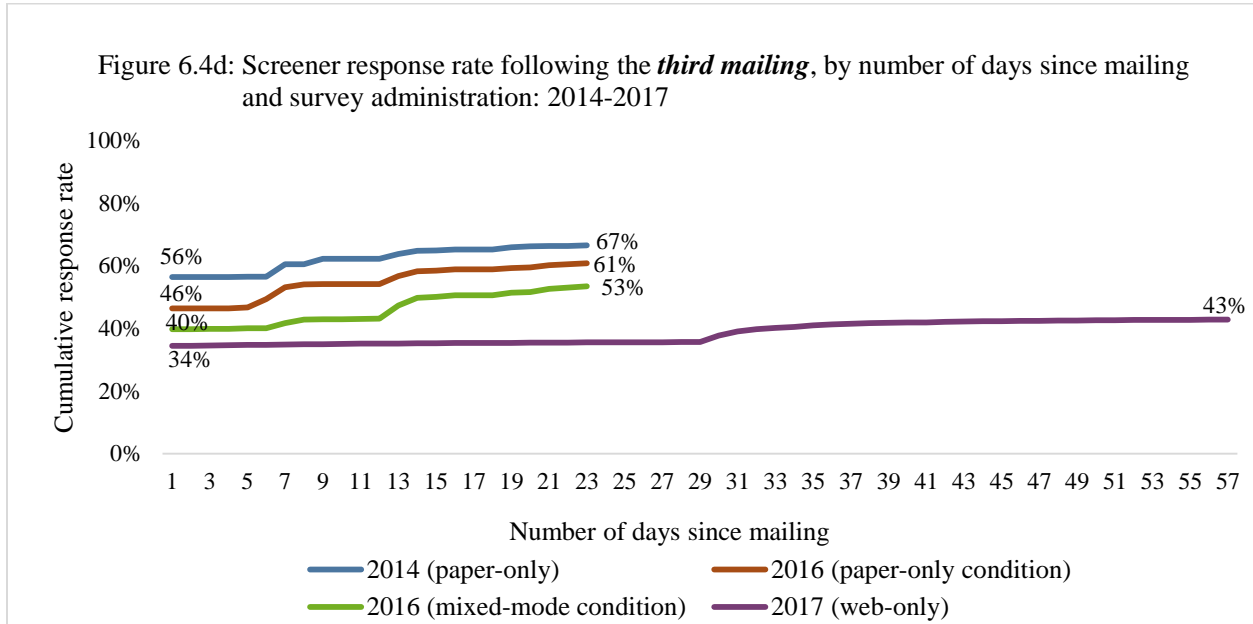


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,490 in 2017 (web-only). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Third mailing

- In 2017, the third mailing was the final screener mailing; as also discussed for the fourth mailing in the other years (which was the final mailing in those years), if desired by NCES, the screener field period could probably have been closed about three weeks earlier with minimal impact on the final screener response rate.
- In all others years, the third mailing (which was a FedEx and the first time a paper option was offered in the 2016 mixed-mode condition), led to a noticeable increase in the response rate that popped 1-2 weeks after the mailing was sent (due to the lag time associated with mailing back and processing paper forms) and it continued to slowly grow for most of the days in the field period that were attributed to this mailing.

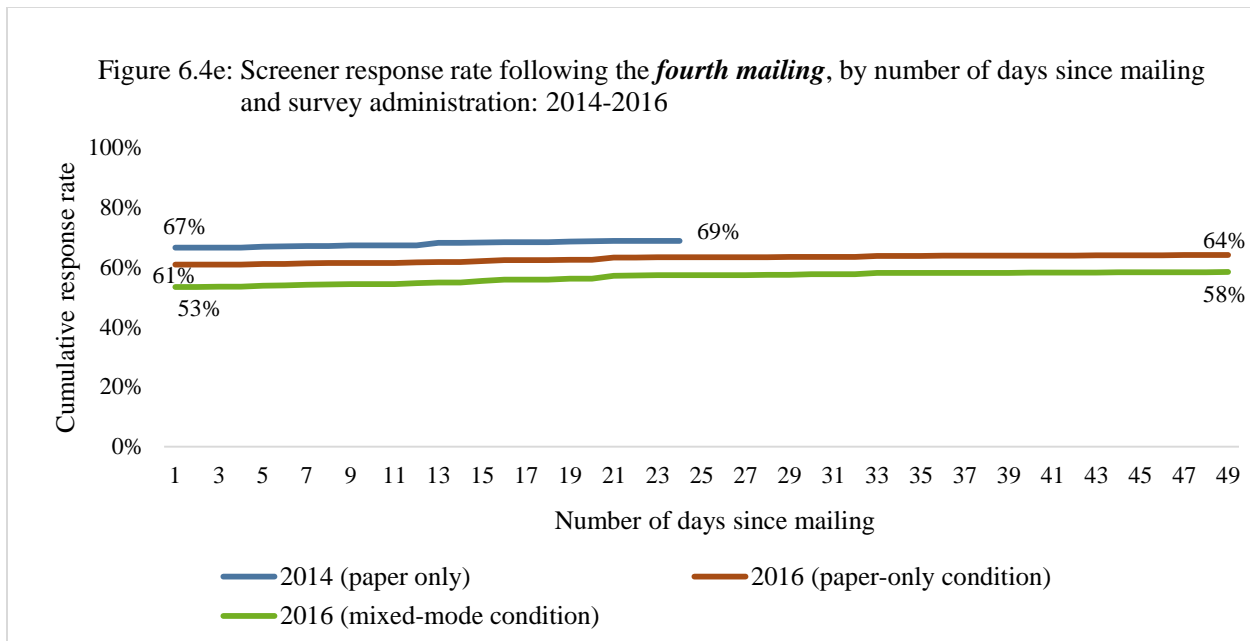
- The reduced response to this mailing in 2017 may be due to it being the only administration that did not offer a paper response option for this mailing. In addition, some of the apparent greater response in the other years may be due to batch processing of forms that had been received earlier.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,490 in 2017 (web-only). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Fourth mailing

- The response rate increased only slightly following the fourth mailing—and it did so very gradually.
- In 2016, in particular, where the screener field period was left open for a much longer time after the fourth mailing, the field period likely could have been closed much earlier without of a negative effect on the final response rate. For example, if the screener field period had been closed after 24 days like it was in 2014 (instead of 49 days), the final response rate would only have been 1 percentage point lower in each condition. There was no additional gain in the paper-only response rate beyond 33 days and no gain the mixed-mode response rate after 30 days.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. There was not a fourth screener mailing in 2017. Unweighted eligible sample size were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), and 31,680 in 2016 (mixed-mode condition). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

Takeaways for effectiveness of screener contact attempts

- The screener response rate was lowest for administrations that only offered a web option (2017) or started by only offering a web option (2016 mixed-mode); however, as discussed further in the next section, web administrations also tended to lead to higher *topical* response rates.
- Offering a web option led to higher rates of response in earlier days and weeks—and to earlier contacts overall—because web allowed for faster response (and processing of responses) than did mail. Delays in processing paper forms make it difficult to attribute response accurately to specific contact attempts or to know how quickly respondents replied after receiving specific contact attempts.
- The pressure-sealed envelope led to a 13 percentage point gain in the screener response rate in 2017; in the 2016 mixed-mode condition, the postcard reminder led to a 6 percentage point increase in the response rate.
- Although response to the second and third screener mailings remained strong, there appeared to be a drop-off for the fourth screener mailing in 2014 and 2016 (though there was still a 5 percentage point gain due to the fourth screener mailing in the 2016 mixed-mode condition, likely due to this being only the second mailing to include a paper questionnaire for this group).

- When used as the final reminder in 2016, the robocall generated less than half a percentage point increase in the screener response rate.
- In all administrations, there was almost no gain in the screener response rate in the final three weeks or so of the screener field period.

6.2: Effectiveness of Topical Contact Attempts

This next section focuses on the effectiveness of the topical contact attempts and compares their effectiveness across the 2014, 2016, and 2017 administrations. A summary of the contact attempts used in each year is shown in exhibit 6.2.

Exhibit 6.2: Topical contact attempts, by administration

	2014 (paper-only survey)	2016 (paper-only and mixed-mode conditions)	2017 (web-only survey, single and dual-topical conditions)
First reminder e-mail	None	None	Yes (If contacting screener R. and if e-mail provided during screener)
Initial mailing	Cover letter Paper qnaire.	Cover letter Paper qnaire. OR offers web only ¹	FedEx Cover letter Offers web only
Reminder postcard or pressure-sealed envelope	Postcard Offers paper only	Postcard Offers paper or web only ¹	Pressure-sealed envelope Offers web only
First follow-up mailing / e-mail	Cover letter Paper qnaire.	Cover letter Paper qnaire. OR offers web only ¹	Yes (If contacting screener R. and e-mail provided during screener)
Second follow-up mailing	FedEx Paper qnaire.	FedEx Cover letter Paper qnaire.	None
Robocall	None	Yes If phone avail.	None
Third follow-up mailing	Cover letter Paper qnaire.	Cover letter Paper qnaire.	None

1. Households in the mixed-mode condition that responded to the screener online were only given the option to do the topical on the web in this mailing. All other households (mixed-mode households that responded to the screener by paper or TQA and all paper-only households) were only sent a paper questionnaire.

There was again some variation in the contact attempts used in the three years:

- In 2017, screener respondents who provided their e-mail address in the screener and were contacted about completing topicals received up to two reminder e-mails; e-mail reminders were not used in the other two years.³⁵

³⁵ However, because the second e-mail was sent at about the same time as one of the mailings, it is not possible to isolate the effect of the second e-mail on the response rate.

- As in the screener phase, in 2014 and 2016, sample members received a postcard reminder, while in 2017, they received a pressure-sealed envelope with web login information.
- In 2017, sample members only received up to two topical mailings. Screener sample members who provided their e-mail address in the screener and were contacted about completing topicals also received up to two reminder e-mails.
 - In 2014 and 2016, sample members received up to three additional follow-up mailings after the postcard/pressure-sealed envelope, but in 2017 they did not receive any additional follow-up mailings (though some did receive the second reminder e-mail).
- In 2014 and 2016, the second follow-up mailing was sent using FedEx, but in 2017, this was done for the initial topical mailing.
- In 2016 only, a robocall reminder was made at about the same time as the second follow-up mailing.
- In 2017 and in the 2016 mixed-mode condition, it was also possible for sample members to respond to the topical before any topical contacts were made if they completed the topical in the web instrument at (or around) the same time they completed the screener.

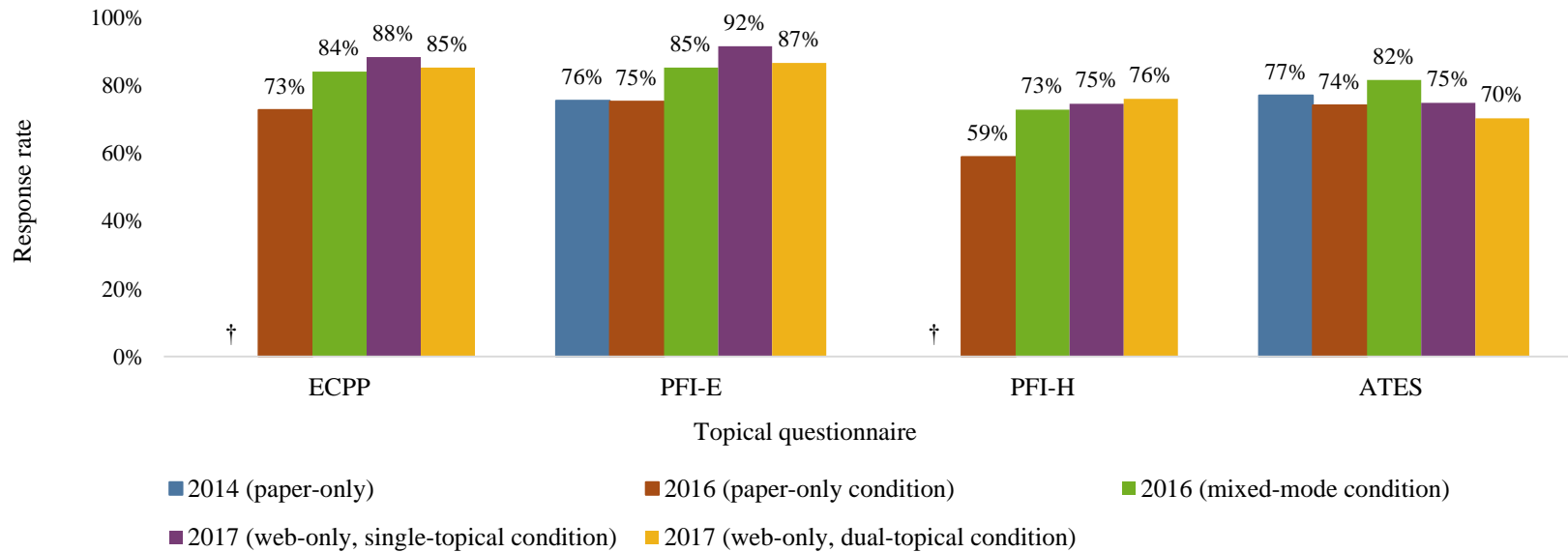
As was done for the screener analysis, we calculated the screener response rate using AAPOR RR1. In 2016, the response rate was calculated separately for the mixed-mode and paper-only conditions. In 2017, the response rate was calculated separately for the single-topical and dual-topical conditions. Finally, for ATES, the response rate was calculated separately when the screener respondent was sampled for ATES (“same respondent”) and when someone other than the screener respondent was sampled for ATES (“different respondent”).

Final topical response rate

In comparing the final topical response rates across years, a few key findings emerged (see figure 6.5 on the next page and table 6.2 in appendix A):

- The topicals tended to have higher response rates than the screener, likely because only households who already agreed to complete a screener were asked to complete a topical. However, PFI-H tended to have a lower response rate than the other child topicals, likely due to the difficulty of accurately identifying households that are eligible for this topical.
- For the child surveys, the topical response rate was higher in administrations that offered a web option (2016 mixed-mode condition and 2017), likely because web administration allowed most screener respondents to go directly into the topical, while paper administration required mailing out a separate topical survey request. This pattern was also observed when the screener respondent was sampled for ATES but not when a different household member was sampled for ATES—because that required mailing a separate topical survey request to the household.

Figure 6.5: Final topical response rate, by survey administration, mode condition, dual-topical condition, topical questionnaire, and contact effort: 2014-17



† Not applicable

NOTE: Response rates were calculated using AAPOR RR1. In 2014, ASPA was administered instead of the PFI and is used as a proxy for the PFI-E response rate in 2014. ECPP and PFI-H were not administered in 2014. ATEs seeded sample members (2014 and 2016) are excluded from this analysis. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. For ECPP, the unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition). For PFI-E, the unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition). For PFI-H, the unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition). For ATEs, the unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition), 13,310 in 2017 (single-topical condition), and 9,050 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

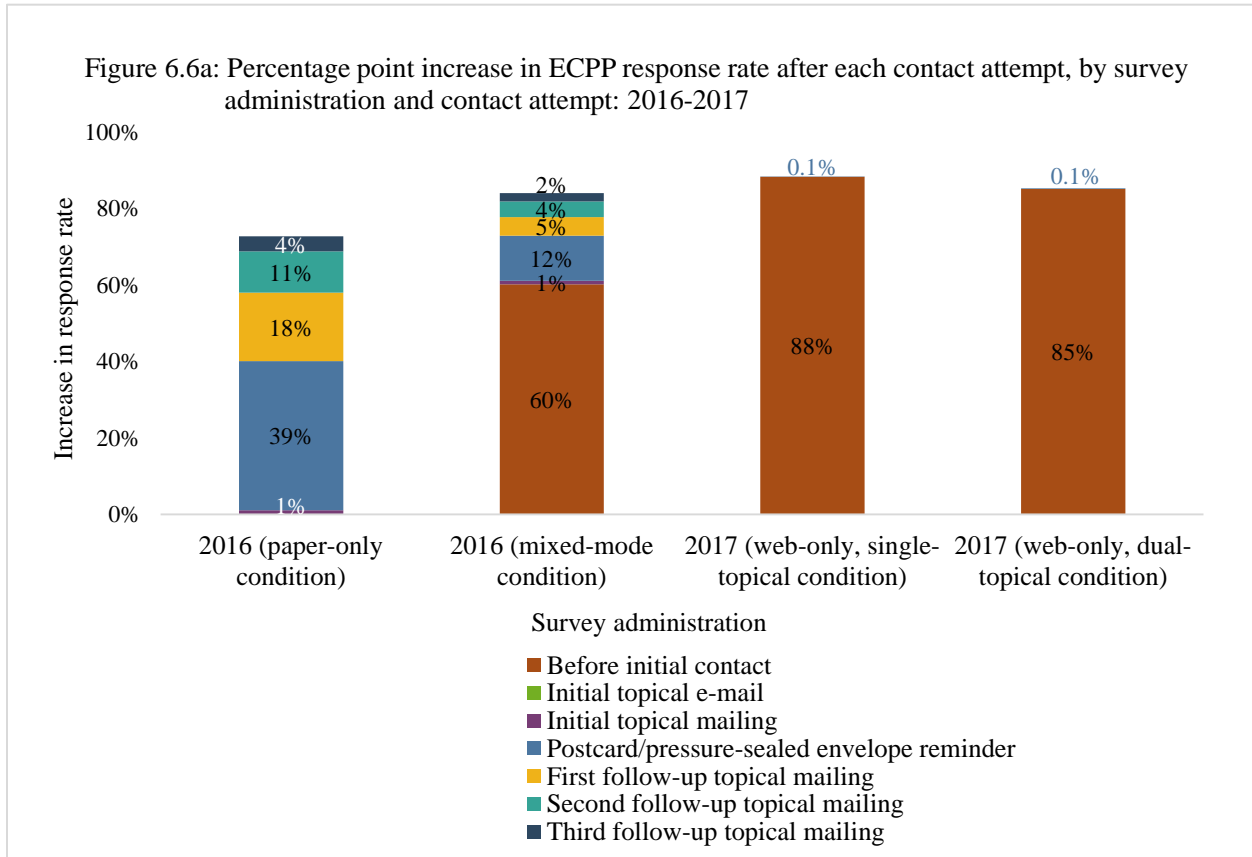
Increase in topical response rate after each contact attempt

We also calculated the increase in the topical response rate after each contact attempt.³⁶ Responses were again attributed to a mailing if they were received three or more days after that mailing was sent and less than three days after the next mailing was sent. Responses were attributed to e-mails if they were received on or after the day the e-mail was sent and less than three days after the next mailing was sent. Looking at the response rate after each specific mailing (see figures 6.6a-e that follow and table 6.2 in appendix A):

- In administrations where a web option was offered (the 2016 mixed-mode condition and 2017), most topical response came before the initial topical contact (due to screener respondents completing the topical at the same time as the screener). The sole exception was when a different household member was sampled for ATES because these sample members could start the topical until they were sent a topical mailing.
- In the paper-only administrations (2014 and the 2016 paper-only condition), there was a relatively small gain in the response rate due to the initial mailing (1 to 6 percentage points) and a much larger increase due to the postcard reminder that followed it (30 to 51 percentage points). However, as also discussed in the screener section of this chapter, it is more likely that many of these responses were sent in response to the initial topical mailing and either were slow to arrive at Census or slow to be scanned into the system.
- In 2017, only two mailings were sent when a household member other than the screener respondent was sampled for ATES (a FedEx mailing and a pressure-sealed envelope). This resulted in a much lower response rate for this group in 2017 than in the other years (around 50 percent in 2017 versus around 70 percent in the other years).
- In the administrations where second and third follow-up topical mailing were sent (2014 and 2016), these mailings continued to increase the response rate, although this was more true for the second follow-up mailing than the third one. The effectiveness of the second (and especially third) follow-up mailings was noticeably smaller in the 2016 mixed-mode condition than in 2014 or the 2016 paper-only condition (except when a different household member was sampled for ATES), likely because so many of the sample members had already responded to the topical directly after completing the screener and fewer sample members needed to be sent topical mailings.
- The initial e-mail reminder in 2017 had very little impact on the topical response rate, likely in part because it was sent to relatively few individuals and these screener respondents had already shown themselves to be reluctant to complete a topical questionnaire.

³⁶ There were a few contact attempts that we could not isolate because they were made too close to other attempts: (1) It is not possible to isolate the effect of the robocall reminder in 2016 because it was made too close to when the second follow-up mailing was sent. (2) It is not possible to isolate the effect of the second reminder e-mail in 2017 because it was sent too close to when the pressure-sealed envelope was sent.

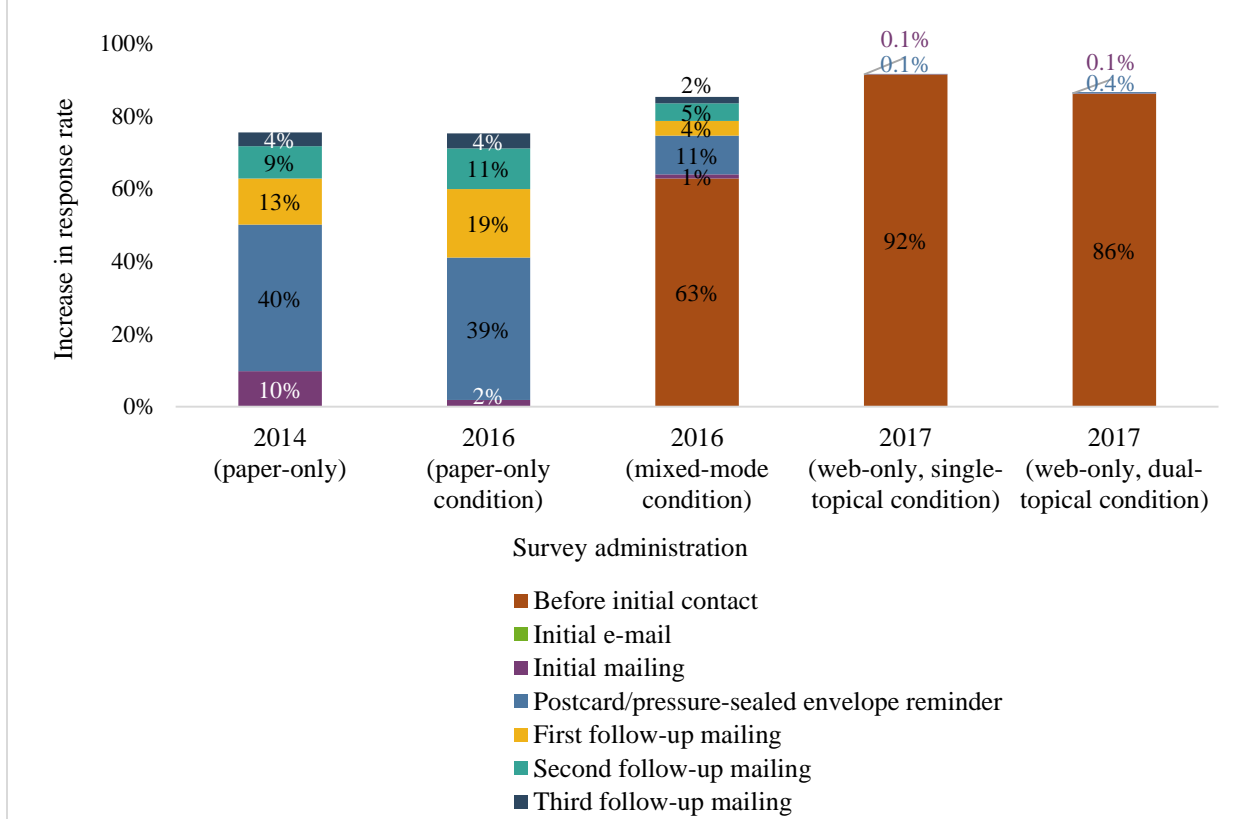
- Finally, it is difficult to assess the effectiveness of the pressure-sealed envelope (2017) at the topical phase as compared to the reminder postcard (2014 and 2016) due to several factors: (1) for the child surveys, few cases were sent topical mailings in 2017, and those that were sent them were likely reluctant topical respondents, while previous administrations sent topical mailings to a larger and more diverse group of sample members); and (2) the delayed processing of receipts in paper-only administrations makes it difficult to disentangle responsiveness to the postcard from responsiveness to the initial mailing.



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. ECPP was not administered in 2014. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

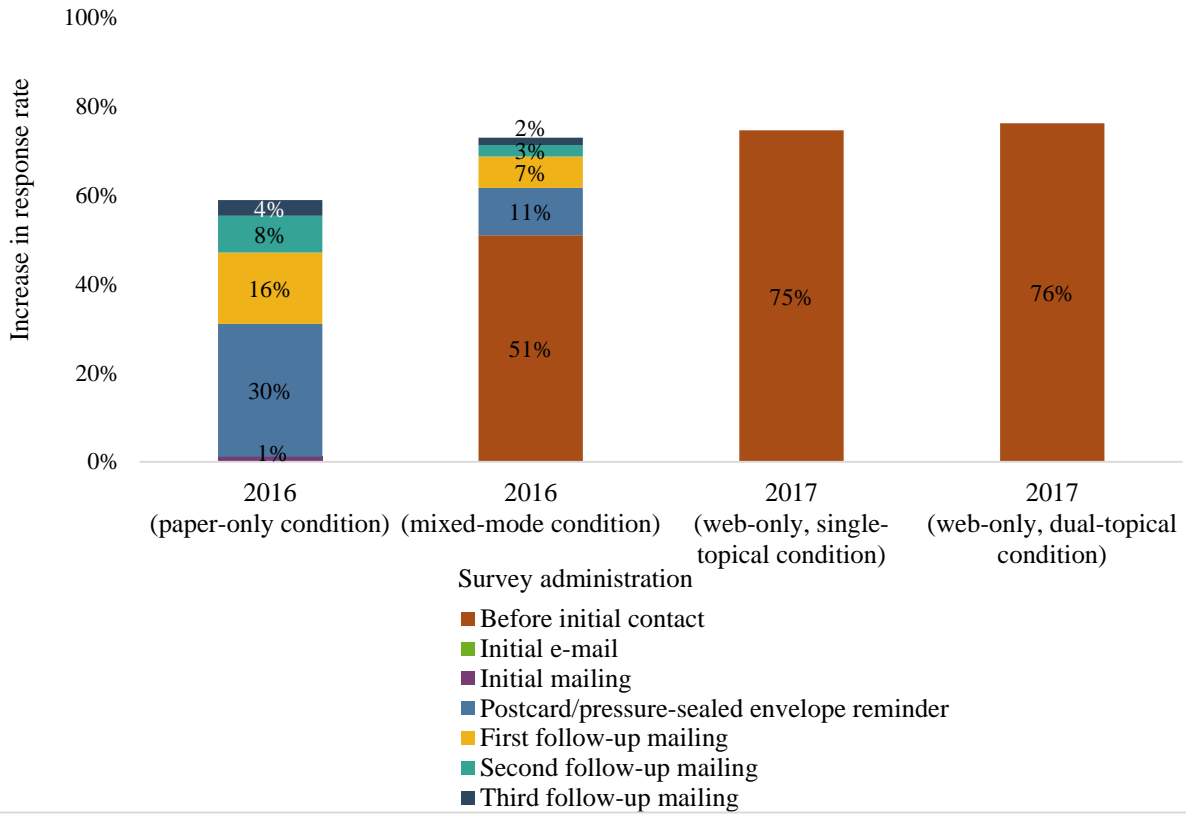
Figure 6.6b: Percentage point increase in PFI-E response rate after each contact attempt, by survey administration and contact attempt: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. In 2014, ASPA was administered instead of the PFI and is used as a proxy for the PFI-E response rate in 2014. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

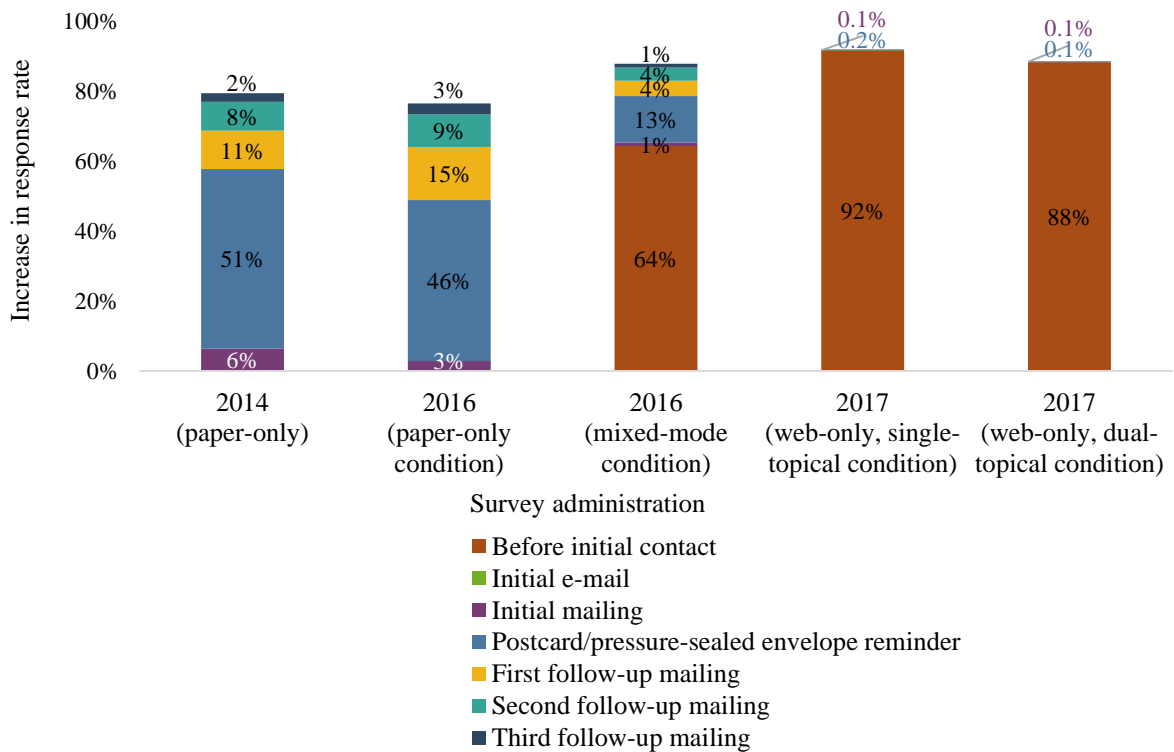
Figure 6.6c: Percentage point increase in PFI-H response rate after each contact attempt, by survey administration and contact attempt: 2016-2017



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. PFI-H was not administered in 2014. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10.

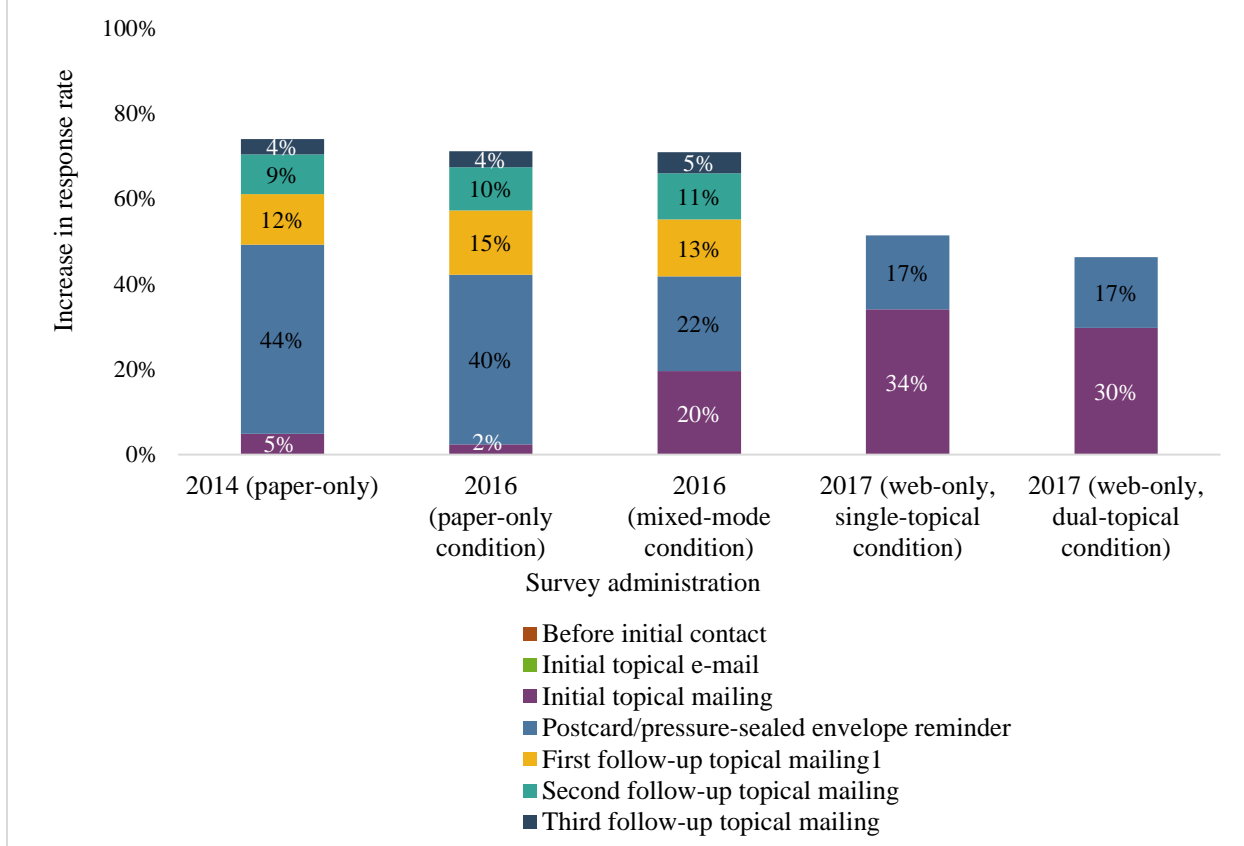
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

Figure 6.6d: Percentage point increase in ATES (same respondent) response rate after each mailing, by survey administration and contact attempt: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. ATEs “same respondent” households are those where the screener respondent was sampled for ATEs. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. ATEs seeded sample members (2014 and 2016) are excluded from this analysis. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition), 7,700 in 2017 (single-topical condition), and 5,140 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Figure 6.6e: Percentage point increase in ATES (different respondent) response rate after each mailing, by survey administration and mode condition: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. ATEs “different respondent” households are those where a household member other than the screener respondent was sampled for ATEs. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. ATEs seeded sample members (2014 and 2016) are excluded from this analysis. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition), 5,610 in 2017 (single-topical condition), and 3,910 in 2017 (dual-topical condition). Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Topical response rate by week

We next calculated the weekly gain the response rate for each topical in each of the three years (again looking separately at the paper-only and mixed-mode conditions in 2016 and single and dual-topical conditions in 2017). For the purposes of this analysis, “weeks” refer to how long a particular topical sample member has had to respond to the topical, not how long the overall topical phase has been going on (this approach was taken because topical sample members come

into the topical phase at varied points depending on their topical group or when their screener was submitted).³⁷ These figures can be found in appendix B (figures 6.7a–f).

- As mentioned previously, in the 2017 web-only administration, there was nearly no gain in the topical response rate during the topical field period for the child surveys or for ATEs when the screener respondent was sampled for ATEs. Most of the responses came at the same time as the screener response, and subsequent attempts to reach the screener respondent did very little.
- In both 2014 and 2016, almost no additional response was received after the tenth week of the topical field period. In 2017, when a household member other than the screener respondent was sampled for ATEs, almost no additional response was received after about the fifth week of data collection, likely due to the reduced topical protocol used in 2017.

Topical response rate by day after each contact attempt

To gain a more fine-grained understanding of how each mailing impacted the topical response rate across administrations and whether mailings are spaced appropriately, an additional line graph was created for each topical contact attempt for each topical survey.³⁸ Each of these figures show the cumulative screener response each day following the contact attempt for 2014, 2016, and 2017 (2016 paper-only and mixed-mode results are again be presented separately, as are 2017 single and dual-topical conditions). The response rate on day 0 (the mailing day) is the screener response rate as of the day the mailing was sent. The final response rate shown for each line is the response rate the day before the next mailing was sent. The lines for some administrations are shorter than others because there were fewer days between mailings in some administrations. These figures can be found in appendix B (figures 6.8a through 6.13e).

For the child surveys and when the screener respondent is sampled for ATEs, this discussion focuses on the results for 2014 and 2016 because, as mentioned previously, there was almost no gain in the child survey topical response rates in 2017 during the topical phase.

- As seen for the screener, there was little response attributable to the initial topical mailing in 2014 or the 2016 paper-only condition; this was especially the case in 2016, likely due to the greater difficulty of processing a larger volume of topical returns quickly. The gain was slightly greater for the 2016 mixed-mode condition, likely because some sample members were given the option to respond by web. There is no indication that any changes are needed to the timing of sending the next topical mailing.
- As also mentioned for the screener, in the 2016 mixed-mode condition, the final mailing that offered only a web option (in this case, the first follow-up) yielded comparatively little response, and thus it may be preferable to send the next mailing (with a paper option included) more quickly.

³⁷ We considered the end of the topical field period to be the date when Census stopped accepting/keying topical forms.

³⁸ No figures were made for the e-mail reminder because they were only conducted in one year and had almost no impact on the topical response rates.

- In both 2014 and 2016, the pattern of response suggests that it may be worthwhile to send the third follow-up mailing more quickly.
- As previously mentioned, if desirable to NCES, the topical field period could also be closed several weeks earlier without much negative effect on topical response rates.
- Relatively similar conclusions are drawn when reviewing the results when a household member other than the screener respondent is sampled for ATES.

Takeaways for effectiveness of topical contact attempts

- When a web option was offered at the screener phase, most topical response came prior to the topical contacts (due to screener respondents completing the topical at the same time as the screener)—except for ATES when a household member other than the screener respondent was sampled.
- When only a paper response was offered, most responses came as a result of the combination of the initial mailing and postcard reminder.
- In 2014 and 2016, the second and third follow-up mailings continued to increase the response rate, although there was a diminishing return for the third follow-up mailing (especially for the mixed-mode condition in 2016).
- In the 2017 web-only administration, topical contacts, which were mostly sent to screener respondents who had already decided not to complete the topical questionnaire when it was presented to them right after the screener, had almost no impact on the topical response rate. The topical response rate for ATES when someone other than the screener response rate was sampled was much lower in 2017 than in other years due to the reduced topical protocol used in 2017 (and perhaps due to only offering web response).
- The e-mail reminder had very little impact on the response rate.
- Given the response pattern to the topical contact attempts, it may be desirable to shorten the lag time before sending the second and third follow-up mailings. In general, there was very little gain in the response rate following the tenth week of contacts. Some of this may be due to the fact the only earlier topical groups actually had the full number of weeks shown on the graph to respond to the topical (because responses continued to be accepted for earlier topical groups while the mailing protocol for later topical groups was being completed). However, topical response slows to a crawl even before the full contact protocol has been completed, suggesting it could be possible to shorten the field period with little negative impact on the response rate.

6.3: E-Mail Outcomes

This final section of the chapter presents findings related to the request for screener respondents to provide their e-mail addresses before starting the topical to assess respondents' willingness to

provide this information, the quality of the responses that are received, and the effectiveness of the e-mails at garnering topical response.

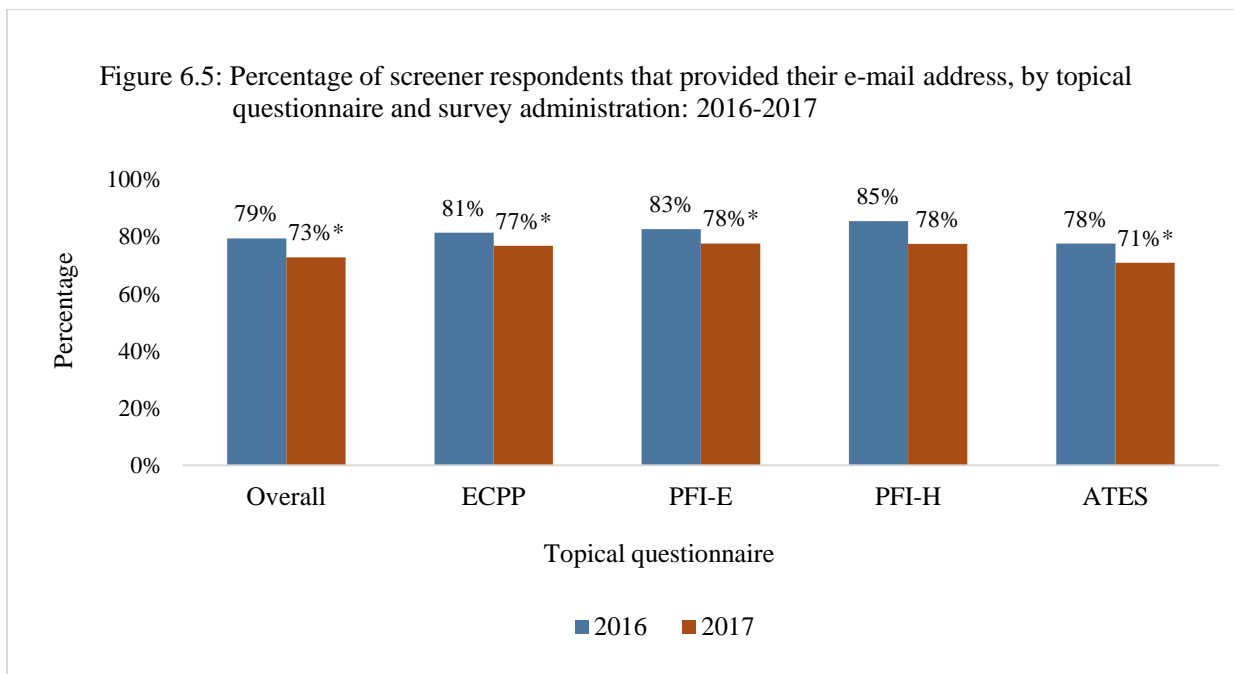
Request for screener respondents to provide their e-mail address

The first part of this section examines the percentage of screener respondents that provided their e-mail addresses after completing the screener.³⁹ This request was also made of some respondents in 2016 as part of an experiment. In that year, some respondents in the experimental conditions were asked to provide their own e-mail addresses and others were asked to provide the e-mail address of another household member (who was going to be asked to complete a topical survey); we limit the analysis only to those respondents asked to provide their own e-mail address to maximize comparability to 2017.

Overall, most screener respondents were willing to provide their e-mail address: 79 percent of screener respondents provided their e-mail address in 2016 and 73 percent provided it in 2017 (see figure 6.5 on the next page and table 6.3 in appendix A). The percentage of screener respondents who provided their e-mail addresses in 2017, however, significantly decreased as compared to 2016. This was surprising given that the question wording was the same in both years. The only difference between the two years is that the 2016 screener only asked for email addresses of individuals who (for the child topicals) had already confirmed they were a parent or guardian of the sampled child or (for ATES) had already confirmed they were the sampled individual; this confirmation was not asked in 2017 (it was assumed that the screener respondent was knowledgeable about the sampled child, and if person 1 was sampled for ATES, it was assumed that the screener respondent was that person).

Looking specifically at households that were sampled for particular topicals, there was some variation in the percentage of screener respondents who provided their e-mail addresses across topicals, but the percentage was still high for all topicals in both years (ranging from 71 percent for ATES in 2017 to 85 percent for PFI-H in 2016). The trend of more willingness to provide an e-mail address in 2016 versus 2017 continued when looking at the topical-specific results. All of the differences between the two years were significant except for PFI-H, likely due to the much smaller number of cases sampled for this topical.

³⁹ The exact wording of this question in 2017 varied slightly depending on which topical the household was sampled for, but was similar to for all screener respondents: “Before we take you to the questions about (SAMPLED CHILD)’s care and education, would you please give us your e-mail address in case we need to contact you further?” The wording was almost identical in 2016.



* $p < 0.05$.

NOTE: In 2016, a random sample of screener respondents were asked for an e-mail address for the topical respondent at the end of the screener. In 2017, screener respondents were asked for their own e-mail addresses (unless the only topical sampling that occurred was that a different household member was sampled for ATEs—then the e-mail address request was not made). Households that were not asked for an e-mail address are excluded from this analysis; households that were asked for another household member’s e-mail address in 2016 (other than the screener respondent) are also excluded from this analysis. The number of screener respondents in households sampled for a topical and asked to provide their own e-mail addresses was 3,560 in 2016 and 29,720 in 2017 (ECPP: 400 in 2016 and 3,000 in 2017; PFI-E: 920 in 2016 and 6,320 in 2017; PFI-H: 30 in 2016 and 220 in 2017; ATEs: 2,210 in 2016 and 15,040 in 2017). Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

Bouncebacks

In 2017, topical reminder e-mails were sent to households where the screener respondent was asked to complete one or more topical surveys but did not answer any topical questions.⁴⁰ In 2016, thank you e-mails were sent to households after they completed the survey. In both years, the percentage of e-mails that bounced back was very low, with 2 percent of the e-mails resulting in bouncebacks. However, the 2016 results are not perfectly comparable to those from 2017 because, based on the information available from 2016, we were not able to disentangle the outcome of e-mails sent to the screener respondent from the outcome of e-mails sent to another household member. Nevertheless, bouncebacks were rare in both years, suggesting that respondents provided valid e-mail addresses.

⁴⁰ It was AIR’s understanding that, in the dual-topical condition, if another household member was sampled for ATEs and the screener respondent failed to answer any items in the child topical, then the other household member would be contacted and asked to complete both topicals. However, it appears that more than 1,100 e-mails were sent to the screener respondent in this situation. This also raises questions about whether those screener respondents would even still be able to access the screener using the screener access credentials included in the e-mail, given that the case simultaneously should have been switched over to the topical access credentials so that these could be included in the topical mailings that went out to the other household member.

Topical response as a result of e-mail reminders

Finally, we examined the percentage of 2017 screener respondents who were sent a topical reminder e-mail that responded as a result of the e-mail. As mentioned previously, these e-mails were only sent in a relatively specific situation: if the screener respondent was asked to complete at least one topical survey but did not answer any topical items. Respondents were considered to have responded to the topical as a result of the e-mail if their topical response was received on or after the day the e-mail was sent and less three days after the next topical mailing was sent.⁴¹ This analysis provides insight into how often the e-mail operation was successful at garnering response.

Overall, only 0.2 percent of the respondents who were sent an e-mail responded to the topical as a result of that e-mail (see table 6.4 in appendix A). In households sampled for child surveys, none of the people who were sent an e-mail responded to the topical as a result of that e-mail. In households sampled for ATEs, 8 percent of the people who were sent an e-mail responded to ATEs as a result of that e-mail. All results presented in this section should be interpreted with caution given small sample sizes; this is particularly true for PFI-H and ATEs, where less than 30 cases were sent an e-mail for each topical.

Takeaways for e-mail address request and e-mail outreach

- Most screener respondents were willing to provide their e-mail address.
- Bouncebacks were very rare in both years, suggesting that the e-mail addresses respondents provide are valid.
- However, barely any of the people who were sent e-mails in 2017 responded as a result of those e-mails.

⁴¹ This analysis does not take into account whether or not the respondent accessed the web instrument using the URL provided in the email because AIR does not have the data necessary to do this. In addition, although two e-mail reminders were sent, this analysis only looks at the effect of the first e-mail. The second e-mail was sent at about the same time as the previous mailing, and as a result it is not possible to disentangle the effects of the two contact efforts. However, given the lack of response to the first e-mail, it seems reasonable to believe that a similar result was obtained for the second one as well.

Chapter 7: Summary and Conclusions

This final chapter of the report summarizes the key findings for each previous chapter. It also notes important implications of the findings for the design of NHES:2019.

7.1: Screener Mailing Experiments

Incentive experiment

- The screener response rate was significantly lower when a \$2 screener incentive was offered (by 3 percentage points). If the primary goal is to maximize the screener response rate, then a \$5 screener incentive should continue to be used in NHES:2019.
- However, results from the incentive cost per complete analysis presented in Chapter 4 also show that the \$5 incentive is much more expensive per complete. If cost savings and efficiency are the primary goals, then it may be preferable to use a \$2 incentive in 2019, at least for a subset of cases (building on the findings discussed in Jackson and McPhee 2017).
- Ideally, further incentive sensitivity research would be conducted to identify two subgroups of households: (1) those for whom a \$5 incentive leads to a large gain in the response rate, (2) those who are just as likely to respond when a \$2 incentive is offered as when a \$5 incentive is offered. However, preliminary research conducted by AIR using NHES:2016 paper-only data suggests that the variables currently available on the frame may not have sufficient out-of-sample predictive power to reliably identify such households (Jackson, Steinley, and McPhee 2017).

Letter size experiment

- Using a letter-size envelope did not have a negative impact on the screener response rate, topical response rates, or screener respondent characteristics. Given the lower postage cost of the letter-size envelope and lack of effect on the response rate, we recommend using a letter-size envelope in 2019 for advance letters or web invitations.

FedEx/First Class experiment

- The screener response rate was significantly lower when the final screener mailing was sent using First Class mail instead of FedEx (by 3 percentage points). If maximizing the screener response is the primary goal, then NHES:2019 should continue to use FedEx for the final screener mailing.
- However, FedEx is considerably more expensive than First Class mailing. If cost savings and efficiency are the primary goals, then it would be ideal to conduct further research to determine if there are certain subgroups for whom the FedEx mailing is not effective enough to justify the cost (or subgroups for which it is particularly effective). Analyses included in the 2016 paradata report may shed some light on this (Megra et al. 2017).

When interpreting all findings reported in this chapter, it is important to keep in mind that NHES:2017 only offered a web response option—and that it had a lower screener response rate (likely as a result of this). If NHES:2019 uses a mixed-mode design with both web and paper options, the screener response rate will likely be higher, and in this case, we might expect that the difference in the screener response rates between the experimental conditions would be smaller in 2019 than they were in 2017.

7.2: Screener Split-Panel Experiment

- Among web respondents, screener version did not have a significant effect on the screener or topical response rates, or the screener breakoff rate.
- There was some evidence that web screener respondents had more difficulty completing the redesigned version, although the magnitude of these differences tended to be quite small (e.g., more item nonresponse, more inconsistent responses, more unknown eligibility status designations, longer completion times). This may be because the characteristic-by-characteristic format is harder for respondents to follow. It seems reasonable that it would be easier for respondents to report all of the details about one household member before moving on to the next person.
- The increased item missing rate for the name question in the redesigned version among web screener respondents was surprising given that it is not actually possible to have missing name information for household members 2 through 10 (since the list of names is how the instrument knows how many people are living in the household). Therefore, all of the missing name information had to have been for the screener respondent. The redesigned screener starts by asking the screener respondent for his or her name, while the 2016 screener first asks how many people live in the household and then explains that the characteristics questions will be asked about each household member before asking for any specific information. This more gradual introduction to the name request may help to ease screener respondents into the idea of providing their name on the screener.
- The 2016 version of the screener resulted in slightly fewer household members being reported on average by web respondents (more single-member households and fewer households with about 3 to 6 members). This suggests that having respondents list the names of the household members on the screener yields higher numbers of household members as compared to asking respondents to simply report the number of household members.
- The item asking if anyone else lived in the household (who had not been listed in response to the initial question) was very rarely endorsed among respondents who had not already listed six names. This suggests that this item more likely functions as a way for people living in large households to add more household members (as opposed to being a second chance for respondents in smaller households to remember to list additional household members).

- Even among those respondents who did endorse the item after entering fewer than six names on the first page, a third of them did not list any additional names, suggesting that they may have been confused by the item.
- Ultimately, asking this question of respondents who had initially listed fewer than six names led to about 150 individuals being added to the screeners who would not have been listed otherwise; however, this is a very small increase considering that there were more than 17,000 respondents to the redesigned screener.
- As a result, for web administration in NHES:2019, we recommend combining the best functioning parts of both screener versions:
 - Before asking for any specific information about individuals, make it clear that there will be questions about each of the people who live in the household (to ease respondents into the request and reduce item missingness for the household member characteristic questions).
 - Next, to determine how many people live in the household, ask for a list of the names of the household members (to maximize the number of household members reported).
 - Consider showing 10 spaces for names the first time the question is asked, instead of starting with six and then asking if anyone else lives here (since the question about additional household members was mostly used as a way for those who had already listed six household members to finish listing the rest of the people living there).
 - Also consider rewording or dropping the question about whether anyone else lives here (to reduce confusion among those who have listed fewer people than there are spaces for names on the initial page, given the relatively high rate of such respondents endorsing this item and then listing no additional names - and the relatively low rate of child-topical-eligible individuals being added to the roster).
 - Finally, ask the remaining questions in a person-by-person format (to minimize item missingness, inconsistent responses, unknown eligibility sampling status decisions, and so on).
- Among TQA respondents, there was very little difference in terms of the two screeners among TQA respondents, likely because (1) the interviewers are able to facilitate completion of the questionnaire regardless of version; and (2) smaller households tended to complete the screener on the TQA, which may reduce the effect of the different presentation formats. As a result, for ease of administration, we recommend using the same screener version on the TQA as is used online.

7.3: Dual-Topical Experiment

- Topical response rates were lower in the dual-topical condition than in the single-topical condition. Within the dual-topical condition, they were often lower for the second topical than the first. There also was a higher breakoff rate for some of the topicals in the dual-topical condition. This all suggests that some sample members are not willing to complete a second topical.
- Nevertheless, the dual-topical condition was still more efficient in terms of (1) the percentage of households that completed at least one of the topicals for which they were sampled, (2) the number of screeners that needed be sent to yield a completed topical, (3) the incentive cost per complete, and (4) the number of minutes needed to complete each topical. It also did not have a negative effect on the item missing rate or the characteristics of the households that responded to the topical surveys.
- Therefore, for web administration in NHES:2019, we recommend using the dual topical approach again. The 2019 administration could also experiment with ways of increasing the response rate to the second topical (for example, reminding the respondent that this is the final household member about whom they will be asked to respond, as a way to reassure them that they are making progress toward completing the survey task).

7.4: ATES Item-Level Experiments

- Overall, item version had little effect on response distributions or response quality in either experiment.
- Given the lack of significant differences between the two conditions and the benefits of maintaining continuity in a repeated cross-sectional federal survey such as ATES, we recommend that future administrations of ATES continue to use version A (the 2016 version):⁴²
 - *Certification provider items*: “Is your [most/second-most/third-most] important certification or license required by a federal, state, or local government agency (such as a state board) in order to do that kind of work?”
 - *Usefulness items*: response options ordered from least to most useful (“not useful,” “somewhat useful,” and “very useful”).

⁴² Though the effect was not significant for most of the items, version B of the provider item (the new 2017 version) led to somewhat lower rates of licensure reporting than version A (the 2016 version) for three of the four items. If there is concern that licenses have been overreported in prior administrations (and conversely, that certifications have been underreported), then it may be preferable to use version B.

7.5: Effectiveness of NHES Contact Attempts

Screener contact attempts

- Only offering a web option in 2017 had a negative impact on the screener response rate. We recommend adding back in a paper option in 2019.
- Offering a web option leads to higher rates of response to earlier contacts because it allows for faster response than paper questionnaires. We recommend continuing to offer this option in 2019.
- Because the pressure-sealed envelope tested in 2017 was not administered as part of an experiment, it is difficult to directly assess its effectiveness as compared to the reminder postcard that was used in the 2016 mixed-mode condition. However, the pressure-sealed envelope appears to have performed at least somewhat better than the reminder postcard. We recommend using it again in 2019 for cases that have been offered a web option, given the clear usefulness of including web login credentials in the reminder mailing.
- The fourth screener mailing continued to generate response in 2014 and 2016, although it only increased the response rate by about 2 to 5 percentage points. If maximizing the screener response rate is the priority in 2019, then we recommend adding this mailing back into the screener protocol in 2019. However, if costs become a concern, then cutting this mailing would be a reasonable cost savings measure.
- In 2016, the robocall reminder had almost no effect on the screener response rate. This may have been because it was made after the final mailing had already been conducted. If the robocall is not very expensive, then we recommend trying to use it earlier in the screener (or topical) field period in 2019 to see if getting the robocall helps to get sample members to open and respond to subsequent mailings that they receive.
- There appears to be a lag between when mailings are sent and when paper questionnaires are returned and processed. If it is important to have detailed mailing return date information moving forward, NCES may want to speak with Census to learn more about the procedures for checking-in returned paper questionnaires and (if this seems to be a factor) determine if it is possible to improve the timeliness of the check-in process. The currently available data makes it difficult to know when exactly sample members responded to the screener request.
- Due to the seemingly different patterns of response to web and paper options, it may be worth considering different mailing schedules for cases that are offered different mode options (though this should of course be weighed against any cost increases due to greater operational complexity). Even if the same mailing schedule is used for all sample members, there are some schedule changes that could be considered in 2019. For example, given the pattern of response to first mailing in the 2016 mixed-mode condition, it may be worth waiting a few more days to send the next contact attempt for sample members that are offered a web option than was done in 2017. In addition, for any sample members that are offered a paper option early in the administration, it may be preferable to send the next

mailing package closer to the date of the reminder postcard so that it arrives when the postcard is still fresh in the sample member's mind.

- In all administrations, there was very little gain in the response rate in the final three weeks or so of the screener field period. If desirable to NCEs, it may be possible to shorten the screener field period by a few weeks with little negative impact on the screener response rate.

Topical contact attempts

- When a web option is offered during the screener phase, the topical response rates tend to be higher, and most topical response comes prior to the topical contacts (due to screener respondents completing the topical at the same time as the screener). This is a big efficiency benefit for the topical phase and another reason we recommend keeping a web option in 2019.
- In 2017, only sending topical contacts to screener respondents who had declined to start the topicals had almost no positive impact on topical response rates, likely because these individuals had already shown they were not interested in completing the topical. It may be useful to conduct further research into whether this was also the case in 2016, and if so, we would recommend dropping topical follow-up of screener respondents who fail to start the topical. We do not think that the lack of topical response for this group is due to not offering a paper response option in the topical phase because these individuals had already shown themselves to be willing to do the screener online.
- In 2017, most topical mailings were sent to households where someone other than the screener respondent was sampled for ATEs. Reducing the topical protocol to only two mailings had a negative impact on the response rate for this topical. In future administrations, we recommend sending more than two topical mailings when a different household member is sampled for ATEs.
- Looking at the weekly and daily pattern of response to topical contacts suggests that it may be preferable to send the second and third follow-up mailings more quickly – and that it may be possible to shorten the topical field period overall.

E-mail outcomes

- Most screener respondents were willing to provide their own e-mail addresses in both 2016 and 2017 and very few of the e-mails that were sent bounced back.
- The e-mail operation used in 2017 led to almost no additional topical responses. This is likely because e-mails were only sent to screener respondents who had already made it clear that they were not interested in completing the topical.
- Therefore, we do not recommend continuing to use the same e-mail operation in the future. We suggest either dropping the e-mail operation entirely or experimenting with

ways to ask for another household member's e-mail address when someone else is sampled for ATES that might be more successful than the approach that was used in 2016.

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Appendix A. Tables

Table 2.1. Response rate, by screener incentive condition, questionnaire, dual-topical condition, and topical respondent: 2017

Questionnaire	Screener incentive condition		t statistic
	\$2 incentive ¹	\$5 incentive ²	
Screener	41.3	43.6	5.1 *
Topical			
ECPP			
Overall	88.2	87.0	0.6
Single-topical condition	89.7	88.3	0.6
Dual-topical condition	85.9	85.3	0.2
PFI-E			
Overall	88.7	89.8	1.0
Single-topical condition	90.4	91.9	1.1
Dual-topical condition	86.1	86.8	0.4
PFI-H			
Overall	68.1	76.5	0.9
Single-topical condition	78.2 !	74.0	†
Dual-topical condition	56.4 !	79.4	†
ATES			
Overall			
Overall	72.9	73.1	0.2
Same respondent as screener	90.3	90.8	0.2
Different respondent than screener	49.4	49.4	0.2
Single-topical condition			
Overall	74.0	75.1	1.0
Same respondent as screener	91.4	92.2	0.9
Different respondent than screener	50.5	51.6	0.6
Dual-topical condition			
Overall	71.5	70.1	1.1
Same respondent as screener	88.7	88.7	0.1
Different respondent than screener	47.7	46.2	0.7

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Unweighted eligible sample size was 13,400 for the screener, 390 for ECPP, 890 for PFI-E, 30 for PFI-H, and 3,180 for ATES.

²Unweighted eligible sample size was 76,090 for the screener, 2,560 for ECPP, 5,270 for PFI-E, 190 for PFI-H, and 19,180 for ATES.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete an entire topical questionnaire. Unweighted sample size was equal to 13,400 for the \$2 incentive condition and 76,090 for the \$5 incentive condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 2.2. Percentage point gain in response rate after each mailing, by screener incentive condition and mailing: 2017

Mailing	Screener incentive condition		t statistic
	\$2 incentive	\$5 incentive	
Initial screener mailing	11.2	13.9	6.8 *
Pressure sealed envelope	12.2	13.2	3.4 *
Second screener mailing	8.2	7.9	1.5
Third screener mailing (FedEx/First Class)	9.7	8.6	3.9 *

* $p < .05$.

NOTE: Response rates were calculated using American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1). Percentages represent the proportion of eligible sampled households that completed the screener after the specified mailing. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. Unweighted sample size (excluding undeliverable and out-of-scope addresses) is equal to 13,400 for the \$2 incentive condition and 76,090 for the \$5 incentive condition. Sample sizes have been rounded to the nearest 10. SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 2.3. Number of screener respondent households and percentage distribution, by screener incentive condition and household characteristics: 2017

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		t statistic
		\$2 incentive	\$5 incentive	
Total	37,330	100	100	†
Phone number available (from sampling frame)				
Yes	27,820	74.6	74.9	0.4
No	9,510	25.4	25.1	0.4
Race/ethnicity of head of household (from sampling frame)				
White	19,980	58.3	56.1	2.8 *
Black	3,210	7.0	6.9	0.0
Hispanic	3,130	6.8	7.1	0.7
Asian	1,420	3.4	3.9	1.8
Other	850	2.5	2.4	0.3
Missing	8,740	22.1	23.6	2.5 *
Education of head of household (from sampling frame)				
Less than high school	2,980	7.6	7.4	0.4
High school	7,470	19.7	19.8	0.0
Some college	8,020	21.6	21.4	0.3
B.A.	6,110	17.7	16.6	1.7
Graduate/professional	4,000	11.3	11.2	0.3
Missing	8,740	22.1	23.6	2.5 *
Age of head of household (from sampling frame)				
18–24	420	1.0	1.1	0.9
25–34	2450	6.7	6.5	0.5
35–44	4520	12.4	12.1	0.6
45–54	5880	15.6	15.9	0.6
55–65	7730	21.5	20.7	1.2
Over 65	8560	23.7	23.1	1.1
Missing	7770	19.1	20.6	2.3 *

See notes at end of table.

Table 2.3. Number of screener respondent households and percentage distribution, by screener incentive condition and household characteristics: 2017—Continued

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		
		\$2 incentive	\$5 incentive	t statistic
Annual income (from sampling frame)				
Less than \$21,000	5,220	13.4	13.5	0.2
\$21,000–\$36,000	3,570	8.9	9.5	1.4
\$36,001–\$56,000	4,390	11.0	11.4	0.8
\$56,001–\$85,000	5,810	15.2	15.5	0.6
\$85,001–\$120,000	6,340	18.5	17.0	2.6 *
Greater than \$120,000	8,040	22.8	22.3	0.7
Missing	3,970	10.2	10.6	1.0
Reported at least one topical-eligible household member on the screener				
ECPP	3,860	9.5	10.3	1.8
PFI-E	8,160	21.5	21.6	0.1
PFI-H	350	0.8	0.9	0.6
ATES	29,610	78.5	79.0	0.9

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire and reached at least the first item in the questionnaire. Unweighted eligible sample size was 1,520 for ECPP, 3,300 for PFI-E, 90 for PFI-H, and 950 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires and reached at least the first item in the questionnaire. Unweighted eligible sample size was 1,050 for ECPP, 2,180 for PFI-E, 80 for PFI-H, and 1,720 for ATES.

NOTE: Item missing rates represent the percentage of respondents who should have answered the item but did not. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 2.4. Response rate, by envelope size condition and questionnaire: 2017

Questionnaire	Envelope size condition		t statistic
	Full size ¹	Letter size ²	
Screener	43.3	42.7	0.6
Topical			
ECPP	87.3	85.4	0.6
PFI-E	89.5	91.0	1.0
PFI-H	76.8	53.0 !	†
ATES	73.0	73.8	0.6

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Unweighted eligible sample size was 85,010 for the screener, 2,820 for ECPP, 5,830 for PFI-E, 210 for PFI-H, and 21,290 for ATES.

²Unweighted eligible sample size was 4,480 for the screener, 130 for ECPP, 333 for PFI-E, 10 for PFI-H, and 1,070 for ATES.

NOTE: Response rates were calculated using American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1). Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete an entire topical questionnaire. Unweighted sample size was equal to 85,010 for the full-size envelope condition and 4,480 for the letter-size envelope condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 2.5. Percentage point gain in response rate after each mailing, by envelope size condition and mailing: 2017

Mailing	Envelope size condition		t statistic
	Full size	Letter size	
Initial screener mailing	13.5	13.4	0.1
Pressure sealed envelope	13.1	12.7	0.7
Second screener mailing	8.0	7.4	1.3
Third screener mailing (FedEx/First Class)	8.8	9.2	0.9

NOTE: Response rates were calculated using American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1). Percentages represent the proportion of eligible sampled households that completed the screener after the specified mailing. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. Unweighted sample size (excluding undeliverable and out-of-scope addresses) is equal to 85,010 for the full-size envelope condition and 4,480 for the letter-size envelope condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 2.6. Number of screener respondent households and percentage distribution, by envelope size condition and household characteristics: 2017

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		t statistic
		Full size	Letter size	
Total	37,330	100	100	†
Phone number available (from sampling frame)				
Yes	27,820	74.9	74.5	0.3
No	9,510	25.1	25.5	0.3
Race/ethnicity of head of household (from sampling frame)				
White	19,980	56.4	56.6	0.1
Black	3,210	7.0	6.3	1.3
Hispanic	3,130	7.0	7.9	1.6
Asian	1,420	3.8	4.6	1.6
Other	850	2.4	2.3	0.3
Missing	8,740	23.4	22.3	1.3
Education of head of household (from sampling frame)				
Less than high school	2,980	7.4	7.7	0.6
High school	7,470	19.8	19.1	0.7
Some college	8,020	21.4	21.9	0.5
B.A.	6,110	16.8	16.9	0.2
Graduate/professional	4,000	11.1	12.0	1.0
Missing	8,740	23.4	22.3	1.3
Age of head of household (from sampling frame)				
18–24	420	1.1	0.6	! 2.6 *
25–34	2,450	6.5	6.7	0.3
35–44	4,520	12.2	11.5	0.9
45–54	5,880	15.8	17.1	1.3
55–65	7,730	20.8	20.4	0.5
Over 65	8,560	23.2	23.1	0.2
Missing	7,770	20.3	20.7	0.4

See notes at end of table.

Table 2.6. Number of screener respondent households and percentage distribution, by envelope size condition and household characteristics: 2017—Continued

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		t statistic
		Full size	Letter size	
Annual income (from sampling frame)				
Less than \$21,000	5,220	13.4	15.0	1.9
\$21,000–\$36,000	3,570	9.5	8.8	1.0
\$36,001–\$56,000	4,390	11.4	10.4	1.5
\$56,001–\$85,000	5,810	15.6	14.0	1.8
\$85,001–\$120,000	6,340	17.3	17.2	0.1
Greater than \$120,000	8,040	22.3	23.7	1.4
Missing	3,970	10.5	10.9	0.5
Reported at least one topical-eligible household member on the screener				
ECPP	3,860	10.2	9.5	0.9
PFI-E	8,160	21.5	23.1	1.5
PFI-H	350	0.9	1.1	0.7
ATES	29,610	79.0	78.4	0.6

† Not applicable.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

NOTE: Percentages represent the proportion of eligible screener respondent households within that group. Race categories exclude persons of Hispanic ethnicity. These analyses exclude cases that did the screener on the TQA, since these cases were not asked to complete an entire topical questionnaire. Unweighted sample size was equal to 35,480 for the full-size envelope condition and 1,850 for the letter-size envelope condition. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 2.7. Response rate, by FedEx/First Class condition and questionnaire: 2017

Questionnaire	FedEx/First Class condition		t statistic
	FedEx ¹	First Class ²	
Screener	44.6	42.0	8.2 *
Topical			
ECPP	87.4	87.2	0.2
PFI-E	89.7	89.5	0.3
PFI-H	76.4	74.5	0.3
ATES	73.2	73.0	0.2

* $p < .05$.

¹Unweighted eligible sample size was 45,030 for the screener, 1,530 for ECPP, 3,240 for PFI-E, 130 for PFI-H, and 11,580 for ATES.

²Unweighted eligible sample size was 44,460 for the screener, 1,420 for ECPP, 2,920 for PFI-E, 90 for PFI-H, and 10,780 for ATES.

NOTE: Response rates were calculated using American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1). Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Households with PO box addresses are excluded because they cannot receive FedEx mailings. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete an entire topical questionnaire. Unweighted sample size (excluding undeliverable and out-of-scope addresses) is 45,030 for the FedEx condition and 44,460 for the First class condition. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 2.8. Number of screener respondent households and percentage distribution, by FedEx/First Class condition and household characteristics: 2017

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		t statistic
		FedEx	First Class	
Total	37,110	100	100	†
Phone number available (from sampling frame)				
Yes	27,740	74.7	75.5	1.7
No	9,370	25.3	24.5	1.7
Race/ethnicity of head of household (from sampling frame)				
White	19,880	56.3	56.8	0.9
Black	3,200	6.9	7.1	0.8
Hispanic	3,120	7.1	6.9	1.0
Asian	1,420	3.9	3.8	0.6
Other	840	2.5	2.3	1.1
Missing	8,650	23.3	23.2	0.3
Education of head of household (from sampling frame)				
Less than high school	2,960	7.6	7.2	1.3
High school	7,420	19.6	19.9	0.7
Some college	7,990	21.4	21.6	0.4
B.A.	6,100	16.6	17.2	1.5
Graduate/professional	3,990	11.5	10.9	1.5
Missing	8,650	23.3	23.2	0.3
Age of head of household (from sampling frame)				
18–24	420	1.1	1.0	0.9
25–34	2,440	6.3	6.7	1.5
35–44	4,500	12.4	12.0	1.0
45–54	5,860	15.9	15.8	0.3
55–65	7,700	20.7	21.1	0.9
Over 65	8,530	23.0	23.5	1.2
Missing	7,660	20.5	19.8	1.6

See notes at end of table.

Table 2.8. Number of screener respondent households and percentage distribution, by FedEx/First Class condition and household characteristics: 2017—Continued

Household characteristics	Total number of screener respondents	Percentage distribution of screener respondents		
		FedEx	First Class	t statistic
Annual household income (from sampling frame)				
Less than \$21,000	5,190	13.8	13.2	1.5
\$21,000–\$36,000	3,550	9.6	9.3	1.1
\$36,001–\$56,000	4,370	11.2	11.6	1.1
\$56,001–\$85,000	5,780	15.4	15.6	0.4
\$85,001–\$120,000	6,310	16.8	17.8	2.5 *
Greater than \$120,000	8,030	22.5	22.6	0.2
Missing	3,880	10.7	10.0	2.1 *
Reported at least one topical-eligible household member on the screener				
ECP	3,840	10.2	10.1	0.3
PFI-E	8,110	21.9	21.2	1.6
PFI-H	350	1.0	0.8	1.5
ATES	29,460	79.3	78.7	1.7

† Not applicable.

* $p < .05$.

NOTE: Percentages represent the proportion of eligible screener respondent households within that group. Race categories exclude persons of Hispanic ethnicity. Households with PO box addresses are excluded because they cannot receive FedEx mailings. Households that did the screener on the TQA are also excluded, since these cases were not asked to complete an entire topical questionnaire. Unweighted sample size (excluding undeliverable and out-of-scope addresses) is 19,270 for the FedEx condition and 17,840 for the First Class condition. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.1. Response rate, by screener version and questionnaire: 2017

Questionnaire	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
Screeners	43.4	43.1	1.0
Topical			
ECPP	88.6	85.8	1.0
PFI-E	90.0	89.2	1.0
PFI-H	72.0	79.3	1.0
ATES	73.4	72.8	1.0

¹Questions were asked in a person-by-person format. Unweighted eligible sample size is 44,780 for the screener, 1,420 for ECPP, 3,020 for PFI-E, 120 for PFI-H, and 11,200 for ATES.

²Questions were asked in a characteristic-by-characteristic format. Unweighted eligible sample size was 44,710 for the screener, 1,530 for ECPP, 3,140 for PFI-E, 101 for PFI-H, and 11,160 for ATES.

NOTE: Response rates were calculated using American Association for Public Opinion Research (AAPOR) Response Rate 1 (RR1). Percentages represent the proportion of sampled households (excluding undeliverable and out-of-scope addresses) that were respondents to the questionnaire. Topical response rates exclude cases that did the screener on the TQA because these cases were not asked to complete an entire topical questionnaire. Unweighted sample size was equal to 44,780 for the 2016 version and 44,710 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.2. Web screener breakoff rates, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
Overall	3.2	3.4	0.7
Educational attainment of head of household			
High school or less	3.3	3.3	0.2
Some college or more	2.7	3.1	1.3
Missing	4.0	3.9	0.4
Number of adults in the household			
1-2	3.0	3.2	1.1
3-4	3.4	3.2	0.4
5 or more	2.4 †	1.0 †	†
Missing	5.1	4.8	0.5
Household is flagged as having children			
Yes	3.3	3.1	0.4
No	3.2	3.4	1.0

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of sampled households that accessed the screener web instrument but did not complete the screener. Households that accessed the screener via the TQA are excluded from this analysis. Unweighted sample size was equal to 17,760 for the 2016 version and 17,650 for the redesigned version.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.3a. Number of web screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017

Screener item and household characteristics (from sampling frame)	Total number of web screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
Name							
Overall	26,190	0.5	1.1	-5.5 *	0.2	0.4	-2.1 *
Educational attainment of head of household							
High school or less	6,880	0.7	1.2	-2.2 *	0.3 !	0.6	-2.3 *
Some college or more	13,760	0.5	1.0	-3.9 *	0.2	0.2	-0.7
Missing	5,540	0.4	1.1	-2.6 *	0.2 !	0.4 !	-1.0
Number of adults in the household							
1-2	19,750	0.5	1.0	-4.5 *	0.2	0.3	-1.9
3-4	3,850	0.8	1.3	-1.6	0.3 !	0.6	-1.1
5 or more	180	1.0 !	0.6 !	†	0.0 !	0.0 !	†
Missing	2,410	0.4 !	1.2	-2.2 *	0.2 !	0.3	†
Household is flagged as having children							
Yes	6,260	0.7	1.0	-1.4	0.2 !	0.3 !	-0.6
No	19,930	0.5	1.1	-5.6 *	0.2	0.4	-2.3 *
Date of birth/age							
Overall	26,190	0.6	0.8	-1.2	0.2	0.1 !	2.8 *
Educational attainment of head of household							
High school or less	6,880	0.8	0.8	0.0	0.2 !	0.1 !	†
Some college or more	13,760	0.6	0.8	-1.3	0.1 !	0.1 !	1.0
Missing	5,540	0.4	0.6	-1.0	0.2 !	0.0 !	†

See notes at end of table.

Table 3.3a. Number of web screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of web screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
Number of adults in the household							
1-2	19,750	0.6	0.7	-1.0	0.2	0.1 !	2.5 *
3-4	3,850	0.9	0.9	0.1	0.1 !	0.1 !	†
5 or more	180	1.0 !	1.1 !	†	0.0 !	0.0 !	†
Missing	2,410	0.4 !	0.8	-1.4	0.2 !	0.0 !	†
Household is flagged as having children							
Yes	6,260	0.8	0.9	-0.4	0.2 !	0.1 !	1.0
No	19,930	0.6	0.7	-1.1	0.2	0.0 !	†
Sex							
Overall	24,680	1.0	1.6	-4.5 *	0.4	0.4	0.2
Educational attainment of head of household							
High school or less	6,470	1.0	1.5	-1.8	0.2 !	0.4	-1.5
Some college or more	13,040	1.1	1.6	-2.8 *	0.5	0.4	0.9
Missing	5,180	1.0	1.8	-2.2 *	0.5	0.5 !	0.2
Number of adults in the household							
1-2	18,610	1.0	1.5	-3.2 *	0.4	0.4	0.3
3-4	3,620	1.2	2.0	-1.9	0.5 !	0.4 !	0.4
5 or more	180	1.5 !	1.7 !	†	0.0 !	0.0 !	‡
Missing	2,280	0.9	1.8	-1.8	0.5 !	0.6 !	-0.5
Household is flagged as having children							
Yes	6,110	1.2	2.1	-2.5 *	0.5	0.5	0.1
No	18,570	1.0	1.4	-2.9 *	0.4	0.4	0.2

See notes at end of table.

Table 3.3a. Number of web screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of web screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
School enrollment status							
Overall	24,680	0.9	1.2	-2.5 *	0.3	0.4	-0.2
Educational attainment of head of household							
High school or less	6,470	0.9	1.4	-2.1 *	0.2 !	0.4	-1.3
Some college or more	13,040	0.8	1.2	-1.8	0.3	0.3	0.0
Missing	5,180	1.0	1.2	-0.7	0.5 !	0.3 !	0.9
Number of adults in the household							
1-2	18,610	0.8	1.2	-2.0 *	0.4	0.3	0.1
3-4	3,620	1.1	1.3	-0.5	0.3 !	0.4 !	-0.3
5 or more	180	0.0 !	1.8 !	†	0.0 !	0.0 !	†
Missing	2,280	1.0	1.7	-1.4	0.3 !	0.4 !	†
Household is flagged as having children							
Yes	6,110	0.9	1.6	-2.2 *	0.3 !	0.3 !	0.1
No	18,570	0.9	1.1	-1.6	0.3	0.4	-0.3
Current grade or equivalent							
Overall	24,680	0.4	0.8	-4.1 *	0.2	0.3	-1.9
Educational attainment of head of household							
High school or less	6,470	0.3 !	0.7	-1.9	0.1 !	0.3 !	†
Some college or more	13,040	0.4	0.9	-3.3 *	0.2 !	0.3	-1.2
Missing	5,180	0.5 !	0.9	-1.7	0.2 !	0.2 !	-0.2

See notes at end of table.

Table 3.3a. Number of web screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of web screener respondent households	At least one household member missing a response			Sampled household member missing a response			
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic	
Number of adults in the household								
1-2	18,610	0.4	0.8	-3.4 *	0.2	0.3	-1.9	
3-4	3,620	0.4 !	0.8	-1.7	0.2 !	0.3 !	-0.2	
5 or more	180	0.0 !	0.0 !	†	0.0 !	0.0 !	†	
Missing	2,280	0.4 !	1.0	-1.7	0.1 !	0.2 !	†	
Household is flagged as having children								
Yes	6,110	0.3 !	1.1	-3.9 *	0.2 !	0.4 !	-1.4	
No	18,570	0.4	0.7	-2.7 *	0.2	0.3	-1.5	

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

*p < .05.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of web screener respondent households with at least one household member or the sampled household member missing a response to that screener item. Households that responded to the screener on the TQA are excluded from this analysis. Unweighted sample size was equal to 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.3b. Number of TQA screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017

Screener item and household characteristics (from sampling frame)	Total number of TQA screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
Name							
Overall	1,510	0.2 !	0.2 !	†	0.0 !	0.0 !	†
Educational attainment of head of household							
High school or less	650	0.2 !	0.0 !	†	0.0 !	0.0 !	†
Some college or more	520	0.0 !	0.4 !	†	0.0 !	0.0 !	†
Missing	340	0.4 !	0.0 !	†	0.0 !	0.0 !	†
Number of adults in the household							
1-2	1,100	0.3 !	0.2 !	†	0.0 !	0.0 !	†
3-4	260	0.0 !	0.0 !	†	0.0 !	0.0 !	†
5 or more	10	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Missing	150	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Household is flagged as having children							
Yes	220	0.0 !	1.1 !	†	0.0 !	0.0 !	†
No	1,300	0.2 !	0.0 !	†	0.0 !	0.0 !	†
Date of birth/age							
Overall	1,510	0.8 !	0.5 !	0.81	0.0 !	0.0 !	†
Educational attainment of head of household							
High school or less	650	0.8 !	0.0 !	†	0.0 !	0.0 !	†
Some college or more	520	0.9 !	1.2 !	†	0.0 !	0.0 !	†
Missing	340	0.8 !	0.4 !	†	0.0 !	0.0 !	†

See notes at end of table.

Table 3.3b. Number of TQA screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of TQA screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
Number of adults in the household							
1-2	1,100	0.8 !	0.3 !	†	0.0 !	0.0 !	†
3-4	260	0.9 !	1.0 !	†	0.0 !	0.0 !	†
5 or more	10	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Missing	150	1.0 !	1.0 !	†	0.0 !	0.0 !	†
Household is flagged as having children							
Yes	220	0.0 !	2.4 !	†	0.0 !	0.0 !	†
No	1,300	1.0 !	0.2 !	†	0.0 !	0.0 !	†
Sex							
Overall	1,240	0.3 !	1.5 !	† *	0.2 !	0.2 !	†
Educational attainment of head of household							
High school or less	540	0.2 !	1.7 !	†	0.0 !	0.4 !	†
Some college or more	430	0.2 !	1.2 !	† *	0.2 !	0.0 !	†
Missing	270	0.4 !	1.9 !	† *	0.4 !	0.0 !	†
Number of adults in the household							
1-2	900	0.4 !	1.4 !	† *	0.2 !	0.2 !	†
3-4	210	0.0 !	2.2 !	†	0.0 !	0.0 !	†
5 or more	10	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Missing	120	0.0 !	1.7 !	†	0.0 !	0.0 !	†
Household is flagged as having children							
Yes	190	0.0 !	2.5 !	† *	0.0 !	0.0 !	†
No	1,050	0.3 !	1.3 !	† *	0.2 !	0.2 !	†

See notes at end of table.

Table 3.3b. Number of TQA screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of TQA screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
School enrollment status							
Overall	1,240	0.3	0.4	†	0.1	0.1	†
Educational attainment of head of household							
High school or less	540	0.2	0.6	†	0.0 !	0.0	†
Some college or more	430	0.2	0.0	†	0.2	0.0	†
Missing	270	0.4	0.7	†	0.0 !	0.4 !	†
Number of adults in the household							
1-2	900	0.4	0.5	†	0.1	0.1	†
3-4	210	0.0	0.0	†	0.0 !	0.0 !	†
5 or more	10	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Missing	120	0.0	0.0	†	0.0 !	0.0 !	†
Household is flagged as having children							
Yes	190	0.0	0.9	†	0.0 !	0.6 !	†
No	1,050	0.3	0.3	†	0.1	0.0	†
Current grade or equivalent							
Overall	1,240	0.1	0.2	†	0.0	0.0	†
Educational attainment of head of household							
High school or less	540	0.0 !	0.6	†	0.0 !	0.0 !	†
Some college or more	430	0.0	0.0	†	0.0 !	0.0	†
Missing	270	0.4 !	0.0	†	0.0 !	0.0 !	†

See notes at end of table.

Table 3.3b. Number of TQA screener respondent households and percentage with at least one household member or the sampled household member missing a response to a screener item, by screener version, screener item, and household characteristics: 2017—Continued

Screener item and household characteristics (from sampling frame)	Total number of TQA screener respondent households	At least one household member missing a response			Sampled household member missing a response		
		2016 version ¹	Redesigned version ²	t statistic	2016 version ¹	Redesigned version ²	t statistic
Number of adults in the household							
1-2	900	0.1 !	0.3 !	†	0.0 !	0.0 !	†
3-4	210	0.0 !	0.0 !	†	0.0 !	0.0 !	†
5 or more	10	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Missing	120	0.0 !	0.0 !	†	0.0 !	0.0 !	†
Household is flagged as having children							
Yes	190	0.0 !	0.0 !	†	0.0 !	0.0 !	†
No	1,050	0.1 !	0.3 !	†	0.0 !	0.0 !	†

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of TQA screener respondent households with at least one household member or the sampled household member missing a response to that screener item. Households that responded to the screener on the web are excluded from this analysis. Unweighted sample size was equal to 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.4a. Number of web screener respondent households and percentage who reported an inconsistent response for at least one household member, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Total number of web screener respondents	Web screener respondent households		
		2016 version ¹	Redesigned version ²	t statistic
Overall	34,200	2.5	2.8	-2.0 *
Educational attainment of head of household				
High school or less	9,120	2.0	2.9	-3.2 *
Some college or more	17,130	2.6	2.9	-1.0
Missing	7,950	2.7	2.5	0.6
Number of adults in the household				
1-2	26,170	2.5	2.9	-2.3 *
3-4	4,240	1.8	1.9	-0.4
5 or more	200	1.2 !	9.2 !	†
Missing	3,580	3.2	2.5	1.3
Household flagged as having children				
Yes	7,060	3.8	4.9	-2.2 *
No	27,140	2.1	2.3	-0.8

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of web screener respondent households that reported an inconsistent response for at least one household member. Respondents were considered to have provided an inconsistent response based on their responses to the age, enrollment, and grade level items. Households that responded to the screener on the TQA are excluded from this analysis. The unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.4b. Number of TQA screener respondent households and percentage who reported an inconsistent response for at least one household member, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Total number of TQA screener respondents	TQA screener respondent households		
		2016 version ¹	Redesigned version ²	t statistic
Overall	3,130	1.2	1.5	-0.8
Educational attainment of head of household				
High school or less	1,340	1.3 !	2.5	-1.5
Some college or more	1,000	0.9 !	1.1 !	-0.5
Missing	800	1.4 !	0.3 !	†
Number of adults in the household				
1-2	2,440	1.0	1.7	-1.4
3-4	340	1.1 !	0.8 !	†
5 or more	10	0.0 !	0.0 !	†
Missing	340	2.1 !	0.4 !	†
Household flagged as having children				
Yes	340	3.3 !	6.2 !	-1.2
No	2,790	0.9	0.9	-0.1

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of TQA screener respondent households that reported an inconsistent response for at least one household member. Respondents were considered to have provided an inconsistent response based on their responses to the age, enrollment, and grade level items. Households that responded to the screener on the web are excluded from this analysis. Unweighted sample size was 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.5a. Number of web screener respondent households and percentage where at least one household member received an "unknown eligibility" sampling status, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Total number of web screener respondents	Percentage of web screener respondents		
		2016 version ¹	Redesigned version ²	t statistic
Overall	34,200	0.9	1.6	5.2 *
Educational attainment of head of household				
High school or less	9,120	1.1	1.7	2.7 *
Some college or more	17,130	0.8	1.3	3.1 *
Missing	7,950	0.9	1.9	3.7 *
Number of adults in the household				
1-2	26,170	0.8	1.5	4.9 *
3-4	4,240	1.1	1.6	1.4
5 or more	200	2.0 !	1.6 !	†
Missing	3,580	1.1	2.1	2.4 *
Household flagged as having children				
Yes	7,060	1.0	1.4	1.6
No	27,140	0.9	1.6	5.0 *

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of web screener respondent households where at least one household member was assigned an "unknown eligibility" status. This status was assigned when there was insufficient information to determine whether the household member was eligible for one of the topical surveys because either there was too much item nonresponse or there were inconsistent screener responses. Household members that received this flag were not eligible for topical sampling. Households that responded to the screener on the TQA are excluded from this analysis. Unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.5b. Number of TQA screener respondent households and percentage where at least one household member received an "unknown eligibility" sampling status, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Total number of TQA screener respondents	Percentage of TQA screener respondents		
		2016 version ¹	Redesigned version ²	t statistic
Overall	3,130	0.7	0.7	0.0
Educational attainment of head of household				
High school or less	1,340	0.9 !	0.7	†
Some college or more	1,000	0.2 !	0.9	1.4
Missing	800	0.9 !	0.5	†
Number of adults in the household				
1-2	2,440	0.7 !	0.7 !	0.2
3-4	340	0.7 !	0.8 !	†
5 or more	0	†	†	†
Missing	340	1.1 !	0.4 !	0.8
Household flagged as having children				
Yes	340	0.4 !	2.3 !	†
No	2,790	0.7 !	0.5 !	0.8

† Not applicable. Either there are no cases in this group or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of web screener respondent households where at least one household member was assigned an "unknown eligibility" status. This status was assigned when there was insufficient information to determine whether the household member was eligible for one of the topical surveys because either there was too much item nonresponse or there were inconsistent screener responses. Household members that received this flag were not eligible for topical sampling. Households that responded to the screener on the TQA are excluded from this analysis. Unweighted sample size was 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.6a. Mean number of minutes web screener respondent households spent on the screener questionnaire, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
Overall	3.9	4.4	4.5 *
Educational attainment of head of household			
High school or less	4.0	4.5	3.0 *
Some college or more	3.9	4.3	2.3 *
Missing	3.8	4.4	2.3 *
Number of household members reported in screener			
1-2	3.1	3.6	3.1 *
3-4	4.8	5.0	0.6
5-6	5.6	6.7	2.7 *
7 or more	9.4	11.9	1.2
Household is flagged as having children			
Yes	4.5	4.9	1.1
No	3.7	4.3	4.6 *

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: The estimates represent the mean number of minutes web respondents spent in the screener, including time spent on the transition items that appear after sampling. Cases that completed the topical over multiple days, took more than 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis.

Households that responded to the screener on the TQA are excluded from this analysis. A small number of additional households are excluded from the analysis because there was no information for them available on the paradata file. Unweighted sample size was equal to 17,160 for the 2016 version and 17,040 for the redesigned version.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.6b. Mean number of minutes TQA screener respondent households spent on the screener questionnaire, by screener version and household characteristics: 2017

Household characteristics (from sampling frame)	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
Overall	1.9	1.9	0.0
Educational attainment of head of household			
High school or less	1.7	1.9	1.6
Some college or more	2.2	1.9	0.6
Missing	2.1	2.0	0.4
Number of household members reported in screener			
1-2	1.8	1.7	0.4
3-4	3.5	4.1	1.3
5-6	6.2	6.0	0.2
7 or more	8.8	8.1	0.4
Household is flagged as having children			
Yes	3.8 !	2.6	0.9
No	1.9	2.0	0.8

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: The estimates represent the mean number of minutes TQA respondents spent in the screener, including time spent on the transition items that appear after sampling. Cases that completed the topical over multiple days, took more than 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis.

Households that responded to the screener on the web are excluded from this analysis. A small number of additional households are excluded from the analysis because there was no information for them available on the paradata file. Unweighted sample size was equal to 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.7a. Number of web screener respondent households and percentage distribution, by screener version and household characteristics: 2017

Household characteristics	Total number of web screener respondents	Percentage distribution of web screener respondents		t statistic
		2016 version ¹	Redesigned version ²	
Total	34,200	100	100	†
Phone number available (from sampling frame)				
Yes	25,350	74.2	74.7	0.9
No	8,850	25.8	25.3	0.9
Race/ethnicity of head of household (from sampling frame)				
White	18,430	56.6	56.9	0.6
Black	2,740	6.5	6.5	0.2
Hispanic	2,930	7.2	7.1	0.5
Asian	1,370	3.9	4.1	0.7
Other	790	2.4	2.4	0.1
Missing	7,950	23.4	23.0	0.8
Education of head of household (from sampling frame)				
Less than high school	2,620	7.1	7.2	0.3
High school	6,490	18.6	18.8	0.5
Some college	7,490	21.7	22.0	0.6
B.A.	5,810	17.3	17.6	0.7
Graduate/professional	3,830	11.9	11.4	1.3
Missing	7,950	23.4	23.0	0.8
Age of head of household (from sampling frame)				
18–24	410	1.0	1.3	1.8
25–34	2,380	6.8	7.0	0.6
35–44	4,370	13.0	12.6	1.1
45–54	5,650	16.4	16.7	0.8
55–65	7,210	21.1	21.3	0.3
Over 65	6,940	20.9	20.3	1.6
Missing	7,250	20.6	20.9	0.5

See notes at end of table.

Table 3.7a. Number of web screener respondent households and percentage distribution, by screener version and household characteristics: 2017—Continued

Household characteristics	Total number of web screener respondents	Percentage distribution of web screener respondents		t statistic
		2016 version ¹	Redesigned version ²	
Annual household income (from sampling frame)				
Less than \$21,000	4,560	13.0	12.7	0.7
\$21,000–\$36,000	3,000	8.9	8.5	1.2
\$36,001–\$56,000	3,920	11.0	11.2	0.6
\$56,001–\$85,000	5,350	15.5	15.6	0.2
\$85,001–\$120,000	5,980	17.9	17.6	0.9
Greater than \$120,000	7,770	23.4	23.8	1.0
Missing	3,630	10.4	10.6	0.6

† Not applicable.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of eligible screener respondent households within that group. Households that completed the screener on the TQA are excluded from this analysis. Race categories exclude persons of Hispanic ethnicity. Unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.7b. Number of TQA screener respondent households and percentage distribution, by screener version and household characteristics: 2017

Household characteristics	Total number of TQA screener respondents	Percentage distribution of TQA screener respondents		t statistic
		2016 version ¹	Redesigned version ²	
Total	3,130	100	100	†
Phone number available (from sampling frame)				
Yes	2,470	78.9	79.7	0.5
No	660	21.1	20.3	0.5
Race/ethnicity of head of household (from sampling frame)				
White	1,550	53.5	52.5	0.6
Black	470	11.6	12.7	1.1
Hispanic	200	5.3	5.4	0.2
Asian	60	2.1	1.5	1.3
Other	60	1.9	2.5	1.2
Missing	800	25.7	25.3	0.2
Education of head of household (from sampling frame)				
Less than high school	360	11.2	10.2	0.9
High school	980	31.2	31.9	0.5
Some college	530	17.2	16.7	0.4
B.A.	300	9.4	9.9	0.5
Graduate/professional	170	5.4	6.0	0.6
Missing	800	25.7	25.3	0.2
Age of head of household (from sampling frame)				
18–24	10	0.3 !	0.4 !	0.4
25–34	70	2.4	1.8	1.2
35–44	150	4.3	5.0	0.9
45–54	240	7.3	7.9	0.8
55–65	520	15.7	17.1	1.1
Over 65	1,630	53.9	51.5	1.3
Missing	520	16.0	16.2	0.1

See notes at end of table.

Table 3.7b. Number of TQA screener respondent households and percentage distribution, by screener version and household characteristics: 2017—Continued

Household characteristics	Total number of TQA screener respondents	Percentage distribution of TQA screener respondents		
		2016 version ¹	Redesigned version ²	t statistic
Annual household income (from sampling frame)				
Less than \$25,000	660	20.7	20.5	0.1
\$25,000–\$34,999	570	18.2	18.5	0.2
\$35,000–\$49,999	480	14.3	15.3	0.7
\$50,000–\$74,999	460	15.7	14.0	1.3
\$75,000–\$124,999	350	11.5	11.5	0.0
Greater than \$124,999	270	8.4	9.4	1.0
Missing	350	11.1	10.8	0.3

† Not applicable.

! Interpret data with caution. The coefficient of variation is between 30 and 50 percent.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of eligible screener respondent households within that group. Households that completed the screener on the web are excluded from this analysis. Race categories exclude persons of Hispanic ethnicity. Unweighted sample size was 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Surveys Program (NHES), 2017.

Table 3.8a. Percentage distribution of the number of household members reported in the web screener, by screener version: 2017

Number of household members reported in screener	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
1	25.3	21.5	8.5 *
2	36.6	37.4	1.6
3	14.9	16.2	3.1 *
4	14.1	14.6	1.2
5	5.6	6.3	2.6 *
6	2.2	2.6	2.9 *
7 or more	1.3	1.4	0.8

* $p < .05$.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of web screener respondent households within each condition that reported that number of household members. Households that responded to the screener on the TQA are excluded from this analysis.

Unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.8b. Percentage distribution of the number of household members reported in the TQA screener, by screener version: 2017

Number of household members reported in screener	Screener version		t statistic
	2016 version ¹	Redesigned version ²	
1	52.5	50.9	0.9
2	34.5	35.7	0.7
3	6.9	6.9	0.0
4	3.2	3.9	1.1
5	1.6	1.5	0.3
6	0.8 !	0.8 !	0.0
7 or more	0.6 !	0.4 !	0.7

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of TQA screener respondent households within each condition that reported that number of household members. Households that responded to the screener on the web are excluded from this analysis. Unweighted sample size was 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.9a. Number of web screener respondent households and percentage who reported at least one household member eligible for the topical surveys, by screener version: 2017

Topical	Total number of web screener respondents	Percentage of web screener respondents		t statistic
		2016 version	Redesigned version	
Overall	34,200	82.1	82.8	1.9
ECP	34,200	10.5	11.3	2.3 *
PFI-E	34,200	22.4	23.5	2.5 *
PFI-H	34,200	0.9	1.0	0.8
ATES	34,200	81.9	82.6	1.8

* $p < .05$.

NOTE: Percentages represent the proportion of web screener respondent households for which at least one reported household member was eligible for a topical survey. Screener respondent households may have been eligible for more than one topical; as a result the topical-specific results do not sum to the overall result. Households that responded to the screener on the TQA are excluded from this analysis. Unweighted sample size was 17,160 for the 2016 version and 17,040 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 3.9b. Number of TQA screener respondent households and percentage who reported at least one household member eligible for the topical surveys, by screener version: 2017

Topical	Total number of TQA screener respondents	Percentage of TQA screener respondents		t statistic
		2016 version ¹	Redesigned version ²	
Overall	3,130	42.5	43.1	0.4
ECP	3,130	1.9	2.1	0.4
PFI-E	3,130	6.6	6.3	0.3
PFI-H	3,130	0.3 !	0.3 !	0.2
ATES	3,130	41.8	42.5	0.4

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹Questions were asked in a person-by-person format.

²Questions were asked in a characteristic-by-characteristic format.

NOTE: Percentages represent the proportion of TQA respondent households for which at least one reported household member was eligible for a topical survey. Screener respondent households may have been eligible for more than one topical; as a result the topical-specific results do not sum to the overall result. Households that responded to the screener on the TQA are excluded from this analysis. Unweighted sample size was 1,600 for the 2016 version and 1,530 for the redesigned version. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.1. Topical response rate among households eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, topical form, and topical pairing: 2017

Topical form	Single-topical condition ¹	Dual-topical condition ²			t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical			
ECPP							
Overall	89.3	85.5	87.6	81.1	3.9 *	-3.8	3.0 *
When paired with PFI-E	†	84.6	87.5	82.0	3.0 *	†	†
When paired with PFI-H	†	82.8 !	93.8 !	75.8 !	†	†	†
When paired with ATES	†	86.2	87.3	80.6	3.0 *	†	†
PFI-E							
Overall	91.8	86.8	90.3	80.3	8.2 *	-5.0	7.0 *
When paired with ECPP	†	86.7	92.4	80.8	3.9 *	†	†
When paired with ATES	†	86.8	89.3	80.1	6.9 *	†	†
PFI-H							
Overall	77.3	75.9	83.9	74.8	0.3	-1.4	0.2
When paired with ECPP	†	81.1 !	79.8 !	83.2 !	†	†	†
When paired with ATES	†	74.1	87.6	70.9	0.5	†	†
ATES							
Overall	67.6	59.9	†	†	†	-7.8	4.8 *
Same respondent as screener	90.6	82.6	88.8	76.3	7.3 *	-8.0	5.5 *
Different respondent than screener	46.9	37.0	†	†	†	-9.9	5.1 *
When paired with ECPP							
Overall	†	58.3	†	†	†	†	†
Same respondent as screener	†	80.5	89.5	71.4	6.5 *	†	†
Different respondent than screener	†	34.9	†	†	†	†	†

See notes at end of table.

Table 4.1. Topical response rate among households eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, topical form, and topical pairing: 2017—Continued

Topical form	Single-topical condition ¹	Dual-topical condition ²				t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic			
When paired with PFI-E								
Overall	†	60.4	†	†	†		†	†
Same respondent as screener	†	83.4	88.7	78.1	12.9	*	†	†
Different respondent than screener	†	37.8	†	†	†		†	†
When paired with PFI-H								
Overall	†	60.0	†	†	†		†	†
Same respondent as screener	†	81.0	85.5	75.2	†		†	†
Different respondent than screener	†	35.0	†	†	†		†	†

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire. Unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires. Unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATES.

NOTE: Response rates were calculated using AAPOR RR1. Percentages represent the proportion of eligible households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that were respondents to the topical questionnaire. Child topical results in the dual-topical condition by topical order (first topical and second topical) exclude cases where the other topical sampling for the household was that a household member other than the screener respondent was sampled for ATES. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.2. Topical unit response status among households with household members eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, and topical pairing: 2017

Topical unit response status	Single-topical condition ¹	Dual-topical condition ²			t statistic	Difference between single- and dual-topical condition	t statistic
		Overall	Alphabetical topical order	Reverse topical order			
Overall							
Respondent to all sampled topicals	86.0	59.9	60.9	59.0	1.3	-26.0	19.3 *
Respondent to 1 of 2 topicals	†	29.9	28.6	31.1	1.7	†	†
Nonrespondent	14.0	10.2	10.5	9.9	0.5	-3.9	3.1 *
ECPP/PFI-E							
Respondent to all sampled topicals	†	81.2	80.5	82.0	0.4	†	†
Respondent to 1 of 2 topicals	†	8.9	7.3	10.4	1.3	†	†
Nonrespondent	†	9.8	12.2	7.6	1.7	†	†
ECPP/PFI-H							
Respondent to all sampled topicals	†	78.7 !	83.2 !	75.8 !	†	†	†
Respondent to 1 of 2 topicals	†	6.5 !	10.6 !	3.9 !	†	†	†
Nonrespondent	†	14.8 !	6.2 !	20.2 !	†	†	†
ECPP/ATES same respondent							
Respondent to all sampled topicals	†	76.0	80.6	71.4	2.0 *	†	†
Respondent to 1 of 2 topicals	†	12.4	8.9	15.8	2.0 *	†	†
Nonrespondent	†	11.6	10.5	12.7	0.7	†	†
ECPP/ATES different respondent							
Respondent to all sampled topicals	†	33.1	31.9	34.6	0.6	†	†
Respondent to 1 of 2 topicals	†	57.3	57.2	57.3	0.0	†	†
Nonrespondent	†	9.6	10.9	8.1	1.0	†	†
PFI-E/ATES same respondent							
Respondent to all sampled topicals	†	79.0	80.3	77.7	1.0	†	†
Respondent to 1 of 2 topicals	†	10.2	8.6	11.7	1.6	†	†
Nonrespondent	†	10.9	11.1	10.6	0.2	†	†

See notes at end of table.

Table 4.2. Topical unit response status among households with household members eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, and topical pairing: 2017—Continued

Topical unit response status	Single-topical condition ¹	Dual-topical condition ²			t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	Alphabetical topical order	Reverse topical order			
PFI-E/ATES different respondent							
Respondent to all sampled topicals	†	35.2	37.0	33.6	1.1	†	†
Respondent to 1 of 2 topicals	†	56.3	54.6	57.8	1.0	†	†
Nonrespondent	†	8.5	8.4	8.6	0.2	†	†
PFI-H/ATES same respondent							
Respondent to all sampled topicals	†	72.8	70.9 !	75.2 !	†	†	†
Respondent to 1 of 2 topicals	†	13.6 !	14.5 !	12.4 !	†	†	†
Nonrespondent	†	13.6 !	14.5 !	12.4 !	†	†	†
PFI-H/ATES different respondent							
Respondent to all sampled topicals	†	31.0	33.4 !	28.8 !	†	†	†
Respondent to 1 of 2 topicals	†	42.0	44.5 !	39.7 !	†	†	†
Nonrespondent	†	26.9	22.2 !	31.5 !	†	†	†

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire. Unweighted eligible sample size was 1,700 for ECPP, 3,590 for PFI-E, 120 for PFI-H and 1,400 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires. Unweighted eligible sample size was 1,230 for ECPP, 2,520 for PFI-E, 100 for PFI-H, and 2,860 for ATES.

NOTE: Percentages represent the proportion of households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that completed that number of topicals (all, 1 of 2, none). ATES "same respondent" households are those where the screener respondent was sampled for ATES; ATES "different respondent" households are those where a household member other than the screener respondent was sampled for ATES. Child topical results in the dual-topical condition by topical order (alphabetical order versus reverse order) exclude cases where the other topical sampling for the household was that a household member other than the screener respondent was sampled for ATES. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.3. Incentive cost per topical complete, by dual-topical condition and screener incentive condition: 2017

	Single-topical condition ¹			Dual-topical condition ²		
	Overall	\$2 screener incentive	\$5 screener incentive	Overall	\$2 screener incentive	\$5 screener incentive
Incentive cost per complete	21.73	11.36	23.37	17.32	9.21	18.66

¹Refers to households that were assigned to receive only one topical questionnaire.

²Refers to households that were assigned to receive two topical questionnaires if they had two or more household members eligible for at least two of ECPP, PFI (E or H), and ATES.

NOTE: The cost per topical complete was calculated as the total incentive cost in that condition (for screener and topical incentives) divided by the total number of completed topicals received in that condition. Unweighted sample size for the single-topical condition was 65,000; unweighted sample size for the dual-topical condition was 32,500.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.4. Topical breakoff rate among households eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, topical questionnaire, and topical pairing: 2017

Topical form	Single-topical condition ¹	Dual-topical condition ²				t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic			
ECPP								
Overall	13.1	12.7	14.5	11.8	1.1	-0.3	0.3	
When paired with PFI-E	†	12.1	13.4	10.8	0.8	†	†	
When paired with PFI-H	†	6.8 !	9.6 !	4.5 !	†	†	†	
When paired with ATES	†	15.0	16.1	13.7	0.7	†	†	
PFI-E								
Overall	10.5	13.0	10.4	12.4	1.2	2.5	3.2 *	
When paired with ECPP	†	7.9	9.6	5.9	1.5	†	†	
When paired with ATES	†	13.0	13.6	12.3	0.6	†	†	
PFI-H								
Overall	17.9	16.6	6.2 !	15.9 !	†	-1.2	0.2	
When paired with ECPP	†	14.8 !	20.3 !	6.2 !	†	†	†	
When paired with ATES	†	9.1 !	12.0 !	6.1 !	†	†	†	
ATES same respondent								
Overall	9.4	10.2	11.2	9.1	1.2	0.8	0.6 *	
When paired with ECPP	†	12.0	10.5	13.8	1.0	†	†	
When paired with PFI-E	†	9.6	11.5	7.5	1.9	†	†	
When paired with PFI-H	†	9.1 !	10.9 !	6.8 !	†	†	†	

See notes at end of table.

Table 4.4. Topical breakoff rate among households eligible for two or more topical questionnaires, by dual-topical condition, order of topicals, topical questionnaire, and topical pairing: 2017—Continued

Topical form	Single-topical condition ¹	Dual-topical condition ²				Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic		
ATES different respondent							
Overall	9.9	6.8	†	†	†	-3.1	1.8
When paired with ECPP	†	6.9	!	†	†	†	†
When paired with PFI-E	†	7.1	†	†	†	†	†
When paired with PFI-H	†	0.0	!	†	†	†	†

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire and at least accessed the questionnaire. Unweighted eligible sample size was 1,700 for ECPP, 3,580 for PFI-E, 120 for PFI-H, and 1,040 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires and at least accessed the questionnaire. Unweighted eligible sample size was 1,180 for ECPP, 2,420 for PFI-E, 100 for PFI-H, and 1,900 for ATES.

NOTE: Percentages represent the proportion of eligible households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that was sampled for and reached the first item in the questionnaire but broke off before completing it. ATES "same respondent" households are those where the screener respondent was sampled for ATES; ATES "different respondent" households are those where a household member other than the screener respondent was sampled for ATES. Child topical results in the dual-topical condition by topical order (first topical and second topical) exclude cases where the other topical sampling for the household was that a household member other than the screener respondent was sampled for ATES. This analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.5. Item missing rate for key topical survey items among topical respondent households eligible for two or more questionnaires, by dual-topical condition, topical order, topical questionnaire, and selected items: 2017

Topical form	Single-topical condition ¹	Dual-topical condition ²				Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic		
ECPD							
Regular care from a relative	0.1 !	0.4	0.3 !	0.6 !	†	0.3 !	†
Regular care from a non-relative	0.1 !	0.6 !	0.3 !	1.5 !	†	0.5 !	†
Regular care from a daycare, preschool, or pre-k	0.3 !	0.5 !	0.6 !	0.8 !	†	0.2 !	†
General description of child's health	0.4	0.5 !	0.3 !	1.0 !	†	0.1	-0.3
PFI-E							
Type of school child attends	0.1 !	0.1 !	0.1 !	0.2 !	†	0.0 !	†
Educational expectations	0.3	0.7	0.6 !	1.2 !	-1.1	0.3	-1.6
Number of nights family eats evening meal together	0.7	1.4	0.9 !	3.0	-2.7 *	0.7	-2.5 *
General description of child's health	0.3	0.3	0.2 !	0.1 !	†	0.0	0.3
PFI-H							
Person who provides homeschool instruction	0.0 !	0.0 !	0.0 !	0.0 !	†	0.0 !	†
Educational expectations	0.3 !	0.7 !	3.9 !	0.0 !	†	0.3 !	†
Number of nights family eats evening meal together	0.7 !	1.4 !	0.0 !	0.0 !	†	0.7 !	†
General description of child's health	0.3 !	0.3 !	0.0 !	0.0 !	†	0.0 !	†

See notes at end of table.

Table 4.5. Item missing rate for key topical survey items among topical respondent households eligible for two or more questionnaires, by dual-topical condition, topical order, topical questionnaire, and selected items: 2017—Continued

Topical form	Single-topical condition ¹	Dual-topical condition ²				Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic		
ATES same respondent							
Certification or license	0.2 !	0.5 !	0.2 !	0.7 !	†	0.3 !	†
Post-secondary certificate	2.1	2.4	2.5	2.2	0.4	0.2	-0.3
Work experience program	0.2 !	0.9	1.0	0.8 !	0.4	0.7 !	†
ATES different respondent							
Certification or license	0.0 !	0.0 !	†	†	†	0.0 !	†
Post-secondary certificate	0.6 !	2.7 !	†	†	†	2.0 !	†
Work experience program	0.0 !	0.0 !	†	†	†	0.0 !	†

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹Refers to topical respondent households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire.

Unweighted eligible sample size was 1,520 for ECPP, 3,300 for PFI-E, 90 for PFI-H, and 950 for ATES.

²Refers to topical respondent households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires. Unweighted eligible sample size was 1,050 for ECPP, 2,180 for PFI-E, 80 for PFI-H, and 1,720 for ATES.

NOTE: Item missing rates represent the percentage of respondents who should have answered the item but did not. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.6. Mean number of minutes to complete topical among topical respondent households eligible for two or more questionnaires, by dual-topical condition, order of topicals, topical questionnaire, and topical pairing: 2017

Topical form	Single-topical condition ¹	Dual-topical condition ²				t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical	t statistic			
ECPP								
Overall	19.0	16.8	18.8	13.3	9.6 *	-2.2	3.2 *	
When paired with PFI-E	†	16.0	20.3	11.8	3.8 *	†	†	
When paired with PFI-H	†	8.7 !	10.6 !	7.3 !	†	†	†	
When paired with ATES	†	17.5	17.5	15.6	1.1	†	†	
PFI-E								
Overall	22.2	20.9	21.4	17.7	3.6 *	-1.3	2.6 *	
When paired with ECPP	†	18.5	22.4	13.7	4.9 *	†	†	
When paired with ATES	†	21.4	20.9	19.4	1.2	†	†	
PFI-H								
Overall	19.1	16.5	17.3 !	13.0 !	†	-2.6	1.9	
When paired with ECPP	†	14.5 !	16.9 !	9.9 !	†	†	†	
When paired with ATES	†	17.3 !	17.7 !	14.3 !	†	†	†	
ATES								
Overall	11.8	12.2	†	†	†	0.4	0.4	
Same respondent as screener	11.6	11.9	13.2	10.4	2.3 *	0.3	0.3	
Different respondent than screener	12.2	12.9	†	†	†	0.6	0.5	
When paired with ECPP								
Overall	†	12.2	†	†	†	†	†	
Same respondent as screener	†	11.5	13.0	9.5	1.5	†	†	
Different respondent than screener	†	14.0	†	†	†	†	†	

See notes at end of table.

Table 4.6. Mean number of minutes to complete topical among topical respondent households eligible for two or more questionnaires, by dual-topical condition, order of topicals, topical questionnaire, and topical pairing: 2017—Continued

Topical form	Single-topical condition ¹	Dual-topical condition ²			t statistic	Difference between single- and dual-topical conditions	t statistic
		Overall	First topical	Second topical			
When paired with PFI-E							
Overall	†	12.3	†	†	†	†	†
Same respondent as screener	†	12.1	13.4	10.7	2.0 *	†	†
Different respondent than screener	†	12.5	†	†	†	†	†
When paired with PFI-H							
Overall	†	10.9	†	†	†	†	†
Same respondent as screener	†	10.4 !	8.7 !	12.6 !	†	†	†
Different respondent than screener	†	12.0 !	†	†	†	†	†

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire that were respondents to that questionnaire. Unweighted eligible sample size was 1,470 for ECPP, 3,150 for PFI-E, 90 for PFI-H, and 920 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires that were respondents to that questionnaire. Unweighted eligible sample size was 1,000 for ECPP, 2,080 for PFI-E, 70 for PFI-H, and 1,650 for ATES.

NOTE: Estimates represent the mean number of minutes for topical respondents to complete the questionnaire among respondent households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES. Cases that completed the topical over multiple days, took over 6 hours to complete it, or spent more than 15 minutes on a page without taking any actions are excluded from this analysis. A small number of respondents (less than 1 percent) could not be included in this analysis because there was not any information available for them on the paradata file. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 4.7 Percentage distribution of respondent households on frame variables among households eligible for two or more topical questionnaires, by topical questionnaire, dual-topical condition, and selected household characteristics: 2017

Household characteristics	ECP			PFI-E			PFI-H			ATES		
	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic
Phone number available (from sampling frame)												
Yes	64.1	68.8	2.6 *	77.5	77.1	0.3	73.8	79.5	0.9	74.0	75.6	1.0
No	35.9	31.2	2.6 *	22.5	22.9	0.3	26.2	20.5	0.9	26.0	24.4	1.0
Race/ethnicity of head of household (from sampling frame)												
White	55.0	51.3	1.8	54.4	53.3	0.7	57.1	53.1	0.5	56.3	54.5	0.8
Black	6.2	6.1	0.1	7.8	6.0	2.9 *	8.9 !	5.1 !	†	6.6	5.6	1.2
Hispanic	10.2	10.4	0.2	10.9	11.3	0.5	5.4 !	8.0 !	0.7	9.9	9.9	0.0
Asian	5.4	4.5	1.1	5.2	5.5	0.5	1.2 !	1.4 !	†	5.5	6.0	0.5
Other	3.0	2.6	0.6	2.6	2.8	0.5	1.2 !	2.8 !	†	2.2	2.4	0.3
Missing	20.1	25.1	3.1 *	19.1	21.0	1.6	26.2	29.5	0.5	19.5	21.6	1.3
Education of head of household (from sampling frame)												
Less than high school	8.3	10.0	1.4	7.4	8.2	1.1	9.3 !	4.4 !	1.3	9.0	8.1	0.9
High school	15.0	14.3	0.5	14.6	14.8	0.2	23.5	7.8 !	2.8 *	16.8	15.0	1.1
Some college	26.4	22.2	2.5 *	25.7	23.2	2.0 *	26.7	21.6	0.9	26.9	22.9	2.3 *
B.A.	19.3	18.3	0.7	20.7	20.8	0.1	5.0 !	27.3	† *	17.2	20.7	2.7 *
Graduate/professional	10.9	10.1	0.7	12.5	12.0	0.5	9.4 !	9.3 !	0.0	10.5	11.7	0.9
Missing	20.1	25.1	3.1 *	19.1	21.0	1.6	26.2	29.5	0.5	19.5	21.6	1.3

See notes at end of table.

Table 4.7 Percentage distribution of respondent households on frame variables among households eligible for two or more topical questionnaires, by topical questionnaire, dual-topical condition, and selected household characteristics: 2017—Continued

Household characteristics	ECPP			PFI-E			PFI-H			ATES		
	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic	Single-topical condition ¹	Dual-topical condition ²	t statistic
Age of head of household (from sampling frame)												
18–24	1.7	0.9	1.8	1.3	1.3	0.2	0.8 !	0.0 !	†	0.9	1.3	1.0
25–34	18.7	18.5	0.1	5.9	7.8	2.8 *	9.7 !	18.8	1.5	9.7	9.8	0.1
35–44	26.4	27.3	0.5	26.5	26.2	0.3	22.9	27.9	0.8	25.2	24.9	0.1
45–54	10.5	10.5	0.0	31.8	29.8	1.7	23.7	14.2	1.6	26.2	27.0	0.4
55–65	9.2	7.5	1.6	11.6	10.8	0.9	17.3	7.2 !	2.2 *	11.6	10.7	0.6
Over 65	5.6	4.7	1.2	5.1	5.3	0.3	6.4 !	7.0 !	0.1	5.1	5.4	0.4
Missing	27.8	30.6	1.7	17.8	19.0	1.1	19.2	24.9	0.7	21.4	20.8	0.3
Annual income (from sampling frame)												
Less than \$21,000	16.2	12.0	3.2 *	11.5	12.2	0.8	19.0	8.4 !	2.0 *	12.9	12.4	0.4
\$21,000–\$36,000	6.8	7.0	0.2	5.2	5.2	0.0	8.7 !	3.1 !	†	5.1	5.9	0.8
\$36,001–\$56,000	10.1	10.0	0.1	8.7	7.8	1.1	16.8	12.6 !	0.8	9.1	7.4	1.3
\$56,001–\$85,000	14.1	13.3	0.6	12.9	14.0	1.2	13.7 !	29.2	2.4 *	14.5	13.3	0.9
\$85,001–\$120,000	17.9	20.9	2.0	20.2	19.7	0.5	12.4	12.3 !	0.0	22.0	19.7	1.1
Greater than \$120,000	24.6	24.4	0.2	33.8	32.5	1.1	19.9	25.0	0.8	28.4	32.4	2.0 *
Missing	10.2	12.5	1.7	7.6	8.6	1.1	9.5 !	9.4 !	0.0	8.0	8.9	0.6

† Not applicable. Either this estimate or comparison is not applicable for this subgroup, or estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

*p < .05.

¹Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES or a child topical questionnaire and reached at least the first item in the questionnaire.

Unweighted eligible sample size was 1,520 for ECPP, 3,300 for PFI-E, 90 for PFI-H, and 950 for ATES.

²Refers to households with two or more individuals eligible for at least two of ECPP, PFI (E or H), and ATES that received either ATES and a child topical questionnaire or two child questionnaires that were respondents to that questionnaire. Unweighted eligible sample size was 1,050 for ECPP, 2,180 for PFI-E, 80 for PFI-H, and 1,720 for ATES.

NOTE: Percentages represent the proportion of eligible topical respondent households within each group among households with two or more household members eligible for at least two of ECPP, PFI, and ATES. Race categories exclude persons of Hispanic ethnicity. The analysis excludes cases that did the screener on the TQA because these cases were not asked to complete the entire topical questionnaire. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 5.1. Percentage of respondents who chose each response option for item measuring whether certification was required by the government, by educational attainment and item version: 2017

Required by government item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Most important certification									
Yes	77.5	73.0	2.1 *	78.4	64.9	2.0 *	77.4	73.8	1.6
No	18.0	21.7	1.6	14.4	26.0	1.6	18.5	21.3	1.3
Don't know	4.5	5.3	0.7	7.1 !	9.1	0.5	4.2	4.9	0.7
Second-most-important certification									
Yes	66.0	62.2	1.0	79.1	66.9	1.2	64.4	61.9	0.7
No	28.4	31.9	1.0	15.1 !	30.8	1.7	30.3	32.0	0.5
Don't know	5.5	5.9	0.2	5.8 !	2.3 !	†	5.3	6.2	0.5
Third-most-important certification									
Yes	55.4	61.8	0.9	68.7 !	50.7 !	†	54.1	62.6	1.2
No	33.8	30.2	0.6	7.4 !	32.4 !	†	37.0	30.0	1.1
Don't know	10.8	8.0	0.8	23.9 !	17.0 !	†	8.9	7.4	0.5
New certification									
Yes	63.0	56.9	1.3	55.6	61.6	0.3	63.9	56.4	1.4
No	28.2	30.2	0.4	25.2 !	17.5 !	0.6	28.4	31.5	0.7
Don't know	8.7	12.9	1.3	19.2 !	20.9 !	0.1	7.7	12.0	1.4

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$

¹In Version A, this item was worded as "Is your [most/second-most/third-most] important certification or license required by a federal, state, or local government agency (such as a state board) in order to do that kind of work?"

²In Version B, the item was "Is your most important certification or license required by a government agency (such as a state licensing board) in order to do that kind of work?"

NOTE: Percentages represent the proportion of ATEES respondents who selected the response option out of those who answered the question. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 5.2. Item missing rate for item measuring whether certification was required by the government, by respondent characteristics and item version: 2017

Required by government item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Most important certification	0.4 !	0.1 !	†	1.2 !	0.7 !	†	0.2	0.1 !	†
Second-most-important certification	4.5	4.4	0.1	2.3 !	0.0 !	†	4.8	4.7	0.1
Third-most-important certification	13.3	17.3	1.1	8.2 !	9.5 !	†	14.0	17.8	1.0

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹In Version A, this item was worded as "Is your [most/second-most/third-most] important certification or license required by a federal, state, or local government agency (such as a state board) in order to do that kind of work?"

²In Version B, the item was worded as "Is your [most/second-most/third-most] important certification or license required by a government agency (such as a state licensing board) in order to do that kind of work?"

NOTE: Item missing rates represent the proportion of ATEs respondents who should have answered the item but did not. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 5.3. Percentage of respondents who chose each response option, by respondent characteristics, item version, and usefulness item: 2017

Usefulness item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Most important certification or license									
Getting a job									
Not useful	5.5	4.9	0.6	7.9	3.6 !	1.6	5.2	5.0	0.2
Somewhat useful	11.1	13.1	1.3	7.8	17.7 !	1.7	11.3	12.6	0.9
Very useful	79.7	79.1	0.3	80.2	76.7	0.5	79.9	79.4	0.3
Too soon to tell	3.6	2.9	0.9	4.1 !	2.0 !	†	3.6	3.0	0.7
Keeping a job									
Not useful	6.9	5.7	1.1	6.9 !	4.4 !	0.9	7.0	5.9	0.9
Somewhat useful	11.0	12.5	1.0	11.5 !	11.5	0.0	10.9	12.6	1.0
Very useful	79.3	78.6	0.3	79.1	73.9	0.7	79.3	79.1	0.1
Too soon to tell	2.8 !	3.2	0.3	2.6 !	10.2 !	†	2.9 !	2.5	0.3
Keeping you marketable to employers or clients									
Not useful	5.6	4.1	1.3	6.5 !	5.4 !	†	5.5	3.9	1.3
Somewhat useful	12.8	13.2	0.3	10.5	12.5	0.6	13.1	13.3	0.2
Very useful	78.3	80.2	0.9	80.8	76.2	0.8	78.0	80.7	1.1
Too soon to tell	3.3	2.5	0.7	2.3	6.0 !	1.4	3.4	2.1	1.1
Improving your work skills									
Not useful	8.2	7.2	0.8	8.9	6.6 !	0.8	8.1	7.2	0.7
Somewhat useful	19.6	21.4	0.8	13.8 !	27.5	1.7	20.4	20.7	0.2
Very useful	71.2	70.5	0.3	76.1	62.8	1.7	70.6	71.2	0.3
Too soon to tell	1.0 !	1.0	0.0	1.2 !	3.1 !	†	1.0 !	0.8 !	0.5

See notes at end of table.

Table 5.3. Percentage of respondents who chose each response option, by respondent characteristics, item version, and usefulness item: 2017—Continued

Usefulness item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Post-secondary certificate									
Getting a job									
Not useful	20.7	25.4	1.9	23.0	21.3	0.3	20.2	25.7	1.9
Somewhat useful	27.6	27.1	0.2	26.2	31.3	0.7	27.9	26.6	0.4
Very useful	47.6	43.2	1.3	47.3	44.1	0.4	47.7	43.2	1.2
Too soon to tell	4.1	4.4	0.2	3.4 !	3.3 !	†	4.2	4.5	0.2
Increasing your pay									
Not useful	38.7	42.2	1.1	32.3	41.1	1.1	39.8	42.4	0.8
Somewhat useful	30.2	25.1	1.9	30.7	27.8	0.4	30.1	24.6	2.0 *
Very useful	27.5	28.4	0.3	33.1	28.0	0.7	26.5	28.6	0.8
Too soon to tell	3.6	4.2	0.5	3.9 !	3.1 !	0.3	3.6	4.3	0.6
Improving your work skills									
Not useful	12.7	14.6	1.0	17.4	17.3	0.0	11.8	14.2	1.3
Somewhat useful	32.8	35.0	0.7	27.7	36.8	1.3	33.7	34.7	0.3
Very useful	53.2	48.2	1.6	52.9	44.9	1.1	53.2	48.6	1.3
Too soon to tell	1.4	2.3	1.3	2.0 !	1.0 !	†	1.3	2.4	1.5

See notes at end of table.

Table 5.3. Percentage of respondents who chose each response option, by respondent characteristics, item version, and usefulness item: 2017—Continued

Usefulness item	By educational attainment									
	Overall			High school or less			Some college or more			
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	
Last work experience program										
Getting a job										
Not useful	9.5	10.2	0.6	9.7 !	16.6	1.2	9.5	9.8	0.3	
Somewhat useful	24.2	24.9	0.4	29.6	19.6	1.1	23.9	25.2	0.7	
Very useful	62.3	60.7	0.7	53.1	55.6	0.3	62.9	61.0	0.9	
Too soon to tell	4.0	4.2	0.2	7.7 !	8.2 !	0.2	3.7	3.9	0.2	
Increasing your pay										
Not useful	34.7	33.8	0.4	25.2	18.9	0.9	35.3	34.7	0.2	
Somewhat useful	26.2	23.9	1.4	31.6	23.9	0.9	25.9	23.9	1.2	
Very useful	34.9	38.0	1.4	33.9	49.7	2.0*	34.9	37.2	1.0	
Too soon to tell	4.1	4.4	0.2	9.3 !	7.5 !	0.4	3.9	4.2	0.3	
Improving your work skills										
Not useful	5.4	5.0	0.5	8.4 !	6.3! !	0.5	5.2	4.9	0.4	
Somewhat useful	29.1	31.2	1.1	35.7	26.0	1.2	28.8	31.6	1.4	
Very useful	64.5	61.9	1.3	53.4	63.8	1.2	65.1	61.7	1.6	
Too soon to tell	0.9	1.9 !	1.5	2.5 !	4.0 !	†	0.9	1.8 !	1.4	

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹In Version A, the response options were listed in the order presented in this table.

²In Version B, the response options were listed as "Very useful", "Somewhat useful", "Not useful", and "Too soon to tell".

NOTE: Percentages represent the proportion of ATEs respondents who selected the response option out of those who answered the question. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 5.4. Item missing rates, by respondent characteristics, item version, and usefulness item: 2017

Usefulness item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Usefulness of most important certification or license									
Getting a job	1.2	1.0	0.6	2.8 !	2.9 !	0.1	0.9 !	0.8	0.3
Keeping a job	1.5	1.2	0.7	3.4 !	0.9 !	†	1.2 !	1.2	0.1
Keeping you marketable to employers or clients	1.5	1.2	0.7	3.2 !	1.7 !	†	1.2	1.1	0.2
Improving your work skills	1.2	1.1	0.4	2.2 !	2.0 !	†	1.0	1.0	0.1
Usefulness of post-secondary certificate									
Getting a job	8.2	7.8	0.2	9.2 !	7.4	0.4	7.9	7.9	0.0
Increasing your pay	8.6	8.5	0.0	10.3 !	9.0	0.3	8.1	8.5	0.2
Improving your work skills	8.5	7.2	0.9	9.3 !	6.5	0.7	8.2	7.3	0.6
Usefulness of work experience program									
Getting a job	2.4	2.2	0.3	3.4 !	5.0 !	†	2.4	2.1	0.5
Increasing your pay	2.5	2.5	0.0	6.0 !	5.4 !	†	2.3	2.3 !	0.0
Improving your work skills	2.3	2.1	0.3	5.0 !	3.6 !	†	2.2	2.0 !	0.2

† Not applicable. Estimates are not reliable enough to make statistical comparisons.

! Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

¹In Version A, the response options were listed as "Not useful", "Somewhat useful", "Very useful", and "Too soon to tell".

²In Version B, the response options were listed as "Very useful", "Somewhat useful", "Not useful", and "Too soon to tell".

NOTE: In both versions, item missing rates represent the proportion of ATEs respondents who should have answered the item but did not. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 5.5. Straightlining rates, by respondent characteristics, item version, and usefulness item: 2017

Usefulness item	By educational attainment								
	Overall			High school or less			Some college or more		
	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic	Version A ¹	Version B ²	t statistic
Usefulness of most important certification or license	61.3	61.9	0.2	71.1	55.7	1.9	60.4	62.5	0.8
Usefulness of post-secondary certificate	38.4	41.5	1.1	42.7	46.5	0.6	37.6	40.9	1.1
Usefulness of work experience program	40.6	45.0	1.9	51.9	59.0	0.9	39.9	44.1	1.7

¹In Version A, the response options were listed as "Not useful", "Somewhat useful", "Very useful", and "Too soon to tell".

²In Version B, the response options were listed as "Very useful", "Somewhat useful", "Not useful", and "Too soon to tell".

NOTE: Percentages represent the proportion of respondents who straightlined (selected the same response for all items in the grid) out of those who should have answered the questions. Cases that responded to the screener on the TQA are excluded from this analysis because they were not asked to complete the full topical questionnaire. The denominator for each analysis is all ATEs respondents who reported having the credential in question. Unweighted eligible sample size was 8,080 for Version A and 8,200 for Version B. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 6.1. Percentage point increase in screener response rate after each screener mailing, by survey administration, mode condition, and mailing: 2014-2017

Mailing	Survey administration			
	2014 (paper-only) ²	2016 (paper-only condition) ³	2016 (mixed-mode) ⁴	2017 (web-only) ⁵
First screener mailing	4.5	1.6	26.1	13.5
Reminder postcard/pressure-sealed envelope	25.3	31.4	6.1	13.1
Second screener mailing	26.6	13.3	7.5	7.9
Third screener mailing	10.1	14.4	13.7	8.8
Fourth screener mailing	2.2	3.2	4.9	†
Robocall	†	0.2	0.2	†
Final response rate	68.7	64.2	58.5	43.3

† Not applicable.

NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less than three days after the next mailing was sent. Unweighted eligible sample sizes were 54,620 in 2014 (paper-only), 155,180 in 2016 (paper-only condition), 31,680 in 2016 (mixed-mode condition) and 89,485 in 2017 (web-only). Sample sizes have been rounded to the nearest 10. Detail may not sum to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-17.

Table 6.2. Percentage point increase in topical response rate after each topical contact effort, by survey administration, mode condition, dual-topical condition, topical questionnaire, and contact effort: 2014-2017

Contact effort	Survey administration				
	2014 (paper-only)	2016 (paper-only condition)	2016 (mixed- mode condition)	2017 (web-only, single- topical condition)	2017 (web-only, dual-topical condition)
ECPP ¹					
Before initial contact	†	†	60.3	88.4	85.3
Initial topical e-mail	†	†	†	0.0	0.0
Initial topical mailing	†	1.1	0.9	0.0	0.0
Postcard/pressure-sealed envelope reminder	†	39.0	11.8	0.1	0.1
First follow-up topical mailing	†	18.0	4.9	†	†
Second follow-up topical mailing	†	10.8	4.0	†	†
Third follow-up topical mailing	†	4.0	2.3	†	†
Final response rate	†	72.8	84.2	88.5	85.3
PFI-E ²					
Before initial contact	†	†	62.8	91.5	86.3
Initial topical e-mail	†	†	†	0.0	0.0
Initial topical mailing	9.8	1.8	1.2	0.1	0.1
Postcard/pressure-sealed envelope reminder	40.4	39.3	10.6	0.1	0.4
First follow-up topical mailing	12.7	18.9	4.1	†	†
Second follow-up topical mailing	8.8	11.2	4.8	†	†
Third follow-up topical mailing	3.9	4.1	1.8	†	†
Final response rate	75.6	75.3	85.4	91.6	86.7
PFI-H ³					
Before initial contact	†	†	51.0	74.6	76.2
Initial topical e-mail	†	†	†	0.0	0.0
Initial topical mailing	†	1.1	0.0	0.0	0.0
Postcard/pressure-sealed envelope reminder	†	29.9	10.6	0.0	0.0
First follow-up topical mailing	†	16.0	7.1	†	†
Second follow-up topical mailing	†	8.3	2.5	†	†
Third follow-up topical mailing	†	3.6	1.7	†	†
Final response rate	†	58.9	73.0	74.6	76.2

See notes at end of table.

Table 6.2. Percentage point increase in topical response rate after each topical contact effort, by survey administration, mode condition, dual-topical condition, topical questionnaire, and contact effort: 2014-2017—Continued

Contact effort	Survey administration				
	2014 (paper-only)	2016 (paper-only condition)	2016 (mixed- mode condition)	2017 (web-only, single- topical condition)	2017 (web-only, dual-topical condition)
ATES (Overall) ⁴					
Before initial contact	†	†	40.8	53.1	50.1
Initial topical e-mail	†	†	†	0.0	0.0
Initial topical mailing	5.8	2.6	7.8	14.4	12.9
Postcard/pressure-sealed envelope reminder	48.2	43.3	16.6	7.4	7.3
First follow-up topical mailing	11.4	15.2	7.7	†	†
Second follow-up topical mailing	8.7	9.7	6.4	†	†
Third follow-up topical mailing	3.0	3.4	2.5	†	†
Final response rate	77.1	74.2	81.7	74.9	70.3
ATES (Same respondent) ⁵					
Before initial contact	†	†	64.5	91.8	88.5
Initial topical e-mail	†	†	†	0.0	0.0
Initial topical mailing	6.4	2.8	0.9	0.1	0.1
Postcard/pressure-sealed envelope reminder	51.3	46.1	13.3	0.2	0.1
First follow-up topical mailing	11.0	15.2	4.4	†	†
Second follow-up topical mailing	8.3	9.3	3.8	†	†
Third follow-up topical mailing	2.5	3.2	1.1	†	†
Final response rate	79.5	76.6	88.0	92.1	88.7

.See notes at end of table.

Table 6.2. Percentage point increase in topical response rate after each topical contact effort, by survey administration, mode condition, dual-topical condition, topical questionnaire, and contact effort: 2014-2017—Continued

Contact effort	Survey administration				
	2014 (paper-only)	2016 (paper-only condition)	2016 (mixed- mode condition)	2017 (web-only, single- topical condition)	2017 (web-only, dual-topical condition)
ATES (Different respondent) ⁶					
Before initial contact	†	†	†	†	†
Initial topical e-mail	†	†	†	†	†
Initial topical mailing	4.9	2.4	19.6	34.1	29.8
Postcard/pressure-sealed envelope reminder	44.3	39.7	22.2	17.3	16.6
First follow-up topical mailing	11.9	15.1	13.3	†	†
Second follow-up topical mailing	9.3	10.1	10.8	†	†
Third follow-up topical mailing	3.6	3.8	5.0	†	†
Final response rate	74.0	71.2	70.9	51.4	46.4

† Not applicable.

¹ Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition).

² Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition).

³ Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition).

⁴ Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition), 13,310 in 2017 (single-topical condition), and 9,050 in 2017 (dual-topical condition).

⁵ Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition), 7,700 in 2017 (single household), and 5,140 in 2017 (dual household).

⁶ Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition), 5,610 in 2017 (single-topical condition), and 3,910 in 2017 (dual-topical condition).

NOTE: Response rates were calculated using AAPOR RR1. Response is attributed to a mailing if the response was received three or more days after that mailing was sent and less three days after the next mailing was sent. ATES “same respondent” households are those where the screener respondent was sampled for ATES. ATES “different respondent” households are those where a household member other than the screener respondent was sampled for ATES. Response is attributed to an e-mail if the response was received from the day the e-mail was sent up to two days after the next mailing was sent. In 2017, these analyses exclude cases that completed the screener on the TQA because they were not asked to complete the full topical. In 2014, ASPA was administered instead of the PFI and is used as a proxy for the PFI-E response rate in 2014. ECPP and PFI-H were not administered in 2014. ATES seeded sample members (2014 and 2016) are excluded from this analysis. There was also a robocall in 2016, but it happened the same date as the second follow-up mailing and is therefore not shown in the table. There was also a second e-mail reminder in 2017, but it was sent too soon after the pressure-sealed envelope to isolate its effect on the response rate and is therefore not shown in the table. Detail may not sum to totals due to rounding. Sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017

Table 6.3. Percentage of screener respondents that provided their e-mail address, by survey administration, and topical questionnaire: 2016-2017

Topical questionnaire	2016 ¹	2017	t statistic
Overall ²	79.4	72.9	8.6 *
ECPP ³	81.4	76.8	2.2 *
PFI-E ⁴	82.7	77.7	4.0 *
PFI-H ⁵	85.5	77.5	1.2
ATES ⁶	77.6	71.0	7.0 *

* $p < .05$.

¹This is restricted to NHES:2016 respondents who were asked for their own e-mail address to be comparable to 2017.

²The number of screener respondents in households sampled for a topical and asked to provide their own e-mail address was 3,560 in 2016 and 29,720 in 2017.

³The number of screener respondents in households sampled for this topical and asked to provide their own e-mail address was 400 in 2016 and 3,000 in 2017.

⁴The number of screener respondents in households sampled for this topical and asked to provide their own e-mail address was 920 in 2016 and 6,320 in 2017.

⁵The number of screener respondents in households sampled for this topical and asked to provide their own e-mail address was 30 in 2016 and 220 in 2017.

⁶The number of screener respondents in households sampled for this topical and asked to provide their own e-mail address was 2,210 in 2016 and 15,040 in 2017.

NOTE: In 2016, a random sample of screener respondents were asked for e-mail addresses for the topical respondent at the end of the screener. In 2017, screener respondents were asked for their own e-mail address (unless the only topical sampling that occurred was that a different household member was sampled for ATES—then the e-mail address request was not made). Households that were not asked for an e-mail address are excluded from this analysis. All sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

Table 6.4. Percentage of screener respondents who were sent an e-mail reminder that responded to the topical as a result of the e-mail, by topical questionnaire: 2017

Topical questionnaire	Percentage of screener respondents who were sent an e-mail reminder ¹
Overall ¹	0.2 !
ECPP ²	0.0 !
PFI-E ³	0.0 !
PFI-H ⁴	0.0 !
ATES ⁵	8.3 !

¹ Interpret with caution. Either there are too few cases for a reliable estimate or the coefficient of variation is 30 percent or greater.

* $p < .05$.

¹The number of screener respondents in households sampled for at least one topical and sent an e-mail was 1,160.

²The number of screener respondents in households sampled for ECPP and sent an e-mail was 280.

³The number of screener respondents in households sampled for PFI-E and sent an e-mail was 830.

⁴The number of screener respondents in households sampled for PFI-H and sent an e-mail was 30.

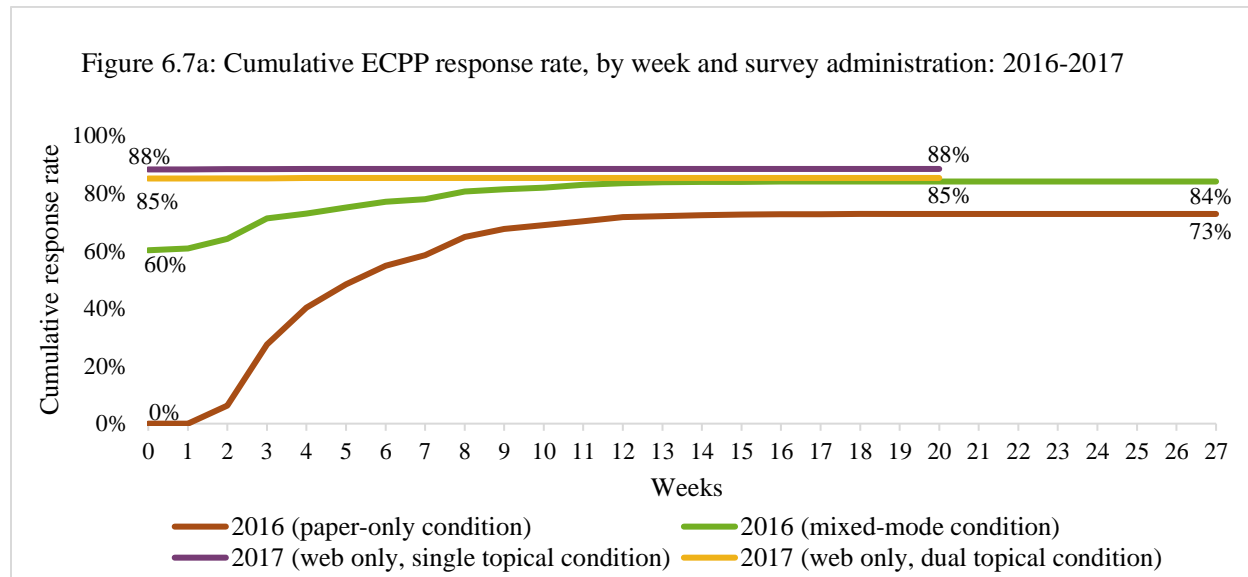
⁵The number of screener respondents in households sampled for ATES and sent an e-mail was 20 in 2017. E-mails were only sent for ATES if the screener respondent was the household member sampled for ATES—the screener respondent was not asked to provide the e-mail address for another household member.

NOTE: Screener respondents were asked for their e-mail address at the end of the screener. Response is attributed to an e-mail if the response is received starting the day the e-mail was sent and within three days after the next mailing was sent. These analyses only include response due to the first e-mail, not the second e-mail. The second e-mail was sent 3 days after the pressure sealed envelope reminder, and, therefore, the effect of the second e-mail cannot be distinguished from the effect of the pressure sealed envelope reminder. All sample sizes have been rounded to the nearest 10.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2017.

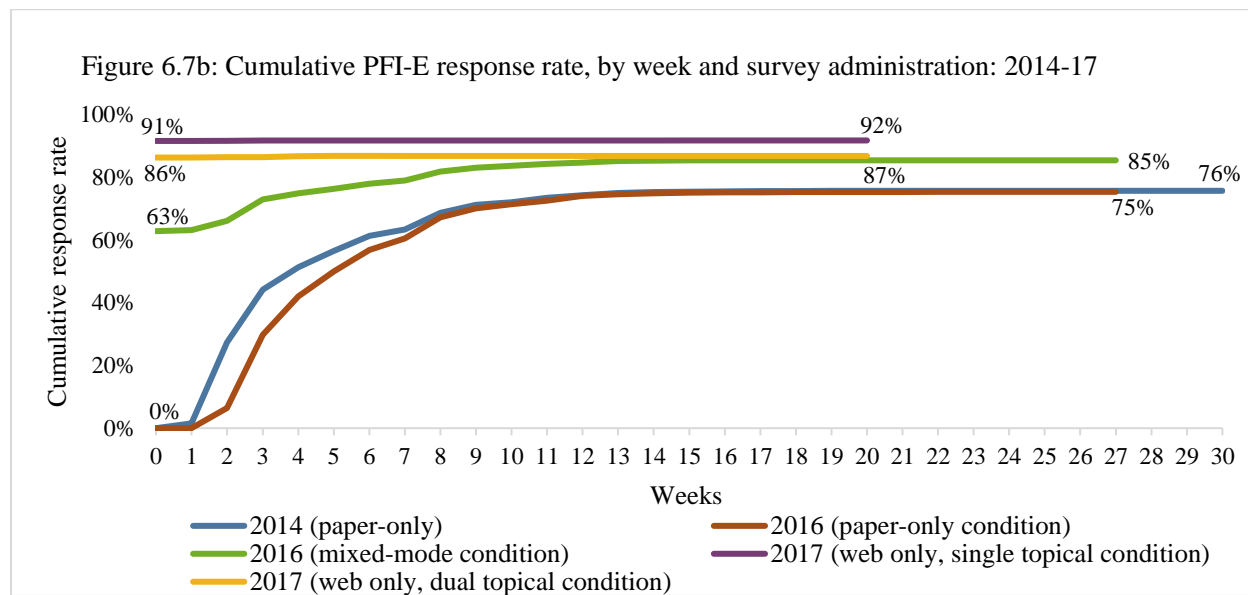
Appendix B. Additional Figures

Topical Response Rate by Week



NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible sample sizes were 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition). ECPP was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. The final contact attempt was sent at week 23 for 2016 and at week 12 for 2017.

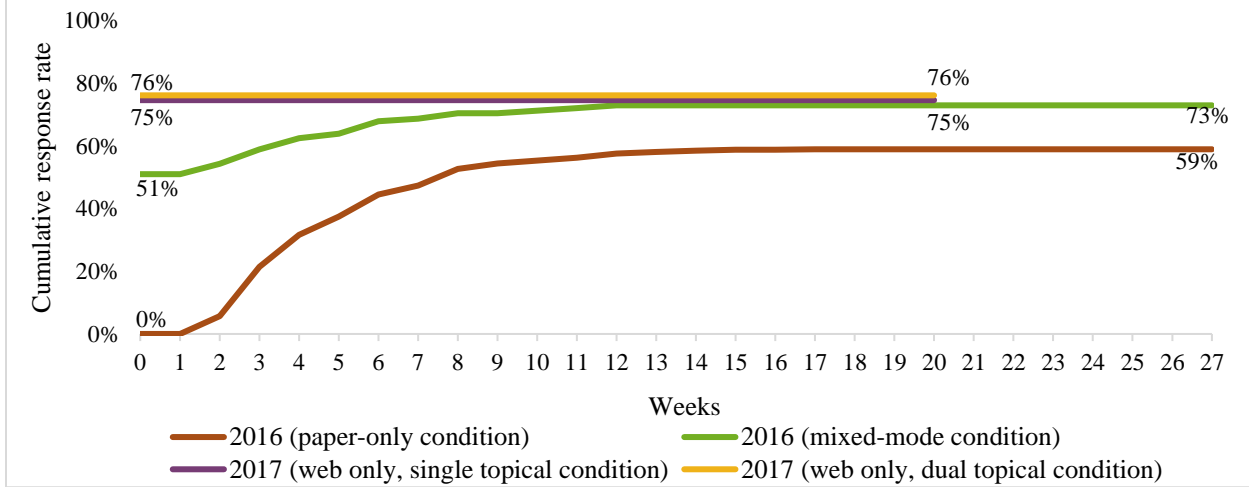
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.



NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition). In NHES:2014, ASPA was administered instead of the PFI. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. The final contact attempt was sent at week 20 for 2014, week 23 for 2016, and week 12 for 2017.

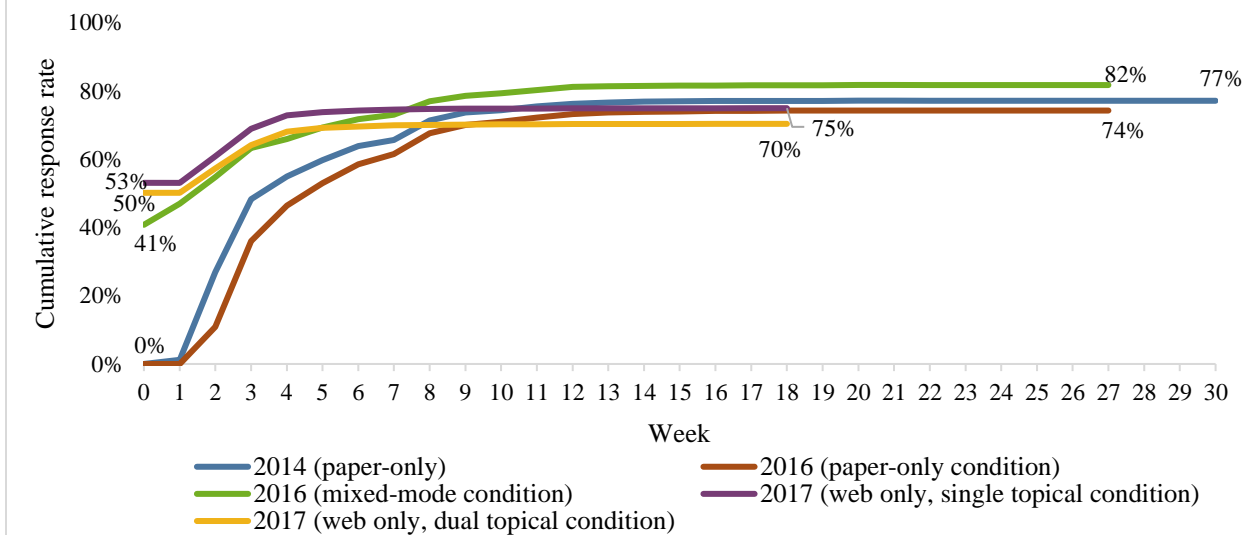
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Figure 6.7c: Cumulative PFI-H response rate, by week and survey administration: 2016-2017



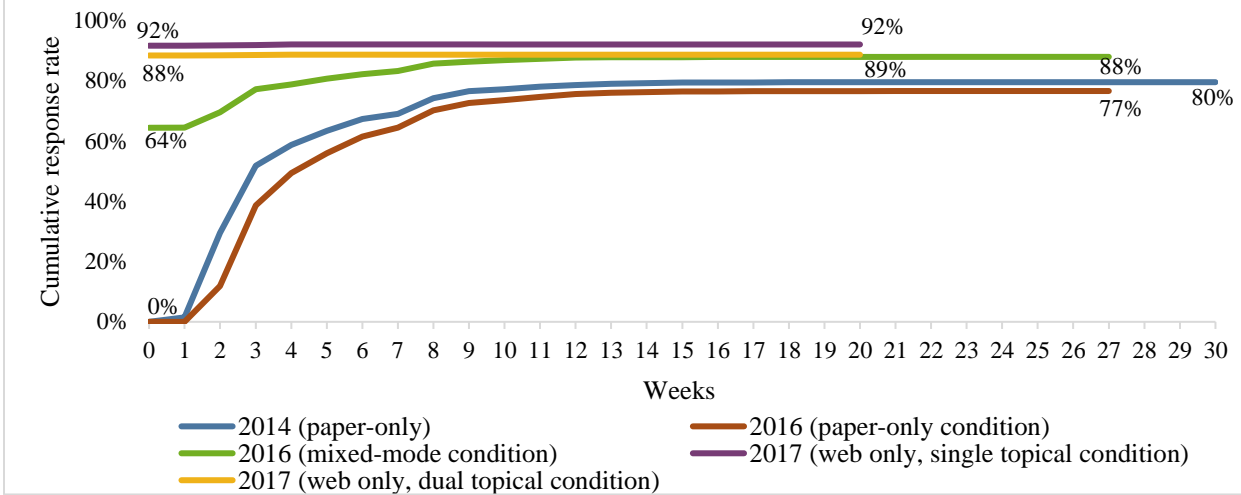
NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition). PFI-H was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. The final contact attempt was sent at week 23 for 2016 and week 12 for 2017. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

Figure 6.7d: Cumulative ATES (overall) response rate, by week and survey administration: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition), 13,310 in 2017 (single-topical condition), and 9,050 in 2017 (dual-topical condition). TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. The final contact attempt was sent at week 20 for 2014, week 23 for 2016, and week 12 for 2017. SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

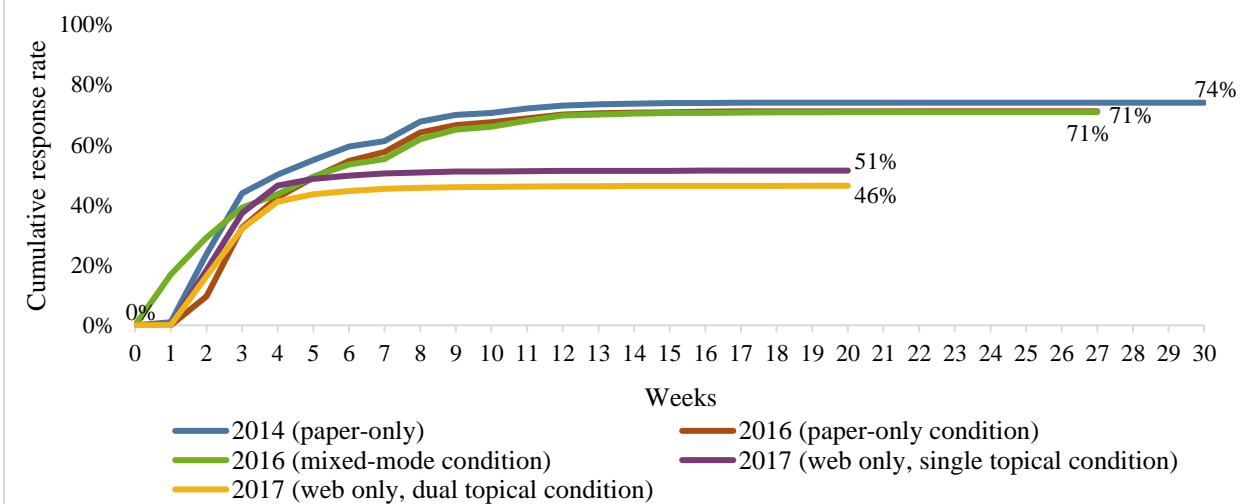
Figure 6.7e: Cumulative ATES (same respondent) response rate, by week and survey administration: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition), 7,700 in 2017 (single-topical condition), and 5,140 in 2017 (dual-topical condition). TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. The final contact attempt was sent at week 20 for 2014, week 23 for 2016, and week 12 for 2017.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

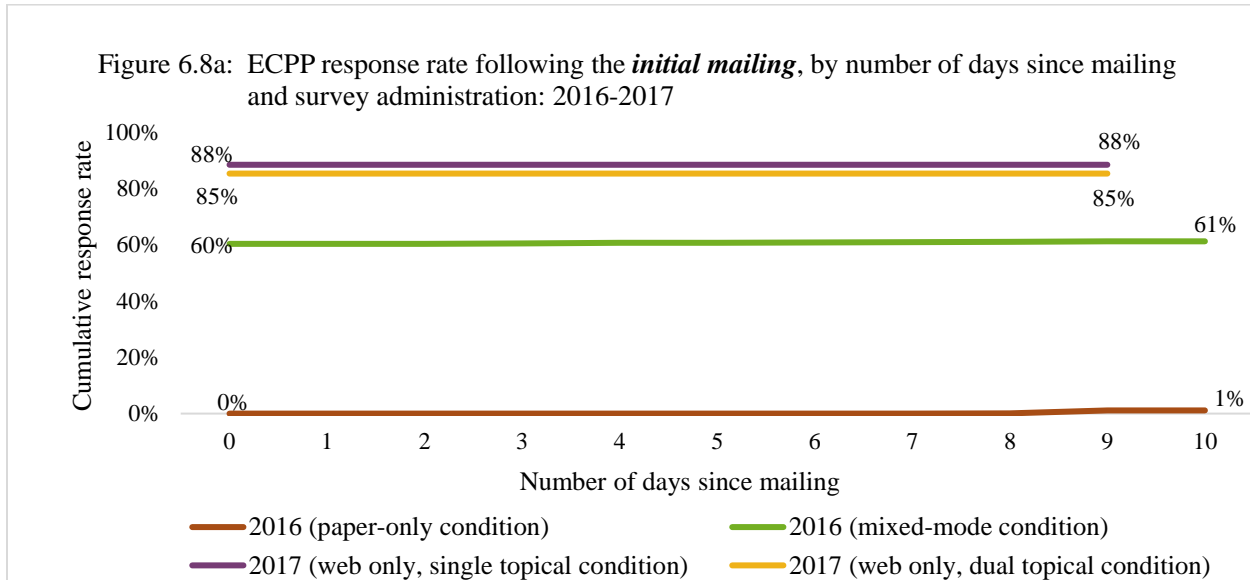
Figure 6.7f: Cumulative ATES (different respondent) response rate, by week and survey administration: 2014-17



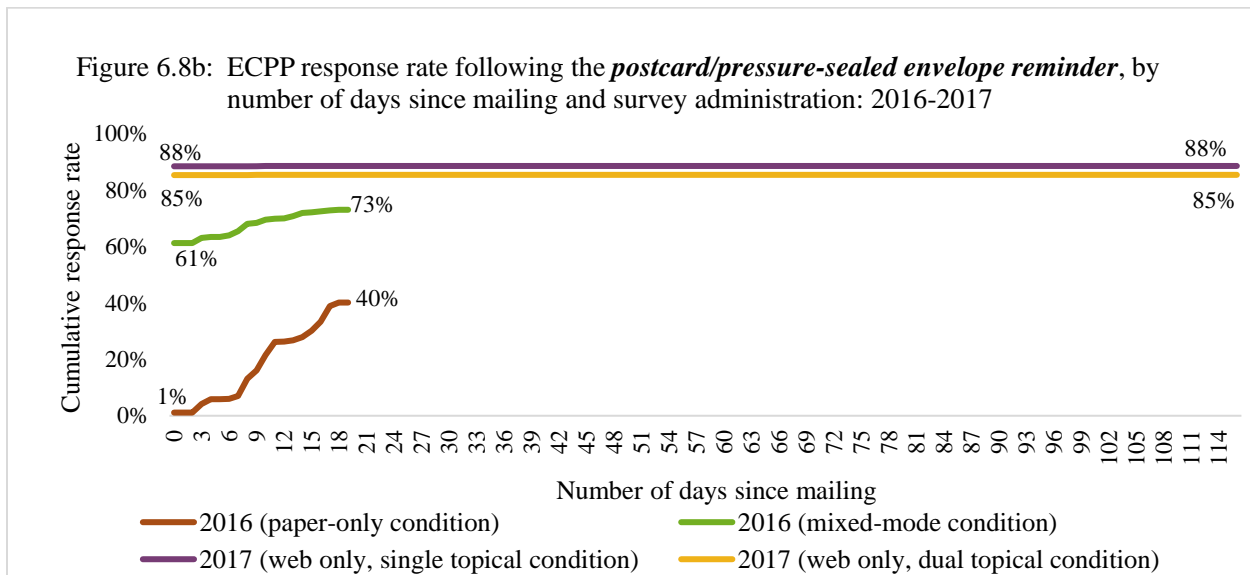
NOTE: Response rates were calculated using AAPOR RR1. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition), 5,610 in 2017 (single-topical condition), and 3,910 in 2017 (dual-topical condition). The final contact attempt was sent at week 20 for 2014, week 23 for 2016, and week 12 for 2017.

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Topical Response Rate by Day After Each Contact Attempt

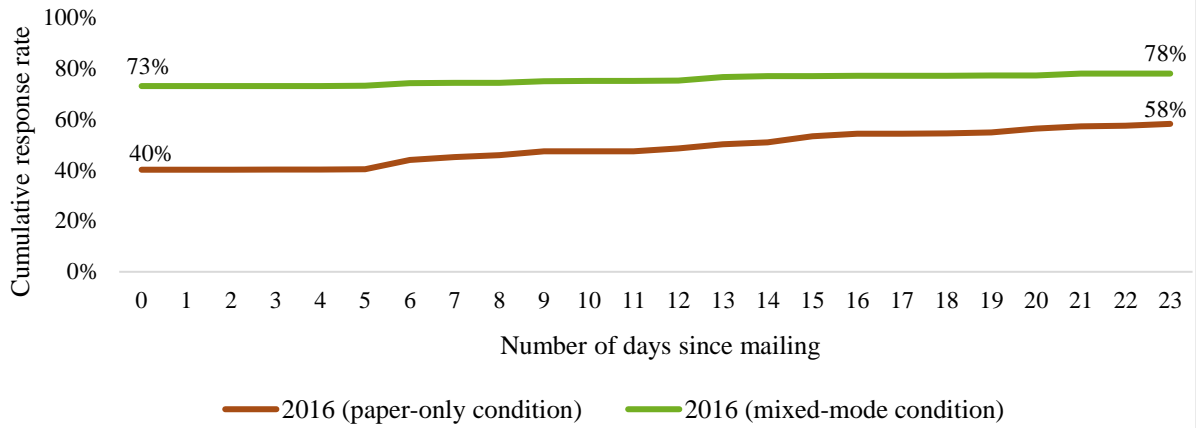


NOTE: Response rates were calculated using AAPOR RRI. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ECPP was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition). SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.



NOTE: Response rates were calculated using AAPOR RRI. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ECPP was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition), 1,720 in 2017 (single-topical condition), and 1,230 in 2017 (dual-topical condition). SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

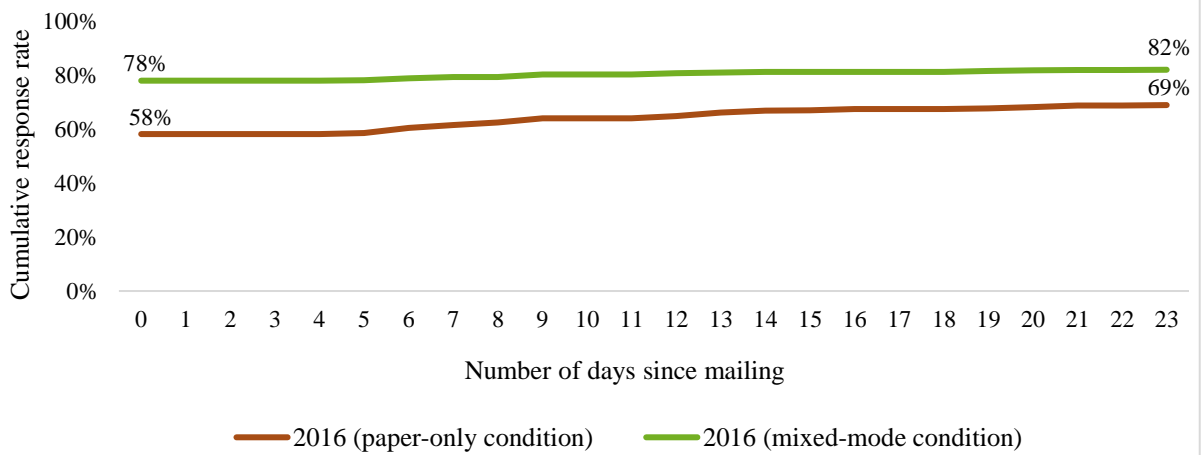
Figure 6.8c: ECPP response rate following the *first follow-up*, by number of days since mailing and survey administration: 2016-2017



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ECPP was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

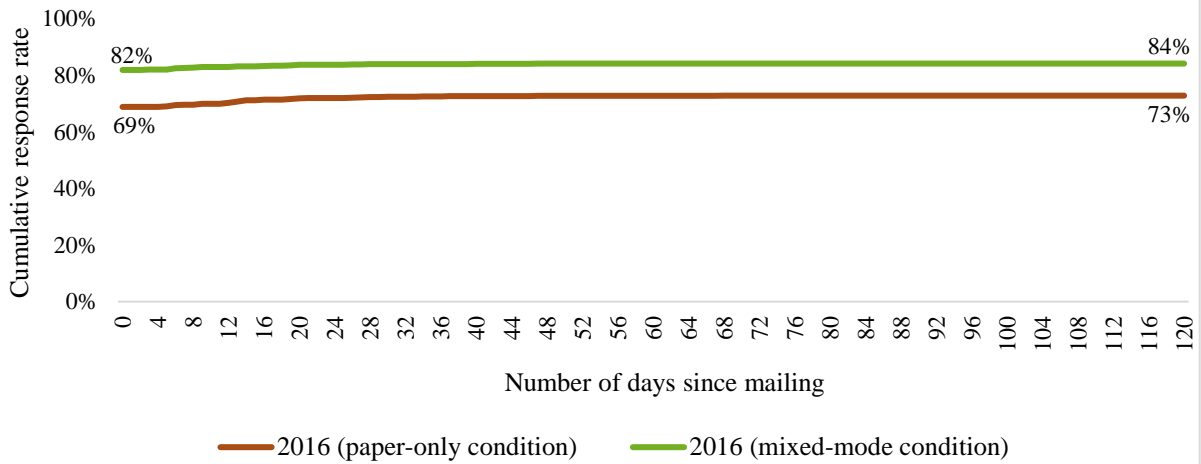
Figure 6.8d: ECPP response rate following the *second follow-up*, by number of days since mailing and survey administration: 2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ECPP was not administered in 2014. There was no second follow-up mailing in 2017. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition).

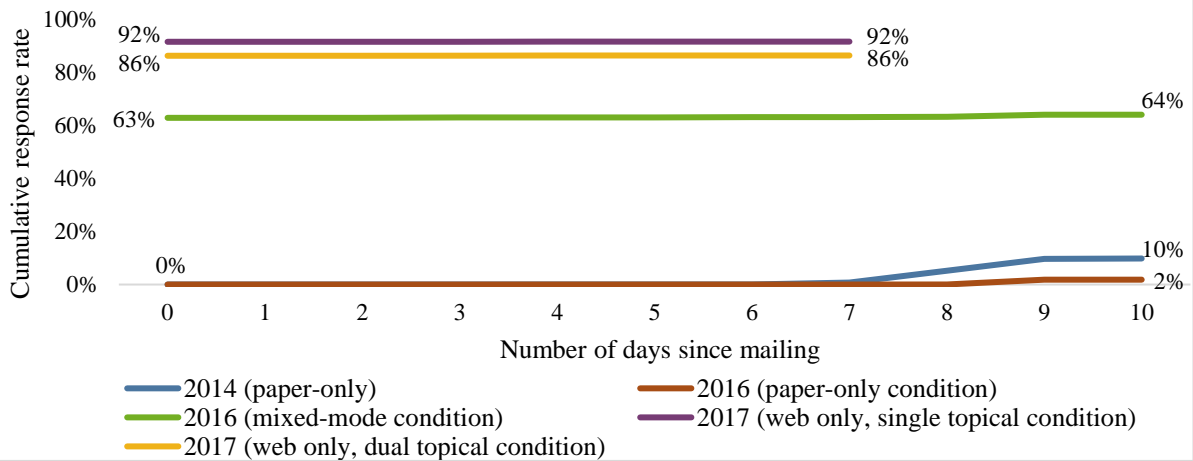
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016.

Figure 6.8e: ECPP response rate following the *third follow-up*, by number of days since mailing and survey administration: 2016

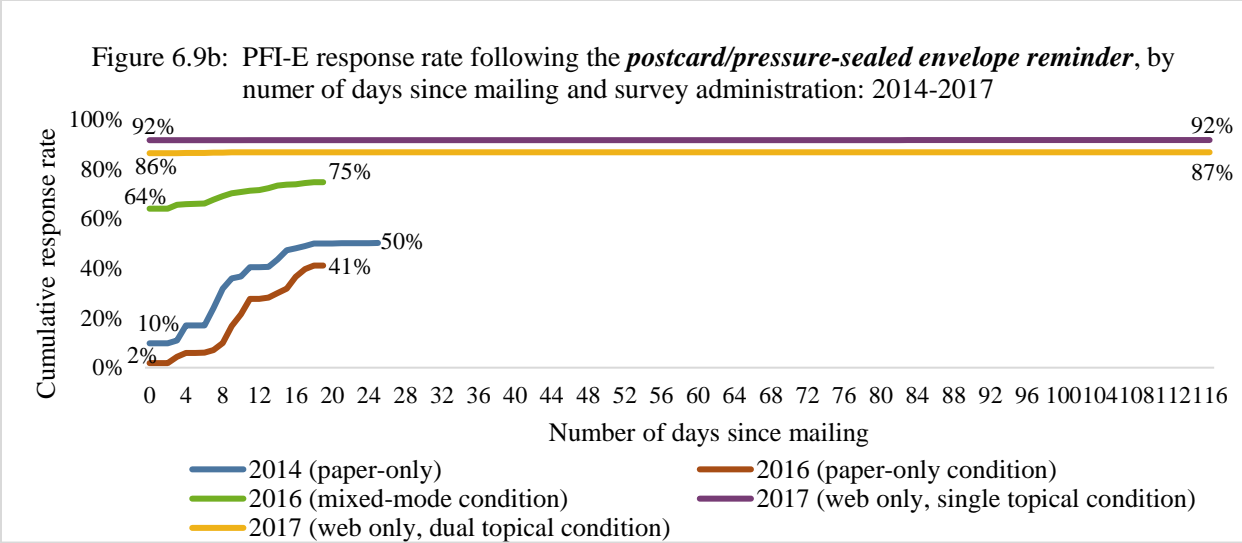


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ECPP was not administered in 2014. There was no third follow-up mailing in 2017. Unweighted eligible sample size was 6,700 in 2016 (paper-only), 1,230 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016.

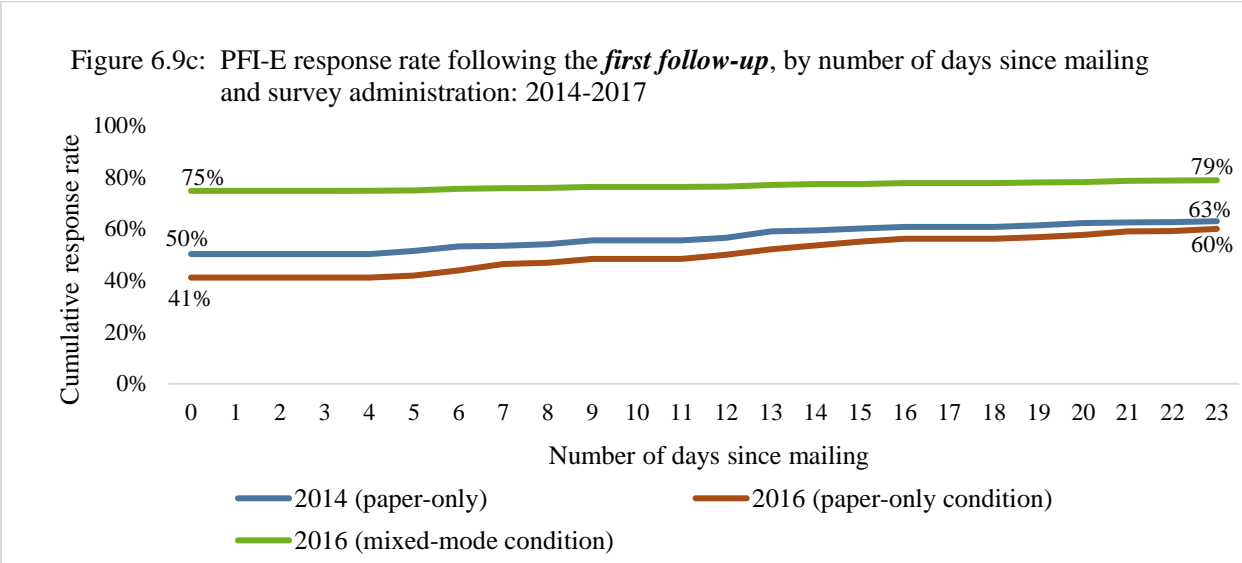
Figure 6.9a: PFI-E response rate following the *initial mailing*, by number of days since mailing and survey administration: 2014-2017



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. In 2014, ASPA was administered instead of the PFI-E. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

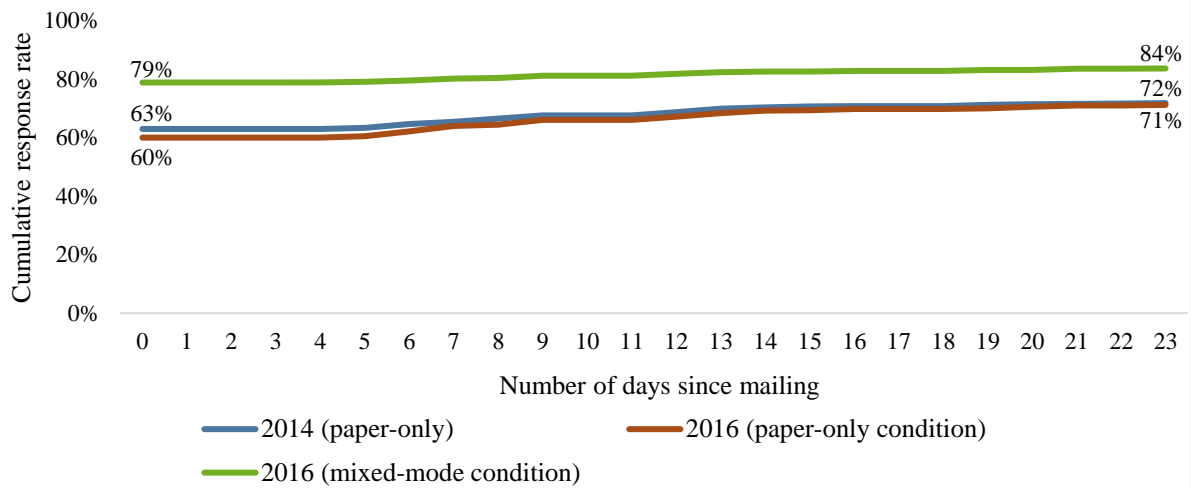


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. In 2014, ASPA was administered instead of the PFI-E. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. This mailing was a postcard in 2014 and 2016; it was a pressure-sealed envelope in 2017. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition), 3,630 in 2017 (single-topical condition), and 2,530 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. In 2014, ASPA was administered instead of the PFI-E. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

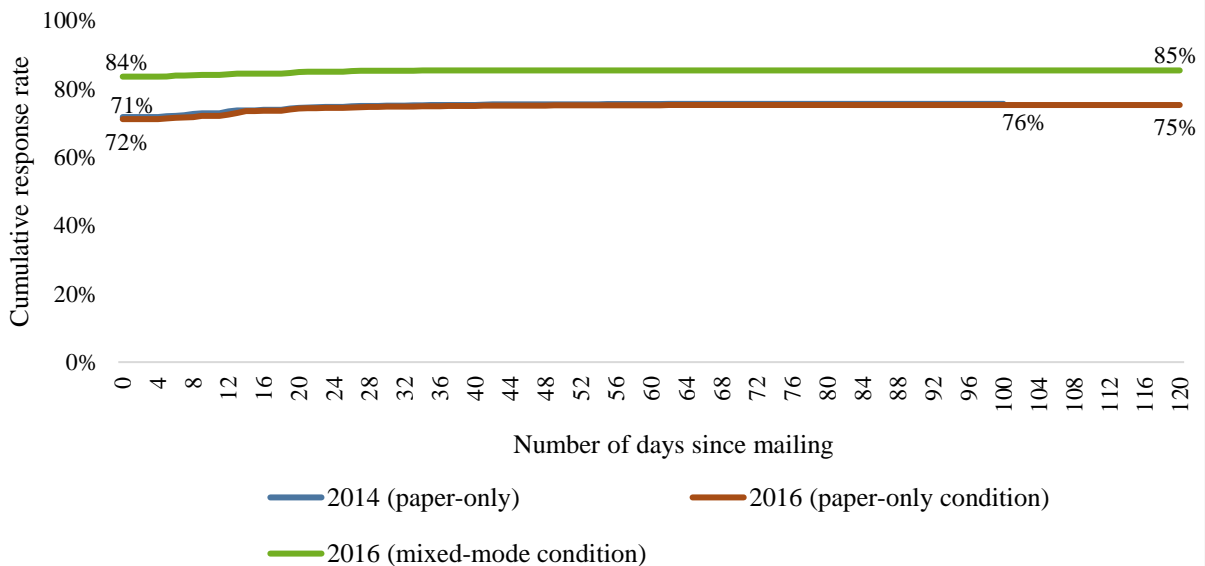
Figure 6.9d: PFI-E response rate following the *second follow-up*, by number of days since mailing and survey administration: 2014-2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. In 2014, ASPA was administered instead of the PFI-E. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. There was no second follow-up mailing in 2017. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

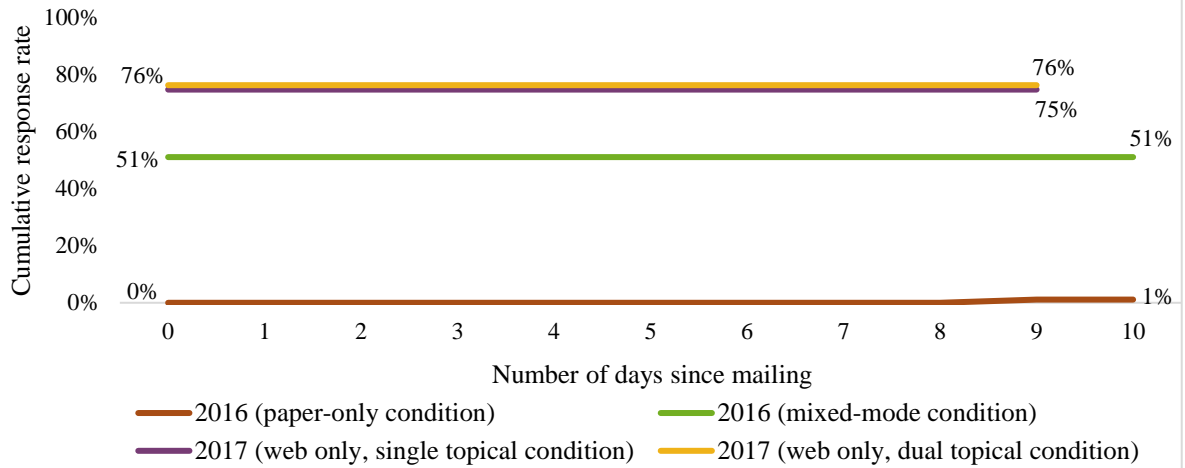
Figure 6.9e: PFI-E response rate following the *third follow-up*, by number of days since mailing and survey administration: 2014-2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. In 2014, ASPA was administered instead of the PFI-E. Given similarities in the eligibility criteria, ASPA is used as a proxy for PFI-E response rates in 2014. There was no third follow-up mailing in 2017. Unweighted eligible sample size was 5,560 in 2014, 15,000 in 2016 (paper-only), 2,790 in 2016 (mixed-mode condition).

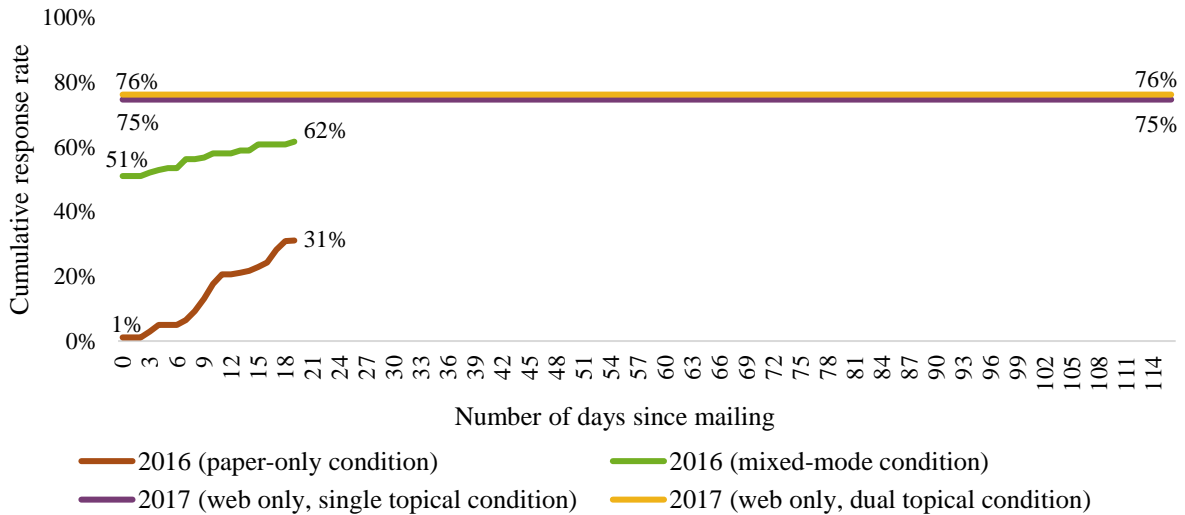
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

Figure 6.10a: PFI-H response rate following the *initial mailing*, by number of days since mailing and survey administration: 2016-2017

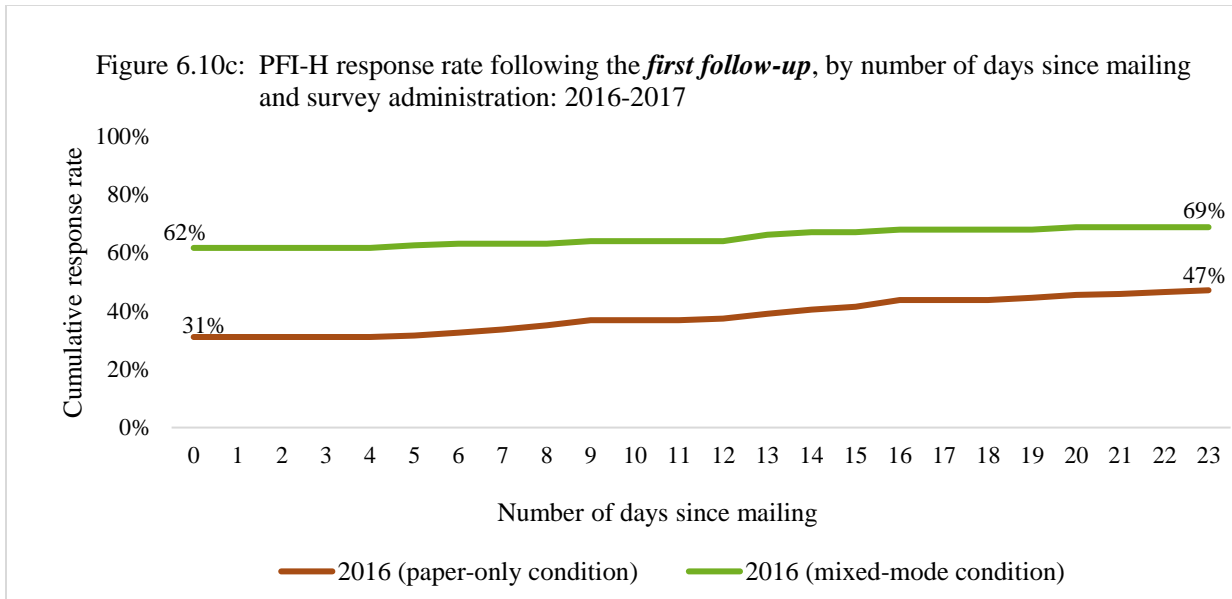


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. PFI-H was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

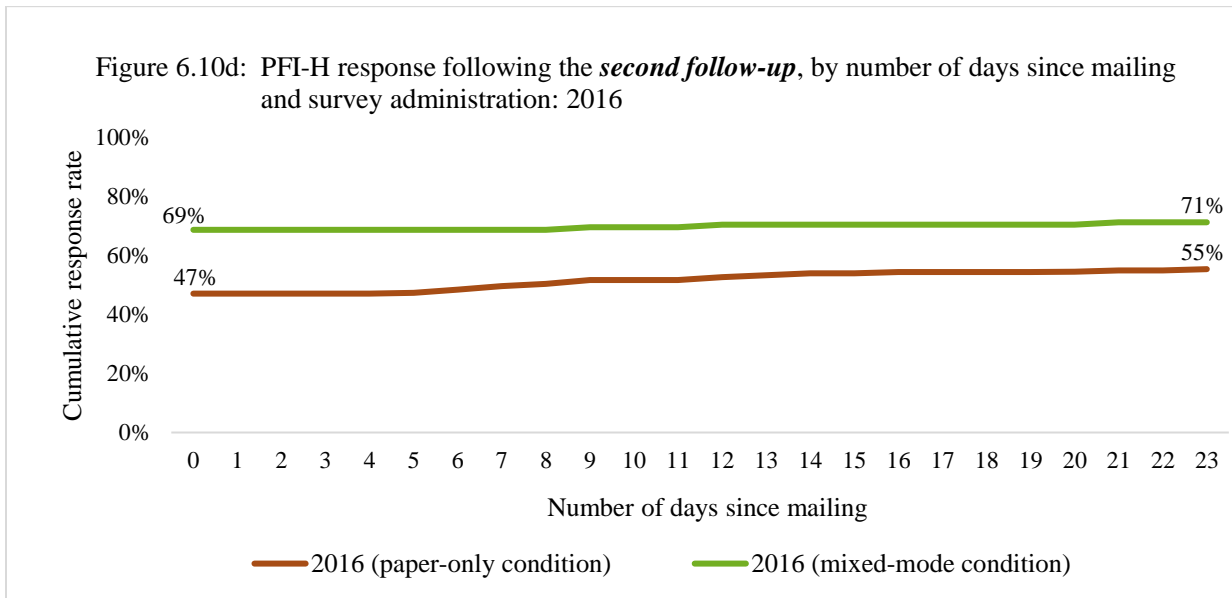
Figure 6.10b: PFI-H response rate following the *postcard/pressure-sealed envelope reminder*, by number of days since mailing and survey administration: 2016-2017



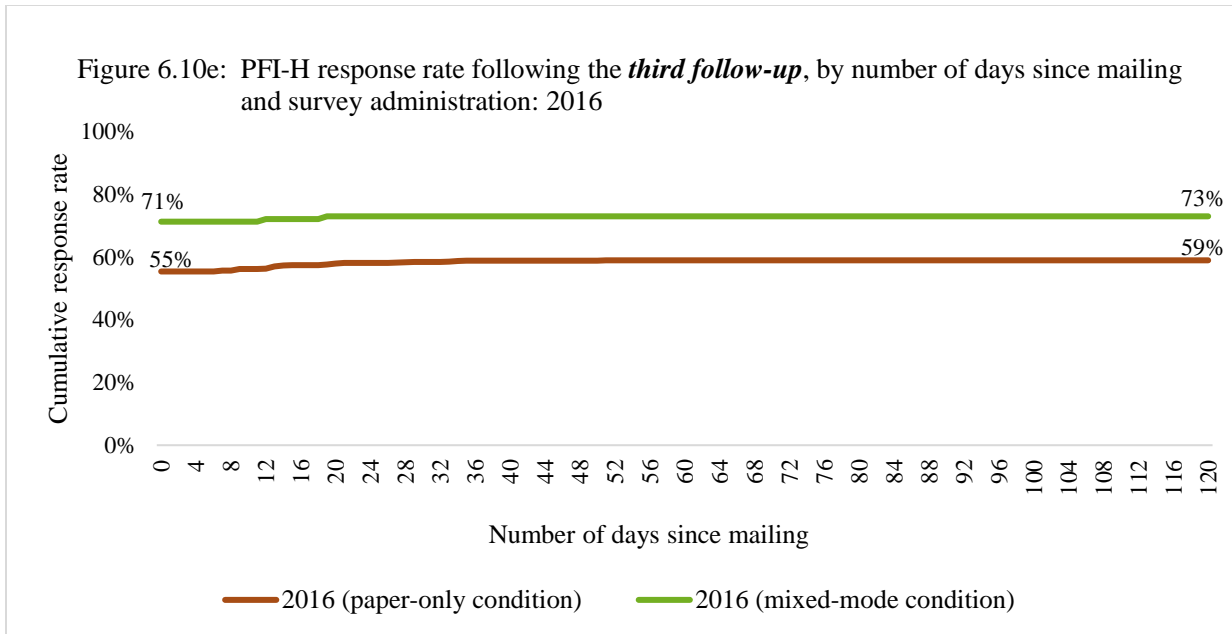
NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. PFI-H was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition), 120 in 2017 (single-topical condition), and 100 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. PFI-H was not administered in 2014. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. In all other administrations it was a paper mailing. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016-2017.

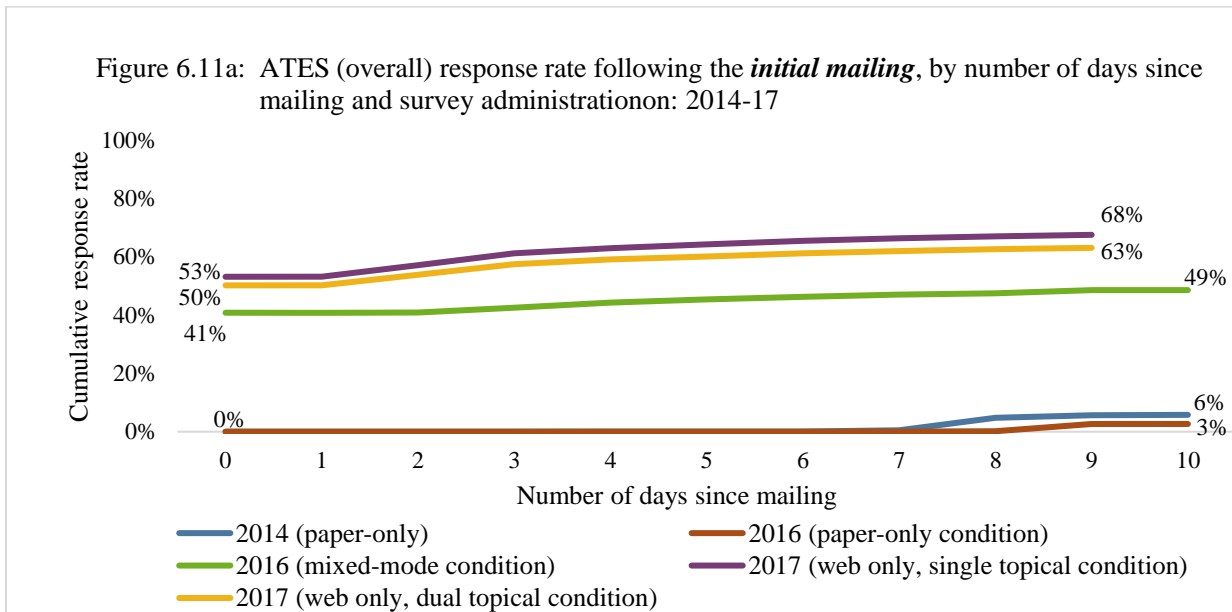


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. PFI-H was not administered in 2014. There was no second follow-up mailing in 2017. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. PFI-H was not administered in 2014. There was no third follow-up mailing in 2017. Unweighted eligible sample size was 790 in 2016 (paper-only), 140 in 2016 (mixed-mode condition).

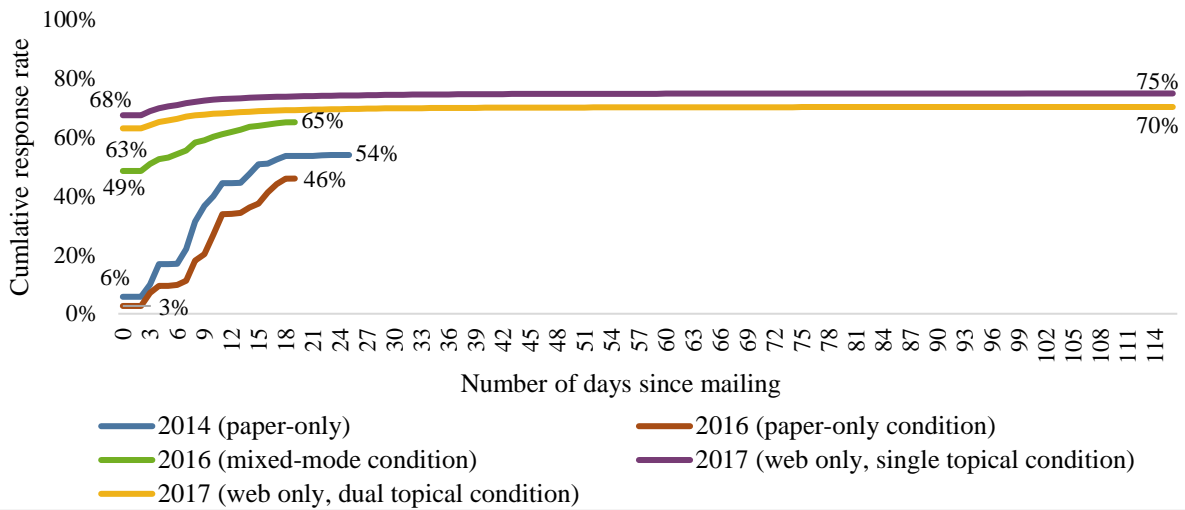
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2016.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition), 13,310 in 2017 (single-topical condition), and 9,050 in 2017 (dual-topical condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

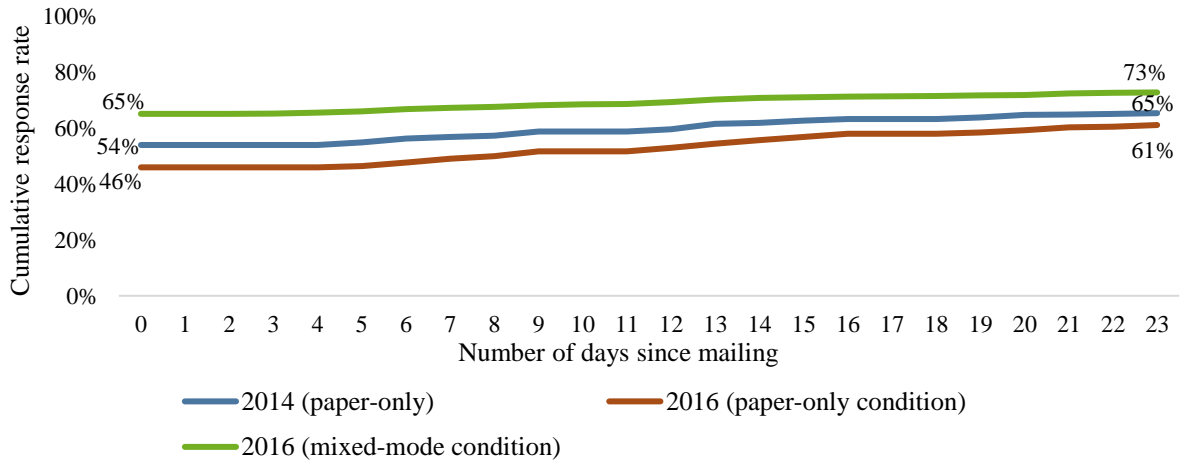
Figure 6.11b: ATEs (overall) response rate following the *postcard/pressure-sealed envelope reminder*, by number of days since mailing and survey administration: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. In 2014 and 2016, this mailing was a postcard; in 2017, it was a pressure-sealed envelope. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition), 13,310 in 2017 (single-topical condition), and 9,050 in 2017 (dual-topical condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

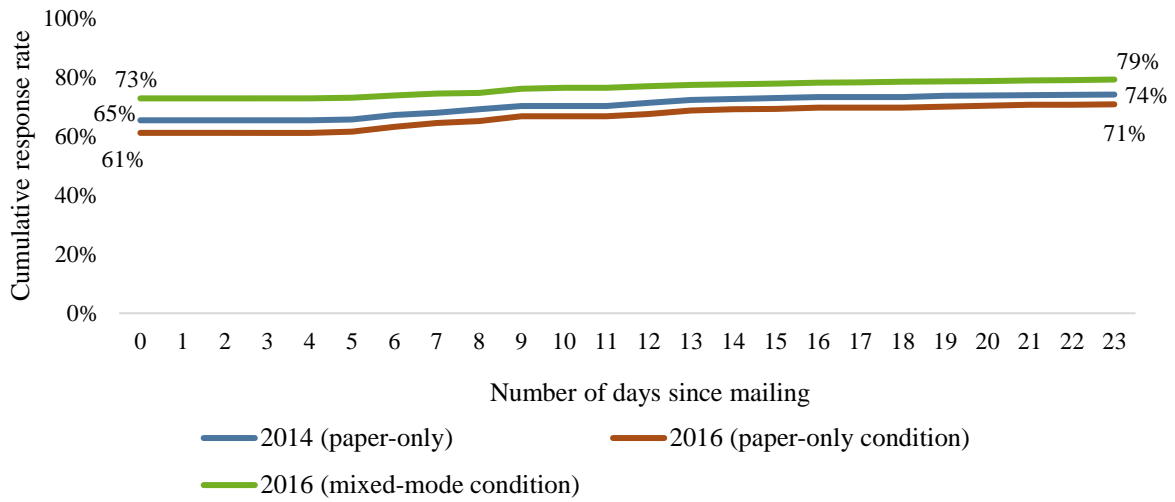
Figure 6.11c: ATEs (overall) response rate following the *first follow-up*, by number of days since mailing and survey administration: 2014-17



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

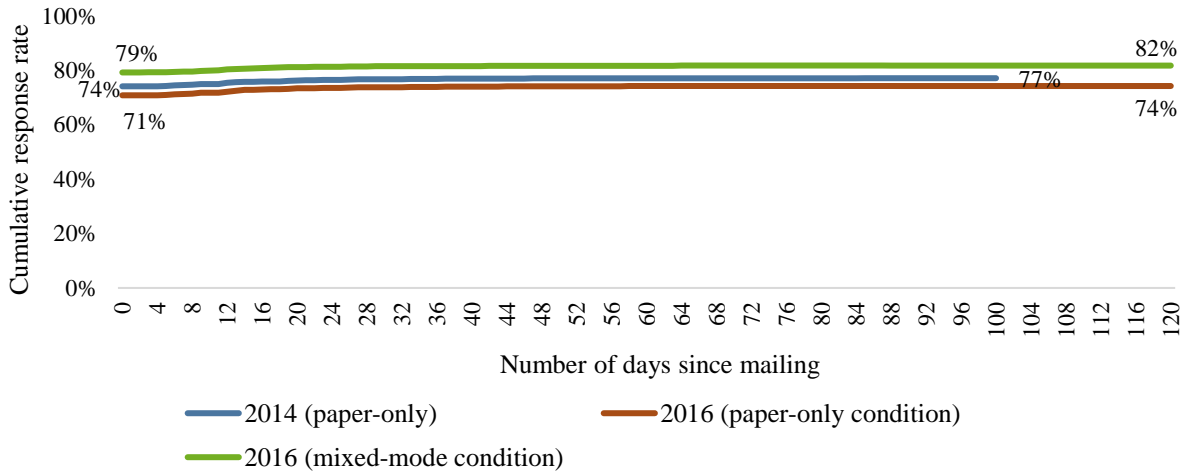
Figure 6.11d: ATEs (overall) response rate following the *second follow-up*, by number of days since mailing and survey administration: 2014-2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. There was no second follow-up mailing in 2017. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition).

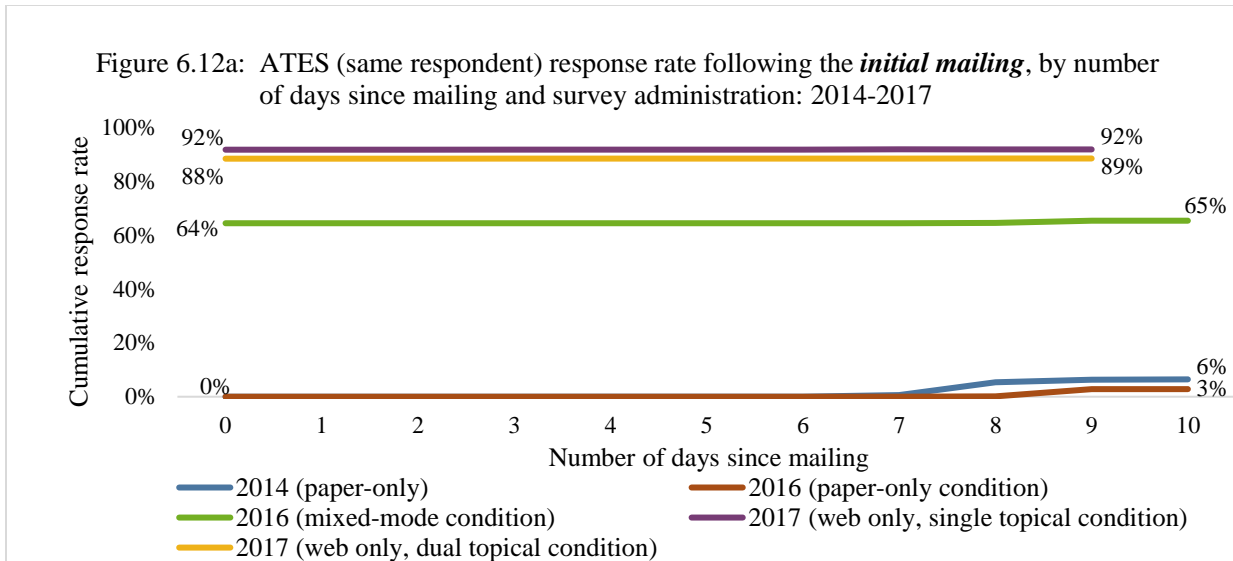
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

Figure 6.11e: ATEs (overall) response rate following the *third follow-up*, by number of days since mailing and survey administration: 2014-2016

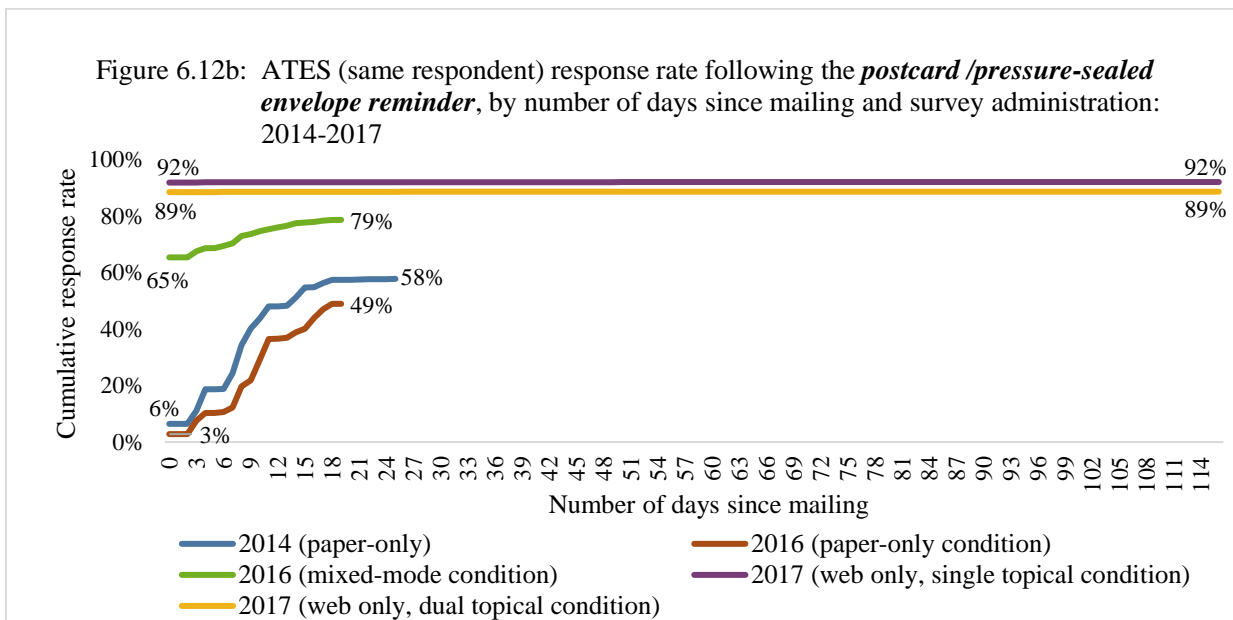


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. There was no third follow-up mailing in 2017. Unweighted eligible sample size was 13,710 in 2014, 53,850 in 2016 (paper-only), 9,980 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

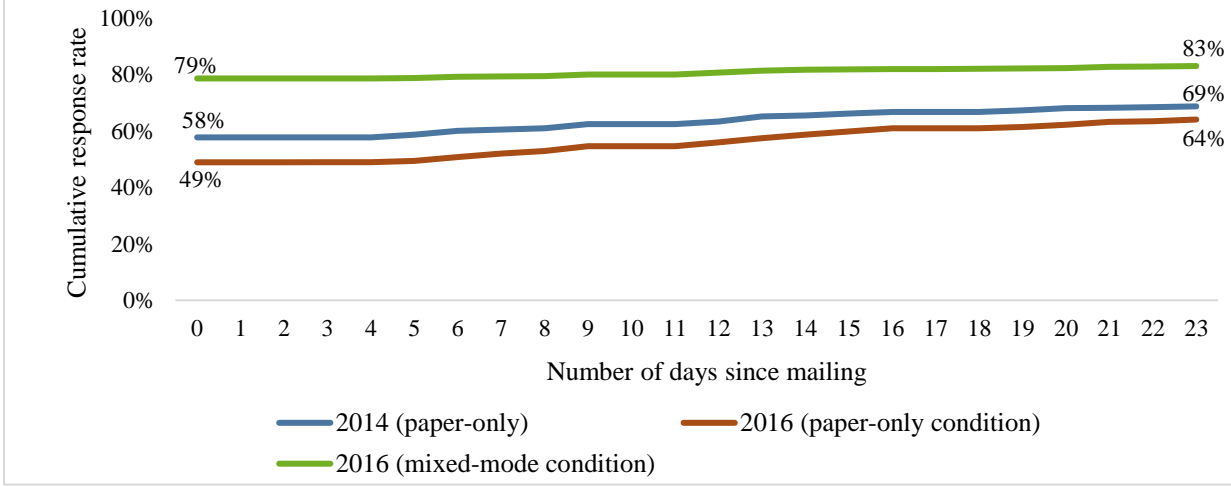


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “same respondents” are screener respondents that were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition), 7,700 in 2017 (single-topical condition), and 5,140 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.



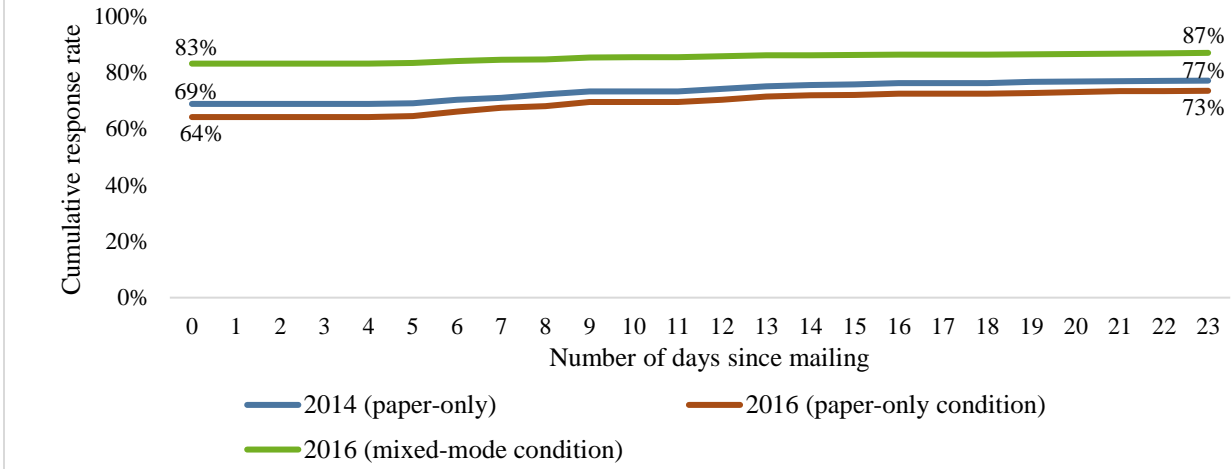
NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “same respondents” are screener respondents that were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. In 2014 and 2016, this mailing was a postcard; in 2017, it was a pressure-sealed envelope. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition), 7,700 in 2017 (single-topical condition), and 5,140 in 2017 (dual-topical condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Figure 6.12c: ATEs (same respondent) response rate following the *first follow-up*, by number of days since mailing and survey administration: 2014-2017



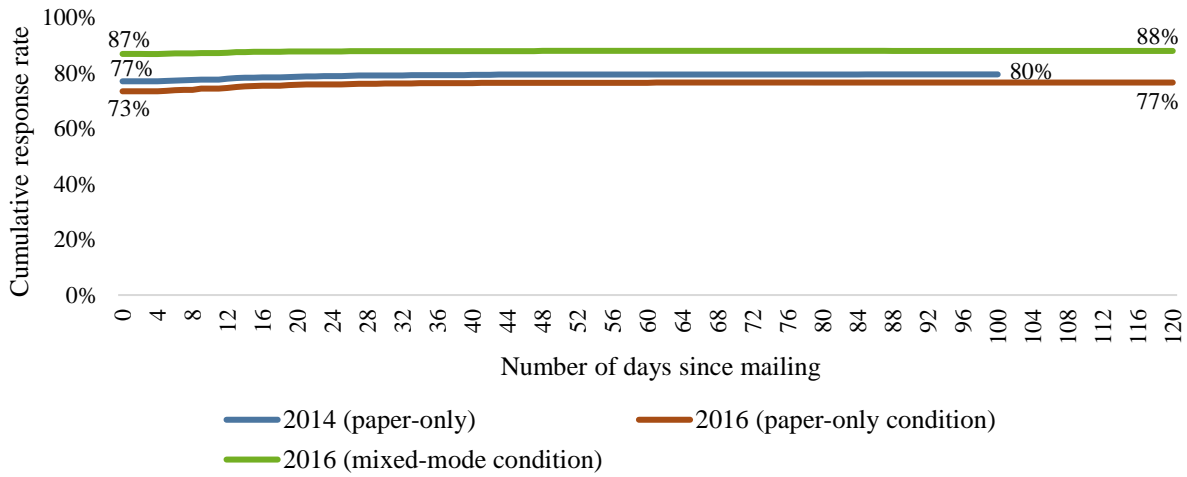
NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “same respondents” are screener respondents that were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Figure 6.12d: ATEs (same respondent) response rate following the *second follow up*, by number of days since mailing and survey administration: 2014-2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “same respondents” are screener respondents that were sampled for ATEs. There was no second follow-up mailing in 2017. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

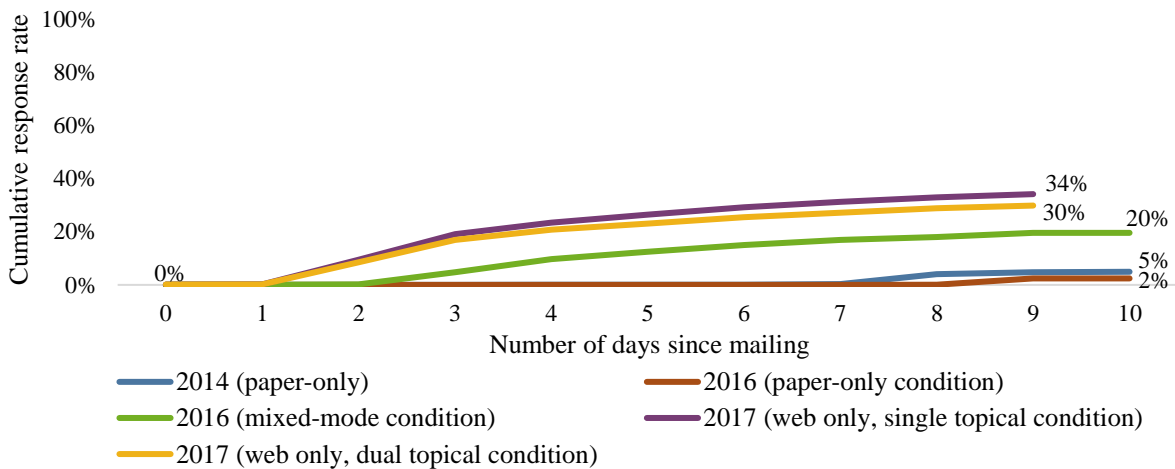
Figure 6.12e: ATEs (same respondent) response rate following the *third follow-up*, by number of days since mailing and survey administration: 2014-2016



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “same respondents” are screener respondents that were sampled for ATEs. There was no third follow-up mailing in 2017. Unweighted eligible screener sample size was 7,620 in 2014, 30,370 in 2016 (paper-only), 6,320 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

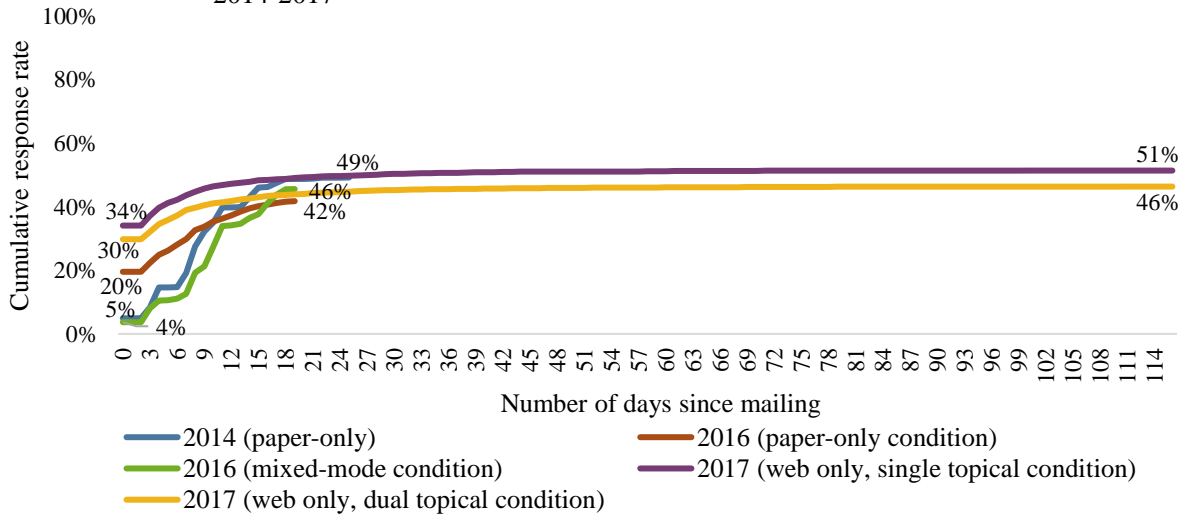
Figure 6.13a: ATEs (different respondent) response rate following the *initial mailing*, by number of days since mailing and survey administration: 2014-2017



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “different respondents” are household members other than the screener respondent who were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition), 5,610 in 2017 (single-topical condition), and 3,910 in 2017 (dual-topical condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

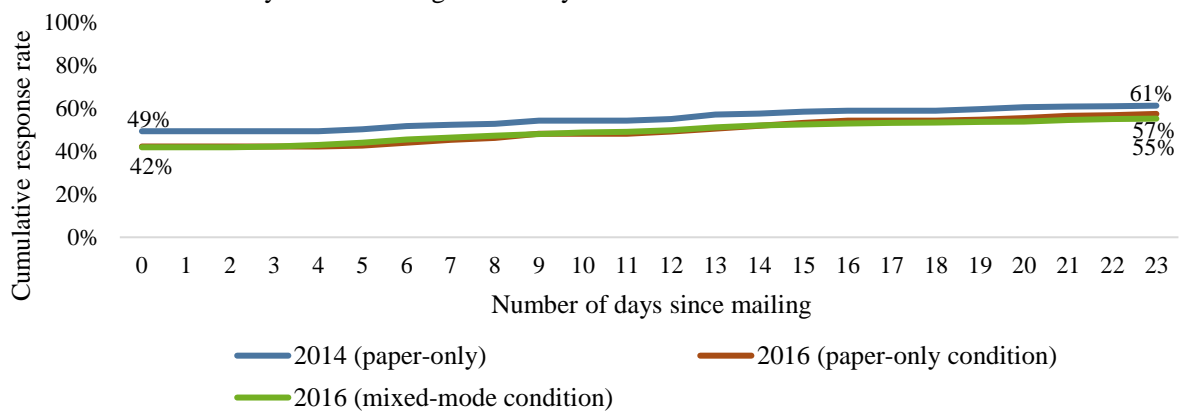
Figure 6.13b: ATEs (different respondent) response rate following the *postcard/pressure-sealed envelope reminder*, by number of days since mailing and survey administration: 2014-2017



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “different respondents” are household members other than the screener respondent who were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. In 2014 and 2016, this mailing was a postcard; in 2017, it was a pressure-sealed envelope. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition), 5,610 in 2017 (single-topical condition), and 3,910 in 2017 (dual-topical condition).

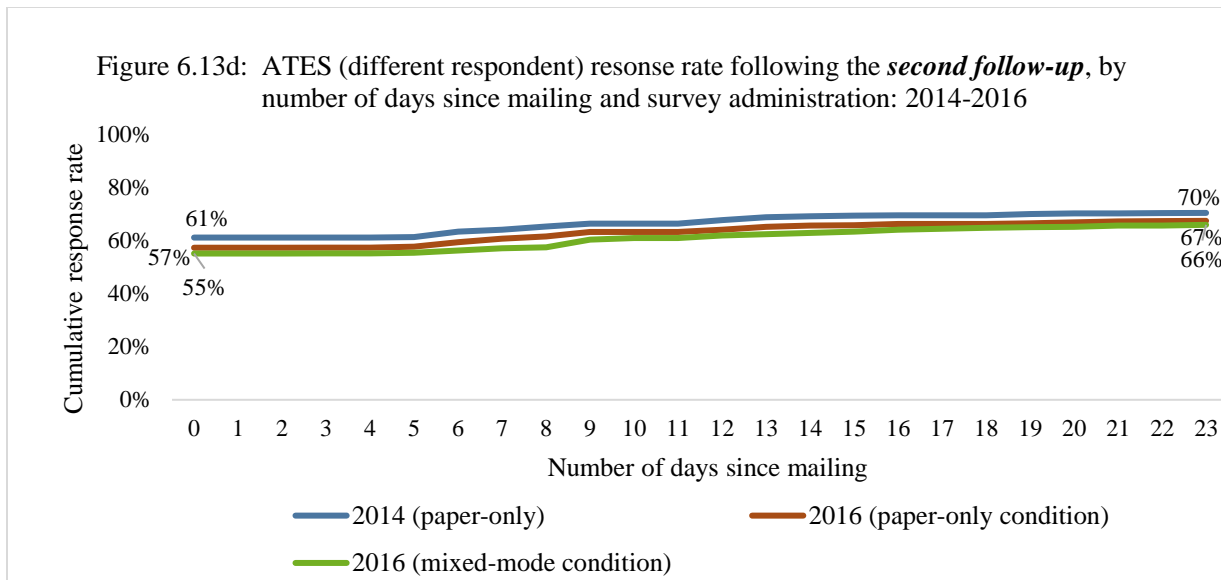
SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.

Figure 6.13c: ATEs (different respondent) response rate following the *first follow-up*, by number of days since mailing and survey administration: 2014-2017

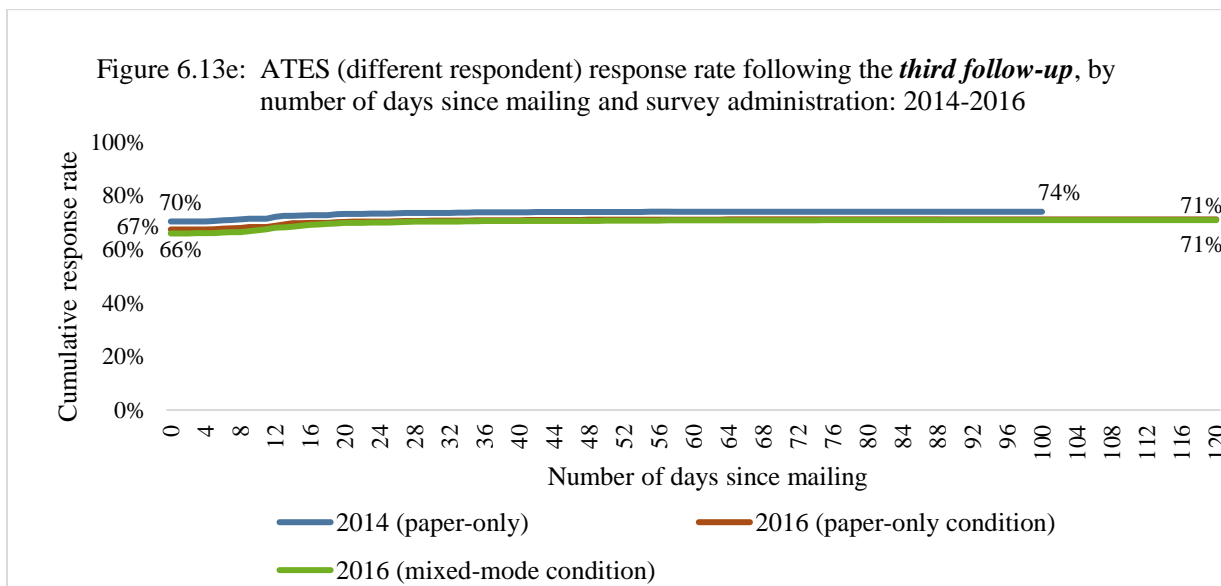


NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “different respondents” are household members other than the screener respondent who were sampled for ATEs. TQA screener respondents are excluded from the 2017 topical response rate calculation because they were not asked to complete a topical survey. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition).

SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2017.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “different respondents” are household members other than the screener respondent who were sampled for ATEs. There was no second follow-up mailing in 2017. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.



NOTE: Response rates were calculated using AAPOR RR1. Day 0 is the day that the mailing was sent. The final day shown is the day before the subsequent mailing was sent. Lines are of differing lengths due to variation in mailing schedules across years. ATEs “different respondents” are household members other than the screener respondent who were sampled for ATEs. There was no third follow-up mailing in 2017. Unweighted eligible sample size was 6,090 in 2014, 23,460 in 2016 (paper-only), 3,670 in 2016 (mixed-mode condition).
 SOURCE: U.S. Department of Education, National Center for Education Statistics, NHES, 2014-2016.

Appendix C: Screener Experiment Results among TQA Respondents

As mentioned previously, where applicable, all screener version analyses were repeated among TQA screener respondents to determine if the ideal screener format is different for interviewer administration than it is for self-administration; this appendix summarizes the result of those analyses.

Breakoffs

Among those who started the screener on the TQA, there were almost no breakoffs (a breakoff rate of less than 0.1 percent); therefore, we did not compare the breakoff rate by screener version among those who started the screener on the TQA.

Item Missingness

The percentage of TQA screener respondent households with at least one person missing a response to the household member characteristic items was very low in both conditions for all five items (less than 2 percent for each item in both conditions; see table 3.3b in appendix A). The same was true for the percentage of households with missing data for the sampled household member (0.2 percent or less for all items in both conditions). However, the estimates are not reliable enough to make statistical comparisons.

Inconsistent Responses

Screener version did not have a significant or notable effect on the percentage of TQA screener respondent households with an inconsistent response for at least one household member (rounds to 1 percent in both conditions; see table 3.4b in appendix A). There also were not significant differences found for any subgroups by screener version, although about half of the subgroup estimates were not reliable enough to comment on statistical comparisons between the two conditions.

Unknown Eligibility Status

Respondents in both conditions were rather unlikely to report household members of unknown eligibility status (less than 1 percent in each condition), and there was not a significant difference in the likelihood of this outcome in the two screener versions (see table 3.5b in appendix A). There also were not significant differences found for any subgroups by screener version, although about half of the subgroup estimates were not reliable enough to comment on statistical comparisons between the two conditions.

Time to Complete Screener

There was not a significant or meaningful difference in the mean number of minutes to complete the screener by screener version (1.9 minutes in both conditions; see table 3.6b in appendix A). This was also the case for all subgroup analyses that were conducted.

Respondent Characteristics

There were no significant or notable differences in the characteristics of screener respondent households based on household characteristic variables available on the frame (see 3.7b in appendix A).

Number of Household Members Reported

There was not a significant difference between versions in the mean number of household members reported (1.7 in both versions). There also were not any significant or notable differences in the percentage distribution of the number of household members reported in each condition (see table 3.8b in appendix A).

Among respondents to the redesigned version, a very similar percentage of households reported additional household members beyond the original six as we found among web screener respondents (3 percent, with this again being more common among those who had already reported six household members; not shown in tables).

- Compared to web responds, much fewer TQA respondents reported zero additional names after saying that more people live in the household (none of screener respondents who had already reported six household members and only 6 percent of those who had previously reported six or fewer members).
- Screener respondents who had previously reported six household members always provided an age for those new members.
- For those who had initially listed six household members, all of the added household members were age 18 or younger; for those who had initially listed fewer than six household members, most of the added household members were age 19 or older (69 percent). As a result, about 20 additional children were listed on the screener who would not have been listed if only six name slots had been provided and there had not been a question asking those who initially listed less than six names whether or not anyone else lived in the household.

Reporting at Least One Household Member Eligible for a Topical Survey

Finally, there were not any significant or notable differences by screener version in the percentage of TQA screener respondent households that reported at least one household member eligible or a topical survey (43 percent in each condition; see table 3.9b in appendix A). We do, however, see notably lower rates of reporting of eligible household members among TQA respondents.

Key Takeaways from the Screener Experiment among TQA Respondents

- There was very little difference in key screener outcomes between the two screener versions among TQA respondents. As a result, there is not a clearly preferable version of the screener to use for TQA respondents in the future. For ease of administration, we thus recommend using the same screener on the phone as is used online.
- Overall, undesirable outcomes like item missingness, breakoffs, and inconsistent responses were less common among TQA respondents than they were among web respondents. Both this and the lack of difference between the two conditions on the phone is likely due to interviewers being more skilled than respondents at navigating the screener (since they have more experience with it).
- In addition, households that completed the screener on the TQA tended to be smaller than those that completed it on the web (for example, 86 percent of households that completed the screener on the TQA had only 1 or 2 household members compared to only 60 percent of those who completed it online); the differences between the two versions would be less notable when there are fewer household members reported.
- Finally, given the much lower topical eligibility rates among households that completed the screener on the TQA, it appears that households that responded to the screener on the TQA were less likely than those who responded online to have children and were more likely to only include senior citizens (the only age group not eligible for any of the topicals).

Appendix D: Topical Survey Eligibility Decision Rules from NHES:2017 Sampling Plan

Table D.1. Topical survey eligibility, by age, enrollment, and grade permutations

Age 0-2			Age 3			Age 4		
Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility
Public/private	PK	ECPP	Public/private	PK	ECPP	Public/private	PK	ECPP
Public/private	K	ECPP	Public/private	K	PFI-E	Public/private	K	PFI-E
Public/private	1-2	ECPP	Public/private	1-2	ECPP	Public/private	1-2	PFI-E
Public/private	3-12	ECPP	Public/private	3-12	ECPP	Public/private	3-12	ECPP
Public/private	College	ECPP	Public/private	College	ECPP	Public/private	College	ECPP
Public/private	None of these	ECPP	Public/private	None of these	ECPP	Public/private	None of these	ECPP
Public/private	Missing	ECPP	Public/private	Missing	ECPP	Public/private	Missing	ECPP
Homeschool	PK	ECPP	Homeschool	PK	ECPP	Homeschool	PK	ECPP
Homeschool	K	ECPP	Homeschool	K	PFI-H	Homeschool	K	PFI-H
Homeschool	1-2	ECPP	Homeschool	1-2	ECPP	Homeschool	1-2	PFI-H
Homeschool	3-12	ECPP	Homeschool	3-12	ECPP	Homeschool	3-12	ECPP
Homeschool	College	ECPP	Homeschool	College	ECPP	Homeschool	College	ECPP
Homeschool	None of these	ECPP	Homeschool	None of these	ECPP	Homeschool	None of these	ECPP
Homeschool	Missing	ECPP	Homeschool	Missing	ECPP	Homeschool	Missing	ECPP
College	PK	ECPP	College	PK	ECPP	College	PK	ECPP
College	K	ECPP	College	K	PFI-E	College	K	PFI-E
College	1-2	ECPP	College	1-2	ECPP	College	1-2	PFI-E
College	3-12	ECPP	College	3-12	ECPP	College	3-12	ECPP
College	College	ECPP	College	College	ECPP	College	College	Unknown
College	None of these	ECPP	College	None of these	ECPP	College	None of these	ECPP
College	Missing	ECPP	College	Missing	ECPP	College	Missing	ECPP
Not in school	PK	ECPP	Not in school	PK	ECPP	Not in school	PK	ECPP
Not in school	K	ECPP	Not in school	K	ECPP	Not in school	K	ECPP
Not in school	1-2	ECPP	Not in school	1-2	ECPP	Not in school	1-2	ECPP
Not in school	3-12	ECPP	Not in school	3-12	ECPP	Not in school	3-12	ECPP
Not in school	College	ECPP	Not in school	College	ECPP	Not in school	College	ECPP
Not in school	None of these	ECPP	Not in school	None of these	ECPP	Not in school	None of these	ECPP
Not in school	Missing	ECPP	Not in school	Missing	ECPP	Not in school	Missing	ECPP
Missing	PK	ECPP	Missing	PK	ECPP	Missing	PK	ECPP
Missing	K	ECPP	Missing	K	ECPP	Missing	K	PFI-E
Missing	1-2	ECPP	Missing	1-2	ECPP	Missing	1-2	PFI-E
Missing	3-12	ECPP	Missing	3-12	ECPP	Missing	3-12	ECPP
Missing	College	ECPP	Missing	College	ECPP	Missing	College	Unknown
Missing	None of these	ECPP	Missing	None of these	ECPP	Missing	None of these	ECPP
Missing	Missing	ECPP	Missing	Missing	ECPP	Missing	Missing	ECPP

Table D.1. Topical survey eligibility, by age, enrollment, and grade permutations—Continued

Age 5			Age 6			Age 7-10		
Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility
Public/private	PK	ECPP	Public/private	PK	ECPP	Public/private	PK	PFI-E
Public/private	K	PFI-E	Public/private	K	PFI-E	Public/private	K	PFI-E
Public/private	1-2	PFI-E	Public/private	1-2	PFI-E	Public/private	1-2	PFI-E
Public/private	3-12	PFI-E	Public/private	3-12	PFI-E	Public/private	3-12	PFI-E
Public/private	College	PFI-E	Public/private	College	PFI-E	Public/private	College	PFI-E
Public/private	None of these	ECPP	Public/private	None of these	PFI-E	Public/private	None of these	PFI-E
Public/private	Missing	ECPP	Public/private	Missing	PFI-E	Public/private	Missing	PFI-E
Homeschool	PK	ECPP	Homeschool	PK	ECPP	Homeschool	PK	PFI-H
Homeschool	K	PFI-H	Homeschool	K	PFI-H	Homeschool	K	PFI-H
Homeschool	1-2	PFI-H	Homeschool	1-2	PFI-H	Homeschool	1-2	PFI-H
Homeschool	3-12	PFI-H	Homeschool	3-12	PFI-H	Homeschool	3-12	PFI-H
Homeschool	College	PFI-H	Homeschool	College	PFI-H	Homeschool	College	PFI-H
Homeschool	None of these	ECPP	Homeschool	None of these	PFI-H	Homeschool	None of these	PFI-H
Homeschool	Missing	ECPP	Homeschool	Missing	PFI-H	Homeschool	Missing	PFI-H
College	PK	ECPP	College	PK	ECPP	College	PK	Unknown
College	K	PFI-E	College	K	PFI-E	College	K	PFI-E
College	1-2	PFI-E	College	1-2	PFI-E	College	1-2	PFI-E
College	3-12	PFI-E	College	3-12	PFI-E	College	3-12	PFI-E
College	College	Unknown	College	College	Unknown	College	College	Unknown
College	None of these	ECPP	College	None of these	PFI-E	College	None of these	PFI-E
College	Missing	ECPP	College	Missing	PFI-E	College	Missing	PFI-E
Not in school	PK	ECPP	Not in school	PK	ECPP	Not in school	PK	Unknown
Not in school	K	ECPP	Not in school	K	ECPP	Not in school	K	Unknown
Not in school	1-2	ECPP	Not in school	1-2	ECPP	Not in school	1-2	Unknown
Not in school	3-12	ECPP	Not in school	3-12	ECPP	Not in school	3-12	Unknown
Not in school	College	ECPP	Not in school	College	ECPP	Not in school	College	Unknown
Not in school	None of these	ECPP	Not in school	None of these	ECPP	Not in school	None of these	Unknown
Not in school	Missing	ECPP	Not in school	Missing	ECPP	Not in school	Missing	Unknown
Missing	PK	ECPP	Missing	PK	ECPP	Missing	PK	Unknown
Missing	K	PFI-E	Missing	K	PFI-E	Missing	K	PFI-E
Missing	1-2	PFI-E	Missing	1-2	PFI-E	Missing	1-2	PFI-E
Missing	3-12	PFI-E	Missing	3-12	PFI-E	Missing	3-12	PFI-E
Missing	College	Unknown	Missing	College	Unknown	Missing	College	Unknown
Missing	None of these	ECPP	Missing	None of these	PFI-E	Missing	None of these	PFI-E
Missing	Missing	ECPP	Missing	Missing	PFI-E	Missing	Missing	PFI-E

Table D.1. Topical survey eligibility, by age, enrollment, and grade permutations—Continued

Age 11-15			Age 16-17			Age 18		
Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility
Public/private	PK	PFI-E	Public/private	PK	PFI-E	Public/private	PK	Unknown
Public/private	K	PFI-E	Public/private	K	Unknown	Public/private	K	Unknown
Public/private	1-2	PFI-E	Public/private	1-2	PFI-E	Public/private	1-2	PFI-E
Public/private	3-12	PFI-E	Public/private	3-12	PFI-E	Public/private	3-12	PFI-E
Public/private	College	PFI-E	Public/private	College	ATES	Public/private	College	ATES
Public/private	None of these	PFI-E	Public/private	None of these	PFI-E	Public/private	None of these	ATES
Public/private	Missing	PFI-E	Public/private	Missing	PFI-E	Public/private	Missing	ATES
Homeschool	PK	PFI-H	Homeschool	PK	PFI-H	Homeschool	PK	Unknown
Homeschool	K	PFI-H	Homeschool	K	Unknown	Homeschool	K	Unknown
Homeschool	1-2	PFI-H	Homeschool	1-2	PFI-H	Homeschool	1-2	PFI-H
Homeschool	3-12	PFI-H	Homeschool	3-12	PFI-H	Homeschool	3-12	PFI-H
Homeschool	College	PFI-H	Homeschool	College	PFI-H	Homeschool	College	ATES
Homeschool	None of these	PFI-H	Homeschool	None of these	PFI-H	Homeschool	None of these	PFI-H
Homeschool	Missing	PFI-H	Homeschool	Missing	PFI-H	Homeschool	Missing	PFI-H
College	PK	PFI-E	College	PK	ATES	College	PK	ATES
College	K	PFI-E	College	K	ATES	College	K	ATES
College	1-2	PFI-E	College	1-2	ATES	College	1-2	ATES
College	3-12	PFI-E	College	3-12	ATES	College	3-12	ATES
College	College	PFI-E	College	College	ATES	College	College	ATES
College	None of these	PFI-E	College	None of these	ATES	College	None of these	ATES
College	Missing	PFI-E	College	Missing	ATES	College	Missing	ATES
Not in school	PK	Unknown	Not in school	PK	ATES	Not in school	PK	ATES
Not in school	K	Unknown	Not in school	K	ATES	Not in school	K	ATES
Not in school	1-2	Unknown	Not in school	1-2	ATES	Not in school	1-2	ATES
Not in school	3-12	Unknown	Not in school	3-12	ATES	Not in school	3-12	ATES
Not in school	College	Unknown	Not in school	College	ATES	Not in school	College	ATES
Not in school	None of these	Unknown	Not in school	None of these	ATES	Not in school	None of these	ATES
Not in school	Missing	Unknown	Not in school	Missing	ATES	Not in school	Missing	ATES
Missing	PK	Unknown	Missing	PK	Unknown	Missing	PK	Unknown
Missing	K	PFI-E	Missing	K	Unknown	Missing	K	Unknown
Missing	1-2	PFI-E	Missing	1-2	PFI-E	Missing	1-2	PFI-E
Missing	3-12	PFI-E	Missing	3-12	PFI-E	Missing	3-12	PFI-E
Missing	College	Unknown	Missing	College	ATES	Missing	College	ATES
Missing	None of these	PFI-E	Missing	None of these	ATES	Missing	None of these	ATES
Missing	Missing	PFI-E	Missing	Missing	PFI-E	Missing	Missing	ATES

Table D.1. Topical survey eligibility, by age, enrollment, and grade permutations—Continued

Age 19-20			Age 21-24			Age 25-65		
Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility
Public/private	PK	Unknown	Public/private	PK	Unknown	Public/private	PK	ATES
Public/private	K	Unknown	Public/private	K	Unknown	Public/private	K	ATES
Public/private	1-2	PFI-E	Public/private	1-2	Unknown	Public/private	1-2	ATES
Public/private	3-12	PFI-E	Public/private	3-12	Unknown	Public/private	3-12	ATES
Public/private	College	ATES	Public/private	College	ATES	Public/private	College	ATES
Public/private	None of these	ATES	Public/private	None of these	ATES	Public/private	None of these	ATES
Public/private	Missing	ATES	Public/private	Missing	ATES	Public/private	Missing	ATES
Homeschool	PK	Unknown	Homeschool	PK	Unknown	Homeschool	PK	ATES
Homeschool	K	Unknown	Homeschool	K	Unknown	Homeschool	K	ATES
Homeschool	1-2	PFI-H	Homeschool	1-2	Unknown	Homeschool	1-2	ATES
Homeschool	3-12	PFI-H	Homeschool	3-12	Unknown	Homeschool	3-12	ATES
Homeschool	College	ATES	Homeschool	College	ATES	Homeschool	College	ATES
Homeschool	None of these	PFI-H	Homeschool	None of these	ATES	Homeschool	None of these	ATES
Homeschool	Missing	PFI-H	Homeschool	Missing	ATES	Homeschool	Missing	ATES
College	PK	ATES	College	PK	ATES	College	PK	ATES
College	K	ATES	College	K	ATES	College	K	ATES
College	1-2	ATES	College	1-2	ATES	College	1-2	ATES
College	3-12	ATES	College	3-12	ATES	College	3-12	ATES
College	College	ATES	College	College	ATES	College	College	ATES
College	None of these	ATES	College	None of these	ATES	College	None of these	ATES
College	Missing	ATES	College	Missing	ATES	College	Missing	ATES
Not in school	PK	ATES	Not in school	PK	ATES	Not in school	PK	ATES
Not in school	K	ATES	Not in school	K	ATES	Not in school	K	ATES
Not in school	1-2	ATES	Not in school	1-2	ATES	Not in school	1-2	ATES
Not in school	3-12	ATES	Not in school	3-12	ATES	Not in school	3-12	ATES
Not in school	College	ATES	Not in school	College	ATES	Not in school	College	ATES
Not in school	None of these	ATES	Not in school	None of these	ATES	Not in school	None of these	ATES
Not in school	Missing	ATES	Not in school	Missing	ATES	Not in school	Missing	ATES
Missing	PK	Unknown	Missing	PK	ATES	Missing	PK	ATES
Missing	K	Unknown	Missing	K	ATES	Missing	K	ATES
Missing	1-2	PFI-E	Missing	1-2	ATES	Missing	1-2	ATES
Missing	3-12	PFI-E	Missing	3-12	ATES	Missing	3-12	ATES
Missing	College	ATES	Missing	College	ATES	Missing	College	ATES
Missing	None of these	ATES	Missing	None of these	ATES	Missing	None of these	ATES
Missing	Missing	ATES	Missing	Missing	ATES	Missing	Missing	ATES

Table D.1. Topical survey eligibility, by age, enrollment, and grade permutations—Continued

Age Over 65			Age Missing		
Enrollment	Grade	Survey Eligibility	Enrollment	Grade	Survey Eligibility
Public/private	PK	Ineligible	Public/private	PK	ECPP
Public/private	K	Ineligible	Public/private	K	PFI-E
Public/private	1-2	Ineligible	Public/private	1-2	PFI-E
Public/private	3-12	Ineligible	Public/private	3-12	PFI-E
Public/private	College	Ineligible	Public/private	College	ATES
Public/private	None of these	Ineligible	Public/private	None of these	Unknown
Public/private	Missing	Ineligible	Public/private	Missing	Unknown
Homeschool	PK	Ineligible	Homeschool	PK	ECPP
Homeschool	K	Ineligible	Homeschool	K	PFI-H
Homeschool	1-2	Ineligible	Homeschool	1-2	PFI-H
Homeschool	3-12	Ineligible	Homeschool	3-12	PFI-H
Homeschool	College	Ineligible	Homeschool	College	ATES
Homeschool	None of these	Ineligible	Homeschool	None of these	Unknown
Homeschool	Missing	Ineligible	Homeschool	Missing	Unknown
College	PK	Ineligible	College	PK	ATES
College	K	Ineligible	College	K	ATES
College	1-2	Ineligible	College	1-2	ATES
College	3-12	Ineligible	College	3-12	ATES
College	College	Ineligible	College	College	ATES
College	None of these	Ineligible	College	None of these	ATES
College	Missing	Ineligible	College	Missing	ATES
Not in school	PK	Ineligible	Not in school	PK	ECPP
Not in school	K	Ineligible	Not in school	K	PFI-E
Not in school	1-2	Ineligible	Not in school	1-2	PFI-E
Not in school	3-12	Ineligible	Not in school	3-12	PFI-E
Not in school	College	Ineligible	Not in school	College	ATES
Not in school	None of these	Ineligible	Not in school	None of these	Unknown
Not in school	Missing	Ineligible	Not in school	Missing	Unknown
Missing	PK	Ineligible	Missing	PK	ECPP
Missing	K	Ineligible	Missing	K	PFI-E
Missing	1-2	Ineligible	Missing	1-2	PFI-E
Missing	3-12	Ineligible	Missing	3-12	PFI-E
Missing	College	Ineligible	Missing	College	ATES
Missing	None of these	Ineligible	Missing	None of these	Unknown
Missing	Missing	Ineligible	Missing	Missing	Unknown

Appendix E. Envelopes Used in the 2017 Web Test

DEPARTMENT OF COMMERCE
Economics and Statistics Administration
Census Bureau

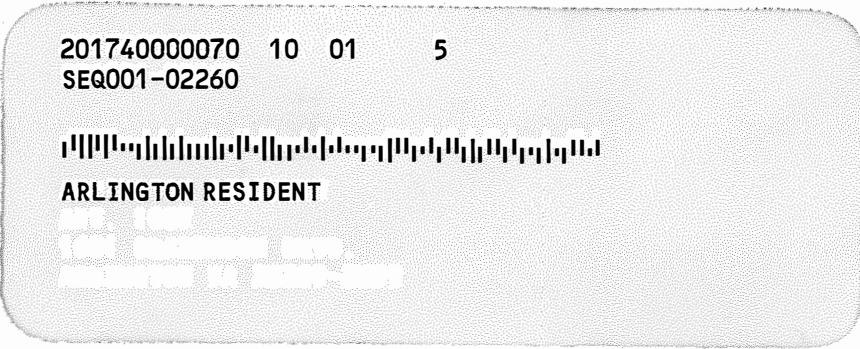
AN EQUAL OPPORTUNITY EMPLOYER

1200 K Street
Washington, DC 20543-0001

For Business
or Private Use \$300

(7198SW) (9-2015)

PRESORTED
FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. CENSUS BUREAU
PERMIT NO. G-58



Please respond within two weeks.

Por favor responda dentro de dos semanas.

**US DEPARTMENT OF COMMERCE
Economics and Statistics Administration
US Census Bureau**

1201 E 10th Street
Jeffersonville IN 47132-0001

OFFICIAL BUSINESS
Penalty for Private Use \$300

BC-1325 (5-2011)

AN EQUAL OPPORTUNITY EMPLOYER

0939

PRESORTED
FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. CENSUS BUREAU
PERMIT NO. G-58

2011-00000000
SEQ001-00120



HYATTSVILLE RESIDENT

Please respond within two weeks.

United States™
Census
Bureau

FedEx

Express

0939



201630000020 11 03

Grand Rapids RESIDENT
Grand Rapids MI 49507

RT 655
ST 56
7 20:00
A 4174
10-07

ATTENTION FEDEX COURIER/CSA

**IF UNDELIVERABLE
STAT14 - NO REROUTE NO RETURN**

ORIGIN ID: LOUA
SHIPPING DEPARTMENT
US CENSUS BUREAU
1621 DUTCH LANE
JEFFERSONVILLE, IN 47132
UNITED STATES US

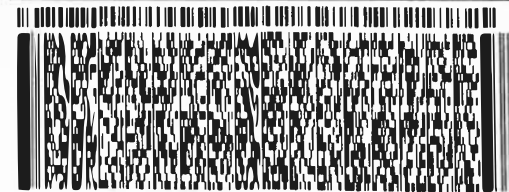
SHIP DATE: 04MAR17
ACTWGT: 0.5 LB MAN
CAD: 0141011/CAFE2912

BILL SENDER

TO **GRAND RAPIDS RESIDENT**

GRAND RAPIDS MI 49507
REF: 52184

PO: 2016300000206103



**FedEx
Express**



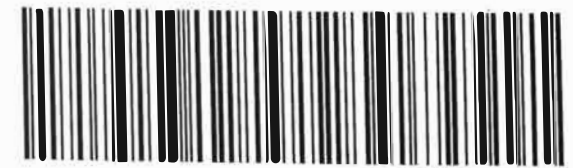
REL#
3785346

TRK# 6695 7668 4154
0201

**07 MAR 8:00P
STANDARD OVERNIGHT**

SA GRRRA

**NSR RES
49507
MI-US GRR**



Align bottom of peel-and-stick airbill or pouch here.

Part # 159474 RIT 0217

J1513100813010V