

# Investigating the 2010 Undercount of Young Children - Examining Data Collected during Coverage Followup

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*A New Design for the 21st Century*

Issued January 2017

Version 1.0

Prepared by Decennial Statistics Studies Division



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## INTRODUCTION

The Census Bureau acknowledges the long-standing undercount of children under the age of 5 in decennial censuses and in Census Bureau surveys. Demographers have documented the high undercount of these youngest children (e.g., West & Robinson 1999, O’Hare 2015). Evaluations show that Census Bureau surveys like the American Community Survey (ACS), the Current Population Survey, and the Survey of Income and Program Participation also undercount young children, which can result in biased survey estimates (O’Hare & Jensen 2014).

In this report, we define “young children” as children age 0 to 4. After the 2010 Census, Demographic Analysis estimated a net undercount of about 4.6 percent for young children (Hogan et al. 2013). This translated into a net undercount of almost 1 million young children. O’Hare (2015) shows that the net undercount rates for young children increased from 1.4 percent in 1980 to 4.6 percent in 2010, while the net undercount rate for the adult population (age 18+) went from an undercount of 1.4 percent in 1980 to an overcount of 0.7 percent in 2010. The rapid rise in the undercount of young children underscores the importance of examining this coverage problem in greater detail.

In 2014, the Census Bureau released a task force report summarizing this issue and recommending research to better understand the possible causes for this undercount (U.S. Census Bureau 2014). An interdivisional team is currently working on several projects that review existing data sources that might provide insights into the high undercount of young children in the 2010 Census.

The 2010 Census included a coverage improvement operation (Coverage Followup or CFU) to improve the accuracy of the household members listed on census questionnaires. Households with suspected coverage errors flowed into CFU. During the CFU operation, interviewers recontacted households by telephone, probing to determine if the list of household members was incomplete or if some people might be included in error. Data from the CFU operation allow us to profile the characteristics of households that initially erroneously excluded young children that CFU successfully added. The CFU data also allow us to study the characteristics of the households that initially indicated that they might have omitted a child, regardless of the outcome of CFU. In combination, they provide important information about households and children that the census may enumerate incompletely.

This is one of two CFU reports. It analyzes the characteristics of the young children that respondents initially omitted from their census questionnaires that CFU determined were missing and later added. The summaries identify instances where respondents made errors that CFU was able to correct. A second report looks at the larger universe of households that responded positively to one of the coverage probes about young children. That report will supplement these findings by assessing if the households with uncertainty about whom to include on their census forms are similar to the households where CFU added young children.

## BACKGROUND

### 2.1 Data Collection - 2010 Census

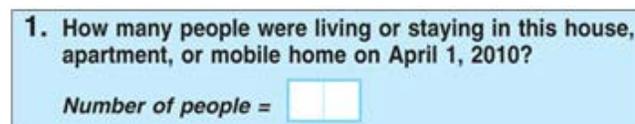
#### 2.1.1 Overview

The 2010 Census, like previous censuses, relied largely on self-response to efficiently enumerate the country. The U.S. Postal Service and census enumerators delivered census questionnaires to nearly every address in the country, asking the households to complete and return them by mail. The Census Bureau mailed or delivered bilingual (English/Spanish) questionnaires in some parts of the country. Forms and guides in other languages were available upon request. The Census Bureau conducted Nonresponse Followup (NRFU) to enumerate the households that failed to respond. In some more rural areas, self-response was not an option. Enumerators visited these households to collect the required information. The vast majority of enumerator-completed forms were from the NRFU operation. Throughout this report, we use the term NRFU to refer to all enumerator-completed forms.

Most 2010 Census data collection instruments were paper-based. The 2010 Census asked several household level questions such as tenure and household size. It also asked for the sex, age, race, and Hispanic origin of each person and their relationship to the householder. Self-response and NRFU questionnaires included coverage questions to identify households that might have omitted someone in error or included someone in error. The sections below provide details about these coverage questions.

#### 2.1.2 Self-Response

The 2010 Census self-response questionnaire asked households to determine the total number of people living at an address. Figure 1 is a facsimile of the population count question.

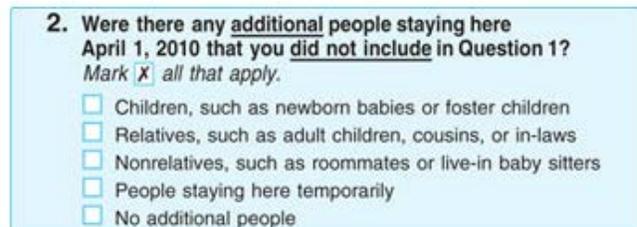


1. How many people were living or staying in this house, apartment, or mobile home on April 1, 2010?

Number of people =

Figure 1. Facsimile of Population Count Question on Self-Response Questionnaires - 2010 Census

The 2010 Census self-response questionnaires included an undercount question to identify possible census omissions. The undercount question asked about people staying at the housing unit who were not included in the population count (see Figure 2).



2. Were there any **additional** people staying here April 1, 2010 that you **did not include** in Question 1? Mark  all that apply.

- Children, such as newborn babies or foster children
- Relatives, such as adult children, cousins, or in-laws
- Nonrelatives, such as roommates or live-in baby sitters
- People staying here temporarily
- No additional people

Figure 2. Facsimile of Self-Response Questionnaire's Undercount Question - 2010 Census

Six columns recorded the names of the people included in Question 1's population count (Figure 3).

Following the name, questions asked how each person was related to the householder and asked for each

person’s sex, age, date-of-birth, Hispanic origin, and race. An “extended roster” requested “information for the rest of the people you counted in Question 1”. This last page of the self-response questionnaire allowed a household to record the name, sex, age, date-of-birth, and if the person was related to Person 1, for six additional people.

**5. Please provide information for each person living here. Start with a person living here who owns or rents this house, apartment, or mobile home. If the owner or renter lives somewhere else, start with any adult living here. This will be Person 1.**  
**What is Person 1's name? Print name below.**

Last Name

First Name  MI

Figure 3. Facsimile of name Question on Self-Response Questionnaire - 2010 Census

For each of the first six people, an overcount question (Figure 4) asked if the person sometimes lived or stayed somewhere else.

**10. Does Person 1 sometimes live or stay somewhere else?**  
 No  Yes — Mark  all that apply.

In college housing  For child custody  
 In the military  In jail or prison  
 At a seasonal or second residence  In a nursing home  
 For another reason

→ If more people were counted in Question 1, continue with Person 2.

Figure 4. Facsimile of Self-Response Questionnaire's Overcount Question - 2010 Census

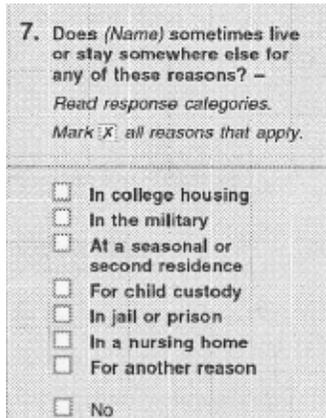
Self-response questionnaires with a positive response to the undercount question or the overcount question were eligible for CFU. The CFU operation assumed that a positive response to the undercount question was an indication that the person completing the form may have failed to include someone on their questionnaire who stayed with the household on April 1, 2010. A positive response to the overcount question indicated that the questionnaire may have included someone in error; i.e., someone the census should count somewhere else.

Self-response questionnaires were also eligible for CFU based on responses to the population count question. If the respondent-provided population count was greater than the number of complete person records for that form, the questionnaire was eligible for CFU. This meant that any form with a population count of seven or more was a “large household” requiring CFU.<sup>1</sup> Mail-returned questionnaires with a respondent-provided population count that differed from the number of valid people included on the questionnaire had suspected coverage errors and were also eligible for CFU.

<sup>1</sup> The rules for identifying a large household varied by type of self-response form and included sending forms with a blank population count.

### 2.1.3 Nonresponse Followup

The questionnaire used in NRFU (and in Update/Enumerate) included space for five people but enumerators could add continuation forms to enumerate all people living in large households. Like the self-response questionnaire, the enumerator questionnaire included two coverage questions. Because of the layout of the enumerator questionnaire, the overcount question was first. The overcount question included the same potential coverage errors included on the self-response form (Figure 5).

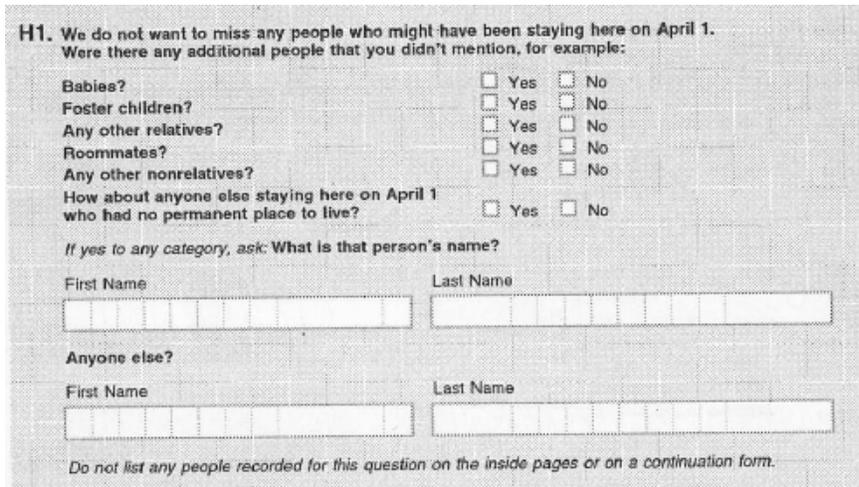


7. Does (Name) sometimes live or stay somewhere else for any of these reasons? –  
Read response categories.  
Mark  all reasons that apply.

- In college housing
- In the military
- At a seasonal or second residence
- For child custody
- In jail or prison
- In a nursing home
- For another reason
- No

Figure 5. Facsimile of Enumerator Questionnaire's Overcount Question - 2010 Census

The enumerator questionnaire's undercount question differed slightly from the question on the self-response questionnaire (Figure 6).



H1. We do not want to miss any people who might have been staying here on April 1. Were there any additional people that you didn't mention, for example:

Babies?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Foster children?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any other relatives?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Roommates?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any other nonrelatives?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
How about anyone else staying here on April 1 who had no permanent place to live?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

If yes to any category, ask: What is that person's name?

First Name	Last Name
<input type="text"/>	<input type="text"/>

Anyone else?

First Name	Last Name
<input type="text"/>	<input type="text"/>

Do not list any people recorded for this question on the inside pages or on a continuation form.

Figure 6. Facsimile of the Enumerator Questionnaire's Undercount Question - 2010 Census

The enumerator questionnaire allowed the collection of the names of two people whenever the response to one of the undercount categories was, “yes.” Enumerators did not attempt to resolve these potential coverage errors during NRFU. In fact, an instruction on the form read, “Do not list any people recorded for this question on the inside pages or on a continuation form.”

CFU would attempt to followup on all cases with a positive response to any of the NRFU undercount or overcount questions. Data processing tentatively added any listed names from this question to the census roster before sending the case to CFU. There was no large household edit of forms completed by a census enumerator. A NRFU form could, however, go to CFU if the population count differed from the number of valid enumerated people.

## 2.2 Coverage Followup - 2010 Census

### 2.2.1 Overview

The CFU operation included a set of decision rules to identify cases with the greatest likelihood of identifying true coverage error. The Census Bureau based its decision to include specific types of coverage problems on productivity and workload size estimates derived from census tests.

The Census Bureau published two detailed reports that describe the CFU results. One report is an operational assessment that summarizes the overall results of CFU with a wealth of operational information and metrics about the total numbers of people added and deleted by selected demographics (U.S. Census Bureau 2012a). A second report (U.S. Census Bureau 2012b) evaluated the CFU operation and explored the potential of a different set of coverage followup questions. That report provides important information about limitations of the CFU operation. Neither of these reports included detailed information about young children.

### 2.2.2 Coverage Followup Methodology

CFU involved a centralized telephone followup of both self-response and NRFU questionnaires that responded positively to any of the coverage questions. This centralized followup also included cases that had an indication of other possible coverage issues. Specifically this included:

- **Large households** - mail returned questionnaires where the respondent-provided population count was equal to or greater than the number of possible complete person records for that form;
- **Low count discrepancies** – self-response or NRFU questionnaires where the number of valid person records was lower than the respondent-provided population count;
- **High count discrepancies** – self-response or NRFU questionnaires where the number of valid person records was higher than the respondent-provided population count ; and
- **Administrative records** – mail or NRFU responses with possible missing people based on a comparison of rosters from the census and administrative records.

At the beginning of each call attempt, a CFU interviewer first verified the identity of the household and the housing unit and probed for the person who filled out the initial census form. The CFU made an effort to speak with the original household respondent. All housing units sent for followup received the same core questions to identify potentially missed or erroneously enumerated people. The use of a common interview means that CFU did not mention the specific coverage issue that the respondent identified on the initial questionnaire (e.g., if a respondent marked the coverage undercount question about children, the followup would not have immediately asked about children). Rather, the CFU included a standard script that included a series of modules. Not all interviews entered every module, and not all questions within a module were asked. U.S. Census Bureau (2012a) summarizes these modules. Of particular

interest to our evaluation are the children that the CFU identified in Module D, the probe for additional roster members (U.S. Census Bureau 2010). The CFU asked every household each of these coverage probes.

*I'd like to make sure that we are not missing anyone who lived or stayed here at <address> on April 1, 2010?*

*Other than the people we have already mentioned were there:*

- *Any newborns or babies? (If yes, "Are there any other newborns or babies?")*
- *Any foster children? (If yes, "Are there any other foster children?")*
- *Any nonrelated children? (If yes, "Are there any other nonrelated children?")*
- *Any other relatives who lived or stayed here? (If yes, "Are there any other relatives?")*
- *Any nonrelatives, roommates, or boarders? (If yes, "Are there any other roommates or nonrelatives?")*
- *Anyone else who stayed here often? (If yes, "Are there any other people who stay here often?")*
- *Anyone else who had no other place to live? (If yes, "Are there any other people who had no other place to live?")*

Module D also removed duplicated or unknown roster members. Subsequent modules probed for other places where household members sometimes lived or stayed. During the review of the roster, CFU validated the people that the enumerator listed in response to the NRFU undercount question.

### 2.2.3 CFU Workloads and Results

The 2010 CFU workload included over 8 million households—6.9 million self-response households and 1.1 NRFU households. Operational decisions about the types of cases eligible for CFU resulted in fewer NRFU cases being eligible for CFU. For example, NRFU cases with continuation forms (i.e., large households) and NRFU cases with multiple failure reasons were not eligible for CFU.

CFU completed over 4.5 million cases (U.S. Census Bureau 2012a). Table 1 summarizes the number of cases sent to CFU and the number completed in CFU by the data collection mode of the census enumeration. The cases that were not completed were primarily cases where CFU was unable to make contact or gain cooperation from CFU-eligible households. Table 1 shows that the completion rate for NRFU cases was lower than the completion rate for self-response cases (34 and 60 percent, respectively). Potential contact challenges may have contributed to the lower completion rate for households originally enumerated in NRFU. Households who did not return their census questionnaire by mail were more difficult to contact in CFU than those who responded by mail. This introduces a limitation to our evaluation because the characteristics of CFU-added young children reflect CFU's success in making contact with CFU-eligible households.

**Table 1. Coverage Followup Workloads by Census Data Collection Mode**

<b>Census Data Collection Mode</b>	<b>Cases Sent to CFU</b>	<b>Cases Completed in CFU</b>	<b>Percent Completed</b>
Self-response	6,934,950	4,153,785	59.9
NRFU	1,118,102	382,851	34.2
<b>TOTAL</b>	<b>8,053,052</b>	<b>4,536,636</b>	<b>56.3</b>

Source: U.S. Census Bureau 2012a – Tables 17 & 33

Table 2 summarizes CFU added people by age. Children under the age of 5 accounted for nearly 16 percent of all CFU adds. Almost 55,000 young children were included in the 2010 Census because of the CFU operation. To put this number in context, Hogan et al. (2013) estimated that the 2010 Census had a net undercount of about 970,000 young children.

**Table 2. Coverage Followup Adds by Age – 2010 Census**

Age	Number of CFU Adds	Percent of Total CFU Adds
Under 5 years	54,695	15.6
5 to 9 years	25,699	7.3
10 to 14 years	22,301	6.4
15 to 19 years	34,212	9.7
20 to 24 years	38,125	10.9
25 to 29 years	26,586	7.6
30 to 34 years	17,479	5.0
35 to 39 years	14,120	4.0
40 to 44 years	13,729	3.9
45 to 49 years	14,338	4.1
50 to 54 years	14,624	4.2
55 to 59 years	12,654	3.6
60 to 64 years	11,564	3.3
65+ years	35,640	10.2
Age missing	15,153	4.3
<b>TOTAL</b>	<b>350,901</b>	<b>100.0</b>

Source: U.S. Census Bureau 2012a – Table 44

We are interested in analyzing the data associated with these 54,695 children. These CFU adds identify young children that the CFU interview determined were erroneously missing from both self-response and enumerator-completed forms. Furthermore, positive responses to the NRFU coverage questions resulted in the addition of 15,642 young children to NRFU questionnaires. The CFU operation validated these young children but did not classify them as CFU adds. If a NRFU questionnaire listed a name but CFU was unable to contact the household or validate the name, the listed person was not included in the census. These listed, but never validated, people are not included in this evaluation.

Both universes of adds to the initial census questionnaires identify errors by household respondents involving young children. Summarizing the demographic, housing, and household characteristics of these added young children may help us identify situations where the census residence rules may not be clear or situations where the respondent may not be carefully reading the instructions.

## RESEARCH QUESTIONS

Given the differences in the treatment of self-response and NRFU questionnaires during CFU and the differences in completion rates, our research questions break out the results by census data collection mode. This report answers the following research questions.

1. What are the demographic characteristics of the young children that respondents initially omitted from their questionnaires that CFU later added?

2. What are the characteristics of the housing units, households, and householders that made an error involving a young child that CFU corrected?
3. Which type of coverage issue identified most of the young children that the CFU added?
4. Which CFU question identified the young children that the CFU eventually added?

## METHODOLOGY

### 4.1 Sources

This report uses data from the CFU operation, specifically, data assembled in the CFU analysis file. This file was the basis for the CFU assessment report and the CFU evaluation report. The CFU analysis file includes the original Decennial Response File (DRF) record and the CFU responses. We matched the young children from the CFU response data to the Census Edited File (CEF) to obtain the final edited and imputed characteristics for the young children added during CFU. In contrast with the DRF records, the CEF records include the final set of characteristics after all edits and imputations, i.e., the records that the 2010 Census used in most tabulations. As noted earlier, U.S. Census Bureau (2012a) indicated that CFU added 54,695 children under the age of 5. We identified a final set of CFU records associated with these children. Once we removed data for Puerto Rico and accounted for changes because of edits (the CFU assessment report used unedited data), the revised total was 53,741. We also identified a total of 15,642 young children that CFU validated after an enumerator listed their names in response to the NRFU undercount question. Combining these two universes provided us with a total of 69,383 young children added to the 2010 Census by CFU or validated in CFU from one of the NRFU coverage questions.

To calculate the proportion of young children added in CFU, we used 2010 Census data as denominators. We restricted this denominator to the United States housing unit population. The 2010 Census included 20,163,046 children under the age of 5 living in housing units in the 50 states and the District of Columbia (U.S. Census Bureau 2010).

Table 3 summarizes the universes for this evaluation. We analyzed data for a total of 69,383 young children—47,144 from self-response forms and 22,239 from enumerator-completed forms. We also analyzed data separately for the subset of adds resulting from a coverage question in each data collection mode—25,287 from self-response forms and 19,118 from NRFU forms.

**Table 3. Universes for Evaluation**

Source	All Sources	Source was a coverage question	Source was NOT a coverage question
<b>Young children added during CFU interview</b>	<b>53,741</b>	<b>28,763</b>	<b>24,978</b>
Self-response	47,144	25,287	21,857
NRFU	6,597	3,476	3,121
<b>Young children added before CFU interview on NRFU forms</b>	<b>15,642</b>	<b>15,642</b>	<b>0</b>
Subtotal added to self-response forms	47,144	25,287	21,857
Subtotal added to NRFU forms	22,239	19,118	3,121
<b>TOTAL young children added</b>	<b>69,383</b>	<b>44,405</b>	<b>24,978</b>

Source: Coverage Followup Analysis File – Special Tabulation

## 4.2 Definitions

Appendix A includes a short glossary with some of the census terms used throughout this report.

### 4.2.1 Data Collection Mode

We defined self-response enumerations as all households enumerated on mailback forms, Fulfillment forms (forms requested by respondents including Spanish and other in-language forms), Be Counted forms, by telephone questionnaire assistance, and on forms designated as CFU cases<sup>2</sup>. The CFU cases include all young children on the forms that went through CFU, including young children initially enumerated and young children added in CFU. In total, we identified 13,739,016 young children enumerated by self-response in the 2010 Census.

We defined NRFU forms as the forms used in NRFU, Update/Enumerate<sup>3</sup>, and the enumeration of transitory locations. We also considered any final census records that NRFU was unable to contact and required count imputation as NRFU forms. In this study we identified a total of 6,424,030 young children enumerated on NRFU forms.

### 4.2.2 Source of Coverage Issue

As described earlier, the CFU identified cases for followup based on information from various sources. To better represent the universe of CFU adds that came from a respondent-identified uncertainty, we chose to isolate the CFU results for the cases identified for CFU by one of the coverage questions. For some of our analyses we excluded the CFU adds resulting from other sources (large households, count discrepancies, administrative records). We retained cases that were identified by both a coverage question and another source. We included names listed on the enumerator form as adds because of coverage questions.

### 4.2.3 Add Rates

To assess the proportion of young children with a certain characteristic who were CFU adds, we calculated the ratio of the number of young children added or validated during CFU with a certain characteristic and data collection mode to the total number of young children in the 2010 Census with that characteristic and data collection mode. Multiplying those results by 1,000 converted the ratios to an estimate of CFU adds per 1,000 enumerations. We determined that 3.4 out of every 1,000 young children on self-response questionnaires were CFU adds (1.8 were because of a coverage question). About 3.5 out of every 1,000 enumerated young children on NRFU forms were CFU adds (3.0 resulting from the coverage questions). Our goal is to compare these add rates within data collection mode across demographics, housing units, and households to identify characteristics with higher than average rates. We consider high add rates to indicate characteristics with high proportions of coverage error that CFU corrected.

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<sup>2</sup> The form type flag did not distinguish between CFU cases originating as self-response versus NRFU. Given that most CFU cases were on mailback forms, we chose to put all of these 2010 CFU cases in the denominator as self-response cases. This results in a slight overstatement of the 2010 universe of young children on self-response forms and a slight understatement of the 2010 universe of young children on enumerator-completed forms.

<sup>3</sup> In Update/Enumerate, census enumerators update the address list and conducted in-person interviews.

### 4.3 Limitations

This summary of the characteristics of young children that the CFU operation successfully added describes young children that the census would probably not have included without CFU. The young children that CFU failed to identify and remained uncounted in the 2010 Census may share the same characteristics or may differ in important ways. Given the difference in the CFU completion rates by data collection mode, we chose to provide results for each mode separately. The high CFU nonresponse rate for NRFU households (66 percent) is an indication that the NRFU results may not be representative of the universe of undercounted young children in households that the 2010 Census enumerated in NRFU. NRFU includes higher proportions of renter-households and Black and Hispanic households. This low completion rate may bias the NRFU results to understate the coverage errors for some groups. The limitations for self-response households maybe less as that completion rate was almost 60 percent.

We assume that the CFU results reflect correct enumerations. However, evaluations of the CFU operation indicate that this was not always true and that CFU added some children in error (U.S. Census Bureau 2012b).

One important limitation for our research is that a large proportion of the cases that responded positively to the undercount question about children did not mention a possible coverage issue with a child during the CFU interview. Because the followup interview was independent of the initial census questionnaire's coverage question responses, it failed to determine if many of the cases that indicated some confusion about children might have included a missed child. The CFU never asked many households with potential coverage errors involving children about the child or children that they may have originally left off of the form. The CFU adds represent the cases where two inquiries resulted in the identification of a missed child under the age of 5. A post-census evaluation found that this methodology was problematic for the undercount questions. Nearly 85 percent of the cases that initially identified a potential undercount issue did not mention that issue during the CFU interview (U.S. Census Bureau 2012b). We see this limitation as reducing the potential gain in coverage from CFU, but we do not necessarily think it alters the distribution of the types of households with coverage errors. Our second report that studies the characteristics of households that responded positively to one of the child-specific coverage probes will allow us to assess this limitation.

Another limitation is the nonrandom selection of cases for followup among the cases that self-identified as having potential coverage errors. Because the Census Bureau conducted the CFU by telephone, a completed CFU interview required that a respondent provided a telephone number and responded to the Census Bureau's telephone call. The methods used to identify cases for CFU make this universe nonrepresentative of the larger population of interest. Given the decision rules about the cases eligible for CFU, we will need to be careful in extrapolating results.

NRFU cases were not sent to CFU if they involved a continuation form or if they failed for multiple reasons. This may distort the distribution of household sizes and the types of households in scope for CFU. Some of the observed differences in the proportions of completed CFU cases by mode reflect this limitation. In addition, it is possible that NRFU enumerators corrected some coverage issues that they identified in the course of the interview in real time. Those cases would not be flagged as CFU failures nor as CFU adds.

Given the different set of rules that applied to NRFU cases, we produced separate results for each mode. The self-response cases have fewer limitations, and we believe that they more accurately identify the young children that were at risk of respondent error on self-response questionnaires. The additional cases, identified during NRFU as part of the coverage questions, have several limitations but also point to situations where young children were not counted correctly.

## RESULTS

### 5.1 Demographic Characteristics

*What are the demographic characteristics of the young children that respondents initially omitted from their questionnaires that CFU later added?*

#### 5.1.1 Overview

Tables 4, 5, and 6 summarize the demographic characteristics of the young children that the CFU operation added to the 2010 Census on self-response and NRFU questionnaires. The adds on NRFU questionnaires include young children added during the CFU interview and young children listed in the coverage question on the NRFU form and later validated in CFU. The tables include separate estimates for the subset of CFU adds resulting from one of the coverage questions. Appendix B includes the detailed tables supporting the distributions and rates in the tables.

Tables 4, 5, and 6 include the distribution of adds and the corresponding add rates. The distributions identify the characteristics with the greatest number of adds. In contrast, the add rates identify the characteristics with the highest proportions of CFU adds. Characteristics with high add rates have the greatest risks of undercoverage that CFU was able to address. As noted earlier, we need to be cautious when interpreting these add rates. The characteristics with the highest add rates may represent characteristics with the greatest proportion of true coverage errors, but they may also represent the characteristics of people and households that CFU was most successful at contacting in a second followup interview, i.e., households with available phone numbers and cooperative respondents. They may also point to the cases that CFU gave priority to because of processing problems.

As noted earlier, the overall add rates are low; about 3.4 out of every 1,000 young children enumerated by self-response were CFU adds. The add rate for young children on NRFU forms is similar, about 3.5 out of every 1,000. When we look only at the subset of adds resulting from one of the coverage questions, the add rates are 1.8 (self-response) and 3.0 (NRFU).

#### 5.1.2 Age and Sex

About 44 percent of the added children on self-response questionnaires were under the age of 1 (33 percent on NRFU questionnaires). This might be because the CFU coverage probe on self-response forms asked about “newborn babies” or because more people were confused about including these youngest children. Children age 0 accounted for 50 percent of all young children that CFU added to self-response forms because of the coverage probes.

**Table 4. Age and Sex of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Age</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
0	44.1	50.0	32.8	34.4	7.8	4.7	5.8	5.2
1	17.5	15.9	20.1	20.2	3.1	1.5	3.5	3.0
2	14.9	13.5	18.5	18.3	2.5	1.2	3.1	2.7
3	12.4	11.1	15.3	14.5	2.1	1.0	2.6	2.1
4	11.0	<b>9.5</b>	13.3	12.6	1.9	0.9	2.3	1.9
<b>Sex</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Male	51.6	51.4	50.7	50.6	3.4	1.8	3.5	3.0
Female	48.4	48.6	49.3	49.4	3.4	1.8	3.5	3.0

Source: Coverage Followup Analysis File – Special Tabulation

The add rates by age in Table 4 show that CFU was most successful in adding the youngest children. CFU adds accounted for nearly eight out of every 1,000 young children under the age of 1 that the 2010 Census enumerated on self-response questionnaires and nearly six out of every 1,000 young children under the age of 1 enumerated on a NRFU questionnaire. In both modes, about five out of every 1,000 enumerated children under the age of 1 were CFU adds. O’Hare (2014) compared estimates of the net undercount by single year of age for 2000 and 2010. He found that undercoverage for children aged 0 dropped from 2000 to 2010 and hypothesized that changes in instructions and coverage questions that used the term, “newborns and babies” might have resulted in the improvement for this population groups. Children aged 4 had the lowest add rates in both modes of about 2 per 1,000.

We see no differences by sex of the young child.

### 5.1.3 Race and Hispanic Origin

In the census, the concepts of race and Hispanic Origin are separate concepts. The census questionnaire asks respondents to select one or races and to indicate if they are of Hispanic origin. For this reason, people reporting as Hispanic may be of any race or of multiple races.

More than 50 percent of the CFU-added children in each data collection mode were White alone, and another 22 percent were Black alone. More than 31 percent of all CFU-added children on self-response forms were Hispanic (29 percent on NRFU forms). To some extent, these distributions reflect the general race and Hispanic origin distributions of young children.

In both modes, we see the lowest add rates for young children with a race of White alone and Asian alone. We observe higher CFU add rates for children with races of Black alone, American Indian or Alaska Native (AIAN) alone, and Native Hawaiian and Pacific Islander (NHPI) alone, especially on self-response questionnaires. The CFU add rate for young children with a race of NHPI alone on self-response forms was very high—15 out of every 1,000 enumerated young NHPI children. The CFU adds per 1,000 young Black children was almost six for self-response questionnaires and more than four for NRFU questionnaires. CFU added about five out of every 1,000 young children reporting a race of AIAN alone on both self-response and NRFU questionnaires. The CFU appears to have been effective in improving coverage for these race groups, which are known to have historical coverage problems.

We see a higher CFU add rate for Hispanic children on self-response forms (nearly five out of every 1,000). The CFU add rates on NRFU forms are similar for Hispanic and non-Hispanic children.

**Table 5. Race and Hispanic Origin of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Race</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
White alone	50.1	51.0	50.8	49.2	2.5	1.4	3.3	2.7
Black alone	21.7	22.2	21.9	23.0	5.9	3.3	4.2	3.8
AIAN alone	1.4	1.4	2.5	2.5	5.3	3.0	4.5	4.0
Asian alone	5.0	5.1	3.7	3.6	3.6	2.0	3.3	2.7
NHPI alone	0.7	0.7	0.4	0.4	15.4	7.7	4.1	3.6
SOR alone	14.4	11.9	12.0	12.6	6.8	3.0	2.9	2.6
2+ races	6.8	7.7	8.5	8.7	3.6	2.2	3.8	3.3
<b>Hispanic Origin</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Hispanic	31.5	27.8	28.7	29.5	4.7	2.2	3.3	2.9
Non-Hispanic	68.5	72.2	71.3	70.5	3.1	1.7	3.5	3.0

AIAN: American Indian or Alaska Native, NHPI: Native Hawaiian or Pacific Islander, SOR: Some Other Race

Source: Coverage Followup Analysis File – Special Tabulation

### 5.1.4 Relationship

Every census household has a householder. This is one of the people living at the address that owns or rents the housing unit. All other people report their relationship back to this householder. As shown in Table 6, a large proportion of the added young children were either biological children or grandchildren of the householder. Just slightly more than a quarter of the added children had a relationship other than biological or grandchild with nearly all of those being other relatives or unrelated children. When we look at the distributions for the adds resulting from the coverage probes only, we see similar results with a few noteworthy differences. In both modes, the relationship category with the greatest number of added children based on the coverage probes was grandchildren. This may indicate that a direct probe about young children is successful in reminding respondents to include grandchildren that they might otherwise omit.

We see striking differences in the CFU add rates by the relationship of the added child to the householder. In both modes, biological children had the lowest CFU add rate at less than two out of every 1,000 enumerations. In contrast, almost 30 out of every 1,000 enumerated unrelated children on self-response forms were CFU adds. On NRFU forms, the CFU add rate for unrelated children was also high; nearly 20 out of every 1,000 NRFU-enumerated unrelated children were included in the 2010 Census because of the CFU operation. Other relatives had high CFU add rates of 18 per 1,000 on self-response forms and 13 per 1,000 on NRFU forms. About nine out of every 1,000 enumerated grandchildren on self-response forms and 12 out of every 1,000 grandchildren on NRFU forms were CFU adds. These findings suggest that respondents may have some confusion about when to include young children who are unrelated, other relatives, or grandchildren. The add rates for the subset of adds prompted by one or more of the coverage probes show similar results. CFU found and corrected a higher proportion of coverage errors involving unrelated children and related children other than biological children, especially grandchildren.

**Table 6. Relationship of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Relationship to Householder	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Biological child	36.7	32.9	40.1	34.1	1.6	0.8	1.7	1.2
Adopted child	0.9	0.7	0.5	0.4	2.0	0.8	1.8	1.3
Stepchild	0.5	0.5	1.5	1.6	2.2	1.2	3.8	3.5
Grandchild	35.0	34.9	34.2	37.5	8.9	4.8	11.7	11.0
Other relative	13.0	12.7	13.3	14.9	18.1	9.5	13.1	12.6
Unrelated child	14.0	18.3	10.4	11.5	29.8	20.9	19.0	18.1

Source: Coverage Followup Analysis File – Special Tabulation

Figure 7 displays the CFU adds per 1,000 enumerations by census data collection mode for each relationship category.

**CFU Adds Per 1,000 Enumerations**

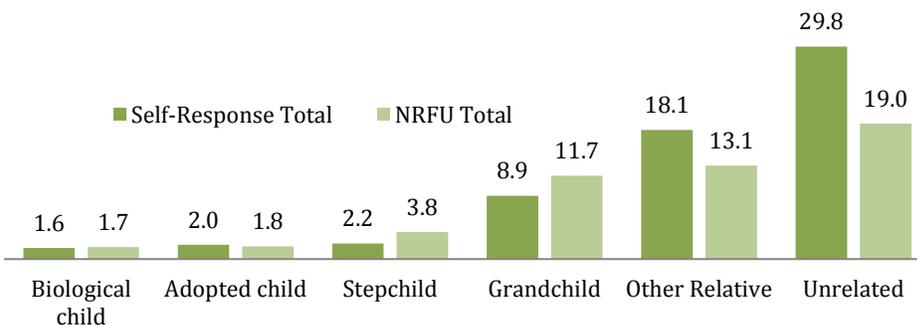


Figure 7. Coverage Followup Add Per 1,000 Enumerations by Relationship to Householder

Source: Coverage Followup Analysis File – Special Tabulation; 2010 Census – Special Tabulation

We see that in both modes, the CFU operation added unrelated children, children who were other relatives, and grandchildren at much higher rates than all other categories of children. In general, the add rates were highest in the self-response mode in each category but on NRFU forms, grandchildren had higher adds rates than found on self-response forms.

## 5.2 Household and Housing Characteristics

*What are the characteristics of the housing units, households, and householders that made an error involving a young child that CFU corrected?*

Tables 7 through 10 summarize the characteristics of the housing units and households with a young child added because of CFU. Tables 11 through 13 consider the demographic characteristics of the householders of children added in CFU. As in earlier tables, the adds on NRFU questionnaires include young children added or validated in CFU. Appendix C includes the detailed information supporting these tables.

As noted earlier, the CFU operation did not process CFU failures on NRFU forms with continuation forms. This means that CFU did not include any NRFU households with six or more listed people. For this reason, we expect the household size distributions to differ by mode. This limitation also influences other characteristics, but the impact is especially limiting for the household size result.

### 5.2.1 Housing Characteristics

The majority of CFU-added young children in both modes lived in single-unit structures. Most young children added to self-response forms lived in owner-occupied units while CFU added more children into renter households enumerated in NRFU. This is likely because of the higher proportion of renters that fall into NRFU.

Young children living in single-unit, multiunit, and trailers or other units share similar CFU add rates. We do not observe major differences in add rates by tenure although for NRFU enumerations, a slightly higher proportion of children living in owner-occupied households (compared with children living in renter-occupied households) were CFU adds (four out of every 1,000 versus three out of every 1,000). These results suggest that coverage errors that CFU corrected existed across housing unit types for both owners and renters.

**Table 7. Housing Characteristics of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Type of Unit</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Single Unit	76.2	75.4	66.6	65.4	3.4	1.8	3.7	3.1
Multiunit	18.2	18.9	25.9	26.8	3.4	1.9	3.1	2.8
Trailer and Other	5.7	5.7	7.5	7.8	3.8	2.1	3.1	2.8
<b>Tenure</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Owner-occupied	62.3	62.6	48.2	46.6	3.4	1.8	4.1	3.4
Renter-occupied	37.7	37.4	51.8	53.4	3.5	1.9	3.0	2.7

Source: Coverage Followup Analysis File – Special Tabulation

For most of the country, the United States Postal Service delivered questionnaires to residents who were asked to complete and return the questionnaire by mail. The Census Bureau called these areas, Mailout/Mailback areas. About 93 percent of young children added in CFU to self-response questionnaires were living in Mailout/Mailback areas, as were 91 percent of young children added in CFU to NRFU questionnaires. In Update/Leave and Urban Update/Leave areas, census enumerators updated the address list while delivering questionnaires for respondents to complete and return by mail. About 5 percent of young children added in CFU to self-response and to NRFU households lived in Update/Leave areas and about 2 percent lived in Urban Update/Leave areas. In some rural areas, census enumerators updated the address list and conducted in-person interviews. Less than 1 percent of all young children that

CFU added to NRFU questionnaires lived in these Update/Enumerate areas. Other types of enumeration areas primarily include military enumeration.

We do not see much variation in CFU add rates by type of enumeration area. We find slightly higher adds per 1,000 for children living in Urban Update/Leave areas when compared with children living in Mailout/Mailback areas.

**Table 8. Type of Enumeration Area of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Type of Enumeration Area	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE Coverage		NRFU Coverage		SELF-RESPONSE Coverage		NRFU Coverage	
	All Questions	All Questions	All Questions	All Questions	All Questions	All Questions	All Questions	All Questions
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Mailout/mailback	93.3	92.6	90.7	90.9	3.4	1.8	3.5	3.0
Update/leave	4.7	5.1	4.5	4.4	3.5	2.0	3.1	2.6
Urban Update/leave	1.7	0.6	1.9	1.9	4.3	2.5	3.2	2.7
Update/enumerate	NA	NA	2.4	2.3	NA	NA	3.4	2.8
Other	0.3	1.8	0.5	0.5	2.1	1.8	2.6	2.4

NA: Not Applicable

Source: Coverage Followup Analysis File – Special Tabulation

### 5.2.2 Household Characteristics

Referring to Table 9, about 46 percent of the young children that CFU added to a self-response questionnaire were living in households with seven or more people. CFU attempted to recontact large households to verify coverage and collect complete information for the individuals listed as person 7 through person 12. When we look at the distribution of the CFU adds resulting from the coverage probes (and thus, excluding the cases failing only for large household reasons) we see a fairly similar distribution. Young children living in large households still had the greatest number of CFU adds (36 percent of all CFU adds from coverage questions compared with 46 percent of CFU adds from all sources).

The household size distributions show that only 13 percent of all added young children on NRFU forms were in these largest households of seven or more people. We expected this low rate because NRFU questionnaires with a continuation form (six or more people) were ineligible for CFU. These 13 percent are households with five enumerated people on the initial roster and two names listed after the coverage probe.

The add rate of 13 children per 1,000 in self-response households with seven or more people is much greater than the add rates for children in all other size households. When we look at the add rates for children added based on one of the coverage questions, we still see high add rates for the largest households. Children living in six-person households had the highest add rates for NRFU households with an added child, but this is because CFU did not include households with continuation forms (those with six or more people). This is an important finding. It tells us that verifying coverage in large households reveals a high proportion of times when a householder failed to include a young child. Large households may reflect households that include extended families or nonrelatives.

**Table 9. Household Size of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Household Size	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
2-person household	2.3	2.2	4.8	5.0	3.0	1.6	3.3	2.9
3-person household	12.5	14.4	17.2	17.0	2.1	1.3	2.8	2.4
4-person household	15.5	18.2	23.0	20.7	1.6	1.0	2.7	2.1
5-person household	13.8	16.9	20.6	19.7	2.3	1.5	3.4	2.8
6-person household	10.3	12.6	20.9	23.2	3.2	2.1	6.7	6.4
7-or-more-person household	45.8	35.7	13.4	14.5	13.1	5.5	3.7	3.4

Source: Coverage Followup Analysis File – Special Tabulation

Table 10 looks at living arrangements of young children. Children living in related households, specifically husband-wife households, accounted for the greatest proportion of CFU adds in both modes. However, related households, especially husband-wife households, had the lowest add rates. Nonrelated households had a higher proportion of enumerations that included a CFU-added young child than related households. More than seven out of every 1,000 self-enumerated young children living in nonrelated households were added in CFU compared with about three per 1,000 in related households. Within related households, we see higher CFU add rates for “other” households and female householders with no husband present. About eight of every 1,000 young children enumerated in NRFU in “other” households came from CFU.

A key finding in Table 10 is the high proportion of added children into “complex” households. We defined complex households as all households other than 1) a single-parent householder with biological or adopted children or 2) a married-couple household with biological or adopted children.. Table 10 shows that, regardless of mode, the CFU operation added over 77 percent of all CFU-added children into a household that we defined as complex. Complex households were more likely to have a young child added in the 2010 CFU than households that were not complex. Not complex households had very low add rates (fewer than two young children added in CFU out of 1,000 total young children), suggesting that these types of households did not have many coverage errors involving children.

For both nonrelated and complex households, the proportion of adds in each mode is greater for those adds resulting from coverage questions only as compared to all adds. This may indicate that a direct coverage question about young children is effective in nonrelated and complex households.

**Table 10. Household Characteristics of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Household Type</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Related households	66.5	63.0	69.1	66.9	2.7	1.4	3.0	2.5
Male householder	40.8	37.4	36.7	35.8	2.4	1.2	3.1	2.6
Female householder	25.7	25.6	32.4	31.1	3.4	1.8	3.0	2.4
Nonrelated households	33.5	37.0	30.9	33.1	7.5	4.4	5.3	4.9
Male householder	19.1	20.9	16.7	18.1	8.3	4.9	5.7	5.2
Female householder	14.3	16.2	14.2	15.0	6.6	4.0	5.2	4.6
<b>Related Household Type</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Nonrelated households	33.5	37.0	30.9	33.1	7.5	4.4	5.3	4.9
Related households	66.5	63.0	69.1	66.9	2.7	1.4	3.0	2.5
Husband-wife	46.7	42.9	39.8	36.6	2.3	1.1	2.6	2.1
Female householder, no husband present	16.3	16.2	20.0	20.2	4.3	2.3	3.1	2.6
Other	3.6	3.9	9.3	10.1	7.0	4.1	8.2	7.5
<b>Complex Household*</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Not Complex	23.3	20.5	22.9	17.1	1.3	0.6	1.4	0.9
Complex	76.7	79.5	77.1	82.9	6.9	3.8	6.4	5.8

\*Not complex: 1) a single-parent householder with biological or adopted children or 2) a married-couple household with biological or adopted children. Complex: All other households.

Source: Coverage Followup Analysis File – Special Tabulation

### 5.2.3 Householder Characteristics

Tables 11, 12, and 13 summarize the characteristics of the householder associated with a CFU-added young child. The householder is someone who owns or rents the home, is generally the person listed first on the form, and is often the person completing the form or the person the enumerator is interviewing.

In both data collection modes, a majority of the CFU-added young children had male householders. Although the pattern is similar, the householder age distributions differ by mode. NRFU included a greater proportion of young householders. The sex and age distributions of householders with a CFU added young children because of one or more of the coverage probes are similar to the total results.

**Table 11. Householder Characteristics of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic of Householder	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Sex</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Male	59.9	58.3	53.4	53.9	3.1	1.6	3.6	3.1
Female	40.1	41.7	46.6	46.1	4.1	2.3	3.3	2.8
<b>Age</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
18-29	15.2	17.0	27.0	26.8	2.2	1.3	2.3	2.0
30-49	52.5	50.4	49.3	47.5	2.8	1.4	3.2	2.7
50+	32.3	32.6	23.7	25.6	9.6	5.2	11.4	10.6

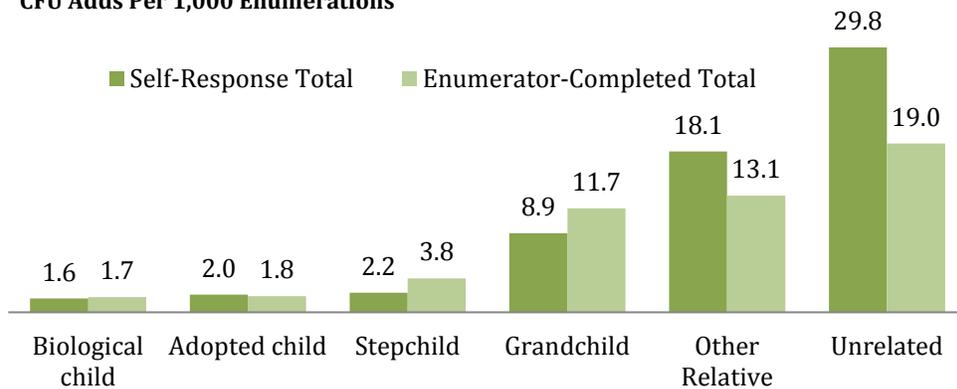
AIAN: American Indian or Alaska Native. NHPI: Native Hawaiian or Pacific Islander, SOR: Some Other Race

Source: Coverage Followup Analysis File – Special Tabulation

The age-of-householder results show that children living with the oldest householders (50 and older) have the highest add rates across modes. In self-response households, the CFU add rate for the oldest householders is almost five times greater than the rate for the youngest householders (nearly 10 of every 1,000 self-enumerated young children with a householder aged 50 or older compared with about two of every 1,000 self-enumerated young children with a householder age 18 to 29). The difference is even greater in NRFU households. CFU added over 11 of every 1,000 young children living in a household with a householder aged 50 or older compared with only about two out of every 1,000 young children living in a household with a householder age 18 to 29. This may indicate that householders who are grandparents are making errors in including their grandchildren. These results hold for the CFU adds resulting from the self-response coverage questions where the CFU add rate of five out of every 1,000 for children with the oldest householders and about one out of every 1,000 for children with either of the two younger householder age groups.

Figure 8 graphs the adds per 1,000 young children in the 2010 Census based on the age of the householder. The householders with an added young child who were age 50 or older had much higher add rates than the other age groups, especially those interviewed during NRFU. This indicates that during NRFU, the coverage probes successfully identified errors involving young children of these oldest respondents. It is very possible that these householders had grandchildren or children who were other relatives living with them who were brought to the respondent's attention by the coverage probe. These results may also indicate that the CFU was more successful at contacting and completing interviews with older respondents.

**CFU Adds Per 1,000 Enumerations**



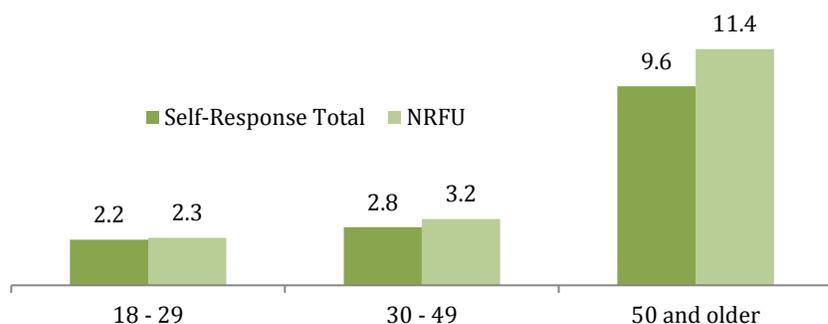


Figure 8. Coverage Followup Adds per 1,000 Enumerations by Age of Householder and Data Collection Mode  
Source: Coverage Followup Analysis File – Special Tabulation; 2010 Census – Special Tabulation

The distributions in Table 12 indicate that the householders of most of the young children added in CFU were White (55 percent of self-response CFU adds and 53 percent of NRFU CFU adds) and non-Hispanic (72 percent of self-response CFU adds and 75 percent of NRFU CFU adds).

We see higher add rates, however, for young children with householders who reported a race of Black alone, American Indian or Alaska Native (AIAN) alone, Asian alone, and Native Hawaiian or Pacific Islander (NHPI) alone when compared with young children with householders reporting a race of White alone. The CFU add rate for young children with NHPI self-response householders is much higher at 11 per 1,000. In self-response households, young children with Hispanic householders had higher add rates when compared with young children with non-Hispanic householders. We don't observe this result for CFU-added young children interviewed in NRFU.

**Table 12. Householder Characteristics of Coverage Followup Adds by Data Collection Mode – 2010 Census**

Characteristic of Householder	DISTRIBUTION OF ADDS				ADDS PER 1,000 ENUMERATIONS			
	SELF-RESPONSE		NRFU		SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions	All	Coverage Questions
<b>Race</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
White alone	54.8	57.0	52.9	50.9	2.6	1.5	3.2	2.7
Black alone	21.2	21.5	22.2	23.3	5.8	3.1	4.1	3.7
AIAN alone	1.4	1.3	2.7	2.7	5.6	2.7	4.5	4.0
Asian alone	5.3	5.3	4.1	4.0	3.6	1.9	3.3	2.7
NHPI alone	0.6	0.4	0.4	0.4	11.0	3.9	3.2	2.8
SOR alone	12.8	10.5	14.3	15.0	5.9	2.6	3.3	3.0
Two or more races	3.9	4.0	3.6	3.7	4.7	2.6	4.1	3.6
<b>Hispanic Origin</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>3.4</b>	<b>1.8</b>	<b>3.5</b>	<b>3.0</b>
Hispanic	28.3	24.0	24.8	25.7	4.7	2.1	3.1	2.8
Non-Hispanic	71.7	76.0	75.2	74.3	3.1	1.8	3.6	3.1

AIAN: American Indian or Alaska Native. NHPI: Native Hawaiian or Pacific Islander, SOR: Some Other Race  
Source: Coverage Followup Analysis File – Special Tabulation

Table 13 provides some information about the language spoken by the householder in the CFU interview. English-language interviews accounted for about 85 percent of the self-response households with a CFU-added young child. Spanish interviews accounted for another 14 percent. The rate of English interviews is slightly higher for householders with an NRFU interview.

**Table 13. Language Spoken in Households with Coverage Followup Adds - 2010 Census**

Language Spoken in Coverage Followup	DISTRIBUTION OF ADDS			
	SELF-RESPONSE		NRFU	
	All	Coverage Questions	All	Coverage Questions
<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
English	84.7	88.0	90.1	89.9
Spanish	14.4	11.3	9.2	9.5
Vietnamese	0.3	0.2	0.1	0.1
Chinese	0.2	0.2	0.1	0.1
Russian	0.1	0.1	0.1	0.1
Korean	0.1	0.1	0.0	0.0
Other or unknown	0.3	0.2	0.3	0.3

Source: Coverage Followup Analysis File – Special Tabulation

### 5.3 Results by Type of Coverage Issue

*Which type of coverage issue identified most of the young children that the CFU added?*

Responses to coverage questions on self-response and NRFU questionnaires determined if a case flowed into CFU. In addition, questionnaire edits and other coverage improvement sources could flag a case for CFU. Table 14 lists the set of potential coverage issues that resulted in a case being eligible for CFU. The table splits the results by data collection mode. The table shows two columns of results - when a coverage issue was the only reason that a case went to CFU (ONLY Issue) and when the issue was either the only issue or in combination with one or more other issues (ONLY Issue or IN COMBINATION with Other Issues).

The first five coverage issues under self-response are instances with a positive response by a respondent to an undercount or overcount question on the self-response questionnaire. This includes:

- **Undercount – children** - households with a yes response to the probe on “Children, such as newborn babies or foster children”
- **Undercount – relatives** - households with a yes response to the probe on “Relatives, such as adult children, cousins, or in-laws”
- **Undercount – nonrelatives** - households with a yes response to the probe on “Nonrelatives, such as roommates or live-in babysitters”
- **Undercount – temporarily** - households with a yes response to the probe on “People staying here temporarily”
- **Overcount – all probes** - households with a yes response to any of the self-response overcount probes

The last four coverage issues are specific coverage improvement sources.

- **Large household** - households with a population count that was blank or greater than six and households with six or more valid person records<sup>4</sup>
- **Low count discrepancy** - households with a population count that exceeded the number of valid person records
- **High count discrepancy** - households with a population count that was less than the number of valid person records
- **Administrative records** - households with possible missing people based on a comparison of rosters from the census and administrative records

A slightly different set of coverage issues existed for NRFU questionnaires, including:

- **Undercount - Babies or foster children** - households with a positive response to either the “Babies?” or the “Foster children?” probe
- **Undercount – Other relatives** - households with a positive response to the “Any other relatives?” probe
- **Undercount - Roommates or other nonrelatives** - households with a positive response to either the “Roommates?” or “Any other nonrelatives?” probe
- **Undercount – No Permanent place** - households with a positive response to the “How about anyone else staying here on April 1 who had no permanent place to live?” probe
- **Overcount – all probes** - households with a positive response to any of the NRFU overcount probes
- **Low count discrepancy** - households with a population count that exceeded the number of valid person records
- **High count discrepancy** - households with a population count that was less than the number of valid person records
- **Administrative records** - households with possible missing people based on a comparison of rosters from the census and administrative records

There was no large household edit since NRFU enumerators could add continuation forms to the paper questionnaire in order to enumerate all household members.

In Table 14, we summarize the number of young children added in CFU based on the issue or issues that identified the household. These results allow us to see the reasons that households with a CFU-added young child failed the coverage checks and flowed into CFU with suspected coverage shortcomings.

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<sup>4</sup> Person records required a minimum amount of information to be recognized as a valid person

**Table 14. Distribution of Added Young Children by Type of Coverage Issue and Data Collection Mode**

Type of Coverage Issue	ONLY Issue or IN COMBINATION with Other Issues		ONLY Issue	
	Number of Young Children Added in CFU	Percent of all Adds	Number of Young Children Added in CFU	Percent of all Adds
<b>Self-Response Questionnaires</b>	<b>47,144</b>	<b>100.0</b>	<b>47,144</b>	<b>100.0</b>
<b>Coverage Question-based Sources</b>				
Undercount – Children	11,628	24.7	8,113	17.2
Undercount – Relatives	3,032	6.4	1,439	3.1
Undercount - Nonrelatives	373	0.8	169	0.4
Undercount - People staying Temporarily	3,442	7.3	1,900	4.0
Overcount – all probes	9,483	20.1	1,668	3.5
<b>Other Sources</b>				
Large Household	16,906	35.9	4,634	9.8
Low Count Discrepancy	19,597	41.6	8,225	17.4
High Count Discrepancy	3,627	7.7	885	1.9
Administrative Records	1,294	2.7	1,115	2.4
<b>NRFU Questionnaires</b>	<b>22,239</b>	<b>100.0</b>	<b>22,239</b>	<b>100.0</b>
<b>Coverage Question-based Sources</b>				
Undercount – Babies or foster children	10,820	48.7	8,649	38.9
Undercount – Other relatives	6,006	27.0	4,955	22.3
Undercount – Roommates or other nonrelatives	800	3.6	633	2.8
Undercount - No permanent place	546	2.5	433	1.9
Overcount – all probes	2,426	10.9	564	2.5
<b>Other Sources</b>				
Low Count Discrepancy	4,771	21.5	2,741	12.3
High Count Discrepancy	455	2.0	302	1.4
Administrative Records	151	0.7	100	0.4

CFU: Coverage Followup

Source: Coverage Followup Analysis File – Special Tabulation

We see that a large proportion of the self-response CFU-added young children were in households that were sent to CFU because they had a low count discrepancy or were a large household. These two coverage issues were effective in identifying households with missing children. The CFU added about 12,000 young children to a self-response household that responded positively to the undercount question regarding children (alone or in combination with other issues). Without the coverage question on children, the 2010 Census would have erroneously omitted the 8,000 CFU-added young children from self-response households where the response to the undercount -children question was the only CFU coverage issue.

The undercount question on babies or foster children was the primary source for CFU adding young children to NRFU forms. This probe identified 39 percent of the added young children in this mode when it was the only issue and 49 percent of all added young children in combination with other issues.

It is interesting to note that CFU added young children to many households that entered CFU for very different reasons (e.g., overcount issues). This may be telling us that households with complex living arrangements have multiple coverage-related issues and young children are included in the confusion.

Figure 9 graphs the data for self-response households.

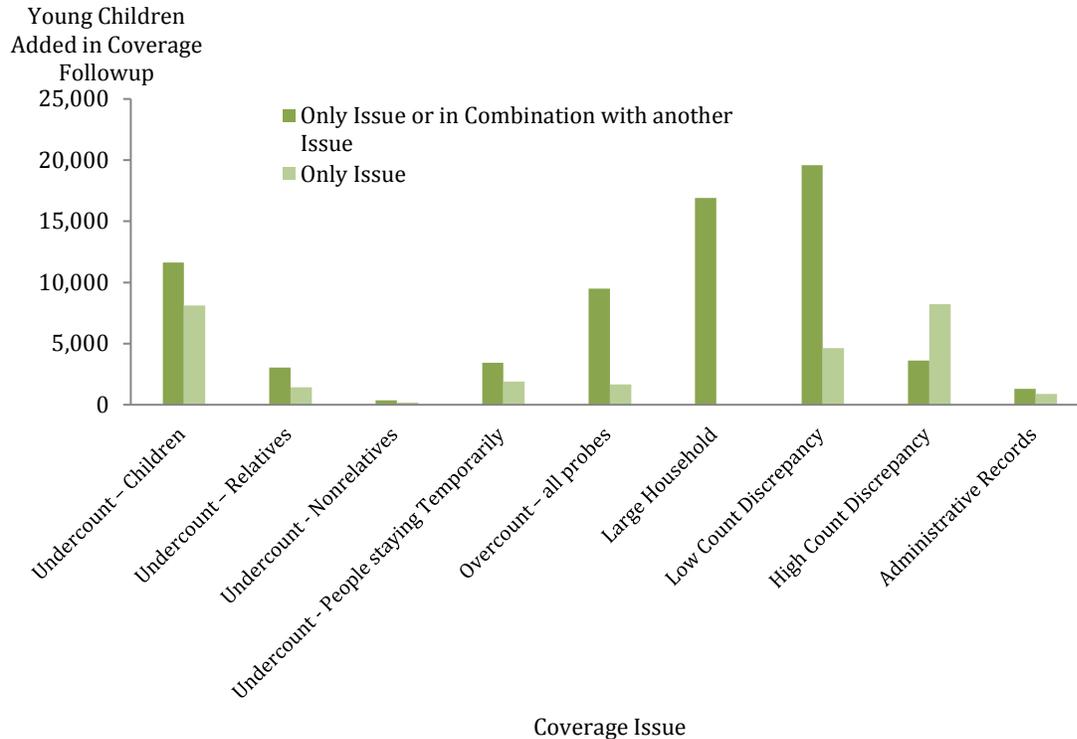


Figure 9. Coverage Issues Associated with Self-Response Households with CFU-Added Young Children  
 Source: Coverage Followup Analysis File – Special Tabulation

## 5.4 Results by CFU Question

*Which CFU question identified the young children that the CFU eventually added?*

Table 14 summarized the reasons that cases were eligible for CFU, specifically looking at the coverage issues that led to a CFU-added young child. It is important to recall, however, that once in CFU, all households received the same CFU interview. The CFU interview did not address the specific coverage issue. For example, the CFU interview did not probe for the child or nonrelative that prompted the initial failure. In a sense, the CFU started from scratch, trying to determine if the household made any type of coverage error. The CFU included the following seven undercount probes and we can look at how effective each of these probes were in identifying missed children.

- **Newborns or babies** - households with a positive response to the “Any newborns or babies?” probe
- **Foster children** - households with a positive response to the “Any foster children?” probe
- **Nonrelated children** - households with a positive response to the “Any nonrelated children?” probe
- **Other relatives** - households with a positive response to the “Any other relatives who lived or stayed here?” probe

- **Nonrelatives, roommates, or boarders** - households with a positive response to the “Any nonrelatives, roommates, or boarders?” probe
- **People who stay often** - households with a positive response to the “Anyone else who stayed here often?” probe
- **People with no other place to stay** - households with a positive response to the “Anyone else who had no other place to live?” probe

Table 15 identifies the specific coverage probe in the CFU operation that elicited the name of a young child that CFU added to the household. For the self-response mode, the table displays separate results for the young children added because of a coverage question. It is important to keep in mind that young children listed on the self-response questionnaire’s extended roster as person 7 through person 12 that CFU validated and completed data collection for would not be CFU adds because they were not added in CFU.<sup>5</sup>

Only a small subset of the CFU-added young children on NRFU questionnaires were children identified during the CFU operation (6,670 out of 22,239). Most of the children added to NRFU questionnaires were identified during the NRFU interview by the undercount questions and validated in CFU. This table excludes those children because a CFU interview probe was not the source of the add.

**Table 15. Distribution of Added Young Children by Coverage Followup Question**

Coverage Followup Probe	SELF-RESPONSE - All		SELF-RESPONSE - CQs		NRFU - All	
	Number of Adds	Percent of all Self-Response Adds	Number of Adds	Percent of CQs Self-Response Adds	Number of Adds	Percent of all NRFU Adds
<b>TOTAL</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>	<b>6,670</b>	<b>100.0</b>
Newborns or babies	25,903	54.9	14,462	57.2	3,332	50.0
Foster Children	3,893	8.3	3,122	12.3	129	1.9
Nonrelated Children	1,299	2.8	713	2.8	201	3.0
Other relatives	13,004	27.6	5,245	20.7	2,654	39.8
Nonrelatives, roommates or boarders	512	1.1	279	1.1	47	0.7
People who stay often	1,472	3.1	932	3.7	173	2.6
People with no other place to stay	282	0.6	176	0.7	28	0.4
Other	631	1.3	274	1.1	95	1.4
Unknown	148	0.3	84	0.3	11	0.2

CQs – Coverage Questions

Source: Coverage Followup Analysis File – Special Tabulation

In both modes, the “newborns or babies” probe was most effective in identifying young children initially omitted from the census questionnaire. The “other relative” probe was also very effective, especially for NRFU forms. It was responsible for identifying 28 percent of the young children that CFU added to self-response forms and nearly 40 percent of young children added on NRFU forms. This pattern holds for the subset of adds resulting from one of the coverage probes – the CFU probe about newborns and babies identified over 57 percent of the young children added in CFU from a coverage probe. The coverage question about foster children identified a greater proportion of the coverage probe CFU adds (12 percent) than the all sources CFU adds (8 percent). This may indicate that households that responded to the

<sup>5</sup> This would only be true if the extended roster included sufficient information for the child to be a valid person record.

coverage question had a question about foster children that the CFU probe was able to identify and address.

## DISCUSSION

The CFU operation flagged cases for followup based on information on the questionnaires that indicated possible inconsistencies (count discrepancies) or coverage problems. Responses to the undercount and overcount questions identified households that might have excluded or included someone in error. Self-response questionnaires with seven or more people also were eligible for CFU. The motivation for sending these large households to CFU was two-fold. While it was important to collect complete data for people 7 through 12, there were concerns that large households might also neglect to include some household members. We found that self-response questionnaires with seven or more people or with fewer people than expected based on the respondent-provided population count were the issues most likely to identify a self-response household with a missed child that CFU added. The undercount probe about children was also effective. For NRFU forms, the undercount probes about babies, foster children, and other relatives were the most effective reasons for CFU adding a young child.

It is important to keep in mind that while any of these reasons (plus administrative records) put a household in the CFU universe, CFU was not always successful in recontacting households to resolve potential coverage problems. In fact, CFU completed interviews for only about 56 percent of all eligible cases (60 percent of self-response cases and 35 percent of NRFU cases). This nonresponse problem limited the effectiveness of the 2010 CFU operation and may bias our results. It is reasonable to interpret the add rates in this report as highlighting areas where respondents made errors in completing their forms, but those rates may over-represent the households that CFU recontacted. Households that tend to be less cooperative and harder to contact may have made equal (or greater) numbers of errors that CFU never corrected because the Census Bureau could not reconnect with the household to review their response. Given the relatively high completion rates for self-response questionnaires, the authors feel that those results have fewer limitations. The NRFU results likely understate the possible coverage errors that exist in the hardest-to-count population groups.

While the largest number of added young children from the CFU operation were biological children, a closer look at the relationship data point to unrelated children and related children other than biological children as being most at risk of being erroneously left off of a census questionnaire and added in CFU. The high add rates for unrelated children, grandchildren, and other relatives suggest that respondents may fail to consider these children when counting the residents that they consider part of their household. The high add rate for young children with a householder over age 50 might signal a problem with householders including children who may be a generation removed. These results held when we restricted our analysis to the children that CFU added because of one of the coverage probes. This means that coverage questions can be effective in identifying households with correctable coverage errors.

The higher add rates for children living in nonrelated households, other related households, and complex households may indicate that errors involving children exist in households with multiple families and more complex living situations. Again, a householder may be uncertain about who to include. Young

children who live in these households appear to have a greater risk of coverage error. We also see much higher add rates for young children living in large households. Large households may be complex households or there may be other factors adding to the problems of correctly enumerating young children living in large households.

The relatively high CFU add rates for Black, American Indian or Alaska Native, and Native Hawaiian or Pacific Islander children indicates that CFU identified and corrected errors involving young children for these population groups. The CFU add rates, however, may be understated if these households were less likely to respond to a second contact by the Census Bureau.

The CFU followup probe about newborns and babies was the most successful probe that led to the identification of a young child that the respondent had erroneously omitted. This was expected. The probes about other relatives and foster children were also successful in prompting a household to identify a young child that they had initially omitted. Other, broader, probes might be equally effective and help identify errors with children age 1 and 2—the two age groups with the highest estimated undercounts.

## CONCLUSIONS

- **The 2010 CFU operation successfully added young children to the 2010 Census, but future CFU-like operations could be more effective.** It is very possible that CFU could have added many more children into households with suspected coverage problems if coverage issues had been resolved in real time. The 2020 Census use of an internet response option will allow undercount or overcount questions to be posed and resolved as part of the initial enumeration. This is a much better approach than mail-returned forms requiring a recontact and second interview. Even more important is the need to resolve possible coverage issues during NRFU, as these households tend to be much harder to recontact.
- **Some householders are confused about whether they should include young children who are not related to them as well as children who are grandchildren or other relatives.** The add rates for these relationship categories were much higher than the rates for biological, adopted, or stepchildren. Education and outreach, in combination with clearer instructions, can highlight the need to include children who may be part of an extended family or a roommate or nonrelative's family. We propose additional testing to develop improved instructions, and targeted outreach for householders who may be grandparents.
- **Children have a greater risk of undercoverage if they live in a complex or large household.** We found relatively high add rates for large households and households that were complex. The data indicate that some living arrangements put these young children at a greater risk of omission. Coverage questions may provide a vehicle to address these errors; outreach and education are other ideas that we should pursue. The complexity of living situations and the lack of understanding of census residence rules likely contribute to this undercoverage. The 2020 Census might benefit from

selected probes in complex households as a way to improve coverage of the youngest children, especially in an internet instrument. For example, the ACS or other data sources could be used to identify geographic areas with high concentrations of complex or large households. We could investigate mailing special materials to those areas to explain the need for complete enumeration of all household members, especially young children.

## NEXT STEPS

CFU did not successfully followup on all households that responded positively to one of the undercount probes involving children. CFU only completed about 56 percent of all CFU-eligible cases (U.S. Census Bureau 2012a). In addition, nearly 85 percent of the cases that CFU was able to recontact did not mention the original coverage issue during the CFU interview (U.S. Census Bureau 2012b). We plan to study the characteristics of all households that responded positively to one of the undercount probes involving children. Even without the CFU outcome, analyzing these data will tell us more about the types of households that had some level of confusion about including children on their questionnaires. This analysis will allow us to assess if the households with added children from CFU are similar to the households with self-identified coverage issues involving children.

We also want to look more closely at the data for complex households, using a detailed typology to try to determine if any specific complex living arrangements for young children resulted in noteworthy add rates in CFU. We want to also produce a few cross tabulations of these data. For example, it would be important to assess whether the national-level relationship, household size, and householder age results vary by race and Hispanic origin.

## REFERENCES

- Hogan, H., Cantwell, P., Devine, J., Mule, V., & Velkoff, V. (2013). "Quality and the 2010 Census," Population Research and Policy Review, DOI 10.1007/s11113-013-9278-5.
- O'Hare, W. P. (2014). Historical Examination of Net Coverage Error for Children in the U.S. Decennial Census. In *Center for Survey Measurement Study Series (Survey methodology #2014-02)*. Washington DC: U.S. Census Bureau.
- O'Hare, W. P., and Jensen, E. B. (2014). The Representation of Young Children in the American Community Survey, presentation at the ACS Users Group Conference, Washington, DC. May 29-30. Available on line at [https://acsdatacommunity.prb.org/p/2014\\_acs\\_conference](https://acsdatacommunity.prb.org/p/2014_acs_conference)
- O'Hare, W. (2015). The Undercount of Young Children in the U.S. Decennial Census. Springer Briefs in Population Studies.
- U.S. Census Bureau. (2010). DRIS – CFU Application, Coverage Follow Up Application (CFU), Application Design Document. Version 57, August 30, 2010. Pages 109-140

U.S. Census Bureau. (2011). Age and Sex Composition: 2010. 2010 Census Briefs.

U.S. Census Bureau. (2012a). 2010 Census Coverage Followup Assessment Report. 2010 Census Planning Memoranda Series No. 197.

U.S. Census Bureau. (2012b). 2010 Census Alternative Coverage Followup Questions and Design Evaluation Report. 2010 Census Planning Memoranda Series No. 246.

U.S. Census Bureau. (2014). Final Task Force Report on the Undercount of Young Children.

West, K. & Robinson, J.G. (1999). "What Do We Know about the Undercount of Children?" U.S. Census Bureau, Population Division working paper.

## **Glossary of Terms**

**Be Counted Form** – The 2010 Census provided “Be Counted Forms” for upon request to individuals who had not received a questionnaire and thought they were not counted in the census. These forms collected critical information to enumerate these people.

**Complex households** – Households other than householder parents with no spouse present or married couple households with biological or adopted children.

**Count Discrepancy** – Self-response and NRFU households with differences between the population count and the number of valid people were count discrepancies that were eligible for Coverage Followup.

**Coverage Followup** – A coverage improvement operation in the 2010 Census that recontacted households to review and correct possible coverage errors.

**Coverage Followup Add** – A person added during the Coverage Followup (CFU) operation. If CFU validated a person listed on the self-response questionnaire (including the extended roster) or after the NRFU undercount question, the person was not considered a CFU add.

**Enumerator-completed** – Households enumerated in the 2010 Census by an enumerator (in Nonresponse Followup, Update/Enumerate, Vacant/Delete Followup) and count imputation households.

**Extended household** – Households that contain a child who has a relative present who is not his or her parent or sibling, or who has a nonrelative present.

**Family household** – A household consisting of a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption.

**Fulfillment** – In the 2010 Census, a respondent could call to request census materials in different languages. The operation that “fulfilled” those requests was called, “Fulfillment.”

**Household** – All of the people who occupy a housing unit.

**Householder** – A person who owns or rents the housing unit.

**Large household** – A self-response questionnaire with a population count of seven or more was considered a large household and was eligible for Coverage Followup.

**Mailout/Mailback areas** – Areas that received a questionnaire from the U.S. Postal Service with instructions to complete and return the form by mail.

**Multigenerational households** – Family households consisting of three or more generations. These households include households with a householder, a parent or parent-in-law of the householder and a child of the householder; or a householder, a child of the householder, and a grandchild of the householder; or a householder, a parent or parent-in-law of the householder, a child of the householder, and a grandchild of the householder.

**Nonfamily household** – A householder living alone or with nonrelatives only.

**Nonrelated household** – A household that includes at least one person who is not related to the householder.

**Nonresponse Followup** – The operation that followed up on all households that failed to respond by mail to the 2010 Census.

**Own children** – Biological, adopted, and stepchildren of the householder.

**Related household** – A householder where all members are related to the householder.

**Self-response** – Households responding to the 2010 Census by mail or during Coverage Followup.

**Update/Enumerate areas** – Rural areas where census enumerators updated the address list and enumerated households.

**Update/Leave areas** – Primarily rural areas where census enumerators updated the address list and dropped off questionnaires for respondents to complete and return by mail.

**Urban Update/Leave areas** – Urban areas where census enumerators updated the address list and dropped off questionnaires for respondents to complete and return by mail.

Table 16. Demographic Characteristics of Self-Response Adds

Characteristic	All Sources – Self Response		Self-Response Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Relationship to Householder</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Biological child	17,299	36.7	8,332	32.9
Adopted child	405	0.9	165	0.7
Stepchild	230	0.5	126	0.5
Grandchild	16,496	35.0	8,821	34.9
Other relative	6,107	13.0	3,215	12.7
Unrelated child	6,607	14.0	4,628	18.3
<b>Age</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
0	20,814	44.1	12,643	50.0
1	8,239	17.5	4,033	15.9
2	7,045	14.9	3,402	13.5
3	5,850	12.4	2,812	11.1
4	5,196	11.0	2,397	9.5
<b>Race</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
White alone	23,611	50.1	12,901	51.0
Black alone	10,235	21.7	5,619	22.2
AIAN alone	643	1.4	359	1.4
Asian alone	2,339	5.0	1,281	5.1
NHPI alone	341	0.7	171	0.7
Some Other Race alone	6,768	14.4	3,005	11.9
Two or more races	3,207	6.8	1,951	7.7
<b>Hispanic Origin</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Hispanic	14,845	31.5	7,032	27.8
Non-Hispanic	32,299	68.5	18,255	72.2
<b>Sex</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Male	24,303	51.6	13,006	51.4
Female	22,841	48.4	12,281	48.6

Table 17. Self-Response Add Rates - Demographic Characteristics

Characteristic	All Sources – Self Response			Self-Response Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Relationship to Householder</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Biological child	11,015,827	17,299	0.16	8,332	0.08
Adopted child	201,531	405	0.20	165	0.08
Stepchild	106,530	230	0.22	126	0.12
Grandchild	1,856,118	16,496	0.89	8,821	0.48
Other relative	337,485	6,107	1.81	3,215	0.95
Unrelated child	221,525	6,607	2.98	4,628	2.09
<b>Age</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
0	2,682,496	20,814	0.78	12,643	0.47
1	2,701,065	8,239	0.31	4,033	0.15
2	2,776,162	7,045	0.25	3,402	0.12
3	2,802,419	5,850	0.21	2,812	0.10
4	2,776,874	5,196	0.19	2,397	0.09
<b>Race</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
White alone	9,349,419	23,611	0.25	12,901	0.14
Black alone	1,720,211	10,235	0.59	5,619	0.33
AIAN alone	120,856	643	0.53	359	0.30
Asian alone	642,387	2,339	0.36	1,281	0.20
NHPI alone	22,103	341	1.54	171	0.77
Some Other Race alone	990,942	6,768	0.68	3,005	0.30
Two or more races	893,098	3,207	0.36	1,951	0.22
<b>Hispanic Origin</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Hispanic	3,176,696	14,845	0.47	7,032	0.22
Non-Hispanic	10,562,320	32,299	0.31	18,255	0.17
<b>Sex</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Male	7,025,838	24,303	0.35	13,006	0.19
Female	6,713,178	22,841	0.34	12,281	0.18

Table 18. Demographic Characteristics of Adds on NRFU Forms

Characteristic	All Sources – NRFU		NRFU Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Relationship to Householder</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Biological child	8,908	40.1	6,519	34.1
Adopted child	120	0.5	86	0.4
Stepchild	326	1.5	303	1.6
Grandchild	7,611	34.2	7,163	37.5
Other relative	2,968	13.3	2,849	14.9
Unrelated child	2,306	10.4	2,198	11.5
<b>Age</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
0	7,296	32.8	6,573	34.4
1	4,475	20.1	3,868	20.2
2	4,106	18.5	3,493	18.3
3	3,405	15.3	2,779	14.5
4	2,957	13.3	2,405	12.6
<b>Race</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
White alone	11,304	50.8	9,403	49.2
Black alone	4,877	21.9	4,392	23.0
AIAN alone	557	2.5	487	2.5
Asian alone	832	3.7	693	3.6
NHPI alone	93	0.4	81	0.4
Some Other Race alone	2,677	12.0	2,401	12.6
Two or more races	1,899	8.5	1,661	8.7
<b>Hispanic Origin</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Hispanic	6,381	28.7	5,641	29.5
Non-Hispanic	15,858	71.3	13,477	70.5
<b>Sex</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Male	11,281	50.7	9,675	50.6
Female	10,958	49.3	9,443	49.4

Table 19. NRFU Add Rates - Demographic Characteristics

Characteristic	All Sources – NRFU			NRFU Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Relationship to Householder</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Biological child	5,270,792	8,908	0.17	6,519	0.12
Adopted child	67,438	120	0.18	86	0.13
Stepchild	86,424	326	0.38	303	0.35
Grandchild	651,303	7,611	1.17	7,163	1.10
Other relative	226,706	2,968	1.31	2,849	1.26
Unrelated child	121,367	2,306	1.90	2,198	1.81
<b>Age</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
0	1,252,459	7,296	0.58	6,573	0.52
1	1,269,016	4,475	0.35	3,868	0.30
2	1,313,128	4,106	0.31	3,493	0.27
3	1,309,445	3,405	0.26	2,779	0.21
4	1,279,982	2,957	0.23	2,405	0.19
<b>Race</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
White alone	3,429,129	11,304	0.33	9,403	0.27
Black alone	1,168,559	4,877	0.42	4,392	0.38
AIAN alone	122,823	557	0.45	487	0.40
Asian alone	254,861	832	0.33	693	0.27
NHPI alone	22,410	93	0.41	81	0.36
Some Other Race alone	924,192	2,677	0.29	2,401	0.26
Two or more races	502,056	1,899	0.38	1,661	0.33
<b>Hispanic Origin</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Hispanic	1,927,087	6,381	0.33	5,641	0.29
Non-Hispanic	4,496,943	15,858	0.35	13,477	0.30
<b>Sex</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Male	3,273,585	11,281	0.34	9,675	0.30
Female	3,150,445	10,958	0.35	9,443	0.30

Table 20. Housing Characteristics of Self-Response Adds

Characteristic	All Sources – Self Response		Self-Response Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Type of Unit</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Single Unit	35,909	76.2	19,054	75.4
Multunit	8,560	18.2	4,784	18.9
Trailer and Other	2,675	5.7	1,449	5.7
<b>Tenure</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Owner	29,361	62.3	15,831	62.6
Renter	17,783	37.7	9,456	37.4
<b>Type of Enumeration Area</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Mailout/mailback	43,994	93.3	23,412	92.6
Update/leave	2,195	4.7	1,281	5.1
Urban Update/leave	797	1.7	141	0.6
Other	158	0.3	453	1.8

Table 21. Self-Response Add Rates - Housing Characteristics

Characteristic	All Sources – Self Response			Self-Response Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Type of Unit</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Single Unit	10,558,963	35,909	0.34	19,054	0.18
Multunit	2,481,190	8,560	0.34	4,784	0.19
Trailer and Other	698,863	2,675	0.38	1,449	0.21
<b>Tenure</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Owner	8,654,572	29,361	0.34	15,831	0.18
Renter	5,084,444	17,783	0.35	9,456	0.19
<b>Type of Enumeration Area</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Mailout/mailback	12,849,043	43,994	0.34	23,412	0.18
Update/leave	628,895	2,195	0.35	1,281	0.20
Urban Update/leave	184,725	797	0.43	453	0.25
Other	76,353	158	0.21	141	0.18

Table 22. Housing Characteristics of Adds on NRFU Forms

Characteristic	All Sources NRFU		NRFU Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Type of Unit</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Single Unit	14,822	66.6	12,508	65.4
Multunit	5,751	25.9	5,119	26.8
Trailer and Other	1,666	7.5	1,491	7.8
<b>Tenure</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Owner	10,715	48.2	8,901	46.6
Renter	11,524	51.8	10,217	53.4
<b>Type of Enumeration Area</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Mailout/mailback	20,167	90.7	17,375	90.9
Update/leave	1,005	4.5	843	4.4
Urban Update/leave	432	1.9	372	1.9
Update/enumerate	528	2.4	433	2.3
Other	107	0.5	95	0.5

Table 23. NRFU Add Rates – Housing Characteristics

Characteristic	All Sources NRFU			NRFU Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Type of Unit</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Single Unit	4,040,391	14,822	0.37	12,508	0.31
Multunit	1,845,569	5,751	0.31	5,119	0.28
Trailer and Other	538,070	1,666	0.31	1,491	0.28
<b>Tenure</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Owner	2,606,305	10,715	0.41	8,901	0.34
Renter	3,817,725	11,524	0.30	10,217	0.27
<b>Type of Enumeration Area</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Mailout/mailback	5,769,694	20,167	0.35	17,375	0.30
Update/leave	324,459	1,005	0.31	843	0.26
Urban Update/leave	135,612	432	0.32	372	0.27
Update/enumerate	153,853	528	0.34	433	0.28
Other	40,412	107	0.26	95	0.24

Table 24. Household Characteristics of Self-Response Adds

Characteristic	All Sources – Self Response		Self-Response Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Household Size</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
2-person household	1,062	2.3	563	2.2
3-person household	5,876	12.5	3,642	14.4
4-person household	7,288	15.5	4,604	18.2
5-person household	6,501	13.8	4,265	16.9
6 –person household	4,842	10.3	3,190	12.6
7-or-more-person household	21,575	45.8	9,023	35.7
<b>Related Household Type</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Nonrelated households	15,783	33.5	9,361	37.0
Related households	31,361	66.5	15,926	63.0
Husband-wife	21,997	46.7	10,847	42.9
Female householder, no husband present	7,679	16.3	4,087	16.2
Other	1,685	3.6	992	3.9
<b>Household Type</b>	<b>47,144</b>	<b>99.4</b>	<b>25,287</b>	<b>100.0</b>
Related households	31,361	66.5	15,926	63.0
Male householder	19,226	40.8	9,459	37.4
Female householder	12,135	25.7	6,467	25.6
Nonrelated households	15,783	33.5	9,361	37.0
Male householder	9,026	19.1	5,276	20.9
Female householder	6,757	14.3	4,085	16.2
<b>Complex Household</b>	<b>47,144</b>	<b>99.4</b>	<b>25,287</b>	<b>100.0</b>
Not Complex	10,992	23.3	5,191	20.5
Complex	36,152	76.7	20,096	79.5

Table 25. Self-Response Add Rates - Household Characteristics

Characteristic	All Sources – Self Response			Self-Response Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Household Size</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
2-person household	348,429	1,062	0.30	563	0.16
3-person household	2,819,501	5,876	0.21	3,642	0.13
4-person household	4,569,846	7,288	0.16	4,604	0.10
5-person household	2,857,258	6,501	0.23	4,265	0.15
6 –person household	1,502,214	4,842	0.32	3,190	0.21
7-or-more-person household	1,641,768	21,575	1.31	9,023	0.55
<b>Related Household Type</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Nonrelated households	2,109,639	15,783	0.75	9,361	0.44
Related households	11,629,377	31,361	0.27	15,926	0.14
Husband-wife	9,590,639	21,997	0.23	10,847	0.11
Female householder, no husband present	1,798,457	7,679	0.43	4,087	0.23
Other	240,281	1,685	0.70	992	0.41
<b>Household Type</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Related households	11,629,377	31,361	0.27	15,926	0.14
Male householder	8,094,094	19,226	0.24	9,459	0.12
Female householder	3,535,283	12,135	0.34	6,467	0.18
Nonrelated households	2,109,639	15,783	0.75	9,361	0.44
Male householder	1,087,466	9,026	0.83	5,276	0.49
Female householder	1,022,173	6,757	0.66	4,085	0.40
<b>Complex Household</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Not Complex	8,462,806	10,992	0.13	5,191	0.06
Complex	5,276,210	36,152	0.69	20,096	0.38

Table 26. Household Characteristics of Adds on NRFU Forms

Characteristic	All Sources NRFU		NRFU Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Household Size</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
2-person household	1,072	4.8	950	5.0
3-person household	3,832	17.2	3,243	17.0
4-person household	5,117	23.0	3,949	20.7
5-person household	4,591	20.6	3,763	19.7
6 –person household	4,651	20.9	4,444	23.2
7-or-more-person household	2,976	13.4	2,769	14.5
<b>Related Household Type</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Nonrelated households	6,882	30.9	6,331	33.1
Related households	15,357	69.1	12,787	66.9
Husband-wife	8,847	39.8	6,994	36.6
Female householder, no husband present	4,446	20.0	3,867	20.2
Other	2,064	9.3	1,926	10.1
<b>Household Type</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Related households	15,357	69.1	12,787	66.9
Male householder	8,154	36.7	6,849	35.8
Female householder	7,203	32.4	5,938	31.1
Nonrelated households	6,882	30.9	6,331	33.1
Male householder	3,723	16.7	3,460	18.1
Female householder	3,159	14.2	2,871	15.0
<b>Complex Household</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Not Complex	5,103	22.9	3,260	17.1
Complex	17,136	77.1	15,858	82.9

Table 27. NRFU Add Rates - Household Characteristics

Characteristic	All Sources NRFU			NRFU Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Household Size</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
2-person household	322,529	1,072	0.33	950	0.29
3-person household	1,351,272	3,832	0.28	3,243	0.24
4-person household	1,893,072	5,117	0.27	3,949	0.21
5-person household	1,356,773	4,591	0.34	3,763	0.28
6-person household	693,469	4,651	0.67	4,444	0.64
7-or-more-person household	806,915	2,976	0.37	2,769	0.34
<b>Related Household Type</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Nonrelated households	1,286,712	6,882	0.53	6,331	0.49
Related households	5,137,318	15,357	0.30	12,787	0.25
Husband-wife	3,410,963	8,847	0.26	6,994	0.21
Female householder, no husband present	1,469,939	4,446	0.30	3,867	0.26
Other	256,416	2,064	0.80	1,926	0.75
<b>Household Type</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Related households	5,137,318	15,357	0.30	12,787	0.25
Male householder	2,662,793	8,154	0.31	6,849	0.26
Female householder	2,474,525	7,203	0.29	5,938	0.24
Nonrelated households	1,286,712	6,882	0.53	6,331	0.49
Male householder	662,558	3,723	0.56	3,460	0.52
Female householder	624,154	3,159	0.51	2,871	0.46
<b>Complex Household</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Not Complex	3,707,830	5,103	0.14	3,260	0.09
Complex	2,716,200	17,136	0.63	15,858	0.58

Table 28. Householder Characteristics of Self-Response Adds

Characteristic	All Sources – Self Response		Self-Response Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Sex of householder</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Male	28,252	59.9	14,735	58.3
Female	18,892	40.1	10,552	41.7
<b>Age of householder</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
18-29	7,186	15.2	4,306	17.0
30-49	24,735	52.5	12,740	50.4
50+	15,223	32.3	8,241	32.6
<b>Race of householder</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
White alone	25,846	54.8	14,410	57.0
Black alone	10,004	21.2	5,440	21.5
AIAN alone	675	1.4	323	1.3
Asian alone	2,489	5.3	1,348	5.3
NHPI alone	274	0.6	98	0.4
Some Other Race alone	6,027	12.8	2,657	10.5
Two or more races	1,829	3.9	1,011	4.0
<b>Hispanic Origin of Householder</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
Hispanic	13,337	28.3	6,071	24.0
Non-Hispanic	33,807	71.7	19,216	76.0
<b>Language Spoken in CFU</b>	<b>47,144</b>	<b>100.0</b>	<b>25,287</b>	<b>100.0</b>
English	39,910	84.7	22,242	88.0
Spanish	6,793	14.4	2,856	11.3
Vietnamese	134	0.3	49	0.2
Chinese	101	0.2	55	0.2
Russian	61	0.1	15	0.1
Korean	25	0.1	15	0.1
Other or unknown	120	0.3	55	0.2

Table 29. Self-Response Add Rates – Householder Characteristics

Characteristic	All Sources – Self Response			Self-Response Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Sex of householder</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Male	9,181,560	28,252	0.31	14,735	0.16
Female	4,557,456	18,892	0.41	10,552	0.23
<b>Age of householder</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
18-29	3,278,772	7,186	0.22	4,306	0.13
30-49	8,866,577	24,735	0.28	12,740	0.14
50+	1,593,667	15,223	0.96	8,241	0.52
<b>Race of householder</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
White alone	9,761,182	25,846	0.26	14,410	0.15
Black alone	1,739,722	10,004	0.58	5,440	0.31
AIAN alone	119,506	675	0.56	323	0.27
Asian alone	691,600	2,489	0.36	1,348	0.19
NHPI alone	24,931	274	1.10	98	0.39
Some Other Race alone	1,015,044	6,027	0.59	2,657	0.26
Two or more races	387,031	1,829	0.47	1,011	0.26
<b>Hispanic Origin of Householder</b>	<b>13,739,016</b>	<b>47,144</b>	<b>0.34</b>	<b>25,287</b>	<b>0.18</b>
Hispanic	2,859,723	13,337	0.47	6,071	0.21
Non-Hispanic	10,879,293	33,807	0.31	19,216	0.18

Table 30. Householder Characteristics of Adds on NRFU Forms

Characteristic	All Sources NRFU		NRFU Coverage Questions	
	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU	Number of Young Children Added in CFU	Percent of all Young Children Added in CFU
<b>Sex of householder</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Male	11,877	53.4	10,309	53.9
Female	10,362	46.6	8,809	46.1
<b>Age of householder</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
18-29	5,994	27.0	5,131	26.8
30-49	10,968	49.3	9,089	47.5
50+	5,277	23.7	4,898	25.6
<b>Race of householder</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
White alone	11,759	52.9	9,736	50.9
Black alone	4,937	22.2	4,457	23.3
AIAN alone	592	2.7	520	2.7
Asian alone	901	4.1	758	4.0
NHPI alone	82	0.4	74	0.4
Some Other Race alone	3,172	14.3	2,870	15.0
Two or more races	796	3.6	703	3.7
<b>Hispanic Origin of Householder</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
Hispanic	5,520	24.8	4,906	25.7
Non-Hispanic	16,719	75.2	14,212	74.3
<b>Language Spoken in CFU</b>	<b>22,239</b>	<b>100.0</b>	<b>19,118</b>	<b>100.0</b>
English	20,048	90.1	17,187	89.9
Spanish	2,046	9.2	1,817	9.5
Vietnamese	24	0.1	16	0.1
Chinese	31	0.1	26	0.1
Russian	17	0.1	17	0.1
Korean	8	0.0	3	0.0
Other or unknown	65	0.3	52	0.3

**Appendix C**  
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Table 31. NRFU Add Rates - Householder Characteristics

Characteristic	All Sources NRFU			NRFU Coverage Questions	
	Number of Young Children in 2010 Census	Number of Young Children Added in CFU	CFU Add Rate (%)	Number of Young Children Added in CFU	CFU Add Rate (%)
<b>Sex of householder</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Male	3,325,351	11,877	0.36	10,309	0.31
Female	3,098,679	10,362	0.33	8,809	0.28
<b>Age of householder</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
18-29	2,562,815	5,994	0.23	5,131	0.20
30-49	3,398,001	10,968	0.32	9,089	0.27
50+	463,214	5,277	1.14	4,898	1.06
<b>Race of householder</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
White alone	3,628,444	11,759	0.32	9,736	0.27
Black alone	1,199,461	4,937	0.41	4,457	0.37
AIAN alone	130,467	592	0.45	520	0.40
Asian alone	275,907	901	0.33	758	0.27
NHPI alone	25,985	82	0.32	74	0.28
Some Other Race alone	969,333	3,172	0.33	2,870	0.30
Two or more races	194,433	796	0.41	703	0.36
<b>Hispanic Origin of Householder</b>	<b>6,424,030</b>	<b>22,239</b>	<b>0.35</b>	<b>19,118</b>	<b>0.30</b>
Hispanic	1,776,239	5,520	0.31	4,906	0.28
Non-Hispanic	4,647,791	16,719	0.36	14,212	0.31