



2020 Post-Enumeration Survey Update

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Census Scientific Advisory Committee

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Outline

1. Design Changes in Response to COVID-19
2. Early Results
3. Correlation Bias Methodology

Design Changes in Response to COVID-19

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Revised field milestone schedule

| Operation | Original Dates | | New Dates | |
|----------------------------|----------------|-----------|------------|------------|
| | Start | Finish | Start | Finish |
| Independent Listing | 1/16/2020 | 3/13/2020 | 1/16/2020 | 3/20/2020 |
| Initial HU Followup | 5/6/2020 | 6/19/2020 | 7/30/2020 | 9/21/2020 |
| Person Interview | 6/17/2020 | 9/18/2020 | 9/23/2020 | 1/11/2021 |
| Person Interview Reopening | | | 2/11/2021 | 3/20/2021 |
| Person Followup | 2/3/2021 | 3/26/2021 | 6/14/2021 | 8/12/2021 |
| Final HU Followup | 5/19/2021 | 6/18/2021 | 10/25/2021 | 11/30/2021 |

Operations in blue are complete.

Impact of delays on field interviews

Increased recall error. People misreport where they were living on Census Day.

Item nonresponse. People don't remember where they were living on Census Day, so they give incomplete information. Or, they leave some people off the Census Day roster. Or they don't report all the addresses where the household could have been counted on Census Day. Delays result in more movers without knowledge of the Census Day household.

Unit nonresponse. Fewer people respond to the Person Interview because impact of Census campaigns diminishes and because people don't want to open their doors to talk to a stranger during a pandemic.

Report Releases

Release 1

- National demographic estimates of net coverage of people
- National demographic estimates of components of coverage for people
- Tables can be downloaded from the Census Bureau website

Release 2

- State estimates for people
- More detailed national estimates for people
- All housing unit coverage estimates

PES Changes

- Continuing to focus on quality
- Modifying PES field procedures to promote social distancing
- Providing event history calendars to field operations
- Adding year reference to all Person Followup questions with dates
- Adding additional review of PES data and tabulations
- Adding a source and accuracy statement to PES reports in addition to methodological reports and assessments
- Conducted some Person Interviews by phone
- Allowed more Initial Housing Unit Followup interviews by observation
- Adding nonresponse bias report with sensitivity analysis
- Reopening Person Interview
- Investigating “Any Address Matching”

Early Results

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Block Sample Results

| | 50 States and DC | Puerto Rico |
|--------------------|------------------|-------------|
| Frame | 5,152,000 | 44,000 |
| Initial Sample | 9,800 | 400 |
| Final Block Sample | 8,200 | 300 |

Unweighted Initial Housing Unit Sample Results

| | 50 States and DC | Puerto Rico |
|---------------------|------------------|-------------|
| Independent Listing | 513,000 | 17,500 |
| In-Scope | 484,000 | 16,000 |
| Linked to Census | 461,000 | 13,000 |

Universe is p-sample housing units in final block sample

Some links will be broken during final housing unit matching.

In-scope excludes duplicates, geocoding errors, and group quarters.

Linked to Census do not include addresses with an unresolved match status.

Person Interview Weighted Response Rates

| | 50 States and DC | Puerto Rico |
|---|------------------|-------------|
| Completed Interview with Household Member | 56.5% | 59.3% |
| Partial Interview with Household Member | 9.0% | 5.1% |
| Completed Interview with Proxy | 1.9% | 2.7% |
| Partial Interview with Proxy | 5.7% | 3.4% |
| Noninterview | 16.1% | 3.1% |
| Vacant | 8.6% | 21.3% |
| Not a HU | 2.4% | 5.3% |

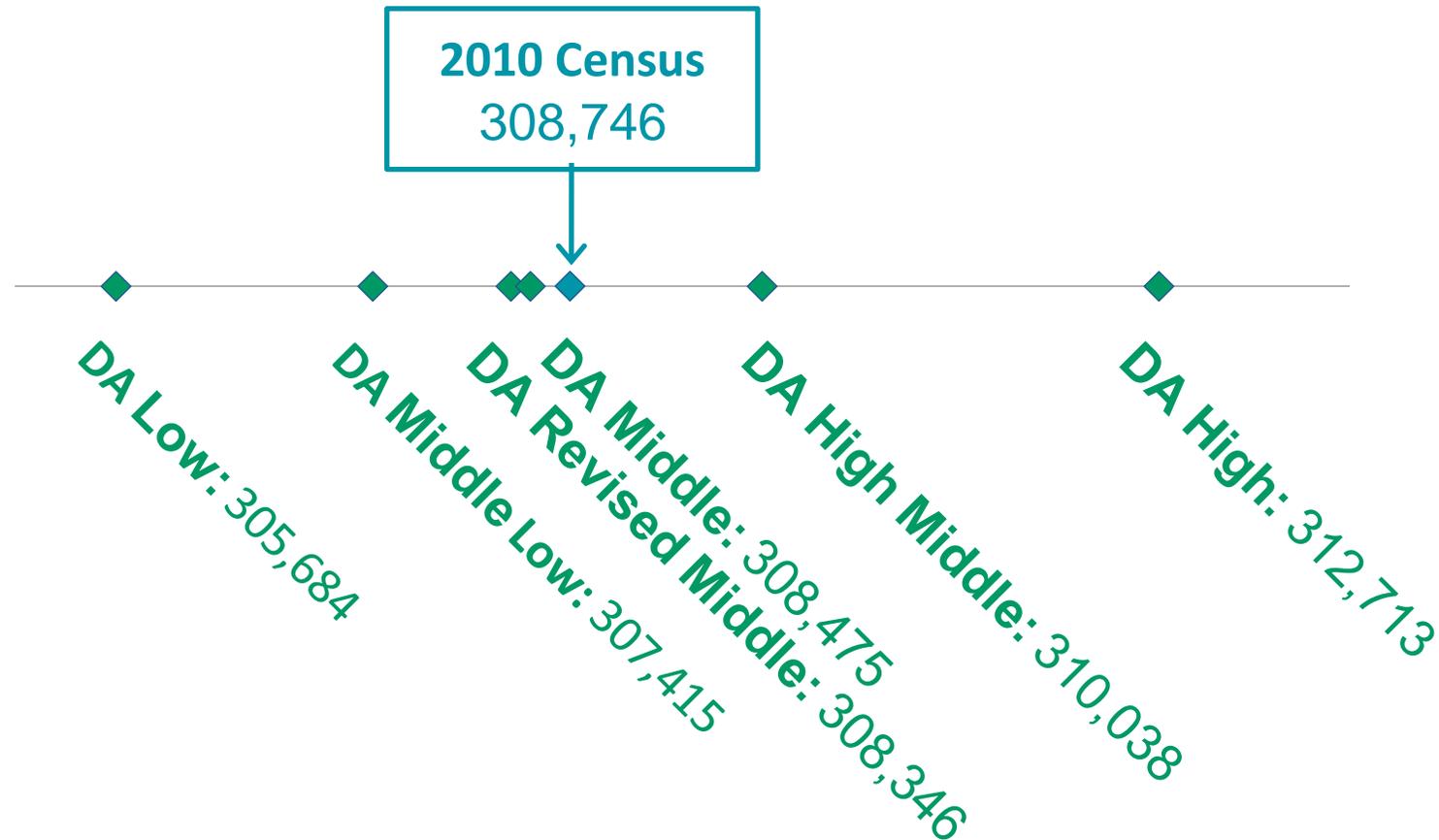
Results do not include responses from the Person Interview Reopening

Correlation Bias Methodology

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2010 Census and Demographic Analysis (in Thousands)



Correlation Bias Formulas

$$DSE = \sum_{j \in C} \pi_{dd(j)} \times \frac{\pi_{ce(j)}}{\pi_{m(j)}} \times CB_j$$

$$CB_j = \frac{r_{DA,k}}{r_{PREDSE,k}}$$

Where $r_{DA,k}$ and $r_{PREDSE,k}$ are the modified DA and PES sex ratios, respectively, for age-race group k.

Past Sex Ratios

| Age Group | 2010 | | | | 2000 | | | |
|-----------|-------|------|-----------|------|--------------------|------|--------------------|------|
| | Black | | Non-Black | | Black | | Non-Black | |
| | CCM | DA | CCM | DA | A.C.E. Revision II | DA | A.C.E. Revision II | DA |
| 18-29 | 0.89 | 0.94 | 1.03 | 1.03 | 0.83 | 0.90 | 1.05 | 1.04 |
| 30-49 | 0.81 | 0.91 | 0.99 | 1.02 | 0.81 | 0.89 | 0.99 | 1.01 |
| 50+ | 0.76 | 0.80 | 0.88 | 0.89 | 0.72 | 0.76 | 0.85 | 0.86 |

Table 1. Sex Ratios Prior to Correlation Bias Adjustment

2000 data source: Shores (2002).

Standard errors for the CCM sex ratios are in parentheses below the estimate. Standard errors are not available for the A.C.E. Revision II estimates.

The CCM and A.C.E. Revision II sex ratios are those prior to the correlation bias adjustment.

The DA sex ratios were calculated using the modified DA estimates, as described in the text.

QUESTIONS?

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Backup Slides

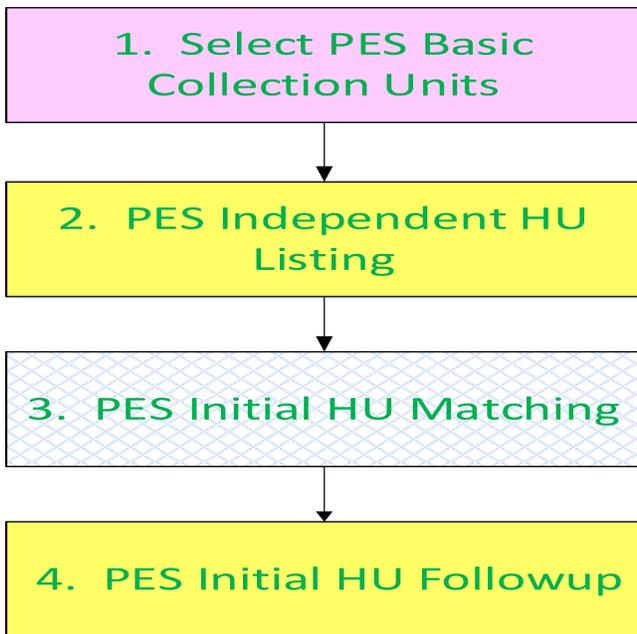
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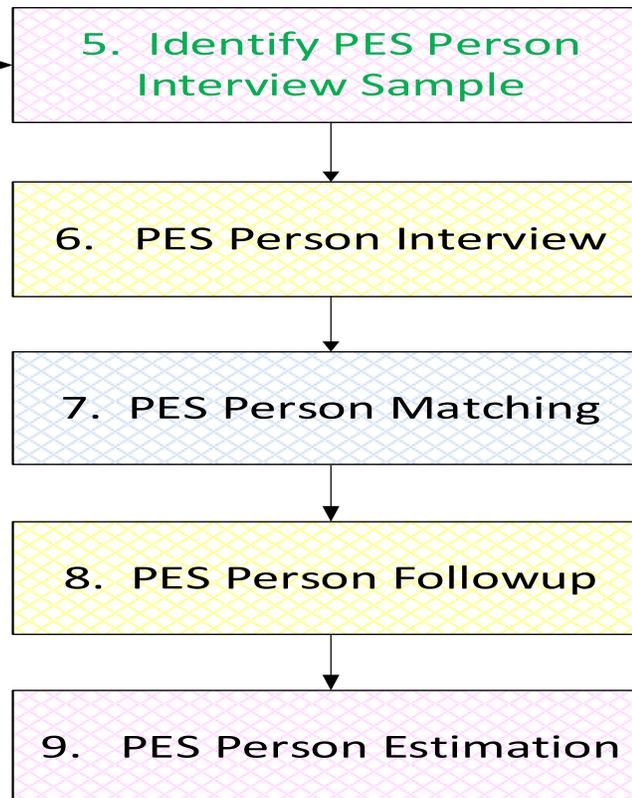
2020 PES Activities

Sampling and Estimation - Pink
Field Operations - Yellow
Matching Operations - Blue

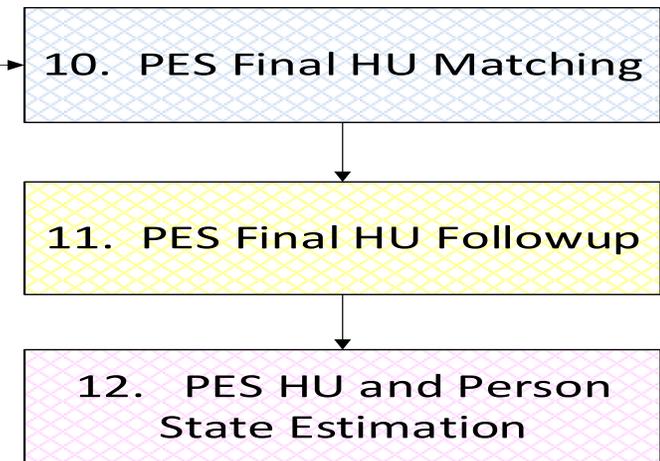
Initial Housing Unit Operations



Person Operations



Final Housing Unit Operations



How PES Estimates are Created

| | | Enumerated in PES? | |
|-----------------------|-----|-----------------------------------|-----------------------------------|
| | | YES | NO |
| Enumerated in Census? | YES | Found in Both | Missing in PES Found in Census |
| | NO | Missing in Census Found in PES | Missing in Both |