CCM Operations

Tamara Adams, U.S. Census Bureau
CCM – Census Coverage Measurement

• Provides estimates of coverage error for the housing unit population and for housing units:
  – Net error
  – Component Error
• Excludes group quarters and remote Alaska
• Includes Puerto Rico
Two Samples

• Independent CCM (P) Sample
  – Sample of housing units and persons obtained independently from the census.
  – Provides information about misses

• Census (E) Sample
  – Sample of housing units and persons in the census in CCM sample areas
  – Provides information about erroneous enumerations
How to Handle People who Move

• What if people move between Census Day and when CCM interviews?
  – Choice – interview/match people who move in or people who move out?
  – CCM 2010 interviewed and matched inmovers to get self-reported interview data
  – More difficult to match since we need to match to where they were on Census Day
CCM Operational Flow

- CCM Independent Listing
  - Aug-Dec 2009

- CCM Initial Housing Unit Matching and Followup
  - Jan-May 2010

- CCM Person Interview
  - Aug-Oct 2010

- Census Person Rosters

- CCM Person Matching and Followup
  - Oct 2010-Apr 2011

- CCM Final Housing Unit Matching and Followup
  - Mar-June 2011
2010 Sample Activities

• Cluster Sampling
  – Create block clusters – about 30 units
  – Select block clusters

• Housing Unit Sampling
  – Identify Independent (P) CCM sample
  – Identify Census (E) Sample
Independence of CCM Operations

• Theory
  – Responding to the survey must be independent of responding to the census

• Application
  – Conduct CCM operations independently of census
Independent Listing

• Goal – to create a complete and independent list of potential housing units within each sample block cluster
• Paper listing book and paper maps
### Independent Listing Results

<table>
<thead>
<tr>
<th>Clusters</th>
<th>11,835</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Units Listed</td>
<td>892,976</td>
</tr>
<tr>
<td>Schedule</td>
<td>Aug-Dec 2009</td>
</tr>
</tbody>
</table>
Initial Housing Unit Operations – Goal

• Assign HU status and match status to all CCM units and census units in the block cluster

• Uses
  – Universe for sampling for later sampling operations
  – HU estimation – closer to Census Day for better HU information

• Dates – Jan-May 2010
Person Interview (PI)

- Goal – Create an independent roster in P-sample and selected census units
  - Where **should** the person be counted?
  - Where **could** the person be counted?
- CAPI on laptops
Person Interview Workload and Results

- Number of addresses sent to field – 186,766
- Response rate – 98.4%
- Number of other addresses collected – 60,590
- Proxy rate – 4.6%
- Schedule – Aug - Oct 2010
Information Collected in Person Interview

• Roster – people who lived here now and those who have moved out since April 1
• Demographics
• Other places the people could have been counted
“Cast a Wide Net”

• Capture anyone who may be attached to a unit
  – Movers
  – People with other places to live
• Use roster probes to collect people tenuously attached or likely missed
• Determine in post-processing who should be counted at the unit
Person Operations – Goal

- Assign a final match, residence, and enumeration status to each sample person
- Search for matches and duplicates
  - Computer
  - Clerical
- Dates – October 2010-April 2011
Searching for Matches and Duplicates

– Sample block cluster
– Nationwide computer match
– Clerical search at other residences provided by respondent
  - Must geocode the addresses to census geography to search for matches
Final Housing Unit Operations – Goal

- Assign HU status and match status to P-sample and E-sample units
- Focuses on changes in census address list since initial housing unit operations
- Used for HU estimation
- Mirrors the Initial Housing Unit Operations
- Dates – March – June 2011
Data for Estimation

- CCM (P) Sample matching and duplication results
- Census (E) Sample matching and duplication results
- Persons and Housing Units
2010 Assessments

• Assessments
  – Every operation
  – Documents the results of the operation and lessons learned.

• Evaluations
  – Recall Bias Study
  – Investigation of Methods to Evaluate the Group Quarters Populations
2010 CCM Done!!

- Let’s get ready for 2020!
Thank you

Contact information:

tamara.s.adams@census.gov