

2020 Census Program Management Review

Nonresponse and Administrative Records Research

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Objectives

Overall

- To design a more cost effective operation for enumerating non-responding housing units by reducing workload, minimizing contacts, and streamlining field operations while continuing to deliver high-quality data.

Major Cost Drivers

- NRFU workload
 - 2010: 47,235,198 cases
- Field productivity
 - 2010: 1.05 cases per hour
- Mileage per case
 - 2010: 5.05 miles per case

Objectives

Specifically

- Workload reduction: Research the use of administrative records to reduce the workload for nonresponse followup operations
- Minimizing contacts: Research the use of adaptive design principles (including reduced contact attempts) to increase the productivity of field staff during nonresponse followup operations
- Streamlining Field Operations: Research reengineering field operations (such as dynamic case assignment and routing) to increase the productivity of field staff during nonresponse followup operations

2014 Census Test

- Alternative contact strategies
 - Fixed number of contacts
 - Variable number of contacts
- Reduction of workload using administrative records
 - Types of cases removed (unoccupied including vacant and deleted units; occupied)
 - Timing of removal of cases (before any visits; after 1 visit)
- Prioritization of cases
- Preliminary comparison of cost savings using alternative approaches

2015 Testing Activities

- Variable number of contact attempts
 - By geography, response rates, administrative records coverage
- Workload reduction
 - Types of cases
 - Timing of removal
- Prioritization of cases
- Dynamic case management
- Routing
- Refined costs savings analysis (geographic variability)

Design Decisions for 2015

- Operational design for administrative records usage strategy
 - Data sets to construct composite
 - Types of cases to remove from field workload
 - Number of contact attempts for cases with good administrative records
 - Imputation methodology (count and characteristics)

Design Decisions for 2015

- Adaptive design for contact strategies, dynamic case management and routing strategy
 - Maximum number of contact attempts by housing unit
 - Possible use of centralized telephone operation to contact non-responding housing units
 - Methodology for assigning cases to enumerators

Design Decisions for 2015

- Improve the management of field enumeration by streamlining and automating operations and more efficiently planning and controlling field activities
 - Manage cases with associated business rules and technology (e.g., use of automation and case routing)
 - Determine the roles and responsibilities within the field structure
 - Consolidate field operations (e.g., combined/reconceptualized operations and staff activities)
 - Determine the field structure (e.g., number and size of office and work force)

Key Activities/Milestones

Completion Date	Title	Impact
December 2013	Successful implementation of adaptive design strategies in the 2013 Census Test	Provided first operational test of Adaptive Design features that are a prominent part of the NRFU panels included in the 2014 Census Test. Successful implementation of adaptive design strategies greatly reduced the risk in the 2014 Census Test of using field operations that had not been field tested previously.
January 2014	Start NRFU Design and Operations team	Allows for the consolidated management of the implementation of the various NRFU research strategies, including reducing workload, minimizing contacts, and streamlining field operations.
April 2014	Finalize Administrative Records Usage and Adaptive Design Strategy for NRFU panels to be included in the 2014 Census Test	Allows for the inclusion of contemporary findings from research and the 2013 Census Test on the use of administrative records to reduce workload and adaptive design to minimize contacts in order to maximize cost savings.

Key Activities/Milestones

Completion Date	Title	Impact
May 2014	Deliver preliminary results on using State Supplemental Nutrition Assistance Program and similar sources to increase coverage of administrative records on the NRFU population	Helps to determine whether the introduction of new administrative records sources will increase the workload reduction for NRFU and/or increase coverage for targeted demographic groups.
November 2014	Estimate relative cost savings associated with alternative NRFU operational designs from the 2014 Census Test to inform 2015 testing activities	Allows for the recommendation on the baseline design of NRFU by showing the cost/benefit analysis of alternative approaches.
February 2015	Findings on using administrative records to simulate enumeration of nonresponse housing units from the American Community Survey	Allows the continuous refinement of administrative records modeling to identify and remove NRFU cases that can be enumerated with administrative records without incurring additional field data collection costs during the R&T period.

Key Activities/Milestones

Completion Date	Title	Impact
May 2015	Deliver findings on imputation methods to account for missing person and housing unit characteristics	Determines the process for completing the enumeration of cases that were not interviewed during the NRFU operation.
September 2015	Determine preliminary approach for the 2020 Census NRFU operation	Outlines first integrated process for reduced workload, adaptive design, and streamlined field operations for the NRFU operation to be used in the 2020 Census.
September 2015	Estimate predicted cost savings associated with the preliminary approach for conducting NRFU in the 2020 Census	Allows the Census Bureau to determine if we will meet the goal of conducting the 2020 Census for no more than the cost per case associated with the 2010 Census.

Performance Measures

Workload Reduction:

- Original goal was to reduce the NRFU workload by 60 percent based on methodology that removed unoccupied and occupied housing units before conducting field work. This goal was reduced to 40 percent based on early research and testing.
- A promising option is to use records to reduce NRFU workload by removing unoccupied housing units (vacant and deleted) first; conduct one in-person visit; use records to further reduce NRFU workload by removing occupied housing units; and then conduct additional visits as necessary.
- Efforts are underway to identify new administrative records data sets to allow a greater reduction to the NRFU workload

Performance Measures – cont'd

Minimized Contacts:

- Previous evaluations show that fewer contacts with NRFU housing units (to between 2 or 3) may greatly reduce costs while continuing our commitment to data quality
- Efforts are underway in the 2014 Census Test to evaluate the impact of fewer overall contacts with NRFU housing units
- Evaluations continue on the relative benefit of using telephone contacts to first contact NRFU housing units as compared with in-person contacts.

Performance Measures – cont'd

Streamlined Field Operations:

- A new team is researching methods to dynamically assign cases and also route/navigate enumerators between cases in order to increase their productivity (cases completed per hour) during NRFU operations
- Efforts are also underway to compare the assignment of priority to particular cases to determine if that increases productivity

Performance Measures – cont'd

Data Quality:

- The goal is to minimize the use of proxies, whole household imputation, and characteristic imputation
- Comparison of data quality will be measured by housing unit status, household count, age, sex, race, and Hispanic origin relative to responses from the 2010 Census and other available data sources