

Standing Up a New Office of Survey and Census Analytics at the U.S. Census Bureau

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Presentation Outline

- Director's Vision
- Alignment to Bureau Strategic Plan
- Types of projects
- Strike Team

Director's Vision

Office of Survey and Census Analytics will work closely with the Field and Demographic Directorates to harness data across various systems, statistically analyze that data, and help inform potential changes to survey data collection with an eye toward improving cost and quality.

Alignment with the Bureau's Strategic Plan

Goal 3

The Census Bureau is an anticipatory, responsive, cost-effective, and adaptable organization...

Alignment with the Bureau's Strategic Plan

Tactic 3.1.7

Implement data-driven performance improvements that improve results, reduce costs, increase cross-organizational collaboration, and create a dedicated performance improvement operational culture.

Alignment with the Bureau's Strategic Plan

Tactic 3.1.8

Increase survey and census efficiency by researching, designing, and building tools and methods that enable the use of empirical data to facilitate intelligent business decisions prior to and during data collection.

Types of Projects

- Real-time Monitoring Improvement
- Data Analytics to Change Business Rules

Real-time Monitoring Improvement

- Unified Tracking System
- Regional Office Survey Control System
- More consistency
- Cross-survey management
- Visualization
- Alerts

Using Data Analytics to Change Business Rules

- Includes longer-term monitoring for trends
 - Develop a series of barometers
 - The Center for Survey Measurement's data sets from the Unified Tracking System
 - Demographic Statistical Methods Division's Data Quality Monitoring System
 - Command Center

Using Data Analytics to Change Business Rules

- Field contact procedures
- CATI calling rules
- Mode switching
- Performance standards for field representatives
- Case assignment across surveys
- Management approaches

Office of Survey and Census Analytics Strike Team

- 6-Month Team dedicated to work on a “finite” set of projects to demonstrate capabilities
- Made up of a combination of permanent members of the staff and staff from other directorates
- Kicked off 2/20/15
- Closeout 8/28/15

Strike Team Projects

- Response Rate and Cost Analysis Project
- National Health Interview Survey Prescriptive Instructions Project
- Survey of Income and Program Participation Quality Measures for 2016
- National Ambulatory Medical Care Survey 2015 Tests

Response Rate and Cost Analysis Project

- Response rates falling and costs increasing
- Disciplined approach to understanding **all** paradata sources that inform survey response, quality, and cost.
- Will make us more nimble in the future
- Put a focus on cross-survey management

Response Rate and Cost Analysis Project

- Expected outcomes:
 - Efficiency gains from improved monitoring applications
 - Stronger analysis capabilities
 - Reduction in reports that are no longer needed

National Health Interview Survey Prescriptive Instructions Project

- Current state of decentralized field management for most Census Bureau surveys – no consistent set of analytic instructions for real-time management of progress, cost, quality via the Unified Tracking System.
- Will create specific instructions for managers to use
- Will prototype presentation of some key metrics through data visualization and incorporating specific alerts

National Health Interview Survey Prescriptive Instructions Project

- Expected outcomes:
 - Prescriptive instructions for field management staff for NHIS
 - New alerts and visualizations to be used in test areas
 - Satisfaction measures with using new monitoring tools
 - Cost, response, and quality measures for NHIS remain constant or improve during implementation

Survey of Income and Program Participation Quality Measures for 2016

- Response rates and production rates are currently used for performance measurement, but no other quality measures
- Look at possibility of adding item-level missing-ness performance measure
- What metrics? What standards? Different areas have different standards?

Survey of Income and Program Participation Quality Measures for 2016

- Expected outcomes:
 - New performance standards are used in 2016
 - Use of quality measure in performance doesn't negatively impact response rates
 - Use of quality measure in performance doesn't negatively impact overall data quality

National Ambulatory Medical Care Survey 2015 Tests

- Complex set of steps needed to obtain data from a sample of patients' visits to sample physicians for each week of the year (screening, interview, abstracting patient record data). Cost is rising.
- Test changes to business rules to reduce costs without losing quality:
 - Attempt screener and induction by phone
 - Restrict the number of personal visits across data collection phases

National Ambulatory Medical Care Survey 2015 Tests

- Expected outcome
 - Demonstrate if tests result in reducing costs without reducing compliance and/or data quality

“Finite” set of projects to demonstrate capabilities

- Already have two new projects with some urgency
 - Impact of interventions in New York region intended to improve overall management, costs, and response
 - Detailed analysis of NHIS data to help reverse dropping response rates
- These ad hoc efforts will be the norm for the Office of Survey and Census Analytics
- Need to mature understanding of paradata infrastructure in order to be nimble when these issues arise.

Stay tuned...

Thank you.

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