

Cost and Quality Indicators to Enable Adaptive Survey Design

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Survey Data Collection Practice Without Adaptive Design

- Attempt to contact all cases in the same way (mode) or same mode sequence
- Monitor case counts and response rate
- Monitor overall cost
- Ad hoc efforts to increase case counts and response rate
- Continue efforts until desired case count/response rate is reached or time or funds run out

Survey Data Collection Practice with Adaptive Design

- Plan to meet cost/quality goals
- Plan to tailor initial contacts and alter approaches with experience
- Supplement response rate with other quality indicators – monitor continuously
- Monitor costs continuously
- Conclude data collection when indicators say that cost/quality goals are reached

Some Quality Indicators Employed During Data Collection

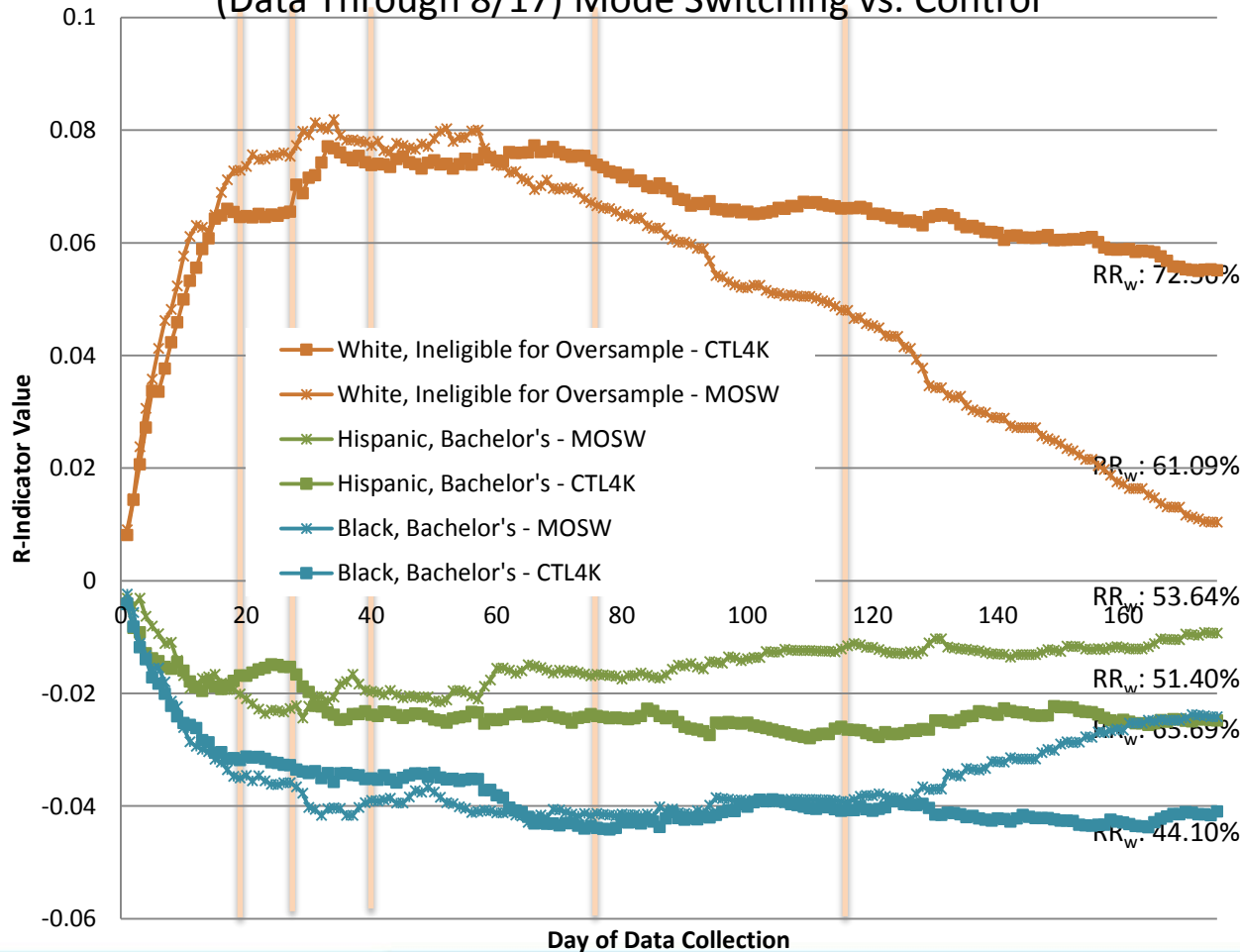
- Checks on response quality
 - Item nonresponse
 - Response error measures
 - Falsification
- Response rate
- Response rate by subgroups of interest
- R Indicators
- Stability of Estimates
- Fraction of Missing Information

R(epresentivity) Indicators

- Measure the dissimilarity between survey respondents and total survey sample **with respect to auxiliary variables** (on the frame)
- Are respondents of different kinds over- or under-represented in the measured sample
- Track daily and observe changes in “representivity” in response to interventions
- Possibilities greater with rich frame information or in longitudinal studies with data from first wave

An Example from the National Survey of College Graduates

Unconditional Partial R Indicators for Targeted Subgroups
(Data Through 8/17) Mode Switching vs. Control



- All interventions improved representativeness vs. a control where no mode switching occurred.

- Sending a web-invite only to over-represented cases resulted in fewer responses and reduced over-representation. (Tradeoff between Response/Representativeness)

- Moving cases to CATI in the under-represented groups resulted in increased response rates and representativeness as compared to the control.

- Until the end of data collection, the black bachelor population behaves nearly identically in both the mode switching and control group.

Some Cost Indicators

- Focus on variable costs during data collection
- Measures of field effort, e.g. in-person contact attempts, telephone calls, mailings, hours worked, travel, editing and other processing
- For prospective cost estimation, response propensity scores
- Monetary value of individual field efforts

Sources of Indicators

- Auxiliary data and paradata needed for some quality indicators
- Contemporaneous response data needed for some quality indicators
- Paradata needed for some cost indicators
- Systems needed to integrate and process data
- Challenges in each of these areas
- Research collaboration needed

Thank you

- Questions?
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