



# Maximizing Response in a Two-Phase Survey with Mail as the Primary Mode

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The views presented in this paper are those of the authors and do not represent the official views of the United States Department of Education.

- Introduction
  - The National Household Education Surveys Program (NHES): Background
  - Motivation for redesign
- Overview of design
- Take-home message
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- Key findings
- Plans for the 2011 Field Test
- Summary

## The National Household Education Surveys Program

- Sponsored by the National Center for Education Statistics
- Surveys roughly every 2 years 1991-2007
- All surveys through 2007: RDD/CATI
- Within-household sampling (up to 3 persons)
- Sample sizes:
  - 34,000 – 64,000 completed household Screeners
  - 2,250 – 24,600 completed Topical surveys

### Motivation for redesign

- Declining response rates
  - Screener response: Low 80's in early years – 53% in 2007
  - Topical rates: 90% in early years – 75% in 2007
- Declining coverage rates for landline RDD
  - January-June 2009: 22.7% of households were cell-only, and another 1.9% were phoneless (Blumberg and Luke 2009)
  - Exclusion of about 20% of landline telephone households (Fahimi, Kulp, and Brick, *POQ* 2009)

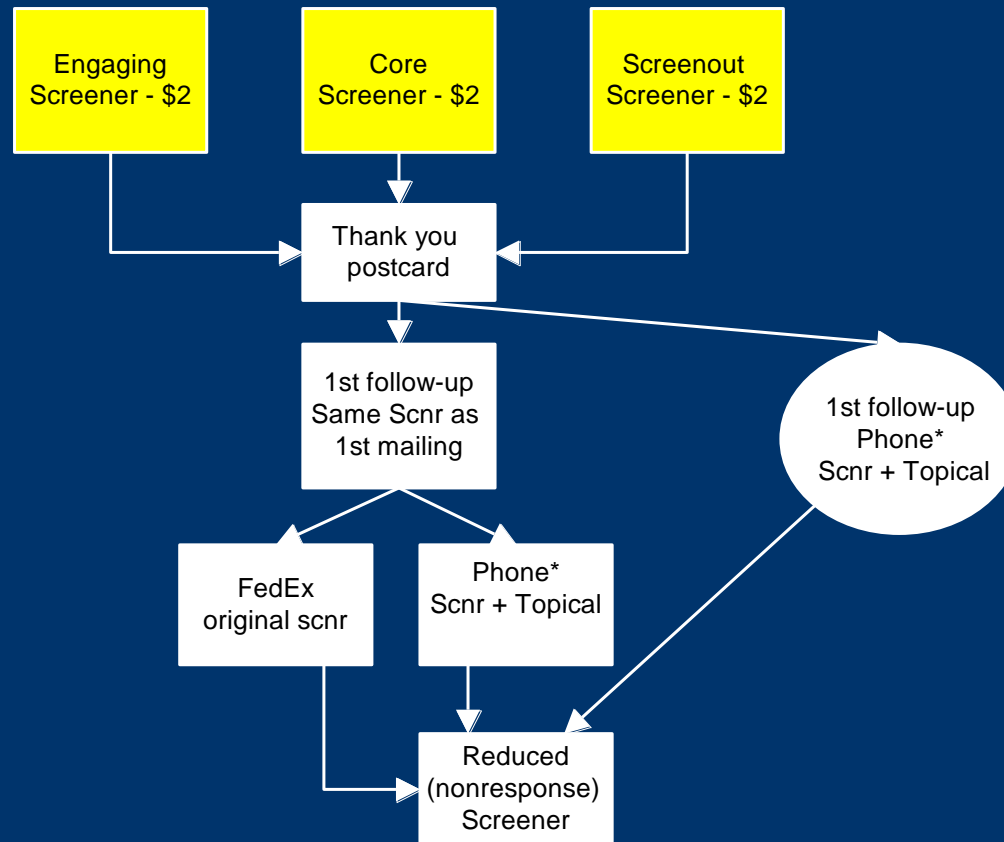
- 2009 Pilot Study to be followed by large-scale methodological Field Test in 2011
- Pilot Study objectives
  - Alternative to landline RDD
  - Must be feasible for a full-scale NHES collection
  - Rule out approaches that clearly were not worthwhile-- NOT to detect small differences
  - Work out operational kinks
  - Determine any needed schedule adjustments

- Key elements of Pilot Study design
  - Address-based sample (n=10,200)
  - Mail as primary mode, with test of phone follow-up
  - Two-phase collection
    - Screener
    - Topical survey (personalized)
  - Embedded experiments
  - Three samples
    - **National sample (n=10,200)**
    - Sample of addresses in linguistically isolated (Spanish) tracts (n = 800)
    - Targeted sample of households with children (n = 800)

## Take-home Message

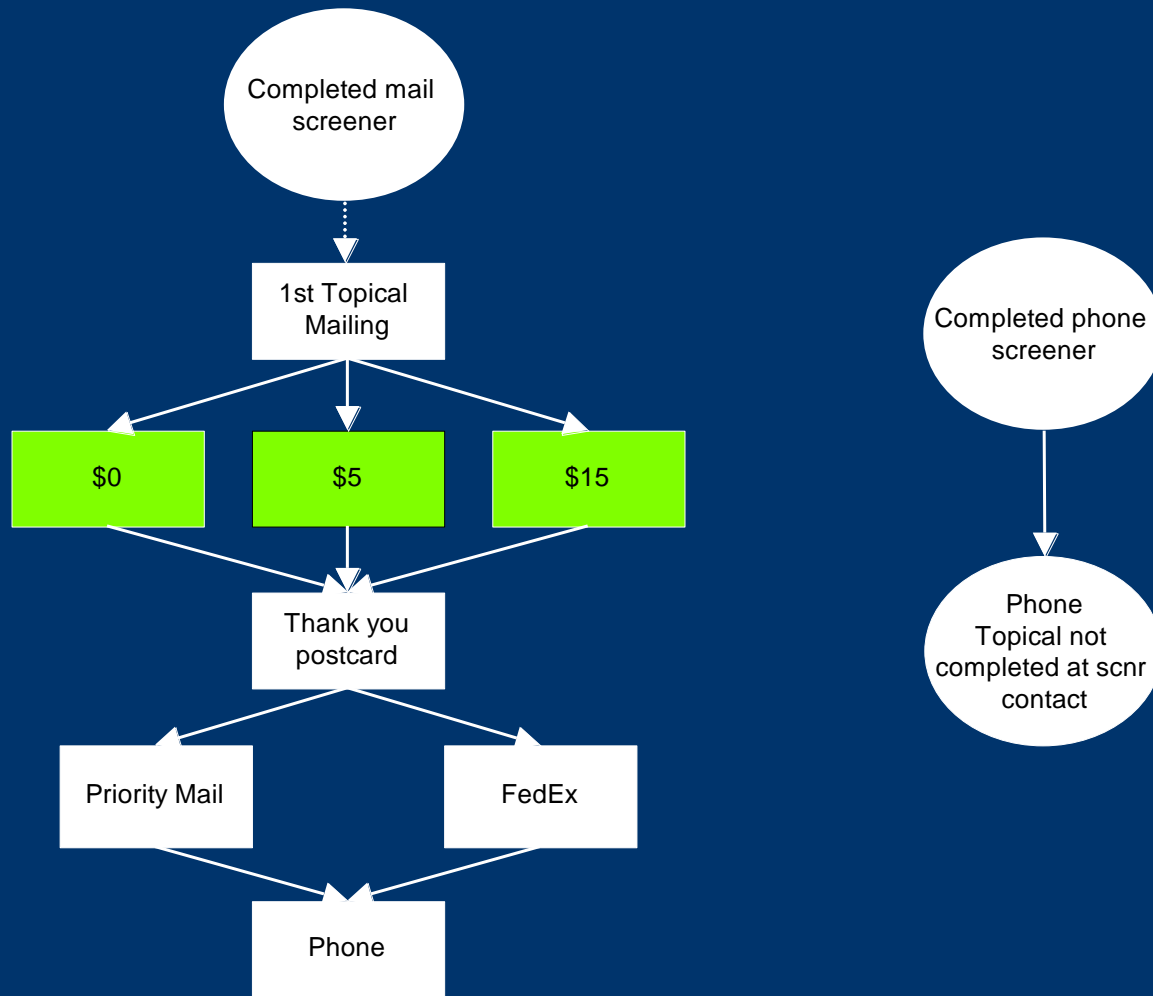
- Overall, Pilot Study provided evidence that the two-phase self-administered approach is feasible
  - Screener response rate: 59% vs. 53% in NHES:2007
  - Topical response rate: 75% (same as NHES:2007)
  - Certain conditions yield even higher rates
    - As high as
      - 64% for Screener (all-mail cases; screenout),
      - 85% for Topical (\$15, FedEx follow-up, all-mail Screeners)
  - Based on preliminary examination of key items
    - Item response rates were high
    - Little evidence of skip pattern issues
    - Passed “laugh test” comparison for key statistics

# Embedded Experiments: Screener Phase





# Embedded Experiments: Topical Phase



# Key Findings

- Screenout and Engaging Screeners outperformed the Core Screener

National sample rates	Screenout	Core	Engaging
Screening response rate	61.8%	56.9%	57.2%
% of households with children	30.1	30.5	32.2
Topical response rate	73.1	74.8	76.3

## Key Findings (Cont.)

- Screener follow-up stages picked up households with children at higher rates than the initial stage

Respondent subgroup	Percent of households with children
Overall	30.9
Initial respondents	27.4
Follow-up respondents	
Mail only for 1 <sup>st</sup> and 2 <sup>nd</sup> follow-up	34.8
Phone for 1 <sup>st</sup> or 2 <sup>nd</sup> follow-up	30.5

- (last figure should be 30.4)

More in Williams et al. (AAPOR 2010, Saturday 2:15 p.m., Concurrent Session C)

- Mail outperformed phone for follow-up
  - For Screener nonresponse, limited by ability to match phone numbers (57% match rate)
  - Even when phone number matches were available, phone follow-up was much less effective than mail
    - 19% of Screener cases assigned to phone follow-up finalized as nonworking/nonresidential
    - Only 17% of mail Topical nonresponse cases sent to phone for follow-up were completed

## Key Findings (Cont.)

- Mail outperformed phone for nonresponse follow-up (cont.)

Assigned mode for Screener follow-up	1 <sup>st</sup> follow-up (Screener) completion rate	2 <sup>nd</sup> follow-up (Screener) completion rate
Mail (No vendor phone number)	42.8	27.1
Mail (Vendor phone number)	49.3	34.6
Phone (Vendor phone number)*	34.4	21.8
Phone (Vendor phone number), completed by phone	18.0	12.4

\*Includes late mail returns received after case had been sent for telephone collection

## Key Findings (Cont.)

- Incentives were effective in eliciting cooperation at the Topical phase
  - Topical response rates by incentive level:
    - \$0: 70%
    - \$5: 74%
    - \$15: 81%
  - No evidence that offering an incentive results in respondents with different characteristics, but the \$15 incentive elicited higher initial cooperation rates
  - More on this in Tubman and Williams (AAPOR 2010, Today, 1:45 p.m., Concurrent Session C)

## Key Findings (Cont.)

- For Topical nonresponse follow-up, indication that FedEx might outperform Priority Mail
  - 53% of those followed up by FedEx responded, compared to 49% for Priority Mail (not significant at  $\alpha=0.05$ )

### Linguistically Isolated Sample

- Experimented with English-only (Core) and Bilingual Screeners
- Similar response rates for English and Bilingual Screeners:  
46.2% (English) vs. 45.8% (Bilingual)
- Language appears to be a key real barrier to participation (More on this in Zukerberg and Han, AAPOR 2010, Thursday, Poster Session 1)



## Plans for the 2011 Field Test

- Mail as primary mode for Screener and Topicals; very limited use of telephone
- Screener form/material experiments
  - Asking for child's name vs. not asking
  - English only vs. bilingual vs. dual (English and Spanish) to Spanish surname/linguistically isolated
- Mailing service experiments
- Topical incentive experiments

- For NHES, transition to address-based sampling with mail as primary mode is promising
  - Higher response rates than last RDD collection
  - Much higher coverage rates than landline RDD
  - No apparent significant data quality issues
- Challenges (particularly language and literacy) remain
- Methodological experiments in 2011 Field Test will inform design of the future

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