# Overview of Session

◙ **Introduction and Background**

◙ **Scripted Q&A with Panelists**

◙ **Open Q&A Floor Discussion**

# What is ABS?

In broad terms, ABS (address-based sampling) refers to survey methodologies for samples selected from address frames; in the US, ABS frames are usually based, in part, on the US Postal Service mail delivery databases.

# Why an ABS Task Force?

- ▣ **Increased opportunities for ABS surveys**

- ▣ **Importance of familiarity with frame and sample properties**

- ▣ **Evolving methodologies and complex tradeoffs**

- ▣ **Encourage consistent disclosure of ABS designs**

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# Charge of the ABS Task Force

This AAPOR task force will supplement the existing AAPOR guidelines for ABS issues, consistent with existing standards for scientific surveys, with focus on:

- ▣ **Standardization/clarification of ABS terminology**

- ▣ **Recommendations for:**

    - ❑ Frame-building and enhancements

    - ❑ Sample selection possibilities

    - ❑ Weighting adjustments

    - ❑ Response rate calculations and reporting

# ABS Task Force Members

- *Rachel Harter*, RTI International, Chair
- *Michael P. Battaglia*, Battaglia Consulting Group, LLC
- *Trent D. Buskirk*, Marketing Systems Group
- *Don A. Dillman*, Washington State University
- *Ned English*, NORC at the University of Chicago
- *Mansour Fahimi*, GfK Custom Research, LLC
- *Martin R. Frankel*, Baruch College
- *Timothy Kennel*, U.S. Census Bureau
- *Joseph P. McMichael*, RTI International
- *Cameron Brook McPhee*, American Institutes for Research
- *Jill Montaquila DeMatteis*, Westat
- *Tracie Yancey*, Nielsen Company
- *Andrew L. Zukerberg*, National Center for Education Statistics

# Expert Consultants

- *Anne Connelly*, Cigna, formerly of Valassis, Inc.

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# Acknowledgements

# Disclaimer

**The views expressed in the report and this presentation are those of the authors and do not represent the views of their agencies and employers.**

# The Process

- Build the team, with AAPOR Council approval
- Hold series of informational sessions with expert consultants
- Prepare outline of report
- Assign sub-teams to write report sections
- Compile, review, and revise – *I T E R A T E*
- Obtain comments from AAPOR Standards Committee
- Solicit feedback from expert consultants based on early draft
- Revise, compile, review – *I T E R A T E*
- Obtain comments from outside expert and revise
- Obtain approval from AAPOR Standards Committee
- Obtain final approval from AAPOR Executive Council

# The ABS Report

http://www.aapor.org/AAPORKentico/AAPOR_Main/media/MainSiteFiles/AAPOR_Report_1_7_16_CLEAN-COPY-FINAL.pdf

- **Introduction**
- **Frame Creation**
- **Auxiliary Variables**
- **Designing and Implementing ABS Surveys**
- **Eligibility, Response Rates, and Weights**
- **Reporting Guidelines**
- **Quality and Cost Issues for ABS Samples**
- **Summary of the Current State of ABS**
- **References**
- **Appendix - Definitions**

# Today's Panelists

- *Jill Montaquila DeMatteis*, Westat

- *Mansour Fahimi*, GfK Custom Research, LLC

- *Cameron Brook McPhee*, American Institutes for Research

- *Andrew L. Zukerberg*, National Center for Education Statistics

# Panel Format

◎ **Scripted Q&A:**

❑ Panelists will respond to prepared questions

❑ Convey the main points of the report

◎ **Open to questions from the audience**

◎ **Handouts will be available at the end of the session**

# Why has ABS emerged?

# Why Has ABS Emerged?

- Evolving coverage problems of telephone-based alternatives

- Complexities and inconsistencies of dual-frame RDD

- Eroding rates of response to telephone and single modes of contact

- Increasing costs and inefficiency of refusal conversions by phone alone

- Improvements in databases of household addresses

- ABS frame enhancement possibilities

- Increasing pressure for cost containments

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# When is ABS appropriate?

# When is ABS Appropriate?

- **Two primary uses:**
    - Housing unit frames
    - Alternative to RDD for mail only, mail-to-web, and multi-mode
- **To address coverage, response rate, and cost issues**
- **Best frames for national US household surveys**
- **Not appropriate for all survey situations:**
    - Learning curve/infrastructure
    - Length of field period

What are the sources of ABS frames, and what is known about their coverage and quality?

# ABS Sources & Coverage

- Primary vendors maintain and lease address lists for frame creation
- Secondary vendors subset address lists and select samples of addresses
- Frames have high coverage of households but can vary by address type:
  - Rural addresses
  - Some Native American reservations
  - Drop points
- Coverage is improving as addresses are converted to city-style
- Most vendors supplement their coverage with data from other sources

# Potential Issues With ABS Frame Data

- **Over coverage and under coverage issues:**

  - ❑ Matching addresses between sources leads to over/under coverage

  - ❑ Household members may receive mail at more than one address

  - ❑ Some addresses are missing entirely from the files

  - ❑ Misclassification of addresses as business or residential

- **Important to have lists that are updated regularly**

# Determining the Quality of ABS Frames

- ◙ **Somewhat difficult due to vendors' proprietary processes**

- ◙ **Use checklist to screen vendors (hand out)**

- ◙ **Field-enumerated Lists vs. ABS Frames:**

  - ❑ Both subject to error due to omission and duplicates

  - ❑ Can be used to complement each other:

    - ➢ Rural routes can be hard to locate physically from an ABS frames
    - ➢ ABS frames can be used to identify gaps in field enumerated lists

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**What are key decisions to be made when using ABS?**

# Key Decisions When Using ABS

- ▣ **Delivery types to include on frame:**
  - ❑ Residential
  - ❑ P.O. Boxes
  - ❑ Vacant units
  - ❑ Seasonal dwellings
  - ❑ Drop points
- ▣ **Supplemental variables:**
  - ❑ Phone number
  - ❑ Append household characteristics from commercial sources
  - ❑ Append Census geodemographics via geocoding

# How do I get a sample of households from addresses?

# Sampling Households from Addresses

◉ **ABS provides a sample of delivery points, not households:**

- ❑ Single address associated with multiple households (drop point)
- ❑ Single household associated with multiple addresses
  - ▪ Both P.O. box and physical (city-style) address
  - ▪ Vacation homes

◉ **Handling households with multiple addresses:**

- ❑ De-duplicate:
  - ▪ Only operating "OWGM" P.O. boxes
  - ▪ Eliminate "seasonal/educational" addresses from frame
  - ▪ Screen out households at their seasonal/educational addresses
- ❑ Include questions about whether household can be reached at multiple addresses

**What methods can be used to sample individuals within households using ABS?**

# Within-Household Subsampling

- **Single-phase design:**
  - All-adults approach
  - Any-adult approach
  - Next-birthday method

- **Two-phase design:**
  - Screener to enumerate eligible persons
  - Returned screener processed, eligible person randomly sampled
  - Survey is administered in second phase

**What specific issues need to be considered when using ABS for local surveys?**

# ABS Issues for Local Surveys

- **Prevalence of specific types of addresses:**

    - Drop points and educational addresses – variation from area to area

    - Substantial group quarters population

    - P.O. box addresses – will geocode based on location of post office

- **Addressing potential effects of geocoding errors:**

    - Cast a wider net

    - Include coverage enhancement methods

# What is currently known about mixing modes in ABS studies?

# Mixing Modes in ABS Studies

◉ **Mixed-mode study:**

- ❑ Contact by one mode, request response by different mode
- ❑ Contact attempted by more than one mode
- ❑ Offer more than one mode response option (sequential or simultaneous)

◉ **Popular approach: Contact by mail, try to elicit web response:**

- ❑ Might offer mail/phone response as option
- ❑ Mail/web choice does not improve response
- ❑ Alternative strategy: Web-push

◉ **Use of phone with mail and web (Finamore and Dillman 2013):**

- ❑ Web-first/mail-first/phone-first
- ❑ Final response rates, respondent characteristics nearly the same
- ❑ Most respondents answered by the original mode
- ❑ Web-first least expensive; phone-first most expensive

# Modes of Data Collection with ABS

- **Contact mode vs. data collection (response) mode:**

  - Mail, in-person via addresses (non-city-style issue)
  - Matched phone numbers (non-matches and bad matches issues):
    - Might use phone just for reminder calls, IVRs
    - Addresses with phone number matches have higher response rates regardless of contact mode

- **Data collection mode:**

  - In-person
  - Mail
  - Web
  - Phone
  - IVR
  - Mixed-mode

**What are methods of selecting a stratified sample from an ABS frame?**

# Stratification with ABS

- **Potential stratification variables:**
  - Postal variables
  - Appended auxiliary variables from commercial sources
    - Cautions!
  - Appended geodemographic variables from the Census

- **Stratification options:**
  - Stratify by characteristics available for all addresses on the frame
  - Use two-phase (double) sampling

**What are the key considerations for determining eligibility of addresses in ABS studies?**

# Determining Eligibility of Addresses

◉ **Need to consider both addresses and households residing at address**

◉ **Regardless of mode, the sampled unit is the address:**

   ❑ Conflicting "signals" about the eligibility of an address is not uncommon

   ❑ Consider the source of the signals and their utility in assigning case dispositions

   ❑ Must have rules for reconciling conflicting dispositions

◉ **Address confirmation question will be necessary for determination of eligibility**

◉ **Surveys with household- or person-level eligibility requirements:**

   ❑ Unreturned mail questionnaire could be an indication of nonresponse or ineligibility

   ❑ May receive conflicting information about the household itself

   ❑ Eligibility criteria often need to be based on a single point in time

**What are the special considerations for computing response rates in ABS studies?**

# Response Rate Calculations with ABS

- Handling the proportion of cases classified as unknown eligibility for good estimation of "$e$"

- Traditional methods for estimating $e$ may not be appropriate for ABS surveys

- Good practice to report multiple response rates (including "best-" and "worst-case" estimates)

- For subpopulation surveys, multiple estimates of $e$ should be computed for address- and household- or person-level eligibility

**What are the special considerations when calculating weights for an ABS study?**

# Weighting Adjustment Issues

▣ **Steps in weighting similar to other list-frame surveys:**

- ❑ Calculation of design weights to account for selection probabilities

- ❑ Eligibility adjustments

- ❑ Unit nonresponse adjustments

- ❑ Poststratification to control totals

▣ **Weight components unique to ABS Designs:**

- ❑ Address-level weights

- ❑ Household-level weights

- ❑ Person-level weights

# Weights Features Unique to ABS

◙ **Household-level weights:**

  ❑ Addresses with multiple households (drop points)

  ❑ Households with multiple addresses: (PO Boxes and seasonal & educational units)

◙ **Person-level weights will be needed to account for additional within-household selection**

◙ **Often eligibility and nonresponse adjustments are made at the household and/or person levels**

**What types of variables are available for making nonresponse weighting adjustments for an ABS study?**

# Nonresponse Weighting Adjustment with ABS

- ◙ **Require auxiliary variables available for both respondents and nonrespondents**

- ◙ **Several commonly used frame (or address-level) variables:**

  - ❑ Auxiliary variables available for Census geographies or ZIP codes

  - ❑ Auxiliary variables that are available for all addresses in the sampling frame

  - ❑ Auxiliary variables that are appended after the sample selection

- ◙ **Ideal weighting class variables exhibit response rate & survey estimate variations across classes**

**What special aspects should be reported for an ABS study?**

# Reporting

- �") **AAPOR minimum standards for disclosure apply:**

  - ❑ Definition of population under study and its geographic location
  - ❑ Description of frame and its coverage of the target population (see AAPOR code)

- ☐ **Following OMB and AAPOR guidelines:**

  - ❑ Vendor name
  - ❑ Name of frame used if vendor offers different frames
  - ❑ Date frame was constructed
  - ❑ Source of address frame
  - ❑ Methods vendor used to de-duplicate the file
  - ❑ Sample design
  - ❑ Comprehensive list of address types included
  - ❑ Procedures to validate the representativeness of the sample

- ☐ **Procedures to identify and resolve duplicate or invalid addresses**

**What are some areas for future research in ABS?**

# Future Research

- Coverage and options for supplementing coverage
- Impact of drop points and methods for working with them
- Ineligible addresses and postmaster returns
- Impact of diminishing landline matches
- Frame updates
- Auxiliary variables via multi-sourcing
- Two-phase methodologies
- ABS for business surveys
- Cost and quality tradeoffs

# Questions from the Floor

◉ **Panelists:**

- ❑ Jill Montaquila DeMatteis

- ❑ Mansour Fahimi

- ❑ Cameron Brook McPhee

- ❑ Andrew L. Zukerberg

# The ABS Report

- http://www.aapor.org/aaporkentico/aapor_main/media/mainsitefiles/aapor_report_1_7_16_clean-copy-final.pdf

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