

Planning an Adaptive Design Treatment in 2020 Census Tests

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The views expressed on statistical, methodological, technical, or operational issues are those of the author and not necessarily those of the U.S. Census Bureau.

Challenges Decennial Faces

- Keep costs at 2010 level
 - Increase self-response
 - Decrease non-response follow-up workload
 - Achieve more efficient non-response follow-up

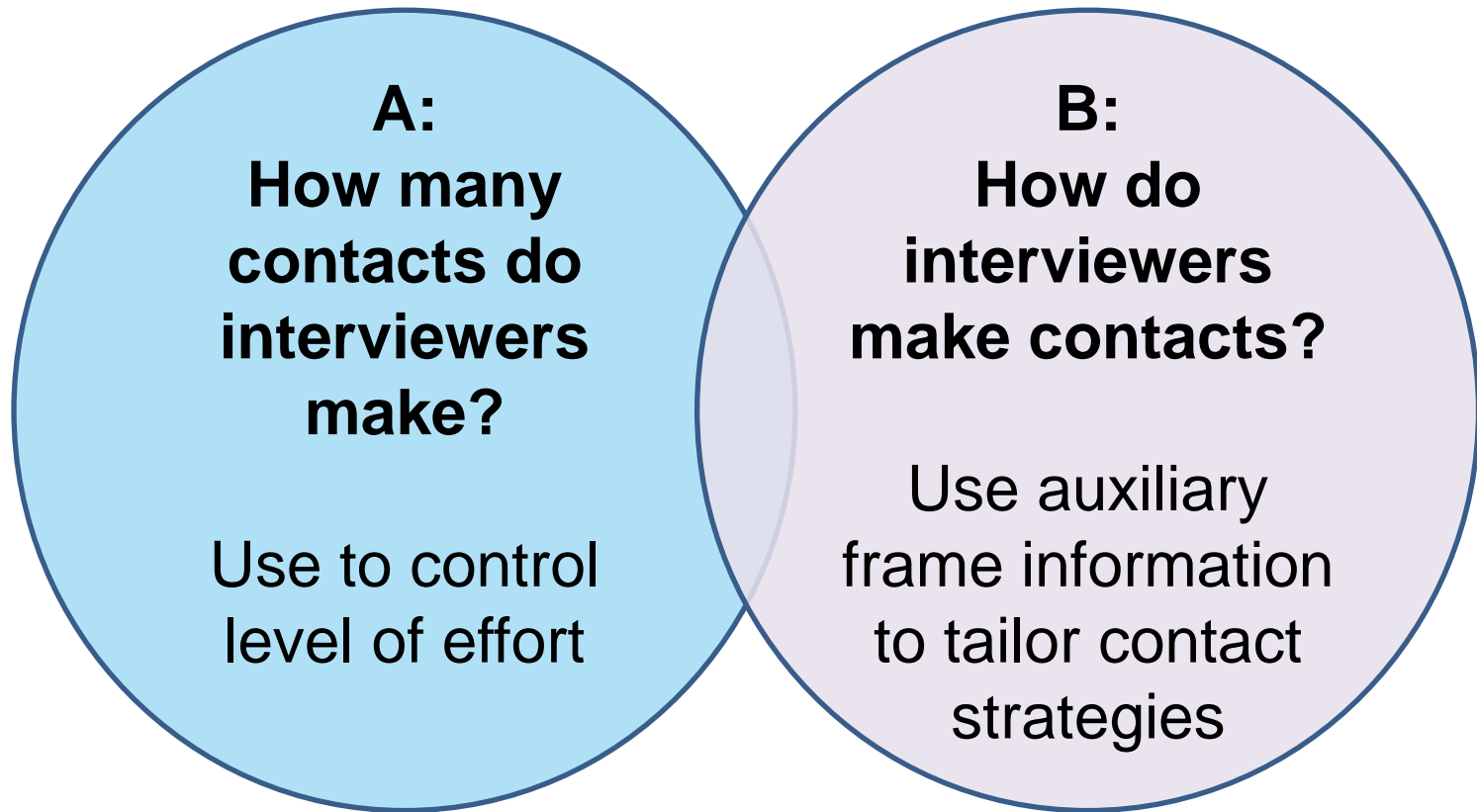
Question for Adaptive Design Approach

Can tailoring contact strategies and dynamically altering data collection procedures achieve acceptable data quality and lower costs?

Adaptive Design in NRFU

- A **tailored** and **dynamic** approach to case management in data collection
- Uses **auxiliary frame information** and **paradata** to guide contact approaches and resource allocation
- Employs a **centralized system** to control data collection

Using Auxiliary Frame Information



Using Paradata

- Track contact attempts
 - Successful interview
 - Refusal, language barrier
 - Strategies to get interview
 - Number and mode of contact attempt
- Propensity models
 - Include auxiliary frame information and paradata
- Adjust future contact attempts based on experience

2013 Census Test

- An **operational** test examining adaptive and fixed approaches to case management and enumeration in a **simulated NRFU environment** using **existing infrastructure**.
- In addition:
 - **Administrative records** (and their absence) to reduce:
 1. Non-response follow-up workload
 2. Level of effort
 - **CATI** and **CAPI** telephone attempts

	Fixed	Adaptive Design
Admin records used to enumerate cases before going to field	<p style="text-align: center;"><u>Treatment 1</u></p> <p>Administrative records</p> <ul style="list-style-type: none"> Remove cases from workload <p>Telephone</p> <ul style="list-style-type: none"> If number, CAPI interviewers call All numbers called twice <p>Priority</p> <ul style="list-style-type: none"> <i>None</i> <p>Number of visits</p> <ul style="list-style-type: none"> Three personal visits before proxy 	<p style="text-align: center;"><u>Treatment 3</u></p> <p>Administrative records</p> <ul style="list-style-type: none"> Remove cases from workload <p>Telephone</p> <ul style="list-style-type: none"> If number, CATI before field CATI call procedures <p>Priority</p> <ul style="list-style-type: none"> Propensity models determine priority <p>Number of visits</p> <ul style="list-style-type: none"> Three personal visits before proxy
Admin records <u>not</u> used to enumerate cases	<p style="text-align: center;"><u>Treatment 2</u></p> <p>Administrative records</p> <ul style="list-style-type: none"> <i>Not used</i> <p>Telephone</p> <ul style="list-style-type: none"> If number, CAPI interviewers call All numbers called twice <p>Priority</p> <ul style="list-style-type: none"> <i>None</i> <p>Number of visits</p> <ul style="list-style-type: none"> Three personal visits before proxy 	<p style="text-align: center;"><u>Treatment 4</u></p> <p>Administrative records</p> <ul style="list-style-type: none"> Determine level of effort (number of contacts) <p>Telephone</p> <ul style="list-style-type: none"> If number, CATI before field CATI call procedures <p>Priority</p> <ul style="list-style-type: none"> Propensity models determine priority <p>Number of visits</p> <ul style="list-style-type: none"> If administrative record, one personal visit before proxy Three personal visits before proxy

Case Management SURVEY: ACS-PRCS ASSIGNMENT PERIOD: 2013BT

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Case Management - Case List DISCLOSURE PROHIBITED - TITLE 13 U.S.C.

Control Number	Address	Place Name/City	Zip	Tract	Block	Map Spot	Appointment	Status	Seq #	Rte
! 2013104210130000008	176 B FIRST AVE	ANY TOWN	99997	4952.01	243546	00008			0008	999
! 2013104210130000009	166 OCEAN VIEW RD	ANY TOWN	99997	4952.01	243546	00009			0009	999
! 2013104210130000014	* 5401 ROBIN CT	ANY TOWN	99997	4952.01	243546	00014			0014	999
! 2013104210130000015	* 143 RIVERSIDE RD	ANY TOWN	99997	4952.01	243546	00015			0015	999
2013104210130000001	101 OCEAN VIEW RD	ANY TOWN	99997	4952.01	243546	00001			0001	999
2013104210130000002	* 104 MAPLE LN APT 4	ANY TOWN	99997	4952.01	243546	00002			0002	999

Assignment | HH Roster | Notes | Contacts | Letter Mgmt | History | Contact History | Bldg Mgmt

Control Number: 201310 42101 30000014 Assignment Period: 2013/BT Case ID: 30000014

MAF ID: 123456802 Outcome: 200

of Units: 0001 Incomplete Addr: Status: Respondent:

CATI Language: Other CATI Language:

AIANHH: AITSCE:

Phone #(1): Phone #(2): Phone #(3): Type:

Best Time: Best Time Spec:

Appointment: 00/00/0000 00:00 AM Callback:

Geocoding Complete: N Current STCOU: Current Tract: Current Block:

LOCATION House #: 5401 Street: ROBIN CT

Row 3 of 14

Training Case Man... Case Management ... 1:17 PM

Sample

- Two matched groups of housing units, approximately 1000 each, in the Philadelphia area
- Selected housing units from 2010 non-response follow-up universe

Field Implementation

- 8 interviewers
 - Trained to follow adaptive procedures
- 10 interviewers
 - Trained to follow fixed procedures
- Separate training, supervision, and report monitoring for the two groups
 - Groups are unaware of each other

Analysis

- Operational:
 - How do systems work in action?
 - How well do we manage workload after cases with administrative records are removed?
 - Do interviewers follow instructions?
 - How must systems be reconfigured and tested to handle larger scale?
- Descriptive:
 - Rough comparison of fixed and adaptive treatments on cost and data quality

Planning for 2014 Census Test

- Similar design, larger scale
 - Only looking at non-response follow-up
- Using administrative records
 1. For workload removal
 2. To determine level of case effort
 3. *To tailor contact strategies*
- Use existing and new decennial infrastructure
 - New: handheld enumeration device
- Hiring enumerators

Questions?

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