



Hang-Ups: Non-Response in Telephone Surveys

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Outline and Purpose

RDD samples have been efficient ways of surveying households for the last two decades

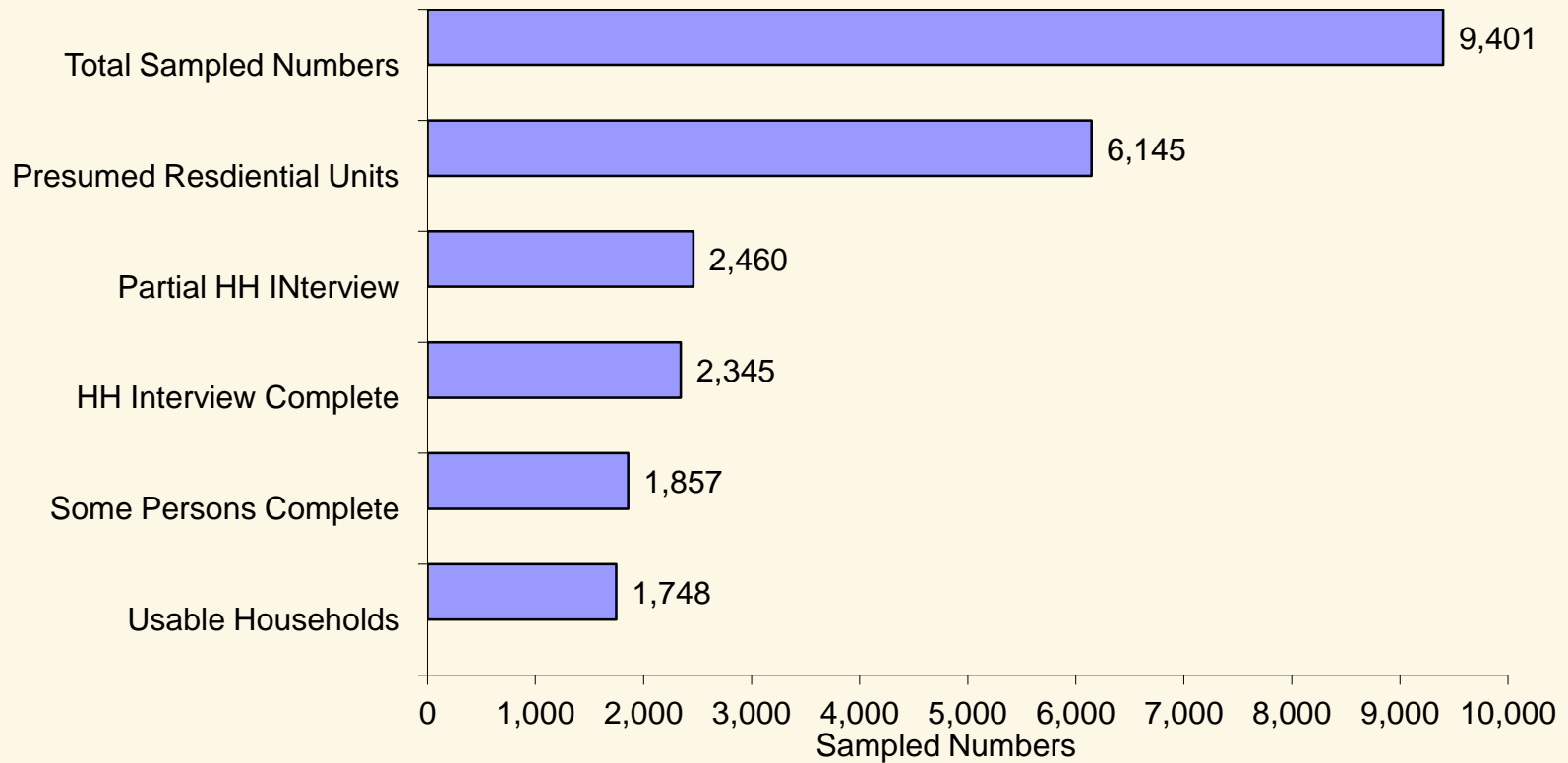
But non-response and non-contact have become serious problems, undermining the quality of the resulting data

Address samples that rely in telephone contact of addresses that match to telephone numbers have the same types of non-response

So let's look specifically at the call files to assess the impact of various types of non-response:

Where do all those sample numbers go?

Disposition of Sampled Numbers



Source: NHTS 2001 Pretest

Changes to the Residential Numbering System= Fishing in a Bigger Pond

Declining Household >Hit= Rate in the Last Decade	1990	1993	1996	1999
Residential Active Exchanges ⁽¹⁾	34,929	37,247	41,396	55,160
Active Banks (millions) ⁽²⁾	164	177	202	236
U.S. Households (millions) ⁽³⁾	94.2	95.8	100.0	106.0
Estimated Household >Hit= Rate	57.4%	54.1%	49.5%	44.9%

⁽¹⁾ Bellcore/LENG Files, 1990-99, Type 00, 50-54

⁽³⁾ Genesys Database/ Claritas, 1990 - 99

⁽²⁾ Derived from Donnelley DQI Listed HH database, 1990 - 99, 1+ HH

(This table taken from: www.m-s-g.com/reference/mra/sld019)

Changes to the Numbering System

Clearly, the changes to the system of telephone numbering has made it's contribution to declining response rates. In the national survey we found:

More numbers out of scope (including mobile phones, fax/modems/ pagers). 27.4 percent in 1995 versus 35.1 percent in 2000 pretest

More numbers with the scope not determined. 6.8 percent of the numbers in sample had scope not determined in 1995 versus 8.6 percent in 2000.

Call Disposition: Can I Talk to a Person?

Disposition code of call attempt		Frequency of Call Attempts	Percent of Call Attempts
Answering machine, never talked to a human being		12,063	29.2
Reached a person	Total (of shaded rows)	10,676	25.9
	Completed Household Interview	4335	10.5
	Set a Call Back	3237	7.8
	Refused to Participate	2828	6.9
	Other (language, etc)	276	0.7
Ring, no answer		10,237	24.8
Other		5456	13.2
Busy		2819	6.8
TOTAL		41,251	100.0

How Many Calls to Make? More is more...

Number and Percent of Outcomes by Type for 9 and 19 Call Attempts

Call Attempt Resulted in:	Nine Call Attempts		Nineteen Attempts	
	Count	Percent	Count	Percent
Answering Machine on every call	204	3.3%	6	0.6%
Ring, no answer on every call	546	8.8%	59	5.4%
Call Back (at least once)	1422	23.0%	283	25.7%
Completed	2057	33.2%	489	44.4%
Refused	1567	25.3%	171	15.5%
Completed, after refusal	400	6.5%	93	8.4%
Total	6196	100.0%	1101	100.0

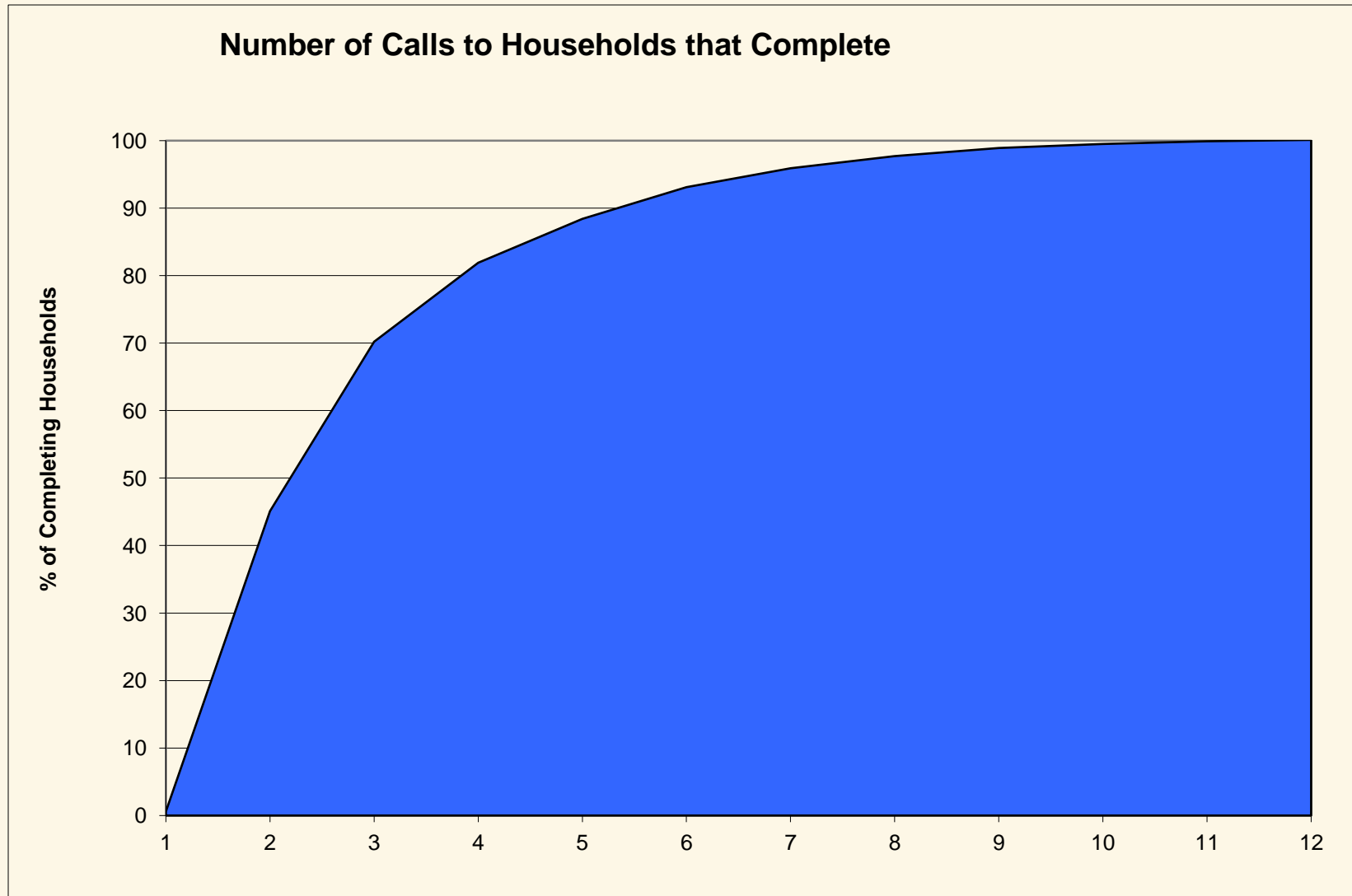
But some times trying harder doesn't get you farther....

Mean Number of Calls by Whether a HH Completed

Test	Avg. Attempts for Completes	Avg. Attempts-Not Completed
Daily Travel Only – No Pre-Incentive	3.32	4.35
Daily travel only – \$5 Pre-incentive	3.25	4.42
Long-distance travel only	3.10	5.00
Combined w/ retrospective long distance (19 call attempts allowed)	3.49	4.76
Combined w/ prospective long distance	3.35	4.46
Overall	3.35	4.59

**This table uses all call attempts

Over 90 percent of households complete by six calls....



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What do people say? Coded Comment Examples

Comment coded as “Call back”

“He was in the middle of something and said we should call him back at a better time”

“Respondent could not hear me because of interference on the phone, set call back “

“Female respondent said very busy right now, offered to call back and she said please don’t”

Comment coded as “Busy”

“Female said I’m busy right now, bye, and quickly hung-up”

“Female respondent said too busy and hung-up before I could set call-back time”

“Male respondent said he had other things to do, offered to call back, he said he was too busy and hung-up”

Comment coded as “Bad Time”

“Respondent said any time was a bad time since involved with day care”

“Female respondent said this was a bad time and hung-up at introduction”

Comment coded as “Hung-up”

“Said she was not interested and hung-up”

“Male answered the phone and hung-up on intro screen while I was reading”

“Male respondent hung-up without comment while introduction was being read”

“Female respondent said hello, I stated my name and she hung-up without comment”

No, Don't Hang Up!

The Excuses People Say When They Don't Want to Talk

The interviewer coded:	Number	Percent
Person "Hung up"	810	52.2%
Person said "Call-back"	298	19.2%
Person said "Bad time"	189	12.2%
No Adult Present	146	9.4%
Person said "Busy now"	62	4.0%
Person said "I don't give information over phone"	46	3.0%
Doesn't speak English	42	2.7%
Illness	21	1.4%

***For this table we only used the records where an interviewer typed in comments

Keep Calling and I'll Keep Saying "Call Back"

Mean Number of Calls to Resolve Household After First Coding "Call-back"

After a person says "call back" once, the number of call-backs to:	Mean number of calls	Percent of call- backs
Complete the survey	3.0	24.0%
Refuse the survey	2.7	18.5%
Talk to a person who says "call-back" again	1.9	47.3%
Never get a person again (ring/no answer)	4.4	10.2%

Incentives work—so does having an interesting topic (long distance travel)

Test	Average Number of Call Attempts	Household Response Rate
Daily Travel Only - No Pre-Incentive	4.2	35.7
Daily travel only - \$5 Pre-incentive mailed to listed households	4.2	40.5
Long-distance travel only	4.5	56.2
Daily Combined w/ retrospective long distance (19 call attempts allowed)	4.5	49.4
Daily Combined w/ prospective long distance	4.3	40.8

Refusal is not the same level of problem that non-contact is:

Outcome for household:	Number	Percent
Initially refused, but ended with completion	503	5.3
Initially refused, and never completed	1277	13.5
Never refused, completed	2344	24.8
Neither refused nor completed	5331	56.4

But together, the differences between complete and incomplete households can bias results:

Younger. Households where the reference person (head of household) was older were much more likely to have all adults complete the extended survey. (42% of households with a reference person aged 25-29 vs. 63% of households with a reference person 60-69).

Large and have more workers. The larger the household, the less likely that at least half of the adults complete the extended travel survey. (68% of the one-person, 60% of the 2-person, 50% of the 3-person, 49% of the 4-person, 42% of the 5-person households had all persons complete the extended survey). The number of workers in the household has even a stronger relationship to non-completion (76% of 0-worker households completed versus 28% of households with four workers).

Non-white. Households that are classified as “white” (the reference person’s race is used as a proxy for the household) were more likely to have all adults complete the survey than were non-whites (70.9% of the white households versus 53.7 percent of the non-white households were completed samples).

Have children present. Households without children are more likely to complete the households with children. (69% of households without children versus 64% of those with children present).

Have fewer vehicles. Households without vehicles are less likely to complete than households with one or more vehicles available, in addition only 34.4 percent of incomplete households had two vehicles compared to over 45 percent of the completed households.

What to do?

Good materials for first contact by mail: Colorful, easy to understand, relevant. Include incentives

Introducing the survey—make it interesting and important to the respondent

Interviewer training—can they respond quickly to:

- Relevancy: why is this survey being conducted?

- Privacy concerns

- Time concerns

Multi-mode surveys, allow respondents to choose what suits them: mail, phone, or internet response