

Screening for Age-Eligibles in a Large, Random Digit Dial Survey

Jessica L. Cardoni, Abt Associates
Paul Buckley, Consultant
Robert A. Wright, CDC
Ali H. Mokdad, CDC
Mary Cay Murray, Abt Associates



AAPOR, 2002



Field Test – Abstract

The National Immunization Survey (NIS) measures vaccination coverage among children aged 19-35 months in the U.S., the 50 states, and 28 urban areas. The NIS is a random-digit dialing telephone survey conducted by Abt Associates for the National Immunization Program and the National Centers of Health Statistics, of the Centers for Disease Control and Prevention.



Field Test – Abstract

Since the inception of the NIS, the eligible age-range has been described in the introduction as "under 4 years of age." In subsequent questions, this range was refined by asking about children aged "12 months to 3 years old." In order to be eligible, children must be between 19 and 35 months old (inclusive). In the fourth quarter of 2001, an alternative wording was used for one-half of the released sample. For these cases, the wording in both the introduction and subsequent screening questions was replaced with "one and a half to three years old, that is 18 to 36 months."



Field Test – Abstract

The purpose of the test was to determine whether the change in the introduction and screener questions would identify more households with age-eligible children without increasing the number of respondents who break off or refuse to complete the screener.



The National Immunization Survey – Background

Large on-going Random Digit Dial survey.

- Data collection conducted quarterly since April 1994.
- Sponsored by the National Immunization Program and the National Centers for Health Statistics, both of the Centers for Disease Control and Prevention.
- National study – data conducted in 78 non-overlapping Immunization Action Plan (IAP) Areas
 - 50 states, 27 metropolitan areas, and the District of Columbia.
- Yearly, 10 million telephone calls made to identify households with 35,000 age-eligible children
- Monitors introduction of new vaccinations and the success of *Healthy People 2000 and 2010*
- Measuring vaccination coverage of children between the ages of 19 and 35 months of age.



The National Immunization Survey – Field Test

Age-Eligibility Field Test

- Field Test conducted in Q4/2001
- Data collected in a split sample – 50% receive control version, 50% receive experimental condition.
- Original wording of “Under 4 years of age” changed to “18 to 36 months” in introduction and successive screening questions in experimental condition.



The National Immunization Survey – Field Test

Key Indicators and response rates monitored to see which wording is better:

- **PEH – Percent of Eligible Households**
- **Refusal Rates – Percent of respondents who hang up or refuse during the introduction**
- **Resolution Rate – Percent of sample resolved as a business, non-working number, or household.**
- **Screener Completion Rate – Percent of Known Households who screen in or out.**
- **Interview Completion Rate – Percent of Eligible households that complete entire survey.**
- **Telephone Center Response Rate – Overall measure of survey success.**



Field Test – Purpose

A more precise wording would provide a more accurate description of the population eligible for the study and would not change response rates.



Field Test – Control vs. Experimental Introduction

Control (used from Q1/1995 to Q4/2001):

Hello. My name is _____. I am calling on behalf of the Centers for Disease Control and Prevention. We are doing a nationwide immunization survey to find out how many children **under 4 years of age** are receiving all of the recommended vaccinations for childhood diseases. Your telephone number has been selected at random to be included in the study. The questions I have to determine whether your household is eligible to take part in this study will take only a few minutes.



Field Test – Control vs. Experimental Introduction

Experimental:

Hello. My name is _____. I am calling on behalf of the Centers for Disease Control and Prevention. We are doing a nationwide immunization survey to find out how many children **between 1 and 1½ and 3 years of age, that is 18 to 36 months**, are receiving all of the recommended vaccinations for childhood diseases. Your telephone number has been selected at random to be included in the study. The questions I have to determine whether your household is eligible to take part in this study will take only a few minutes.



Results – Preliminary data

Experimental vs. Control	Preliminary data -1 month into data collection			
	<i>Exp</i>	<i>Control</i>	<i>t-test</i>	<i>Sig. Level</i>
Eligibility Rate (PEH)	3.57%	3.53%	0.316	n.s.
Refusals During Intro (% of Sample)	7.43%	7.19%	1.758	n.s.
Resolution Rate	72.18%	72.59%	-1.770	n.s.
Screener Completion Rate	95.05%	94.74%	1.837	n.s.
Interview Completion Rate	83.25%	81.96%	0.826	n.s.
% HH with Parental Consent	83.62%	86.19%	-1.586	n.s.
Partial Percentage	16.75%	18.04%	-0.826	n.s.
Cases Released	73,642	73,912		
Completes	1,176	1,175		
Telephone Center Response Rate	57.11%	56.36%	2.880	<.01




Decision – Preliminary Results

- Preliminary data indicate that none of the key indicators are significantly different.
- While certain indicators, such as the PEH, were higher among the experimental sample, these differences were not statistically significant.
- The only factor which was significantly affected was the Telephone Center Response Rate; among the experimental condition, this was significantly higher.
- A decision was made to implement the new wording of “18 to 36 months” in Q1/2002.



Results – All interviewing finished

Experimental vs. Control	Final numbers			
	<i>Exp</i>	<i>Control</i>	<i>t-test</i>	<i>Sig. Level</i>
Eligibility Rate (PEH)	3.49%	3.52%	-0.385	n.s.
Final Refusals (%)	8.50%	9.40%	1.390	n.s.
Resolution Rate	78.07%	78.30%	-2.063	<.05
Screener Completion Rate	96.30%	96.17%	1.766	n.s.
Interview Completion Rate	89.79%	88.35%	2.189	<.05
% HH with Parental Consent	88.38%	88.99%	-0.864	n.s.
Partial Percentage	10.21%	11.65%	-2.189	<.05
Cases Released	258,061	263,437		
Completes	4,437	4,585		
Telephone Center Response Rate	67.50%	66.53%	7.446	<.01




Results – Final Data

- **The percentage of final refusals was lower in the experimental group.**
- **The experimental condition found fewer completes, though found more eligible households that completed the entire interview.**
- **The main measure of survey success, the Telephone Center Response Rate, was statistically higher for the experimental condition.**



For More Information

Contact:

Robert A. Wright: raw2@cdc.gov

or

Jessica Cardoni: jessica_cardoni@abtassoc.com



The logo consists of the word "Abt" in a white, serif font, centered within a dark blue square. This square is positioned in the center of a larger, solid gold background.

Abt

Abt Associates Inc.