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Maintaining Quality Control Standards Using Telephone Interviewing and Data Analysis

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Presented at
International Field Directors & Technologies Conference 2010
May 18, 2010 ? Chicago, IL

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Objectives

- To demonstrate the effectiveness of integrating a multi-modal approach to confirm field interviewer data quality on a large-scale national survey, the National Survey on Drug Use and Health (NSDUH)
- To provide additional knowledge on procedures for maintaining data quality standards for field studies

Acknowledgement

National Survey on Drug Use and Health (NSDUH):

- This project is funded by the Substance Abuse and Mental Health Services Administration, Office of Applied Studies, under Contract no. 283-2004-00022 and Project no. 0209009
- The views expressed in this presentation do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government
- This presentation is sponsored by RTI International's Survey Research Division

Study Background

- The National Survey on Drug Use and Health (NSDUH) is a general population survey
- Conducted by RTI under contract with SAMHSA since 1988
- The nation's largest ongoing source of information on substance use behaviors
- Data collected in all 50 states and the District of Columbia

Study Background (cont'd.)

- Data collected on a quarterly basis each year
- Approximately 700 Field Interviewers (FIs) staffed
- Approximately 180,000 household screenings and 67,500 interviews completed annually

Overview

- This large-scale field survey uses combinations of data quality assurance methods to ensure a high level of data quality
- NSDUH uses a telephone verification team, a 2nd follow up telephone verification team, mail verification, data quality reports, and field verifications

NSDUH Process

The NSDUH is comprised of non-interview and interview cases

- Randomly selected addresses
- Household screenings on hand-held computer
- 0, 1, or 2 persons selected for the interview from the household
- Interview conducted on a laptop computer
- Telephone verification
  - 15% of completed interviews
  - 5% of non-interview cases (no one was selected)

Verification Information

- Non-interview cases
  - Phone and first name collected in hand-held computer
- Interview cases
  - Information gathered on Quality Control (QC) form
    - R's phone number
    - Address
    - Date (of interview – entered by FI)
    - FI name
    - Case ID
    - Parent or legal guardian who granted permission for minor R

Telephone Verification

- Data Quality Coordinators (DQCs)

  - RTI staff that handle all verification data quality issues with the field staff and the telephone interviewing staff

- Telephone Interviewers (TIs) training

  - CATI (Computer Assisted Telephone Interviewing)

  - History of NSDUH

  - FI materials

  - Mock cases

  - Frequently Asked Questions

Telephone Verification

- CATI system used by TIs
- Conduct a brief 2 minute interview
- Verify quality of FIs work and their adherence to project procedures and protocol
- Responses are keyed into the verification system database

Telephone Verification: Call Back Team

- The Call Back Team is a small group of telephone interviewers who conduct follow up calls to flagged or problem cases
- Problems and/or protocol violations are flagged in CATI
- Some flagged or problem cases are sent to the Call Back Team's database

Telephone Verification: Call Back Team

- Call Back Team works cases located on the CMS
  - Flagged cases are sent to a NSDUH web application in the form of problem sheets in the Case Management System (CMS)
  - Initial problem is identified and investigated
    - Questionnaire not read verbatim
    - Addresses problem found by TI on initial call

Telephone Verification: Call Back Team

After Call Back Team completes verification, the DQCs:

- Review cases worked by Call Back Team
- Resolve cases using same web application
- Read problem sheets and are able to determine the reason for the discrepancy

Telephone Verification: Call Back Team

DQCs use Problem Sheets to:

- Determine if the case is considered:
  - unresolvable
  - an error
  - not a problem
  - unable to contact
  - invalid

Mail Verification

- Mail verification form sent to all Rs without contact information
- Standardized form with 7 questions to assess whether FI followed project protocols during the interview
- Returned using pre addressed envelope
- Responses keyed into the verification system

Telephone Verification Production Report

NSDUH Telephone Verification Production Report

- Used to monitor the verification response rates
- The report is updated daily and shows the progress of TIs in verification calls for the quarter
- The report uses information from the Call Center Services Verification Status Report that is run everyday

Data Quality Reports

- Information captured from the initial telephone verification call, the follow-up call by the Call Back Team, and the mail-in verification responses are illustrated on Data Quality Reports
- The main 4 reports are: Increased Verification Report, Data Quality Summary Report, Interview Lengths Report, and the Verification Form Error Report

Data Quality: Increased Verification Report

- Increased Verification Report - An increase in the percentage of cases to be called and verified by TIs

- Interviewers are selected for increased verification based on:

  - Not following project protocol
  - Data quality concerns
  - New interviewers that may have struggled through training

Data Quality: Summary Report

- The Data Quality Summary Report, provides a summary of various reports and tracks:
  - FI production
  - Number / percent of households reporting no phone
  - Refusals for verification information
  - Missing quality control forms
  - The Call Back Team
  - Short interviews

Data Quality: Interview Lengths Report

- The Interview Length Report details all interviews that were completed in less than 30 minutes or more than 3 hours
  - Short interviews can be an indicator that the FI did not follow proper procedures
  - Long interviews may show that the FI needs re-training

Data Quality: Verification Form Error Report

- This Report captures errors reported on verification quality control forms such as:
  - Missing Date or Time
  - Missing or Incorrect FI ID
  - Missing or Incomplete Case ID
  - Also captures refusals by respondents to fill out form

Data Quality Reports

- Main reports capture information from the hand-held computer and the laptop.
- These reports are used by the DQCs to help analyze the Data Quality Summary, Interview Lengths, and Verification Form Error Reports.
  - Short FI Level Report
  - Team Status - FS Level Report
  - Missing Screening Data Report
  - Record of Call Time Discrepancy Report

Field Verifications

- Reasons for Field Verification (FV)

  - A large % of the FIs work that can not be contacted by the TIs

  - Potential falsification is suspected

- The DQC will train an interviewer to re-contact the completed cases of the original FI

- If falsification is found the individual is released from the project

Conclusions

- The NSDUH project uses a combination of various methods, to maximize the reliability of the field interview process
- We hope that the information provided in this presentation illustrated the benefits of a multi-modal verification process and can help other developing projects to construct the most effective data quality monitoring system

Thank You!

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