Using a Multi-Mode Design to Maintain Response Rates

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Outline

- Study Background
  - Sample Design
  - Wave 1 Study Design
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- Wave 2 Data Collection
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  - Survey Design
  - Communications
  - Data Collection Management
  - Case Tracking System
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- Discussion/Questions

Study Background

School-based Substance Use Prevention Programs Study (SSUPPS)

- Funded by the National Institute on Drug Abuse (NIDA)
- Captures data about substance use prevention efforts occurring in schools and their districts
- Measures prevalence of evidence-based curricula
- Two rounds of data collection, 1999 and 2005

Sample Design

- Nationally representative sample of public schools with middle school grades and their corresponding school districts in the United States

- Data about schools gathered from person responsible for teaching substance use prevention in the school

- Data about districts gathered from the substance use prevention coordinator for the district

- Longitudinal sample design
  - Wave 2 sample consists of the wave 1 sample and a small supplement to account for schools that closed or restructured between 1999 and 2005

Wave 1 Study Design

- Wave 1 conducted in 1999
- Data collected using paper survey
- Pre-paid $10 incentive
- High response rates
  - 72.9% for Schools
  - 80.2% for Districts

How to Maintain Response Rates in Different Survey Environment

- Study Team's concerns about social forces affecting response rates would erode high response rate since 1999

- Longitudinal design places particular emphasis on maintaining high response rates

- Solution = More complex data collection methods to maximize response while still maintaining comparability across waves

- 2005 Study Design = Multi-Mode Data Collection

Wave 2 Data Collection (2005)

Multi-mode Design

- Multi-mode design included three modes: Web, Paper and Phone

- Web and Paper surveys were primary modes of data collection

- Web survey offered first then Paper survey; Phone follow-up with nonrespondents

Survey Design

- Designed to minimize differences across modes

- Web survey programmed and hosted using SPSS mrInterview

- Wave 2 paper survey designed to look similar to paper surveys from wave 1

Survey Comparison

- Example question from district survey

Web

Paper

Phone Follow-up

- Phone survey consisted of key questions from the web/paper surveys

- Additional question asked about reasons for nonresponse to web/paper surveys

Communications

- Both mail and email used to invite respondents to participate
- All mail contacts were sent using study specific envelopes and letterhead
- All letters were hand signed by the project director
- Email messages were sent with the project director's name in the "from" line and a study-specific email address as the "reply to" address
- All communications contained study-specific, toll-free number for respondents to call with questions (about the study or technical problems)
- Each communication was unique

Communications Schedule

Communication	Method	Schedule
Prenotification Letter	Mail	Day 0
Invitation	Email/Mail	Day 10 (+10 days)
Reminder 1	Email/Mail	Day 20 (+10 days)
Reminder 2	Email	Day 26 (+6 days)
Paper Survey Mailing 1	Mail	Day 33 (+7 days)
Paper Survey Mailing 2	Priority Mail	Day 63 (+30 days)
Postcard Reminder	Mail	Day 70 (+37 days)
Paper Survey Mailing 3	2-Day FedEx	Day 84 (+14 days)
NR Phone Follow-up	Phone	Day 98 (+14 days)

Data Collection Management

- Managing a multi-mode study is more complex

- Flexible data collection management system can:

  - Keep costs down

  - Keep respondents happy

    - Particularly important for longitudinal designs

  - Help direct data collection efforts

Case Tracking System (CTS)

- All components of multi-mode study must interface with each other in "real time"

- All communications to and from respondents tracked in a single database that can be accessed by all data collection modes

- Case Tracking System (CTS) manages all inbound and outbound communication

SSUPPS Case Tracking System (CTS)

Outbound

Inbound

Email Contacts

Mail Contacts

Phone Contacts

Case Tracking System (CTS)

MSIClient.net Reporting System

Web Survey Data

Paper Survey Data

Phone Survey Data

Respondent Phone Calls to Study Support Line
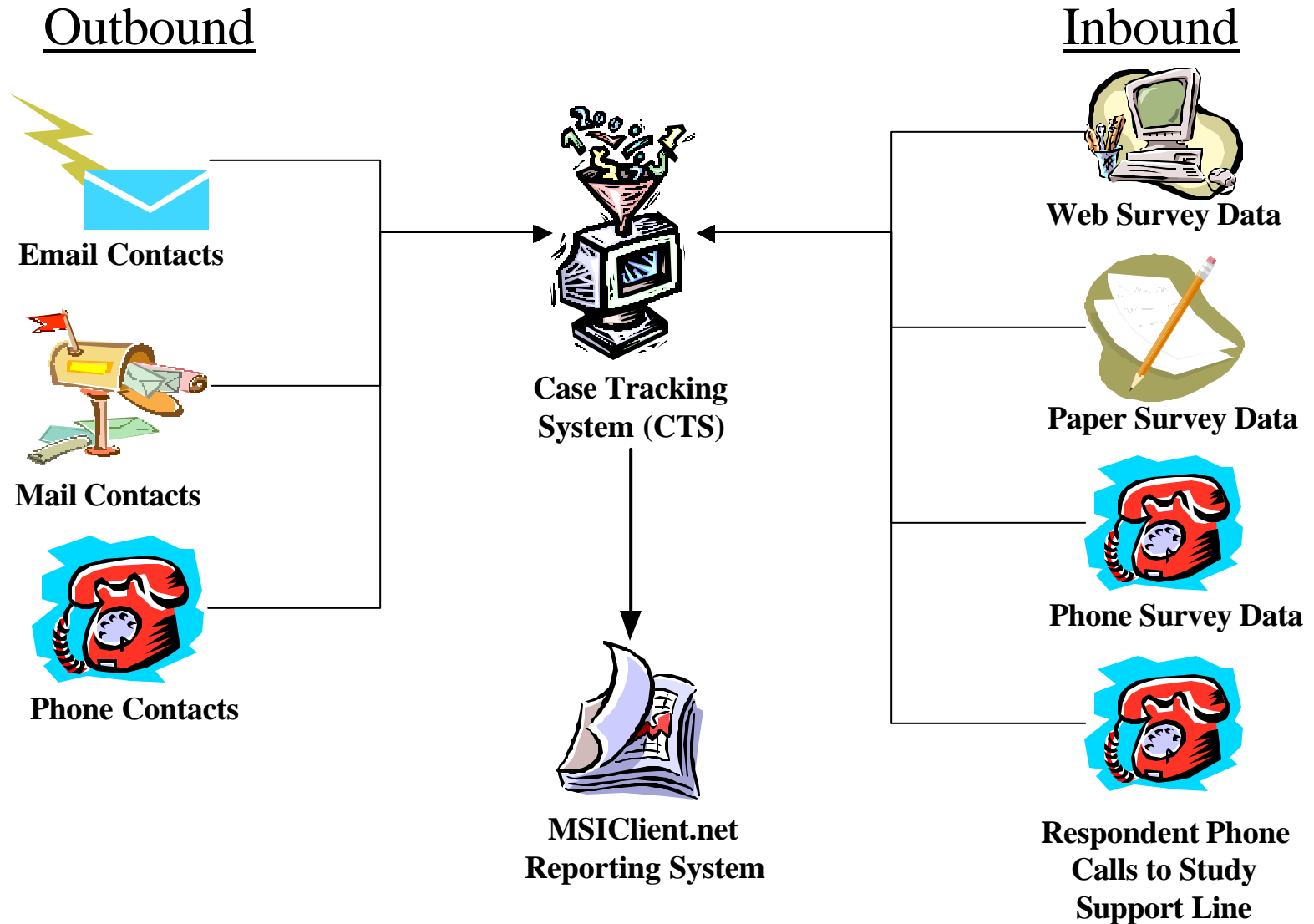
What does CTS collect?

- Outbound Communications
  - Type of contacts sent
  - Dates sent
  - Flags for returned mail/bounced email
  - Call dates/lengths/notes from phone follow-up effort
- Inbound Communications
  - Notes from respondents
  - Changes to contact information
  - Requests for results
- Survey Status
  - Integrated disposition code

What does CTS allow us to do?

- Real-time filtering of reminder messages
  - Only send reminders to those who need them
  - Great costs savings in knowing who to contact for follow-ups
    - Especially important when using expensive forms of contact (FedEx, phone, etc.)
- Inactivates other modes once completed survey is received
  - If paper survey is returned, respondent cannot access the Web version of the survey
  - Reduces amount of duplicate data
- Provides phone interviewers and study team with a great deal of information about respondents before contacting
  - Interviewers making nonresponse calls know what communications each person has received and when
  - Study team would know of any notes about respondents that will aid in contacting them and responding to their needs

CTS → MSIClient

- CTS is a large database that can be overwhelming because of its size.

- MSIClient distills information from CTS and that information is used to manage the study

- Reporting capability at macro and micro views
    - MACRO: Project reports showing:
        - Data Collection statistics (response rate, completion rates, etc.)
        - Status of cases within certain districts
        - Cases that need non-response calls
    - MICRO: Case-level reports showing:
        - Current status
        - Prior contact dates, types, etc

MSIClient Macro Report

- MSIClient report showing project status

6/16/05 6:15 AM	SSUPPS - Production Report																			
	Sample			Web Responses				Mail Responses				Telephone Responses				Overall Responses			
	Start	Ineligible	Final	Completes	Partials	Response Rate	Comp Rate	Completes	Partials	Response Rate	Comp Rate	Completes	Partials	Response Rate	Comp Rate	Completes	Partials	Response Rate	Comp Rate
Teacher	2340	113	2227	1025	82	49.7%	92.6%	332	0	14.9%	100.0%	266	21	12.9%	92.7%	1623	103	77.5%	94.0%
DC	2006	82	1924	959	103	55.2%	90.3%	288	0	15.0%	100.0%	208	28	12.3%	88.1%	1455	131	82.4%	91.7%
Total	4346	195	4151	1984	185	52.3%	91.5%	620	0	14.9%	100.0%	474	49	12.6%	90.6%	3078	234	79.8%	92.9%

MSIClient Macro Report

- Case Status report, used to direct follow-up calls

State	District ID	Sample Type	DC Wave	Milestone	Callback Status	Refusal Flag	Partial Flag	Locating Problem Flag	PIN	First Name	Last Name	Phone	District Name	School Name
AK	200001	District	1	Complete	99 - Dead	0	1	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200001	School	2	2 - Pending	Callback	0	0	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200001	School	1	2 - Pending	Callback	0	0	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200003	District	1	Complete	99 - Dead	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200003	School	1	6 - Partial	99 - Dead	0	1	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200020	District	1	Complete	99 - Dead	0	1	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200020	School	1	2 - Pending	Number	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200020	School	1	Complete	99 - Dead	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200050	District	1	Complete	99 - Dead	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200050	School	1	2 - Pending	Number	0	0	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200180	District	1	Complete	99 - Dead	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200180	School	1	2 - Pending	Number	0	0	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200210	District	1	Complete	99 - Dead	0	1	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200210	School	1	Complete	99 - Dead	0	1	1	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name
AK	200270	District	1	Complete	99 - Dead	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	
AK	200270	School	1	2 - Pending	Number	0	0	0	xxxxxxx	first name	last name	xxx-xxx-xxxx	District Name	School Name

MSIClient Micro Report

- Case report with specific information about one case

Call History Status: G05004_1

Milestone: 7 - Complete
Refusal: No
Locating Problem: No
Partial: Yes
Tech Administered: No
Call Status: 99 - Dead
Callback: 2005-02-07 16:37:16.153
Assigned To: 401996

User Id	User Name	Date	Call Length	Talk Time	Result Code	Memo	Entry Type
WEBUPDATE		2005-02-03 00:00:00.000			190 - Email/Web: Complete - Self Administered - Web	Self completed web survey	WEBIN
WEBUPDATE		2005-02-01 15:23:56.450			191 - Email/Web: Partial - Self Administered - Web	Self partially completed web survey	WEBIN
EMAILER		2005-01-31 16:37:16.140				SOL1a	EMAILOUT
CTSMAIL		2005-01-21 00:01:00.000				PRE1	MAILOUT

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MSIClient Micro Report

- Another case report with multiple contacts

Call History Status: G05004_1

Milestone: 7 - Complete
Refusal: No
Locating Problem: No
Partial: No
Tech Administered: Yes
Call Status: 99 - Dead
Callback: N/A
Assigned To: 403737

User Id	User Name	Date	Call Length	Talk Time	Result Code	Memo	Entry Type
403737		2005-06-28 08:51:20.000	687	568	90 - Phone: Complete - Tech Administered		CALLOUT
403737		2005-06-27 08:47:52.000	45	24	12 - Phone: No Answer		CALLOUT
403737		2005-06-23 09:46:59.000	183	6	26 - Phone: Voicemail (left msg)		CALLOUT
403737		2005-06-22 09:49:45.000	40	15	32 - Phone: Soft Callback (screened)		CALLOUT
403737		2005-06-21 13:00:22.000	229	50	32 - Phone: Soft Callback (screened)		CALLOUT
403737		2005-06-10 11:20:03.000	47	7	13 - Phone: Voicemail (no msg left)		CALLOUT
403737		2005-06-03 09:44:47.000	36	8	13 - Phone: Voicemail (no msg left)		CALLOUT

|							
403737		2005-05-25 09:02:20.000	56	6	13 - Phone: Voicemail (no msg left)		CALLOUT
403737		2005-05-12 13:37:50.000	36	11	13 - Phone: Voicemail (no msg left)		CALLOUT
403737		2005-05-03 08:56:32.000	36	0	13 - Phone: Voicemail (no msg left)		CALLOUT
403737		2005-05-03 06:53:51.000	159	76	13 - Phone: Voicemail (no msg left)		CALLOUT
CTSMAIL		2005-04-11 00:01:00.000				SOL4b	MAILOUT
CTSMAIL		2005-03-28 00:01:00.000				REM4	MAILOUT
CTSMAIL		2005-03-21 00:01:00.000				SOL3b	MAILOUT
CTSMAIL		2005-02-22 00:01:00.000				SOL2b	MAILOUT
CTSMAIL		2005-02-09 00:01:00.000				REM2bm	MAILOUT
CTSMAIL		2005-01-31 00:01:00.000				REM1bm	MAILOUT
CTSMAIL		2005-01-21 00:01:00.000				PRE1	MAILOUT

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Results

- Data Collection period = 162 days (~5.5 months)
- 20,456 total outbound communications to respondents
  - Total of 6,900 emails sent
  - Total of 13,556 mailed contacts sent
  - An average of 5 contacts per sample line
  - An average of 126 contacts per day of data collection

Response Rates

	Completed Surveys	Partially Completed Surveys	Eligible Sample Size	AAPOR Response Rate #2
School Survey	1470	253	2204	78.2%
District Survey	1492	120	1922	83.9%
Total	**2962**	**373**	**4126**	**80.8%**

Responses Over Time

Weeks of Data Collection

Paper Responses — Phone Responses — Web Responses — Cumulative Responses
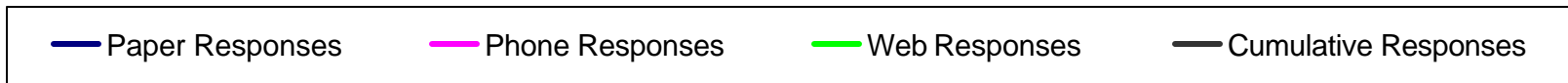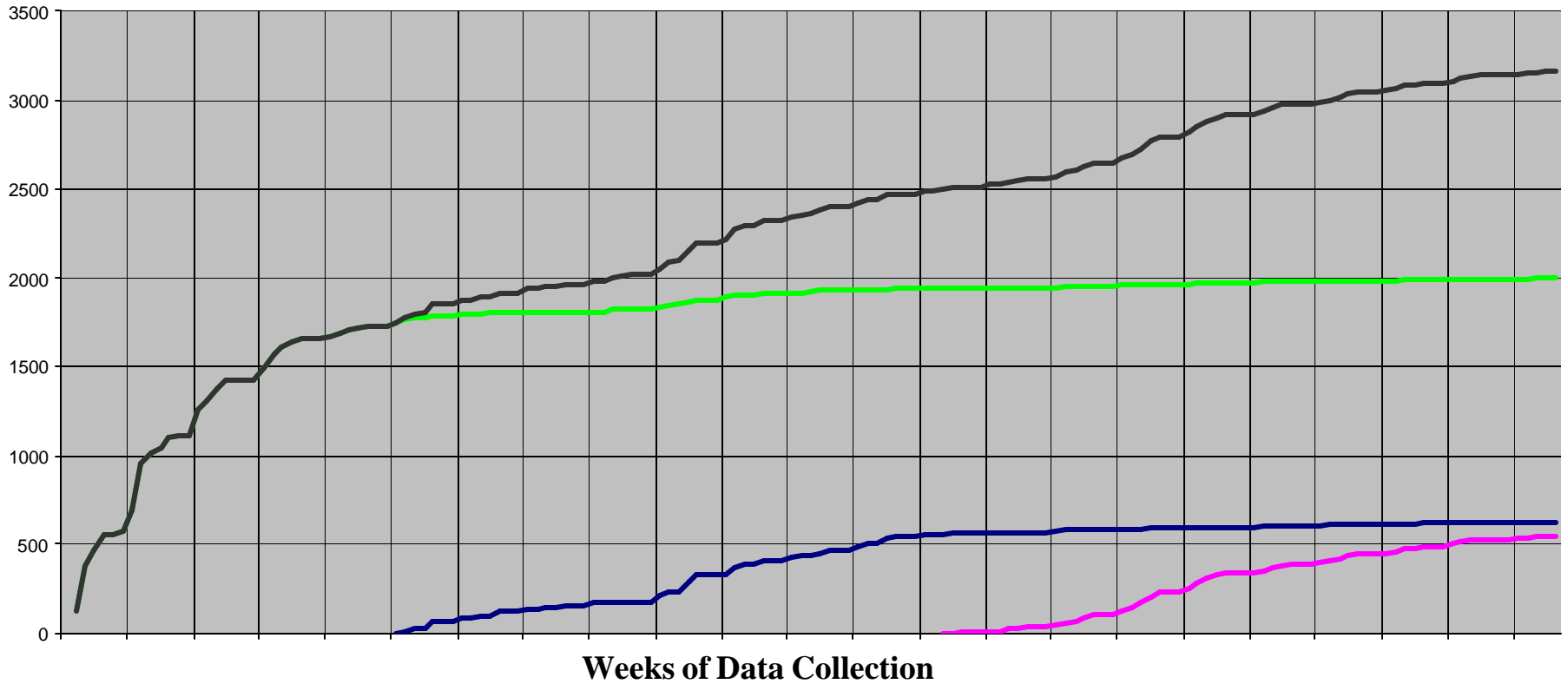
Mode Analysis

- Data collection approach did not include an experimental design so it is not possible to calculate mode effects

- Looking at demographics across modes, the following observations can be made:
  - RACE: Whites more likely to respond by Web, African Americans by mail (p=.04)
  - GENDER: No difference in gender
  - AGE: No difference in mean age

- Looking at key questionnaire item (Does your school/district have a substance use prevention program?), the following observation can be made:
  - Higher proportion responded by phone, lower by mail (p = .06)

Conclusions

- High response rates are possible despite generally declining response rates

- Multi-Mode data collection strategy can be successful in maintaining response rates

- More complex data collection designs require more complex data management systems and considerable staff time

Directions for Future Research

- More research about using multi-mode designs is needed
- More research investigating effects of multiple mode design
  - Can't sacrifice data quality for response rates

Questions?