

Initial evaluation of the use of an address-based sample with multi-modes as a replacement for an RDD sample for a general population survey

Chad Kniss

UW Survey Center
University of Wisconsin Madison
ckniss@ssc.wisc.edu

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Outline for this presentation

- Review existing omnibus statewide survey ***UW Badger Poll***
- Changing the sample frame to utilize an address-based sample
- Implementation of an experiment of web vs paper vs mix-mode
- Initial review of outcomes from ***Wisconsin Point of View***

UW Badger Poll

A statewide omnibus phone survey of adult Wisconsin residents:

- RDD landline sample frame
- A core set of general opinion questions and political approval items
- A core set of demographic questions
- Space available for clients to sponsor questions
- Field period usually 7 to 14 days

Issues with the ***UW Badger Poll***:

- Declining response rates
- RDD landline sample frame only
- Big under representation of young adults
- Increasing complexity and cost

Weighing potential changes to landline RDD sample

Add a cell phone RDD sample

- + Expands frame coverage
-
- Increases size of sample, complexity, and costs
 - Overlapping frame coverage and weighting issues
 - Distribution of cell phones across state lines
 - Likely lower response rates, with potential for biasing results

Switch to address-based sample

- + Expands frame coverage
 - + Potential use of alternative means of contact
-
- Need to obtain phone numbers
 - Potential need for mix-mode data collection
 - Potential difference between modes
 - Likely lower response rates, with potential for biasing results
 - Respondent selection

Implementing a new sample frame

Change sampling frame:

Address-based sample (ABS) of residential addresses in Wisconsin

- exceptions: those flagged as seasonal, institutional, and vacant
- only PO Boxes flagged as the “only way to get mail” included

Address-based sample provides

- An address for every case
- A name matched to large majority of sampled cases
- A telephone number matched to about half of sampled cases

New name to reflect break with past: ***Wisconsin Point of View***

Experimenting with new mode(s)

Once we decided to change the sample frame, we also decided to change mode. We considered two self-administered modes:

- Paper questionnaire
- Web questionnaire

The switch provided a good opportunity to do an experiment to look at which mode of self-administered questionnaire would produce the better response and data.

Experimental design with multiple modes

Since we have addresses for all cases, all contacts would be by mail

- physical letters/materials mailed all cases
- web questionnaires required entering URL and password

	<i>Experimental Groups</i>		
<u>Contacts</u>	Web only	Paper only	Mix-mode
First	Letter with URL & \$2 bill	Survey packet with \$2	Letter with URL & \$2 bill
Second	Reminder postcard (URL)	Reminder postcard	Reminder postcard (URL)
Third	Letter with URL	Survey packet	Letter with URL
Fourth	Letter with URL	Survey packet	Survey packet *

* mode switch

Wisconsin Point of View

An omnibus statewide survey, with a majority of questions from sponsoring clients about general knowledge of and opinions of:

- UW Health System
- UW-Madison

Paper questionnaire

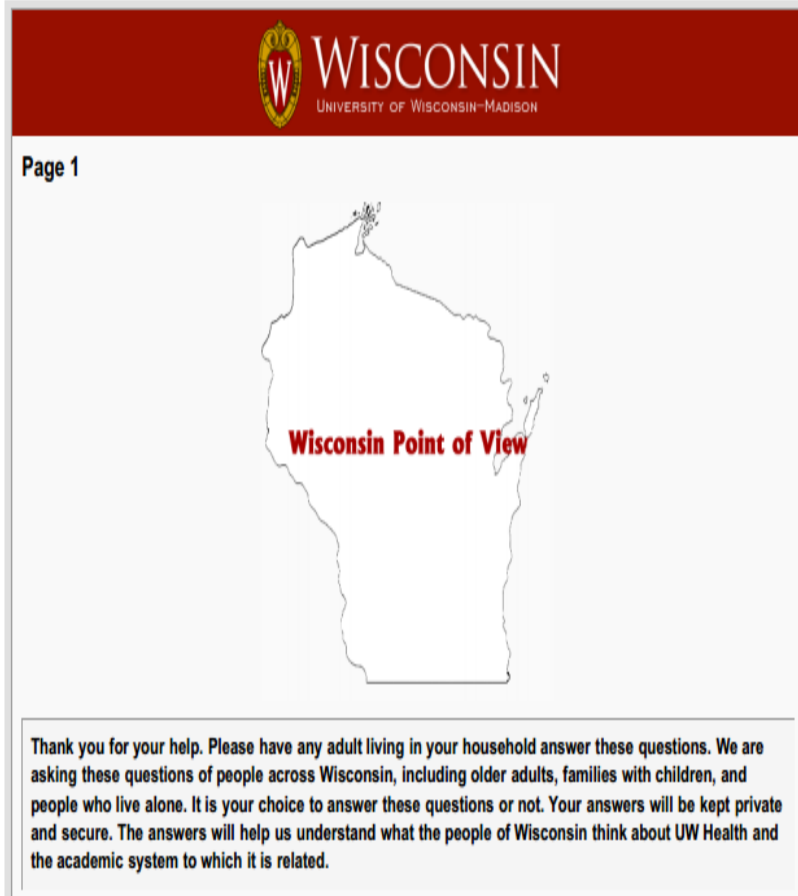
- an eight page questionnaire with a front title page and back cover

Web questionnaire

- max 25 web pages once logged into the survey site
- A total of 61 survey questions (one additional web = 62)
- Most questions laid out in same format between modes

Wisconsin Point of View – First Page

Web

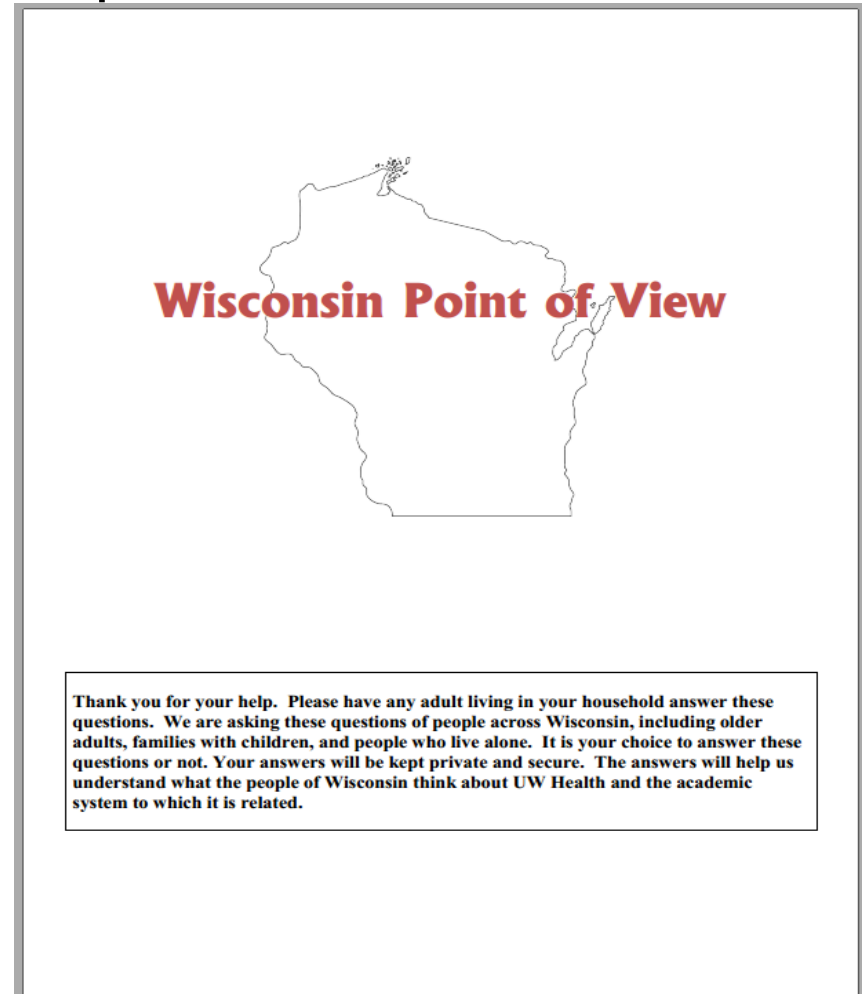


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Wisconsin Point of View

Thank you for your help. Please have any adult living in your household answer these questions. We are asking these questions of people across Wisconsin, including older adults, families with children, and people who live alone. It is your choice to answer these questions or not. Your answers will be kept private and secure. The answers will help us understand what the people of Wisconsin think about UW Health and the academic system to which it is related.

Paper



Wisconsin Point of View

Thank you for your help. Please have any adult living in your household answer these questions. We are asking these questions of people across Wisconsin, including older adults, families with children, and people who live alone. It is your choice to answer these questions or not. Your answers will be kept private and secure. The answers will help us understand what the people of Wisconsin think about UW Health and the academic system to which it is related.

Wisconsin Point of View – First Question Set

Web

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UW Health is an academic health system in Madison that includes the University of Wisconsin School of Medicine and Public Health, UW physicians who are faculty of the school, and the UW Hospital and Clinics.

How knowledgeable are you about each of the following organizations?

	Not at all	Slightly	Somewhat	Very	Extremely
UW Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UW School of Medicine and Public Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UW Hospital and Clinics in Madison	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
American Family Children's Hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UW Carbone Cancer Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

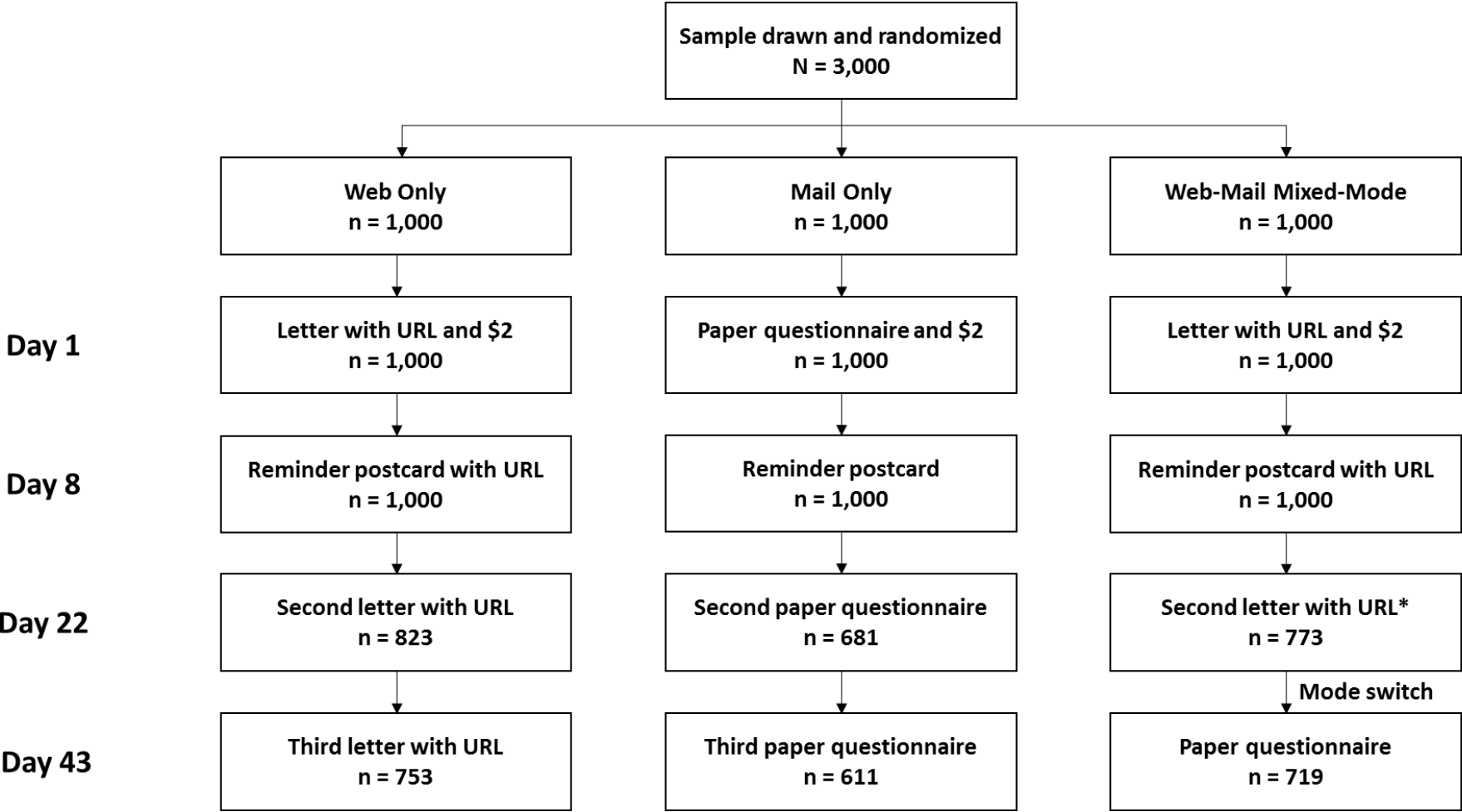
Paper

1. UW Health is an academic health system in Madison that includes the University of Wisconsin School of Medicine and Public Health, UW physicians who are faculty of the school, and the UW Hospital and Clinics.

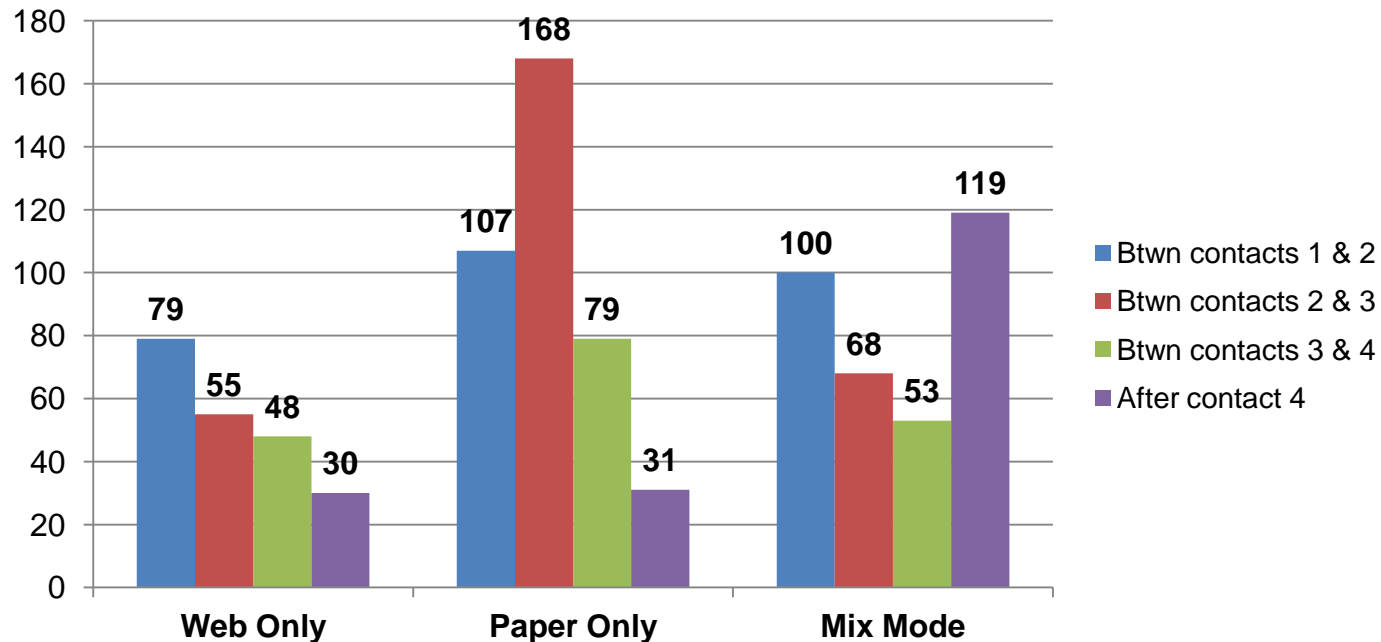
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	Not at all	Slightly	Somewhat	Very	Extremely
a. UW Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. UW School of Medicine and Public Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. UW Hospital and Clinics in Madison	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. American Family Children's Hospital	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. UW Carbone Cancer Center	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Experiment Implementation and Mail Process



Completes by Experimental Group and Contact



- Majority of completes for the single mode groups came from contacts 1 and 2
- The mode switch in the mix-mode group greatly increased response

Final Outcomes and Response Rates

Data collection from October 15, 2013 to December 31, 2013

	<i>Experimental Groups</i>			Overall
	Web only	Paper only	Mix-Mode	
<u>Outcomes</u>	n = 1000	n = 1000	n = 1000	n = 3000
Completes and Usable Partials	212	385	340	937
Not Usable Partials	14	25	17	56
Refusals	5	18	12	35
Eligible Non-completes	1	1	1	3
Undeliverable	11	9	11	31
No Such Address	3	0	1	4
Vacant	42	39	33	113
Screened out	17	0	0	17
Ineligible address	0	3	0	3
Total Response	305	479	415	1199
Unknown / No response	695	521	585	1801
Yield Rate	21.2%	38.5%	34.0%	31.2%
Response Rate	23.5%	42.1%	36.5%	34.2%

Completed Surveys by Mode and Experimental Group

993 questionnaires were either returned or entered via the web

- 30 cases were missing data for more than 50% of items
- 26 additional were missing key respondent demographics (age and/or gender)
- were recoded as unusable partials

937 questionnaires were determined to be usable:

	<i>Experimental Groups</i>			
	Web only	Paper only	Mix-Mode	Overall
<u>Mode</u>	n = 212	n = 385	n = 340	n = 937
Web	212	0	225	437
Paper	0	385	115	500

Item Missing Data

Among the cases determined to be usable (completes and partials)

	<i>Experimental Groups</i>		
	Web only	Paper only	Mix-Mode
<u>Items Missing Data</u>	n = 212	n = 385	n = 340
Mean	2.01	4.42	2.93
None	64.2%	49.9%	60.9%
Less than 10%	25.0%	25.1%	23.2%
10% or more	10.8%	25.0%	15.9%

	<i>Mode</i>	
	Web	Paper
<u>Items Missing Data</u>	n = 437	n = 500
Mean	1.56	4.88
None	69.6%	46.2%
Less than 10%	22.4%	26.0%
10% or more	8.0%	27.8%

Fielding Expenses and Costs

The figures below account for expenses of technology development and fielding of surveys (e.g.: printing, postage, sample, data entry, incentives, stuffing, and logging returns).

	<i>Experimental Groups</i>			Overall
	Web only	Paper only	Mix-Mode	
	n = 212	n = 385	n = 340	n = 937
Total Costs	\$7,655.26	\$13,079.38	\$9,636.81	\$30,371.46
Cost per Complete	\$36.11	\$33.97	\$28.34	\$32.41
Estimated cost per complete if sampled 3,000 for each group	\$31.33	\$31.59	\$25.08	\$29.17

As a comparison, the last ***UW Badger Poll*** in the summer of 2011:

Total costs: \$24,725 (for similar fielding expenses)

Cost per complete: \$44.47

Key Respondent Demographics of Gender and Age

	<i>Experimental Groups</i>		
	Web only	Paper only	Mix-Mode
<u>Gender</u>	n = 212	n = 385	n = 340
Women	56.1%	57.7%	55.3%
Men	43.9%	42.3%	44.7%
<u>Age</u>			
18-29 years old	7.1%	3.9%	8.5%
30-44 years old	28.8%	22.6%	22.9%
45-59 years old	36.8%	30.9%	31.8%
60 years or more	27.4%	42.6%	36.8%

	<i>Mode</i>	
	Web	Paper
<u>Gender</u>	n = 437	n = 500
Women	54.2%	58.4%
Men	45.8%	41.6%
<u>Age</u>		
18-29 year olds	8.0%	4.8%
30-44 year olds	27.0%	21.6%
45-59 year olds	36.2%	29.4%
60 years or more	28.8%	44.2%

Comparison of Age Groups

Ideally 18 to 29 year olds would make up between 20% to 25% of the respondents who completed the survey

<u>Age Groups</u>	2010 Census	2011 <i>UW Badger Polls</i>	2013 <i>WI Point of View</i>
18 to 29 years old	22.2%	4.8%	6.3%
30 to 44 years old	24.7%	16.5%	24.1%
45 years old or more	53.1%	78.7%	69.6%

Respondent Education Level

	<i>Experimental Groups</i>		
	Web only	Paper only	Mix-Mode
<u>Education Level</u>	n = 212	n = 385	n = 340
High School or less	19.3%	32.7%	27.6%
Some college	35.8%	34.3%	33.2%
4 year College Degree or more	44.9%	32.8%	39.1%

	<i>Mode</i>	
	Web	Paper
<u>Education Level</u>	n = 437	n = 500
High School or less	18.7%	35.8%
Some college	34.8%	33.8%
4 year College Degree or more	46.4%	30.2%

Household Phone Service

	<i>Experimental Groups</i>		
	Web only	Paper only	Mix-Mode
<u>Phone Service</u>	n = 212	n = 385	n = 340
None	0.0%	0.3%	0.9%
Landline only	2.8%	4.7%	2.4%
Cell only	32.1%	35.3%	34.4%
Both Cell and LL	63.7%	53.2%	57.9%
Unable to tell	1.4%	6.5%	4.4%

	<i>Mode</i>	
	Web	Paper
<u>Phone Service</u>	n = 437	n = 500
None	0.5%	0.4%
Landline only	2.1%	4.6%
Cell only	35.0%	33.6%
Both Cell and LL	60.2%	54.8%
Unable to tell	2.3%	6.6%

Household Phone Service by Age Group

The majority of respondents under 45 years of age reported that they lived in wireless or cell phone only households

<u>Age Groups</u>	Landline Only	Both LL and Wireless	Wireless Only
18 to 29 years old	0.0%	10.2%	88.1%
30 to 44 years old	1.3%	42.9%	53.5%
45 years old or more	8.4%	66.5%	22.7%

Conclusions

Fielding an omnibus statewide survey using an address-based sample with paper and web modes:

- Increased frame coverage over standard RDD landline
- Decreased fielding costs per complete over standard RDD landline

Important questions to consider:

- What mode or modes to use?
 - Costs
 - Response issues
 - Timing
- Possible differences in response by mode?
 - Demographic (mode may impact who responds)
 - Missing data (formatting questions and item non-response)
- What, if anything, do about respondent selection?

Thank You!

For copies of this presentation or more information, contact:

Chad Kniss
ckniss@ssc.wisc.edu

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