

# **Advancing State-Wide Polling: Examining the Effects of Advance Letters on Response Rates?**

**Chad Kniss  
Project Director**

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# Why care about response rates?

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- A key indicator providing some information on the quality of survey data
- Concerns about potential bias from non-responses if non-responders are different from responders
- Declining response rates over the last two decades
- Trade offs between response rate and survey costs

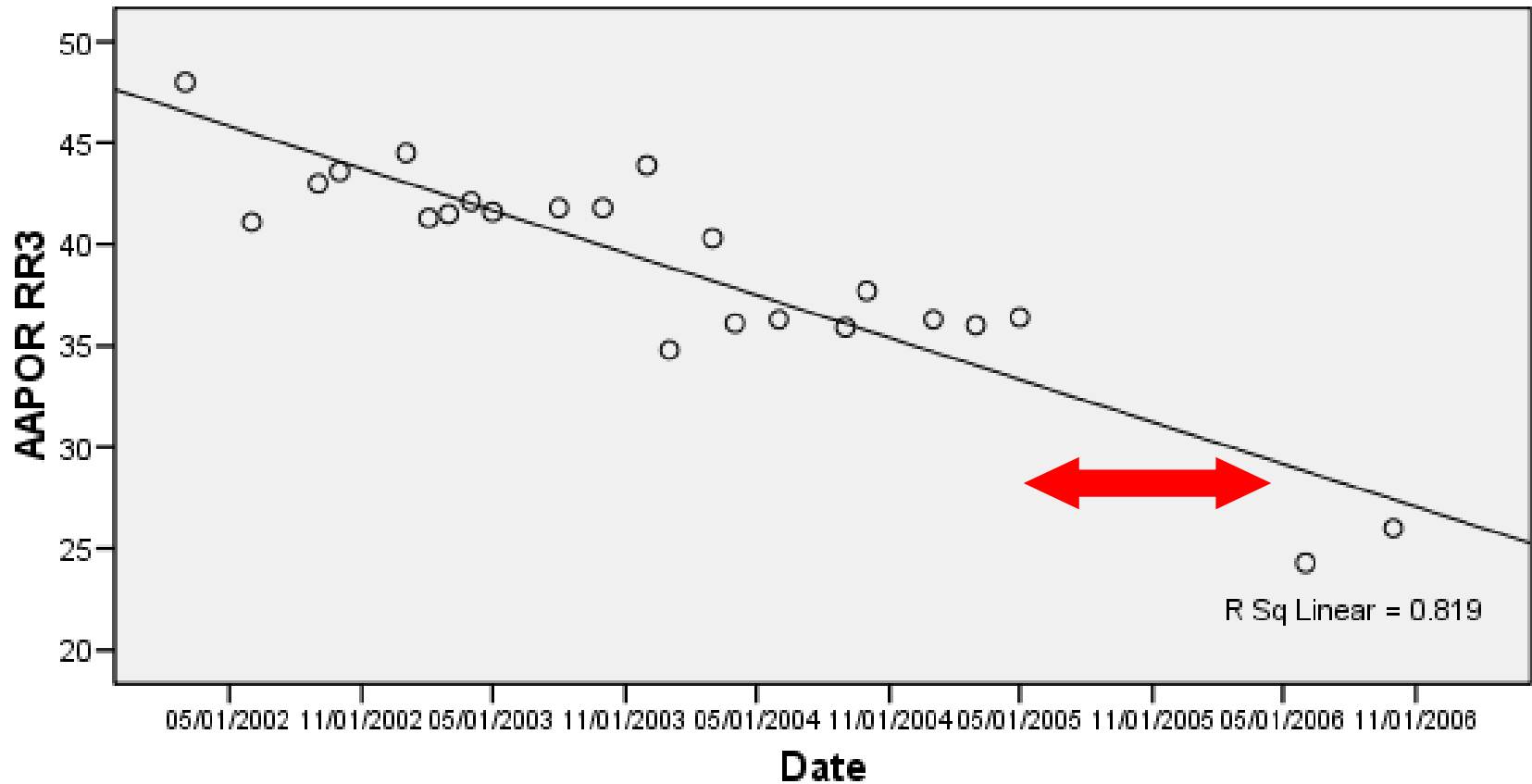


# Case Study: The Badger Poll

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- A state-wide public opinion poll
- Simple RDD survey, no stratification
- Short field period, max 10 attempts
- Publicly released data

# Badger Poll Response Rates



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# Why consider advance letters & incentives?

- Fall 2006 noted regional disparities in responses as well as an overall low response rate (26%)
  - Milwaukee County under represented
  - Ideally should get about 16-17% from this region

<b>Badger Poll</b>	<b>Date</b>	<b>Milwaukee Co. Completes</b>
#23	October 2006	10%
#22	June 2006	13%
#21	May 2005	12%



# Why send advance letters?

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- Advance letters increase cooperation
  - Traugott, Groves and Lepkowski, 1987
  - Curtin, Singer and Presser, 2007
- Use of pre-incentives in advance letters can increase response rate
  - Brick, et al., 2005
  - Singer, Van Hoewyk, and Maher, 2000
  - Curtin, Singer and Presser, 2005 & 2007
- Advance letters and incentives likely affect number of calls
  - Singer, Van Hoewyk, and Maher, 2000
  - Brick, et al., 2005

# Initial use of advance letters & incentive

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- Initial use of advance letters with \$2 as a pre-incentive
  - For the two Badger Polls in 2007, we used advance letters with a \$2 incentive for all cases with a listed address in Milwaukee County

	Date	Milw.Co Listed	Milw.Co Non-listed
<b>BP#25</b>	December '07	218	346
<b>BP#24</b>	June '07	209	400

# Initial results of advance letters & incentive

Response Rates (AAPOR Response Rate 3)						
	Date	Milw.Co Listed	Milw.Co Non	Other Listed	Other Non	Overall
<b>BP#25</b>	Dec. '07	<b>50.9%</b>	23.4%	31.1%	26.5%	<b>31.9%</b>
<b>BP#24</b>	Jun. '07	<b>48.3%</b>	26.8%	32.0%	26.9%	<b>31.7%</b>



Cooperation Rates (AAPOR Cooperation Rate 1)						
	Date	Milw.Co Listed	Milw.Co Non	Other Listed	Other Non	Overall
<b>BP#25</b>	Dec. '07	<b>63.9%</b>	46.6%	40.1%	37.2%	<b>42.4%</b>
<b>BP#24</b>	Jun. '07	<b>61.2%</b>	46.0%	40.9%	38.9%	<b>42.8%</b>



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# Experimenting with advance letters & incentive

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- April 2008 Badger Poll #26
  - Original sample draw for BP#26 was 2,600 cases
  - Reverse match of cases from an RDD draw  
approximately 42% of cases matched to an address
  - Cases with address matches randomly assigned to one of three groups

<b>Group</b>	<b>Treatment</b>	<b>N</b>
1	None (control)	356
2	Advance letter only	359
3	Advance letter & \$2 incentive	365



# Badger Poll #26

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Conducted from April 15, 2008 through April 24, 2008

Advance letters sent out in USPS on April 14, 2008

Advance letters exactly the same, except one part of a sentence.

“Please accept the \$2 enclosed as our thanks for your time and consideration and... / ...we look forward to your participation in this important survey of public opinion in Wisconsin!”



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# Results from advance letter & incentive

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## Overall

Response Rate:	34.7% (AAPOR Resp. Rate 3)
Contact Rate:	72.2% (AAPOR Contact Rate 2)
Refusal Rate:	35.0% (AAPOR Refusal Rate 2)
Cooperation Rate:	48.1% (AAPOR Coop. Rate 2)

# Response rate across regions

- Results of the experiment across regions of Wisconsin
  - AAPOR Response Rate 3

	Date	Milw. Listed	Milw. Non-listed	Other WI Listed	Other Non-listed	Overall
<b>BP#26</b>	Apr. '08	<b>31.6%</b>	15.1%	<b>40.7%</b>	25.0%	<b>34.7%</b>
<b>BP#25</b>	Dec. '07	<b>50.9%</b>	23.4%	<b>31.1%</b>	26.5%	<b>31.9%</b>
<b>BP#24</b>	Jun. '07	<b>48.3%</b>	26.8%	<b>32.0%</b>	26.9%	<b>31.7%</b>



# Effect on Response Rate

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	<b>AAPOR3</b>	<b>N</b>
Advance Letter w/ \$2	46.0%	365
Advance Letter only	41.0%	359
Address no letter	33.3%	356
Non-listed	22.7%	1520

## Significance Tests

No letter v. AL only      chi-sq = 3.383 ( $p < 0.10$ )

AL only v. AL w/\$2      chi-sq = 2.046

No letter v. AL w/\$2      chi-sq = 10.663 ( $p < 0.01$ )

# Effect on Contact Rate

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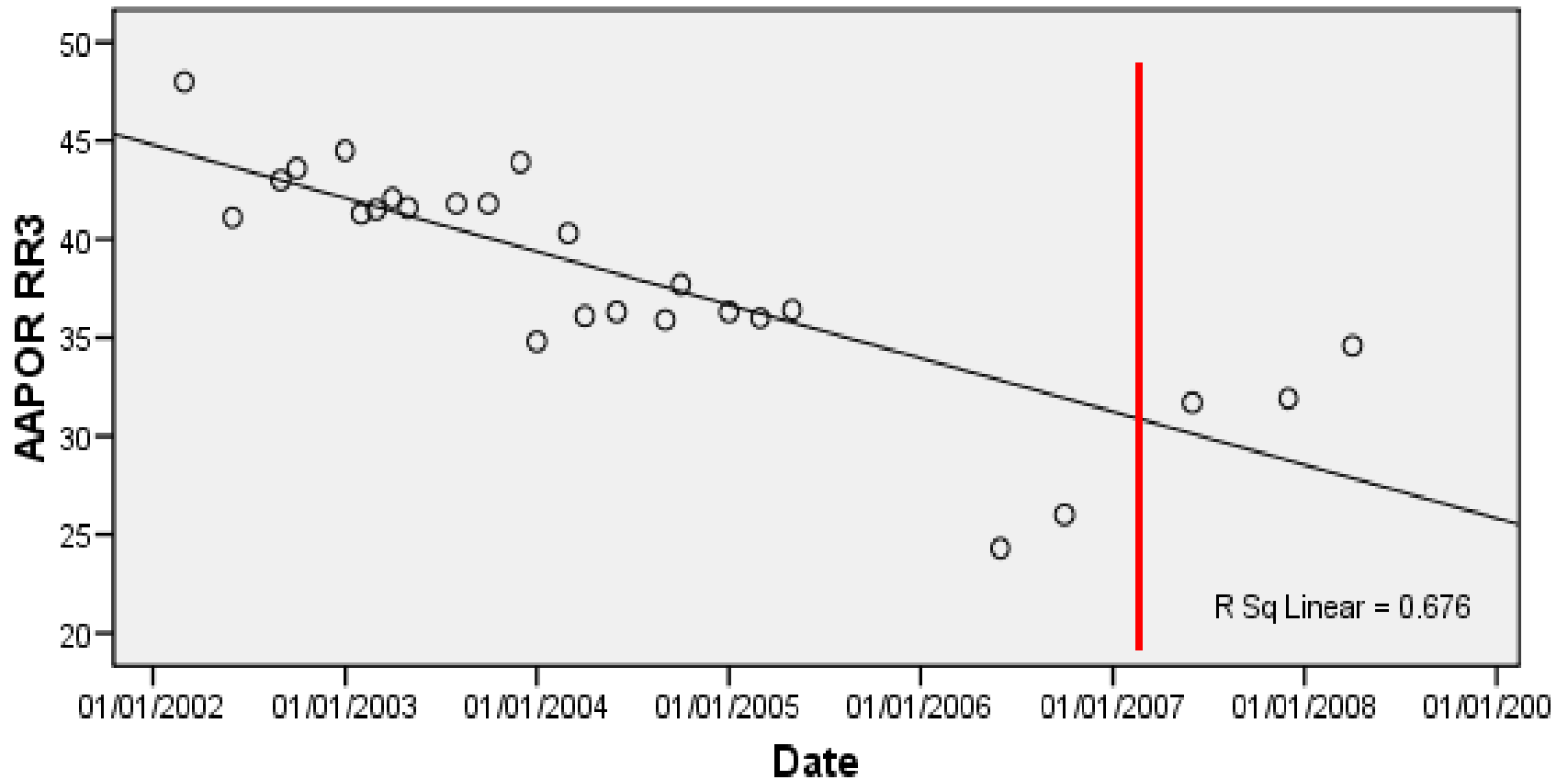
	<b>AAPOR2</b>	<b>N</b>
Advance Letter w/ \$2	74.4%	365
Advance Letter only	74.4%	359
Address no letter	74.0%	356
Non-listed	69.2%	1520

# Effect on Cooperation Rate

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	<b>AAPOR1</b>	<b>N</b>
Advance Letter w/ \$2	61.8%	365
Advance Letter only	55.2%	359
Address no letter	45.0%	356
Non-listed	33.2%	1520

# Badger Poll Response Rates, Updated





# Effect on Calls per Case to Finalize

	Mean	S.E.	N
Advance Letter w/ \$2	5.28	0.183	365
Advance Letter only	5.31	0.184	359
Address no letter	5.34	0.181	356
Non-listed	3.96	0.093	1520

## Significance Tests

No letter v. AL only  $t = 0.161$

AL only v. AL w/\$2  $t = 0.104$

No letter v. AL w/\$2  $t = 0.265$



# Effect on Calls per Completed Interview

	<b>Mean</b>	<b>S.E.</b>	<b>N</b>
Advance Letter w/ \$2	3.41	0.201	149
Advance Letter only	3.50	0.224	128
Address no letter	3.41	0.276	104
Non-listed	3.92	0.287	91

## Significance Tests

No letter v. AL only  $t = -0.246$

AL only v. AL w/\$2  $t = 0.301$

No letter v. AL w/\$2  $t = 0.012$



# Effect on Days to Completion of Interview

	<b>Mean</b>	<b>S.E.</b>	<b>N</b>
Advance Letter w/ \$2	4.41	0.202	149
Advance Letter only	4.30	0.211	128
Address no letter	4.30	0.272	104
Non-listed	4.67	0.265	91

## Significance Tests

No letter v. AL only  $t = -0.020$

AL only v. AL w/\$2  $t = -0.357$

No letter v. AL w/\$2  $t = -0.265$



# Effect on Overall Survey Effort

<b>Badger Poll</b>	<b>Date</b>	<b>Cases / Comp</b>	<b>Calls / Case</b>	<b>Calls / Comp</b>	<b>Hours / Comp</b>
#26	Apr. '08	5.49	4.50	24.71	1.61
#25	Dec. '07	5.82	4.93	28.70	1.71
#24	Jun. '07	5.87	6.09	35.74	2.11
#23	Oct. '06	6.93	4.34	30.12	1.78
#22	Jun. '06	5.80	7.75	44.98	2.80



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# Review of Findings

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Do advance letters and incentives matter for response rates?

- Advance letters increased response & cooperation rates
- A \$2 incentive increased response & cooperation rates above just an advance letter
- Advance letter with a \$2 incentive most effective at increasing response & cooperation rates

# Review of Findings

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Do advance letters and incentives matter to the amount work for a survey?

- Little variation in the mean call attempts / case
- Little variation in the mean call attempts / interview
- Little variation in the mean days to complete interview
- Modest decline in...
  - Number of cases fielded
  - Calls per completed interview
  - Number of hours worked for complete interview



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# Looking Forward

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- Going to continue with experiment in next Badger Poll in October 2008
  - Change back to all listed sample in Milwaukee County will get an advance letter and \$2 incentive
  - Rest of the listed sample in the state will be randomly split into the three experimental groups
- Look at the impact of who is responding to advance letters and incentive

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## Contact Information

Chad J. Kniss

[ckniss@ssc.wisc.edu](mailto:ckniss@ssc.wisc.edu)

608.262.4157



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