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# EVALUATING EFFICIENCY AND EFFECTIVENESS OF CELL PHONE SAMPLES

PRESENTED AT THE  
ANNUAL MEETING  
AMERICAN ASSOCIATION OF  
PUBLIC OPINION RESEARCH

NEW ORLEANS, LOUISIANA  
MAY 17, 2008

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**PRESENTED AT THE  
AMERICAN ASSOCIATION OF PUBLIC OPINION  
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# **Evaluating Efficiency and Effectiveness of Cell Phone Samples**

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**American Association of Public Opinion Research**

**May 17, 2008**

# Exploratory Evaluation of Two Sampling Frames

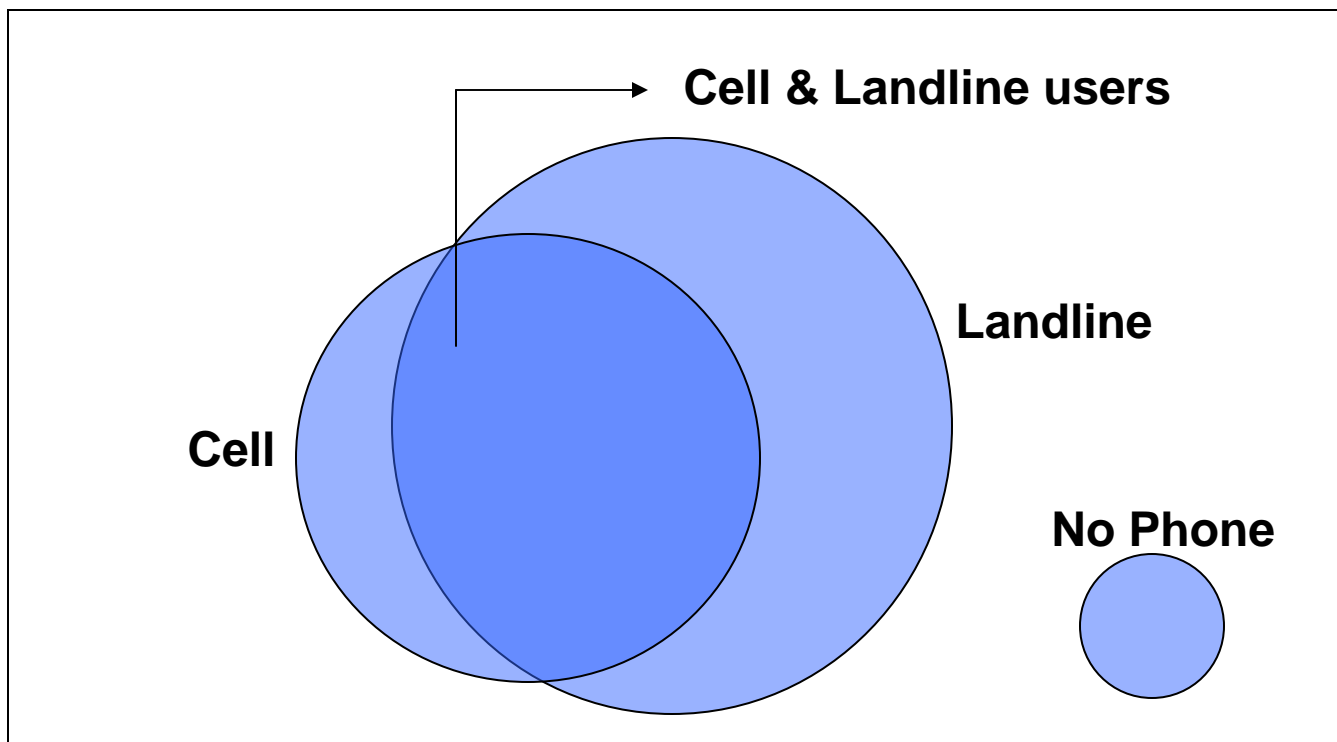
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- **Address-based**
  - Residential locations
  - Passive Contact Method
- **Cell Phone**
  - Cell phone numbers
  - Active Contact Method

# Coverage of Telephone Ownership Types

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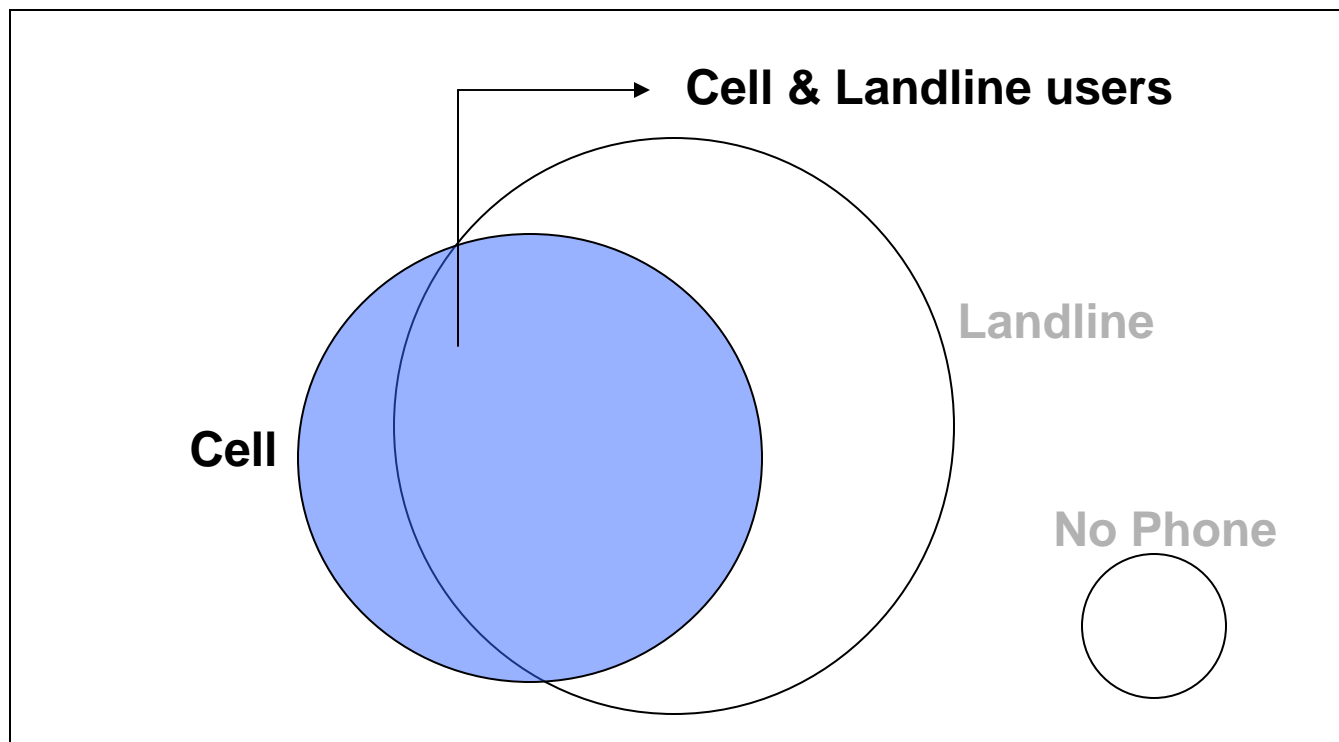
Address-based Sampling Frame



# Coverage of Telephone Ownership Types

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## Cell Phone Sampling Frame



# Data

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- **Address-based Frame**
  - Metropolitan Washington Household Travel Survey
    - Two-Stage Regional Survey
      - Analysis focused on Stage 1: Recruitment
      - Mail-out with Multiple Completion Options
    - Single Frame:
      - Matched and Unmatched to Telephone Numbers
- **Cell Phone Frame**
  - National Traffic Safety Survey
    - Single Stage National Survey
    - Dual Frame: RDD landline and Cell phone samples

# Response Rates

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	<b>Address-based Frame</b>	<b>Cell Phone Frame</b>
<b>AAPOR Response Rate (RR4)</b>	<b>18.5%</b>	<b>19.0%</b>
<b>Total Completed Interviews</b>	<b>5,015</b>	<b>719</b>
Cell-Only households	<b>1,532 (30%)</b>	<b>299 (42%)</b>
Landline-Only households	<b>1,287 (26%)</b>	-
Cell and landline households	<b>1,982 (40%)</b>	<b>420 (58%)</b>
Other (VOIP)	<b>214 (4%)</b>	-

# Coverage: Age

Address-based Frame: Metropolitan Washington Survey

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## Respondent Age

	Cell-Only	Dual	Landline-Only
18 - 34 years	<b>56%</b>	20%	15%
35 - 54 years	35%	<b>51%</b>	43%
55 years or older	9%	29%	<b>42%</b>
	100%	100%	100%

# Coverage: Age

Cell Phone/RDD Landline Dual Frame: National Survey

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## Respondent Age

	Cell Phone Frame		RDD Frame	
	Cell-Only	Dual	Dual	Landline-Only
18 - 34 years	<b>55%</b>	48%	24%	23%
35 - 54 years	31%	35%	46%	34%
55 years or older	14%	17%	30%	<b>43%</b>
	100%	100%	100%	100%

# Coverage: Age

## Address-based Versus Cell Phone

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### Respondent Age

	Address-based Frame	Cell Phone Frame
	Cell-only	Cell-only
Less than 34 years	56%	55%
34 to 54 years	35%	31%
55 years or older	9%	14%
	100%	100%

# Coverage: Household Size

Address-based Frame: Metropolitan Washington Survey

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Household Size (with Mean Respondent Age)

	Cell- Only	Dual	Landline- Only
One	<b>48% (38)</b>	28% (49)	<b>41% (57)</b>
Two	35% (35)	38% (50)	32% (52)
Three	9% (35)	16% (43)	13% (44)
Four or more	8% (37)	18% (42)	14% (43)
	100% (36)	100% (47)	100% (52)

# Coverage: Household Size

Cell Phone/RDD Landline Dual Frame: National Survey

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Household Size (with Mean Respondent Age)

	Cell Phone Frame		RDD Frame	
	Cell-Only	Dual	Dual	Landline-Only
One	<b>40% (39)</b>	<b>18% (40)</b>	<b>18% (58)</b>	<b>38% (65)</b>
Two	30% (36)	32% (44)	40% (53)	35% (58)
Three	14% (35)	20% (36)	15% (44)	11% (42)
Four or more	16% (32)	30% (35)	27% (39)	16% (36)
	100% (36)	100% (39)	100% (46)	100% (51)

# Coverage: Household Size

## Address-based Sample Versus Cell Phone

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Household Size (with Mean Respondent Age)

	Address-based Frame	Cell Phone Frame
	Cell-only	Cell-only
One	48% (38)	40% (39)
Two	35% (35)	30% (36)
Three	9% (35)	14% (35)
Four or more	8% (37)	16% (32)
	<b>100% (36)</b>	<b>100% (36)</b>

# Coverage: Household Income

Address-based Frame: Metropolitan Washington Survey

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## Household Income

	Cell-Only	Dual	Landline-Only
Less than \$30,000	17%	11%	34%
\$30,000 to < \$75,000	44%	36%	39%
Greater than \$75,000	39%	<b>54%</b>	<b>27%</b>
	100%	100%	100%

# Coverage: Education (Income Proxy)

Cell Phone/RDD Landline Dual Frame: National Survey

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## Respondent Education

	Cell Phone Frame		RDD Frame	
	Cell-Only	Dual	Dual	Landline-Only
No College	41%	44%	36%	54%
Some College	36%	28%	33%	28%
College Graduate	<b>24%</b>	<b>29%</b>	<b>31%</b>	<b>18%</b>
	100%	100%	100%	100%

# Cost per Interview

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- **Address-based Frame**

- Costs distributed cross mailing, telephone, incentive
- \$25.40/Completed Survey
  - \$2.00 Survey Material and Postage
  - \$23.40/ Recruitment Call
- \$50 incentive for completion of stages 1 & 2

- **Cell Phone Frame**

- Costs focused on telephone interviewing
- \$50.91/Completed Interview
- \$5 Remuneration

# Conclusions

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- Address-based frame is “information rich” compared to cell phone
- Coverage of telephone ownership types is broader in address-based frame
- Response rates are similar for both frames
- Aggregate cost per interview comparable
- Both frames capture the unique characteristics of cell-only users

# Contact Information

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