

Practical Issues in Conducting Cell Phone Polling

for DC-AAPOR

April 16, 2009

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Pew Research Center

Dual Frame Surveys at Pew

14 full dual frame surveys in 2008

~22,000 landline & 8,000 cell interviews

4 full dual frame surveys in 2009

~ 4,000 landline & 1,400 cell interviews

Cell interviews **2** times as costly
as landline interviews

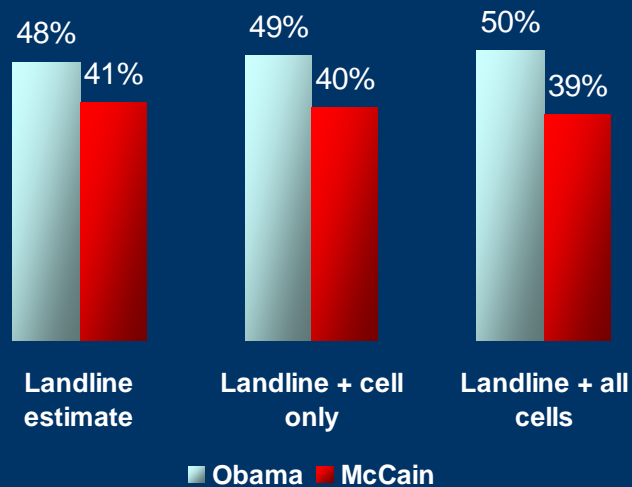
Cell-*only* interviews **4** times as costly

Interviewing Rates

	<u>Landline sample</u>	<u>Cell phone sample</u>
Contact rate	74%	75%
Eligibility rate	88%	58%
Cooperation rate	35%	32%
Response rate	24%	23%
Break-off rate	6%	5%

Source: Nov. Election Weekend 2008 survey

Election Weekend Poll Horse Race Estimates

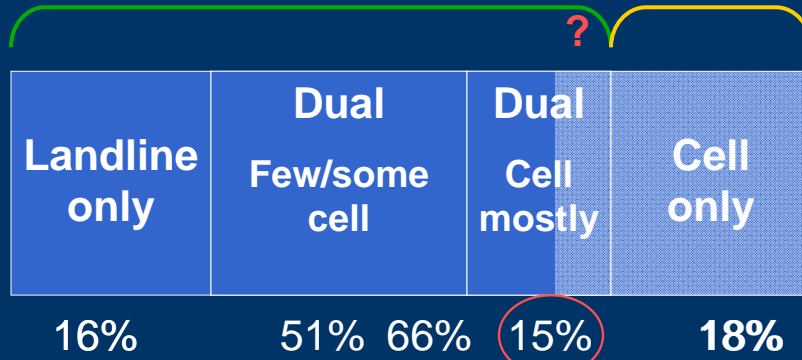


The Sampling Problems

Possible Coverage Problem

Landline sample

Cell only supplement

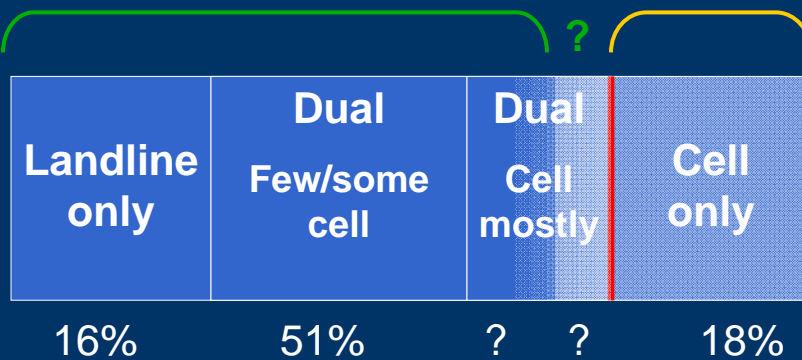


Possible Composition Problem

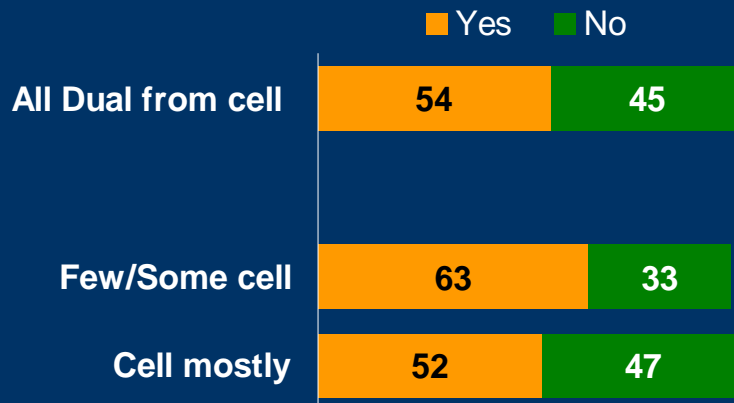
One Solution: Fill the Gap

Landline sample

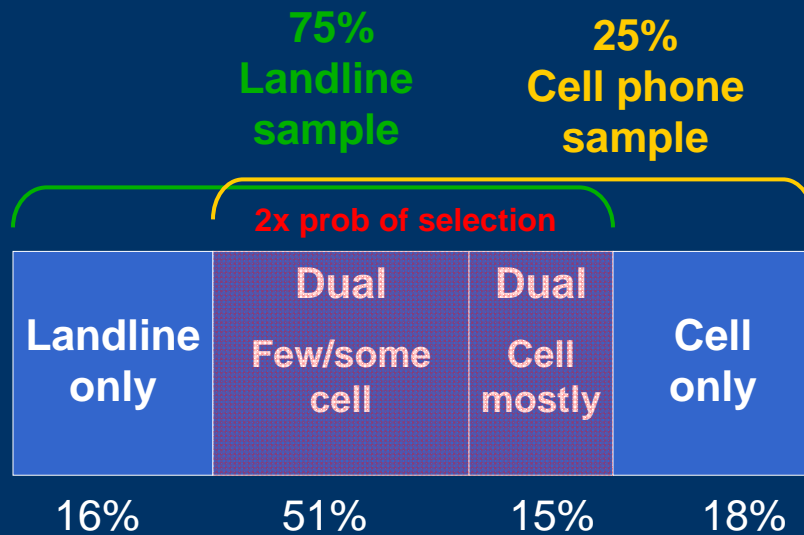
Cell only^{plus} supplement



If I had called you just now on your landline phone, would I have been able to reach you?



Pew Research "Full Cell" Samples



How the Frames Come Together

	<u>Land</u> <u>line</u>	<u>Cell</u> <u>phone</u>	=	<u>Total</u>
LL only	17%	--	=	17%
Dual-LL	47%	11%	=	58%
Dual-cell	11%	6%	=	17%
Cell only	--	<u>8%</u>	=	<u>8%</u>
	75%	25%		100

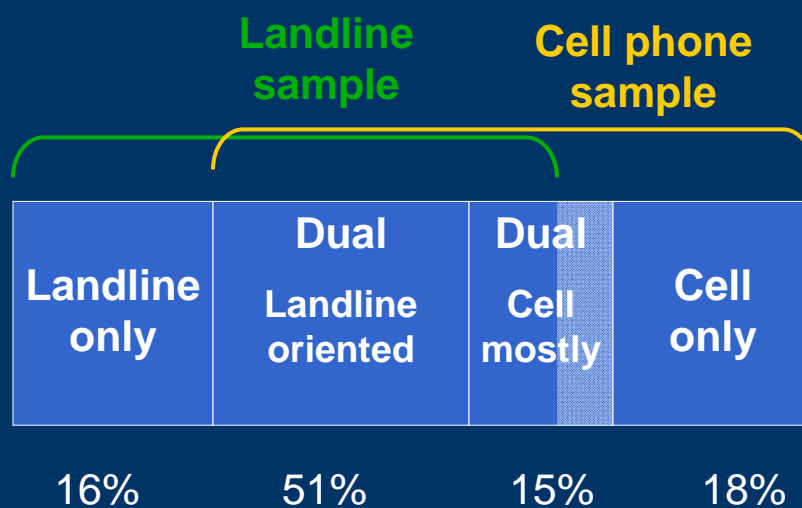
How the Frames Come Together

	<u>Land</u> <u>line</u>	<u>Cell</u> <u>phone</u>	=	<u>Total</u>		<u>NHIS</u> <u>Est.</u>
LL only	17%	--	=	17%		16%
Dual-LL	47%	11%	=	58%	Dual users 75% 66%	51%
Dual-cell	11%	6%	=	17%		15%
Cell only	--	<u>8%</u>	=	<u>8%</u>		<u>18%</u>
	75%	25%		100		100

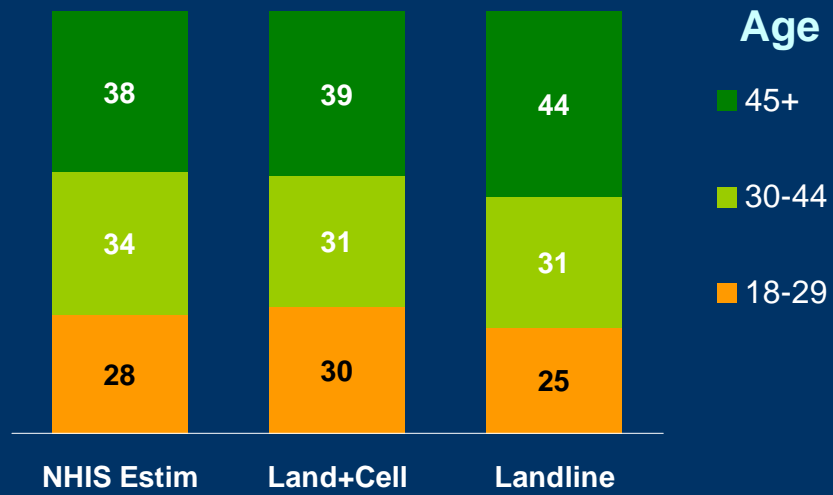
How the Frames Come Together

	<u>Land line</u>	<u>Cell phone</u>	=	<u>Total</u>	<u>1st stage weight</u>	<u>NHIS Est.</u>
LL only	17%	--	=	17%	27%	16%
Dual-LL	47%	11%	=	58%	/ 2 = 46%	51%
Dual-cell	11%	6%	=	17%	/ 2 = 13%	15%
Cell only	--	<u>8%</u>	=	<u>8%</u>	<u>13%</u>	<u>18%</u>
	75%	25%	=	100	100	100

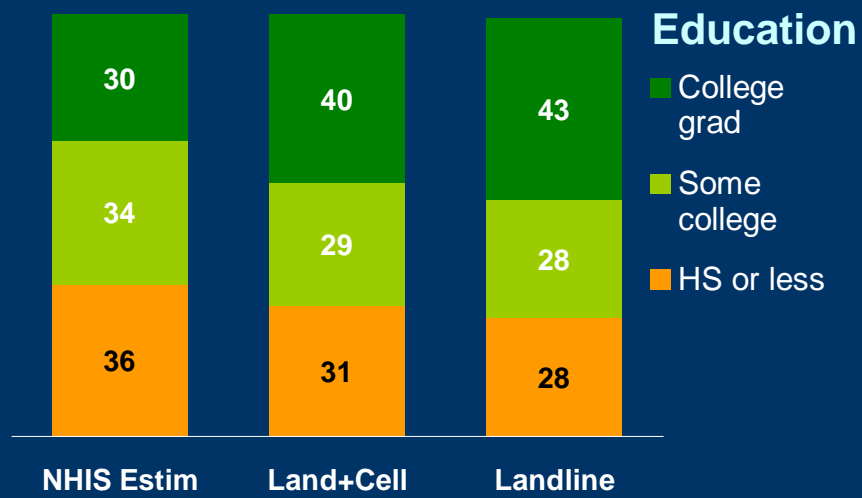
Assessing the "Cell Mostlys"



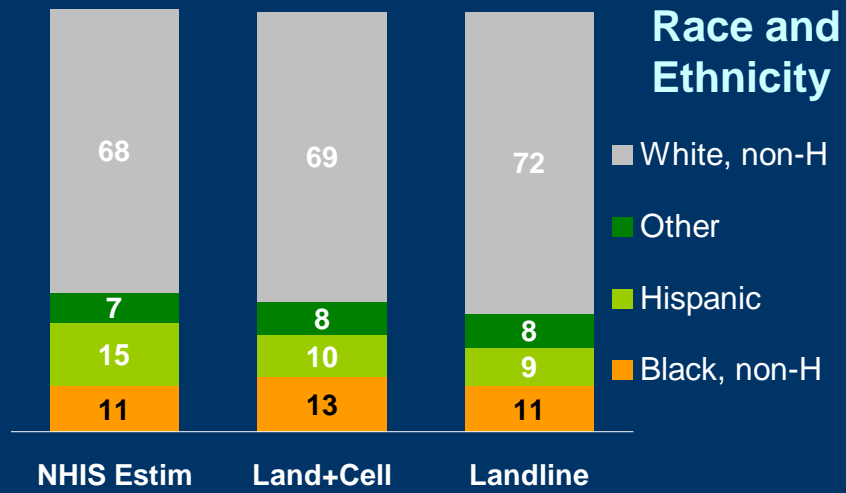
Demographic Profile of Cell Mostly



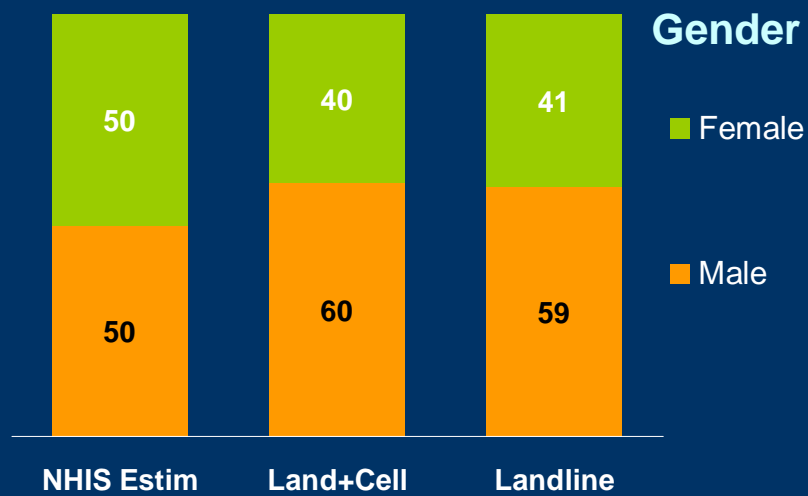
Demographic Profile of Cell Mostly



Demographic Profile of Cell Mostly



Demographic Profile of Cell Mostly



Comparing Sampling Approaches

Landline sample		Cell phone sample	
16%	51%	15%	18%
Landline only	Dual Few/some cell	Dual Cell mostly	Cell only
78%			18%
Landline sample			Cell only supplement

Summary of Factors Contributing to Cost Differential

	<u>All Cell</u>
Reimbursements	~ 35%
Screening costs	~ 30%
Manual dialing	~ 10%
Staffing & admin.	~ 25%

Summary of Factors Contributing to Cost Differential

	<u>All Cell</u>	<u>Cell-Only</u>
Reimbursements	~ 35%	~10%
Screening costs	~ 30%	~50%
Manual dialing	~ 10%	~30%
Staffing & admin.	~ 25%	~10%

How is Geographic Information Different in Cell Phone Frame?

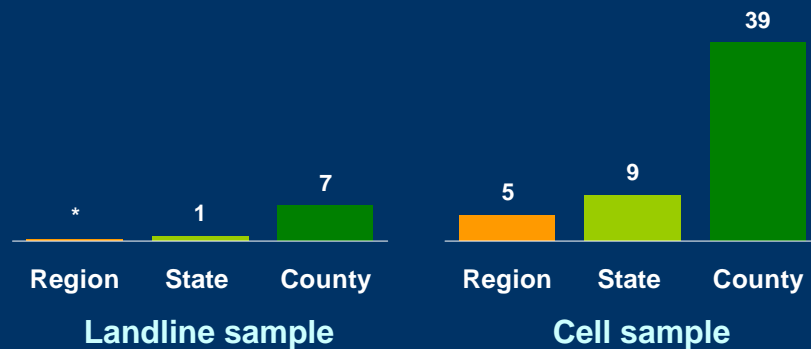
- No requirement that number is associated with physical residence, business, or billing address
- Usually based on “rate center or switch point location” assigned at point of purchase
- Service areas are usually larger for cell phones than for landlines
- Cell phones are mobile!

How Do We Measure Accuracy of Geographic Information?

- Ask respondents for their zip code and compare geographic information provided with sample to that derived from zip code
- Data from six general population surveys conducted in the Fall of 2008
 - 10,430 landline respondents
 - 3,460 cell respondents
 - 1,160 cell phone only respondents

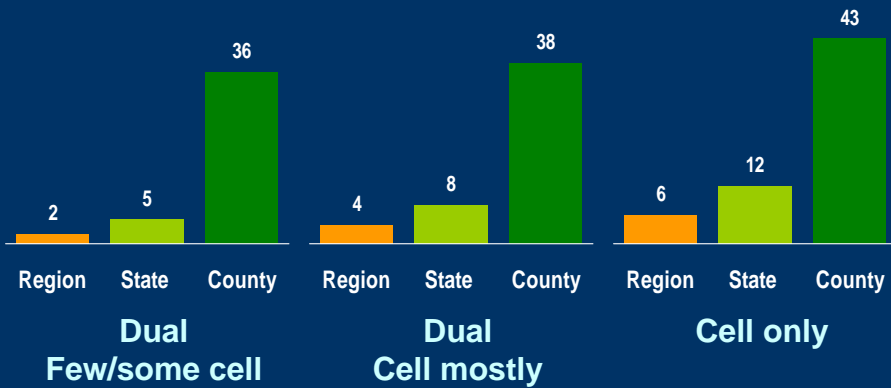
How Accurate is Geographic Information for Cell Sample?

Percent where sample and zip code information differ



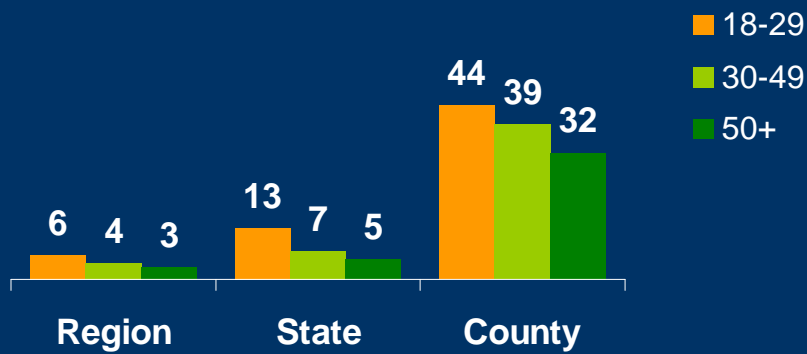
Differences by Phone Groups within Cell Sample

Percent where sample and zip code information differ



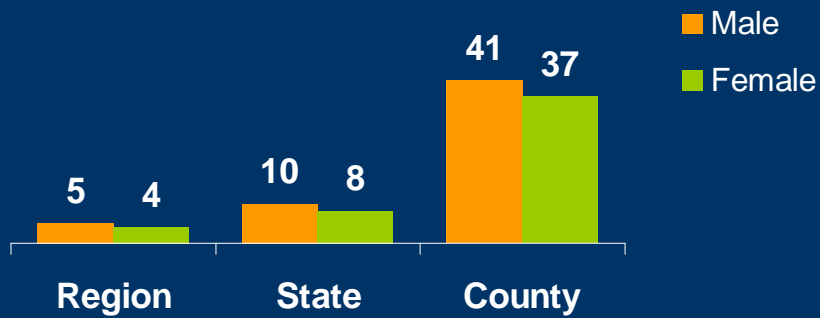
Differences by Age Within Cell Sample

Percent where sample and zip code information differ



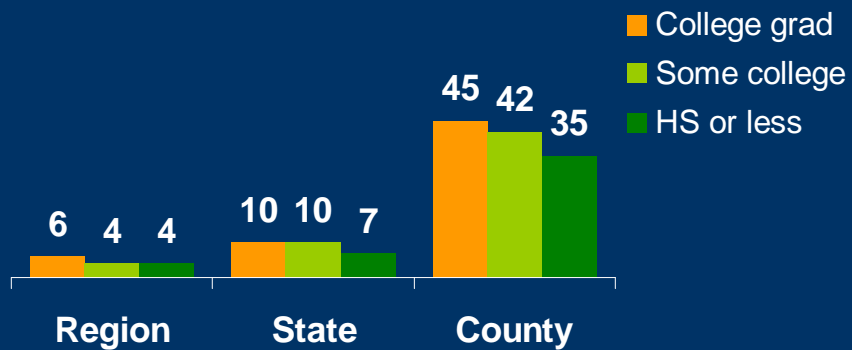
Differences by Gender Within Cell Sample

Percent where sample and zip code information differ



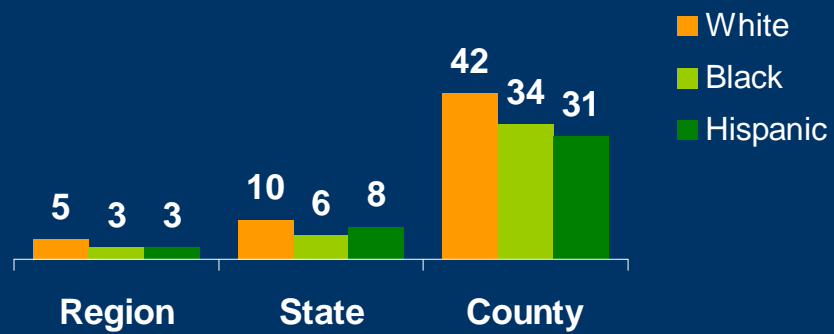
Differences by Education Within Cell Sample

Percent where sample and zip code information differ



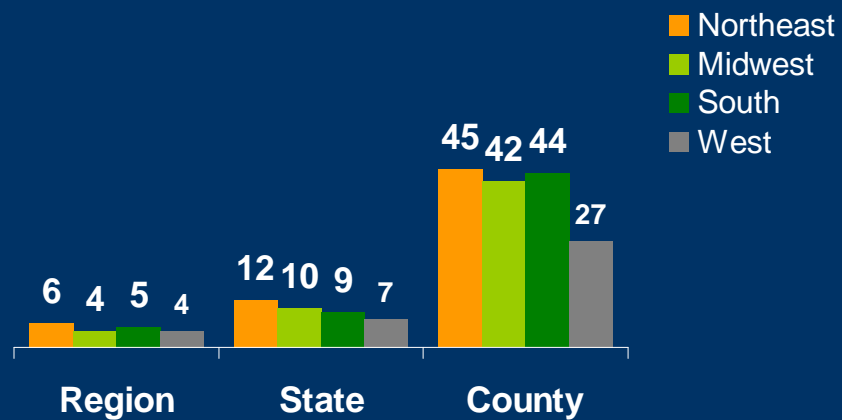
Differences by Race-Ethnicity Within Cell Sample

Percent where sample and zip code information differ



Differences by Region Within Cell Sample

Percent where sample and zip code information differ



Implications for Sampling

- Geographic sampling of cell phones is biased both by people included who do not live in the area and those who are excluded but actually live in the area
- The size of the bias gets larger as the geographic area of interest gets smaller
- Consider alternatives, such as address based sampling, for sampling smaller geographic areas with greater precision

Implications for Data Analysis

- Do not rely on sample information!
- Collect geographic information from respondents to use for analysis
- Be sure to collect information at appropriate level of precision
- Use external sources to supplement sample information and information collected from respondents

For More Information

www.people-press.org

www.pewresearch.org