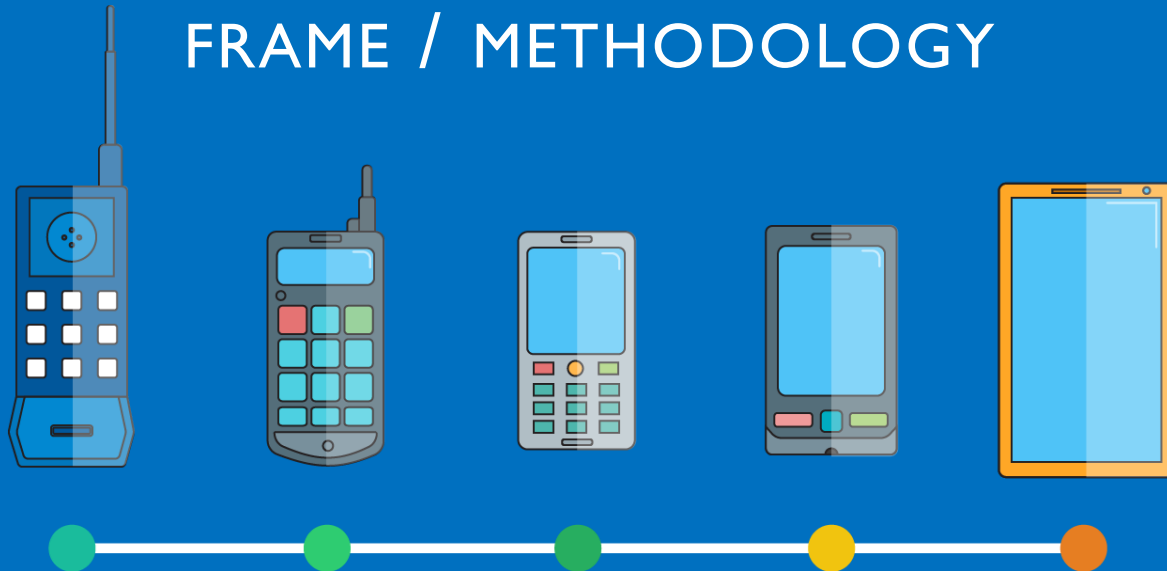


ADVANCEMENTS IN THE CELLULAR FRAME / METHODOLOGY



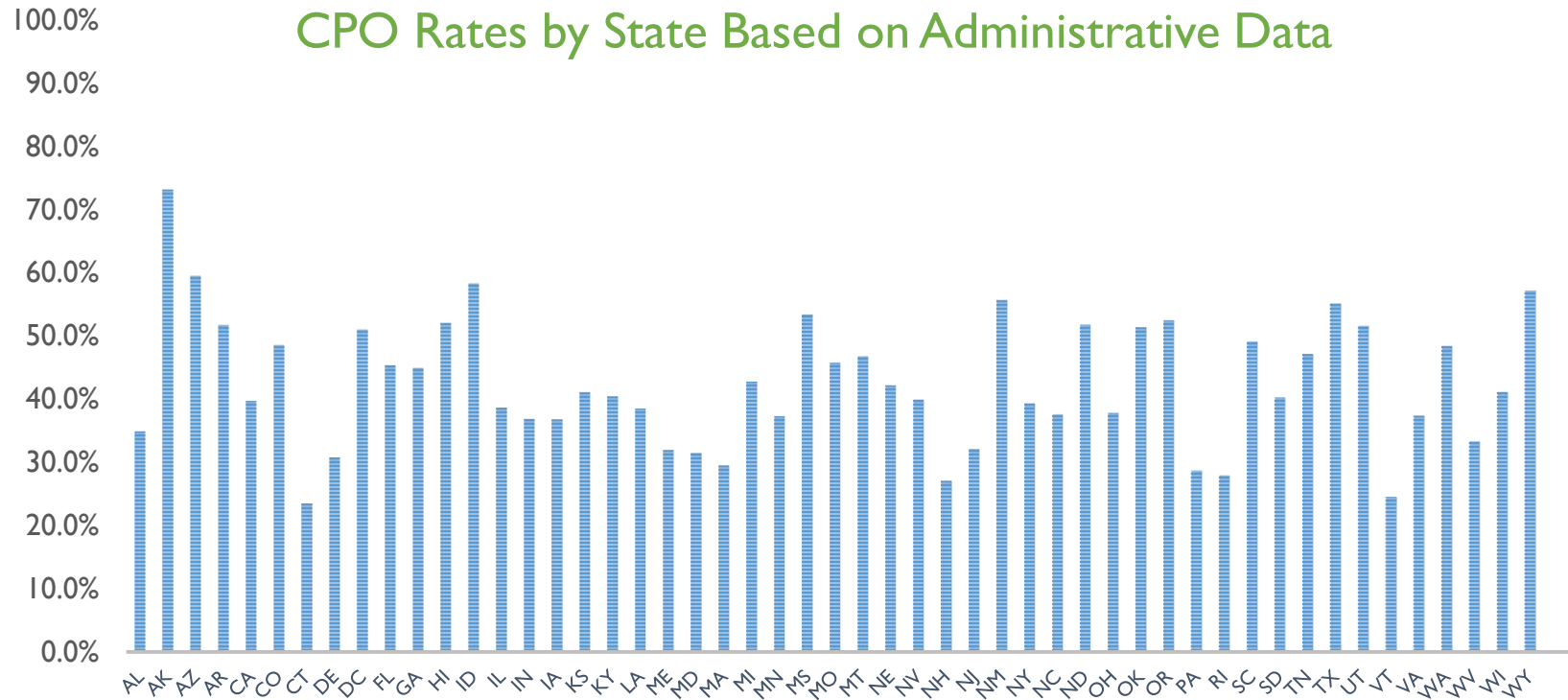
FedCASIC

April 12, 2017

OVERVIEW

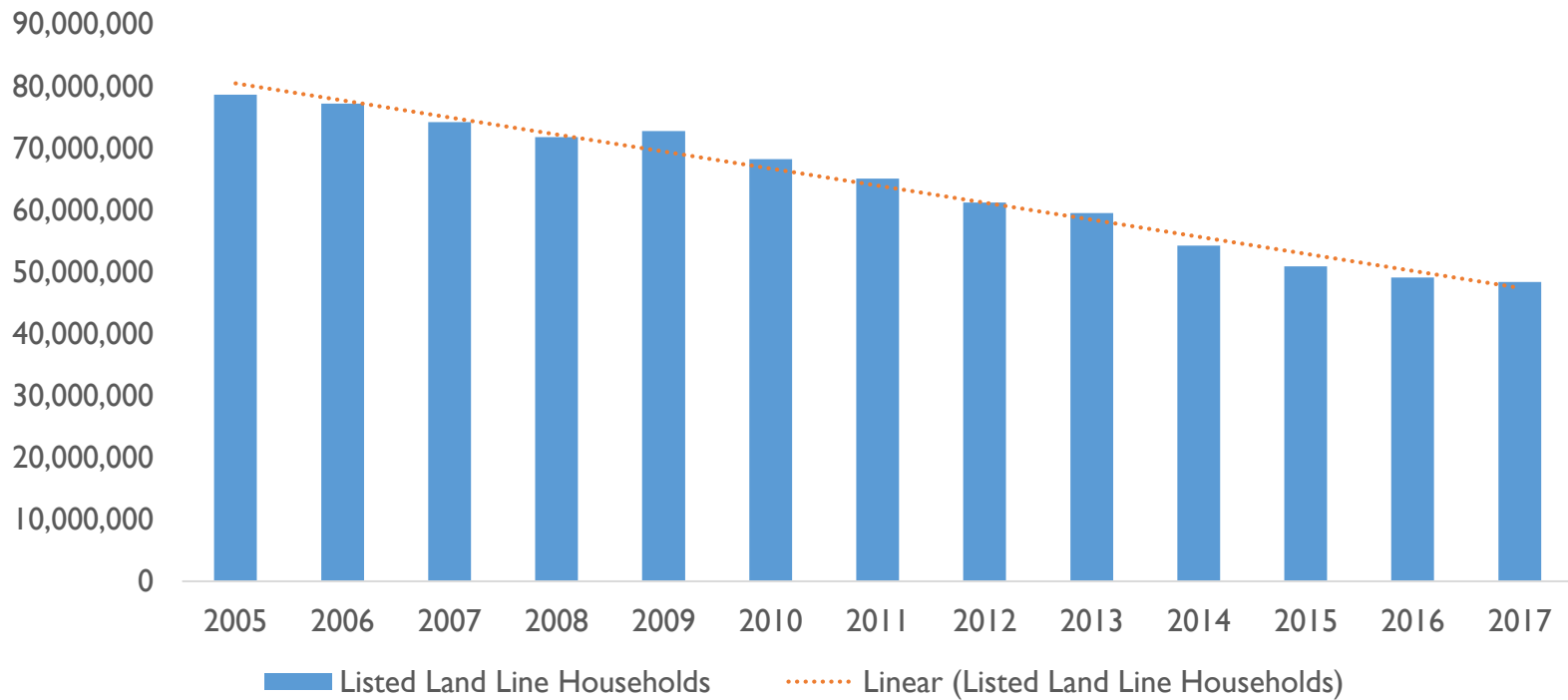
- Topology/Background
- Cellular Frame/Methodologies
 - Cellular RDD Geographic Targeting
 - Cellular RDD Demographic Targeting
 - Cellular RDD Screening
 - Additional Flags
 - Consumer Cellular Database/Utility

TOPOLOGY



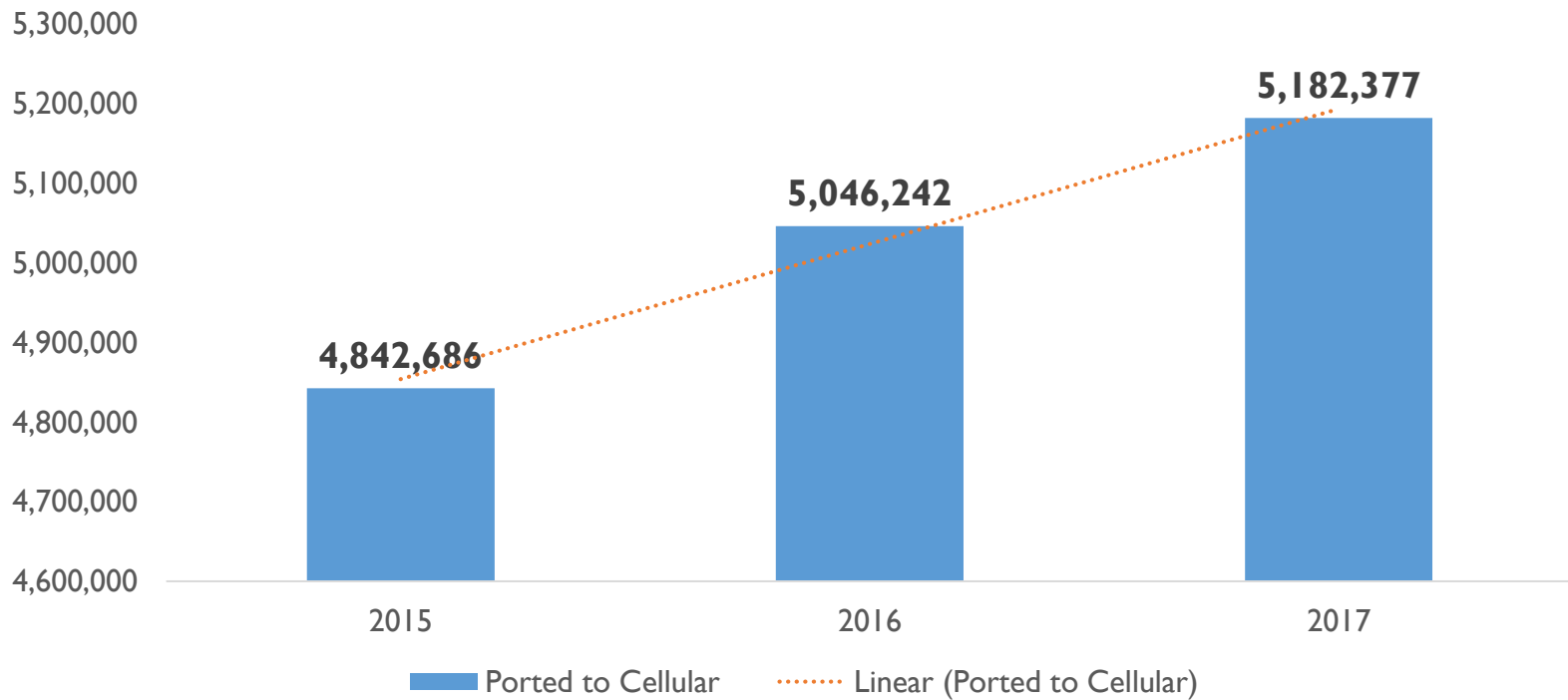
TOPOLOGY

Listed Land Line Households



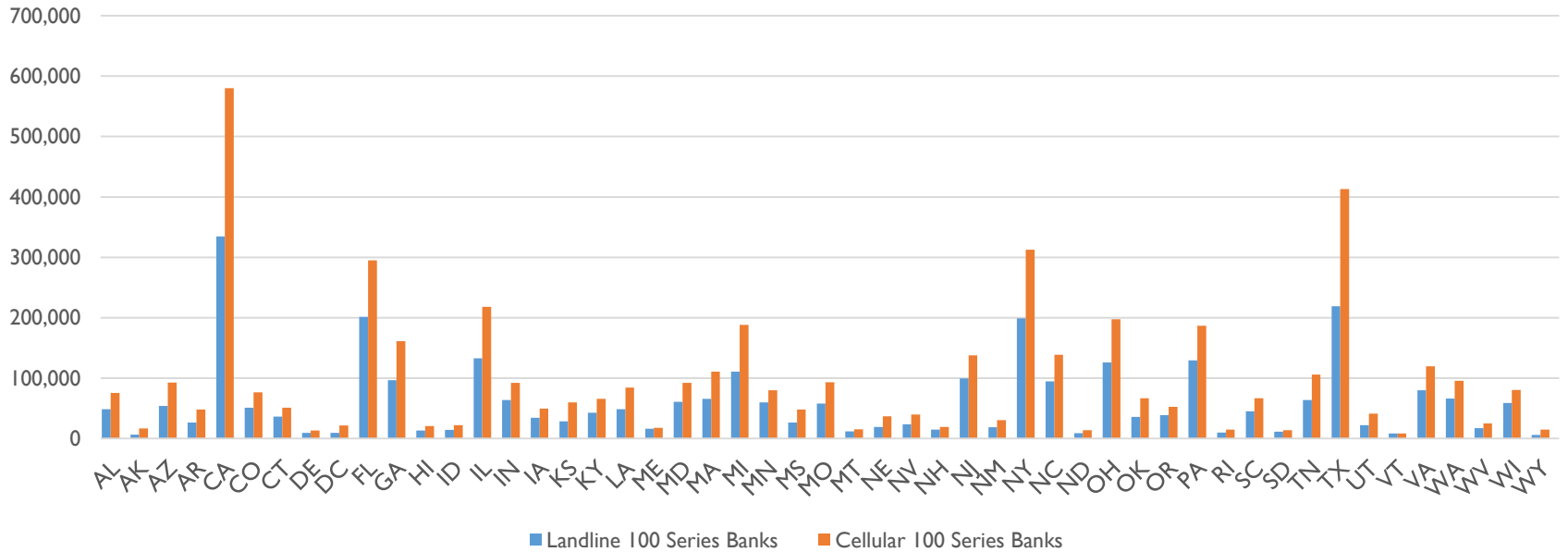
TOPOLOGY

Land Line Ports To Wireless

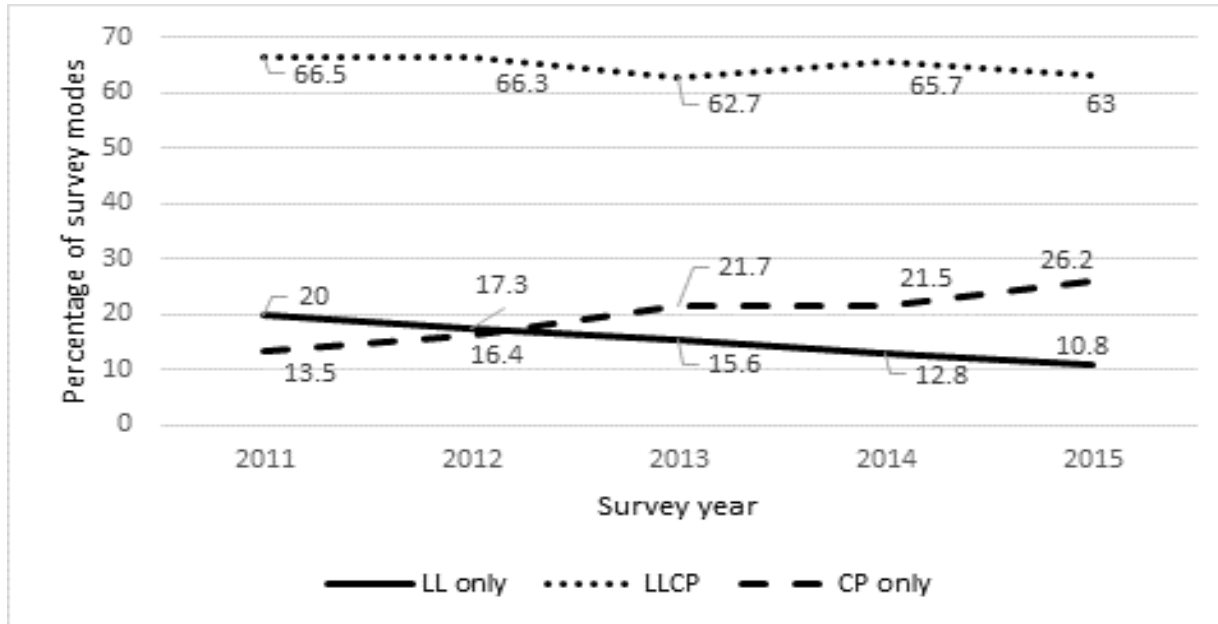


TOPOLOGY

I 100 Series Telephone Banks



BRFSS SAMPLE TRENDS



Cell phone response rates
Efficiency of sample (locational, working number %)



Landline response rates
Efficiency of sample (locational, working number %)

Source: Forthcoming AAPOR presentation by Carol Pierannunzi, Ph.D. Senior Survey Methodologist at the Centers for Disease Control and Prevention “Comparison of Survey Response and Sampling Bias by Sample Frame”

CELLULAR RDD FRAME

- Includes all thousand-series blocks dedicated to cellular numbers
- Cellular RDD Universe = 492,192,000
- Each cellular IK Block assigned a predominant FIPS Code based on Rate Center geography
- Demographic targeting using Rate Center demographic profiles

CELLULAR RDD FRAME GEOGRAPHIC TARGETING

- Rate Center is the basic unit of Geography for Land Line & Cellular Thousand Blocks
- Rate Center Boundaries Updated Quarterly
 - Defined by 2010 Census Blocks
 - Each US Census Block assigned uniquely to a single Rate Center
 - Boundaries provide more flexibility when stratifying by geography smaller than state
- Rate Center only identifies where the Cellular IK Block is “homed”

CELLULAR RDD FRAME DEMOGRAPHIC TARGETING

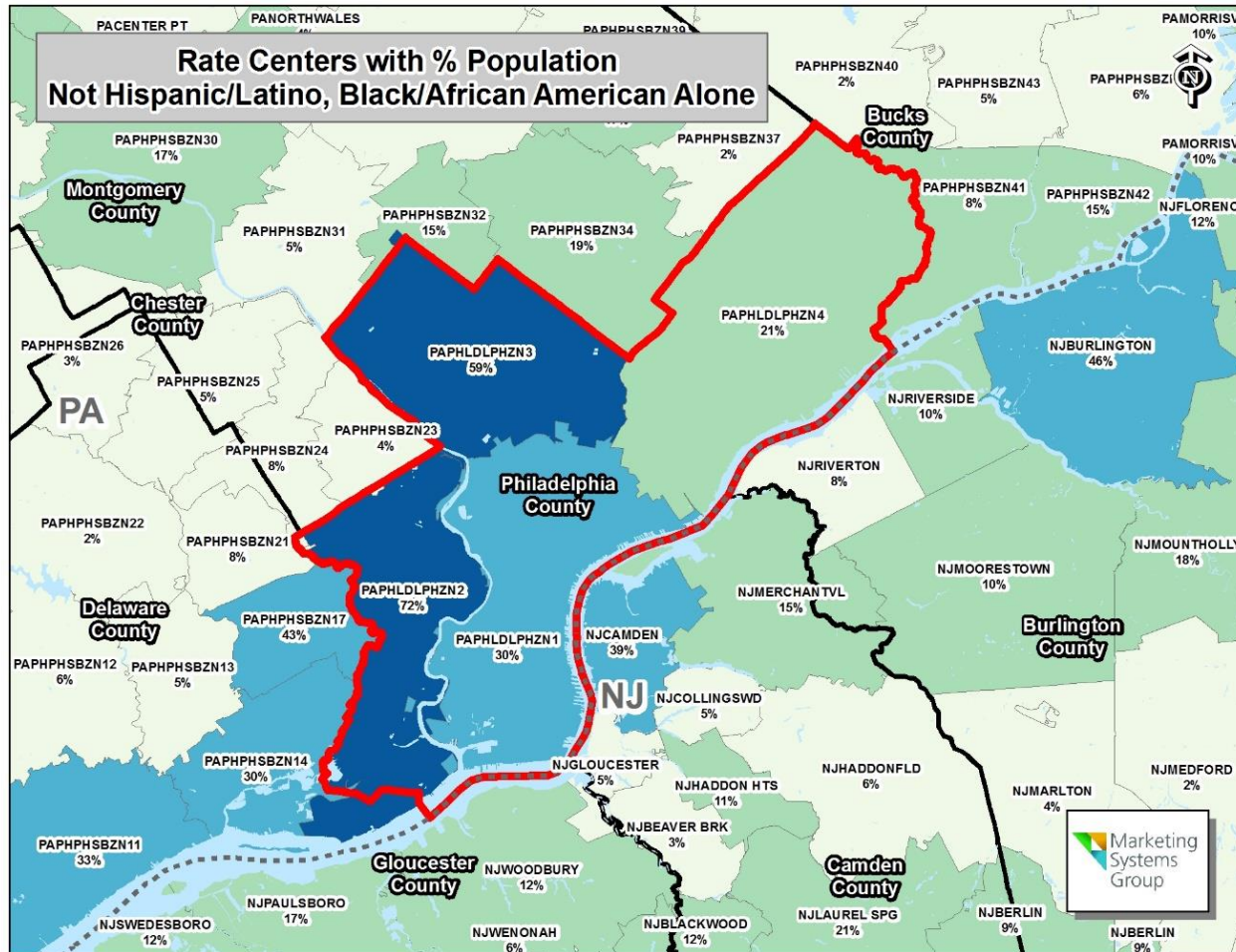
- Current Year Households
- Current Year Population - Gender
- Current Year Population - Race
- Current Year Population - Age
- Current Year Household Income

Rate Center Geographic Boundaries are linked to census geography → Census-based demographic sources are then used to generate Rate Center specific demographic profiles that can be used for stratification or oversampling.

CELLULAR RDD FRAME RATE CENTER REPORT

Rate Center ID	Primary FIPS Code	Total Housing Units	Number of Cellular 1k Blocks	Total Population (2010)	% Inclusion (Population)	Pop Total	Pop NHS Black	% NHS Black
PAPHLDLPHZN1	42101	237,091	1,876	495,900	100%	523,812	159,658	30.48%
PAPHLDLPHZN2	42101	120,636	931	272,015	100%	279,191	199,799	71.56%
PAPHLDLPHZN3	42101	135,601	167	307,888	100%	312,281	184,688	59.14%
PAPHLDLPHZN4	42101	176,850	171	449,428	100%	461,217	95,965	20.81%
PAPPHSBZN23	42091	10,266	139	25,998	3.05%	25,732	1,107	4.30%

CELLULAR RDD FRAME RATE CENTER MAP

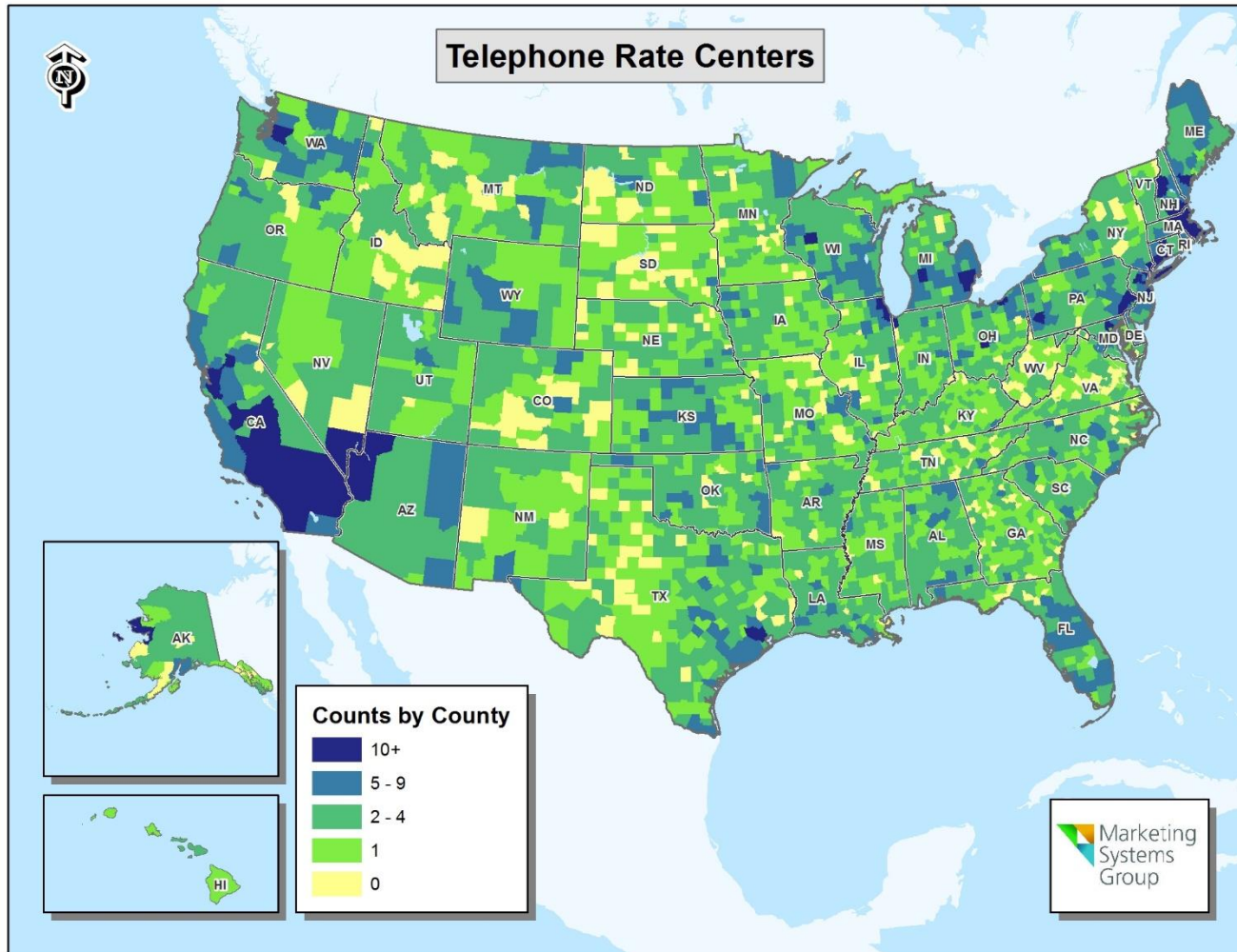


CELLULAR RDD FRAME

Number of Telephone Rate Centers with at least One Assigned Cellular 1k Block **Number of Assigned 1K Blocks** **Count of Counties**

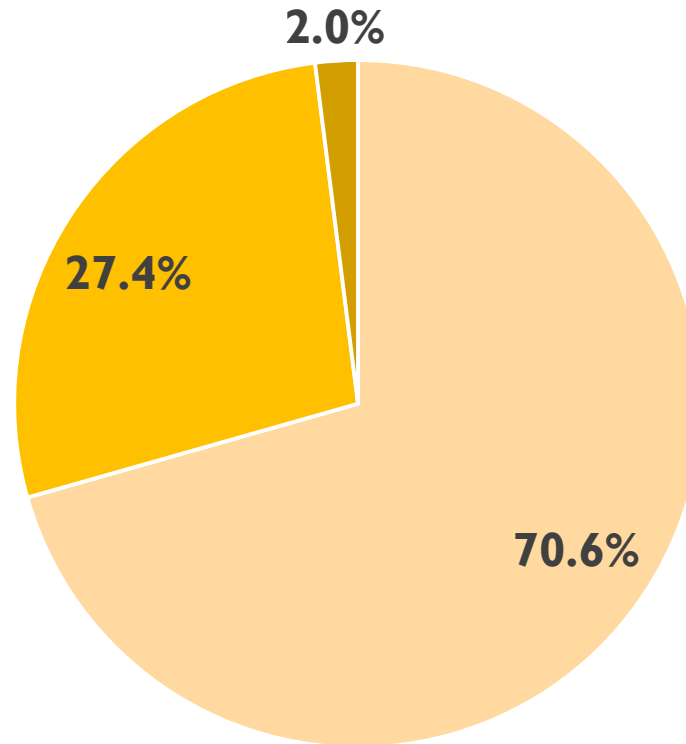
0	0	335
1	87,723	1,101
2-4	165,975	1,361
5-9	114,694	290
10+	123,800	55

CELLULAR RDD FRAME



CELLULAR RDD SCREENING

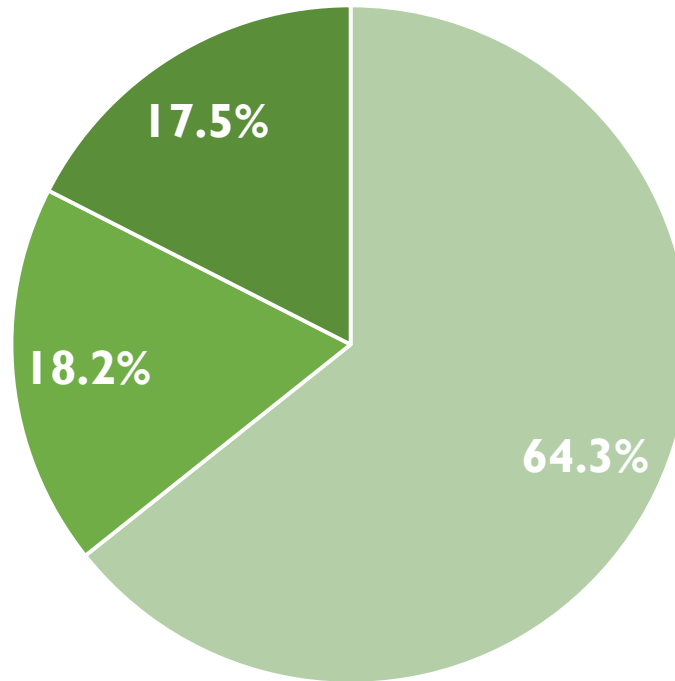
Cell-WINS



■ Active ■ In-active ■ Unknown

CELLULAR RDD SCREENING

Activity Flags



■ Active ■ In-active ■ Unknown

CELLULAR RDD ADDITIONAL FLAGS

Pre-Paid Flag

12.1% of cellular numbers (un-screened)

91% Active

8% Inactive

1% Unknown

Billing Zip Code

52.9% of cellular numbers (un-screened)

85% Active

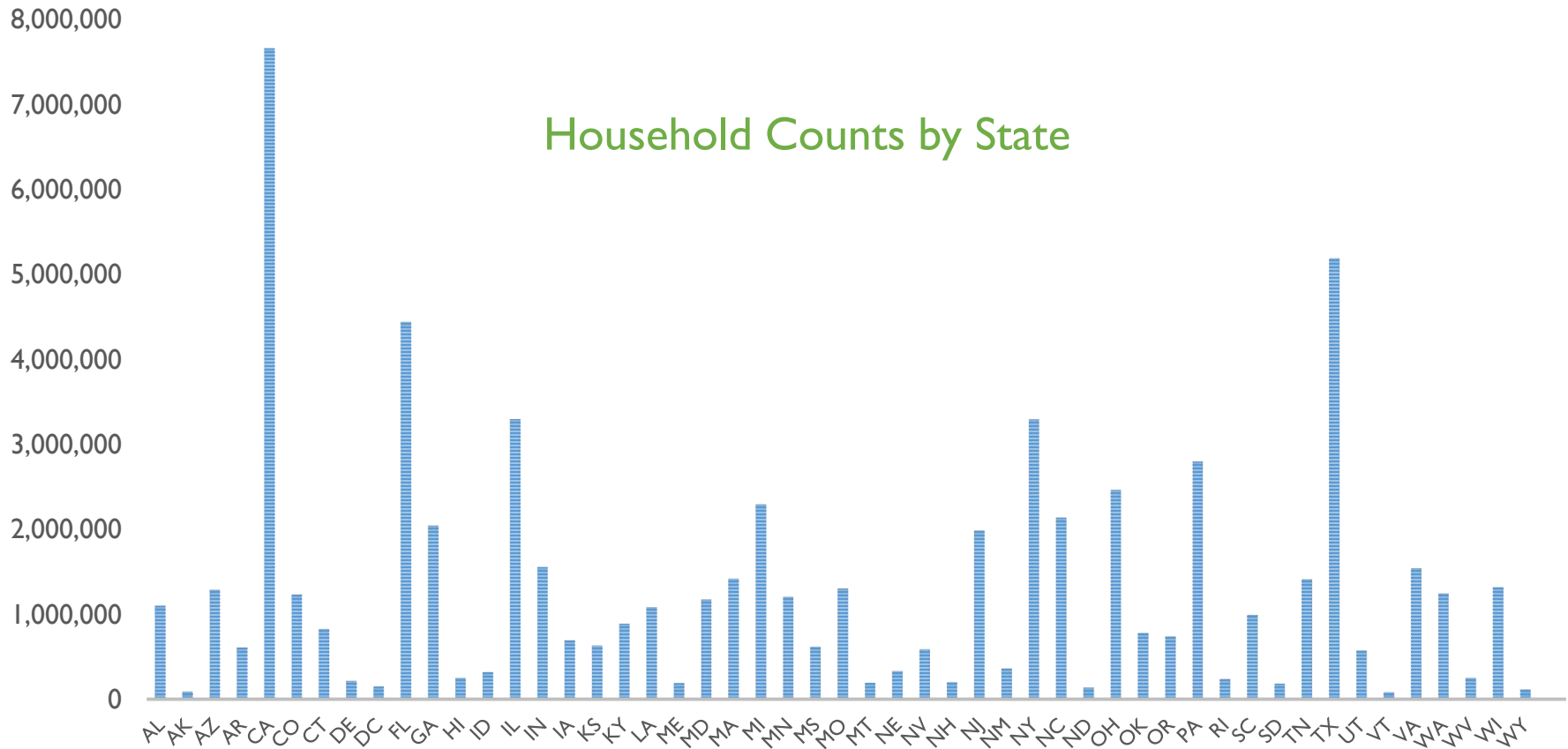
11% Inactive

4% Unknown

CONSUMER CELLULAR FRAME

- Based on credit/purchasing information
- Secondary source to append cellular numbers
- Geographic capability – down the Census Block
- Updated monthly
- 50 State + DC national household count = 65,812,610
- Counts vary by state

CONSUMER CELLULAR FRAME



CONSUMER CELLULAR FRAME

How can this frame be utilized?

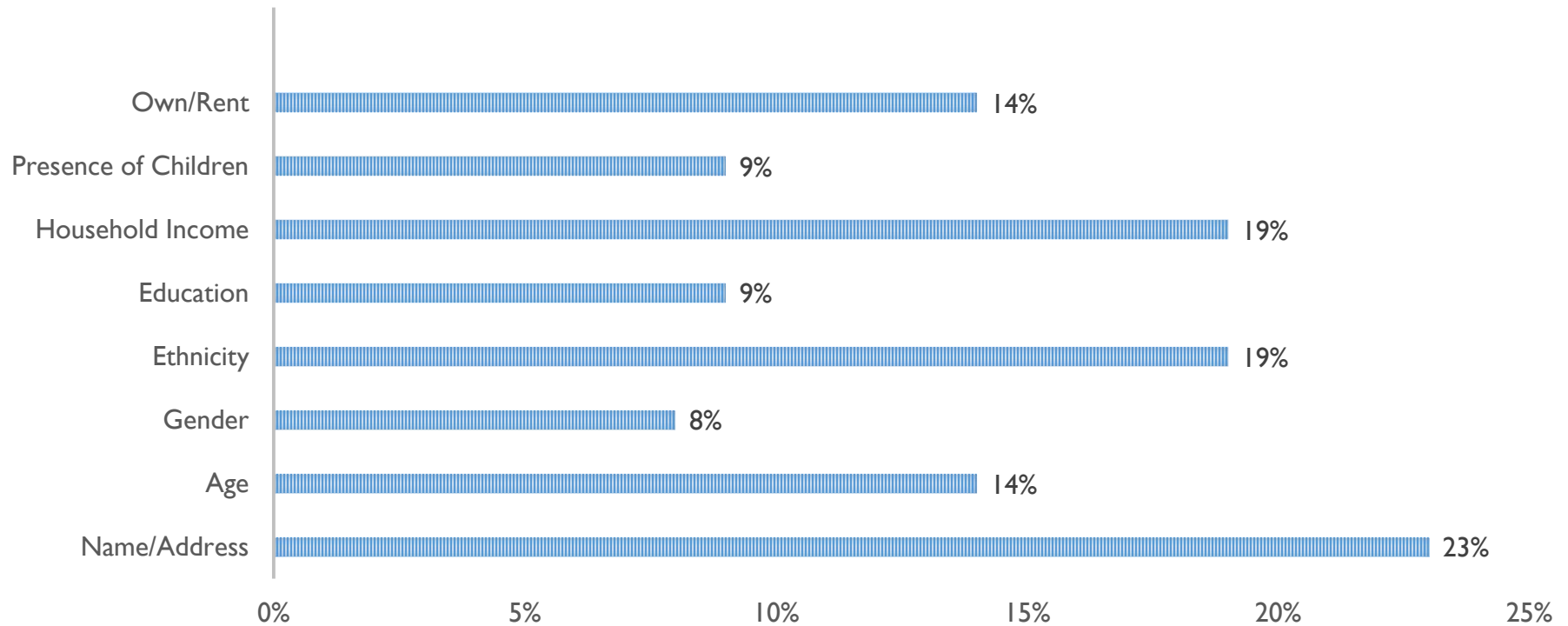
- Sample into areas below county
- Individual/Household level demographic targeting
- Split Frame/Over Sample Designs
- Capture some of the in-migration respondents that are missed in a Cellular RDD Frame for a given area

CONSUMER CELLULAR FRAME DEMOGRAPHIC TARGETING

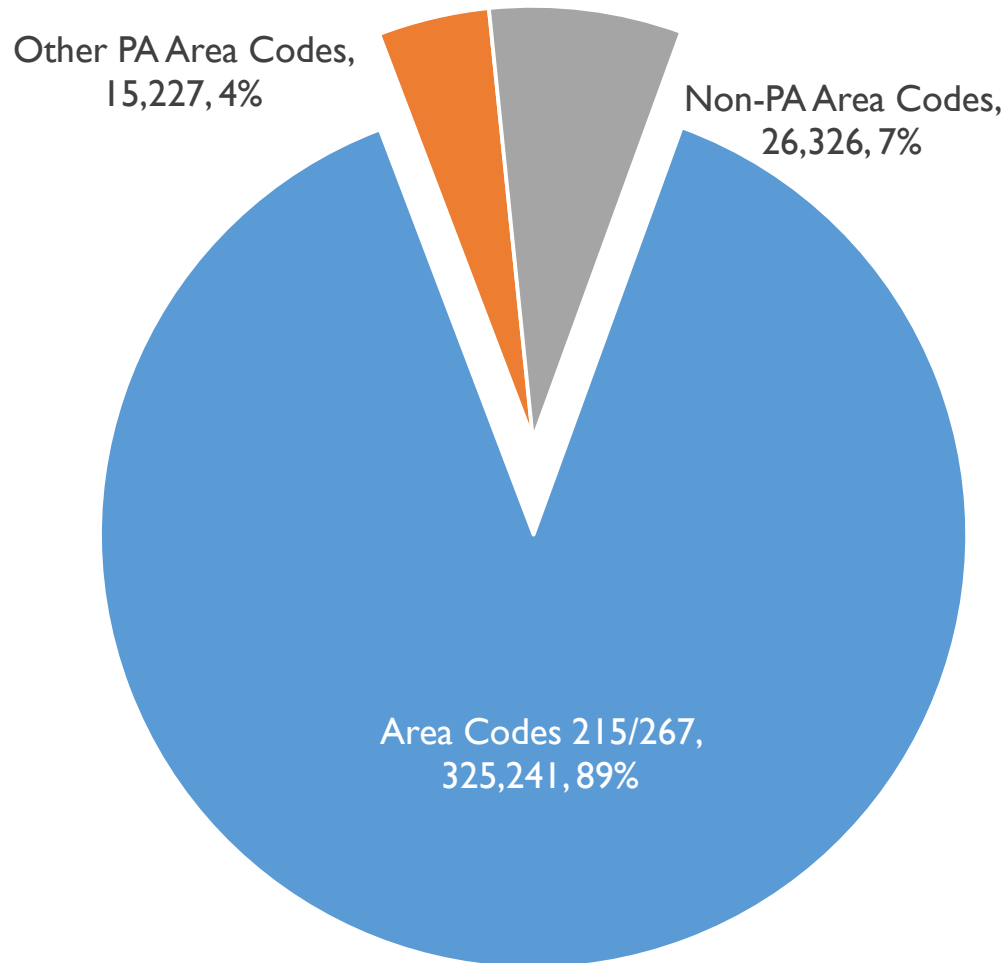
- Demographic Targets
 - Age
 - Gender
 - Ethnicity
 - Education
 - HH Income
 - Presence of Children
 - Own/Rent

CONSUMER CELLULAR DEMOGRAPHICS TO CELLULAR RDD

MATCH RATES



CONSUMER CELL FRAME CAPTURING IN-MIGRATION



SUMMARY

The topology of the telephone landscape has changed a great deal in the past five years

The linear trend of diminishing land lines will continue

Population shifts will continue to increase cell only/mostly rates

Consumer Cellular Frames will continue to grow expanding its utility

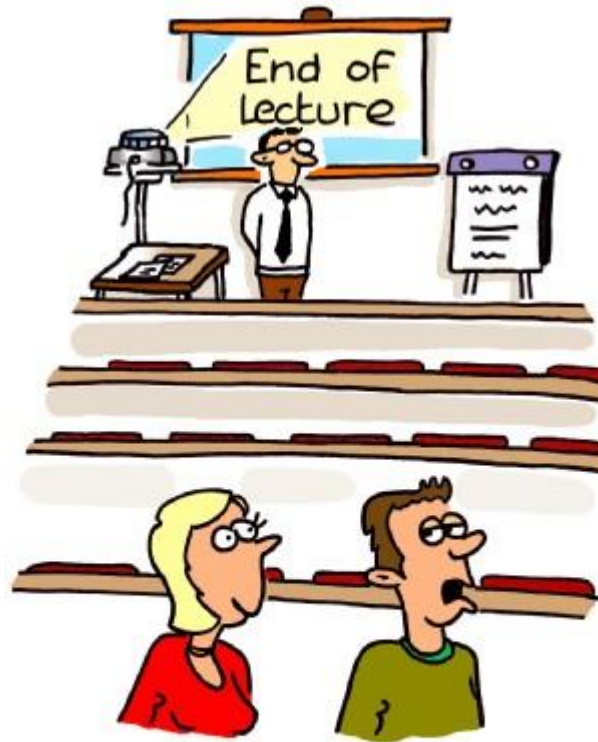
THANK YOU!

Ashley Hyon (Ahyon@m-s-g.com)

Marketing System Group

215-653-7100 (O)

215-870-3338 (C)



"He always allows time for questions. Someday he'll allow time for answers."