

Current State of Telephony in the U.S.

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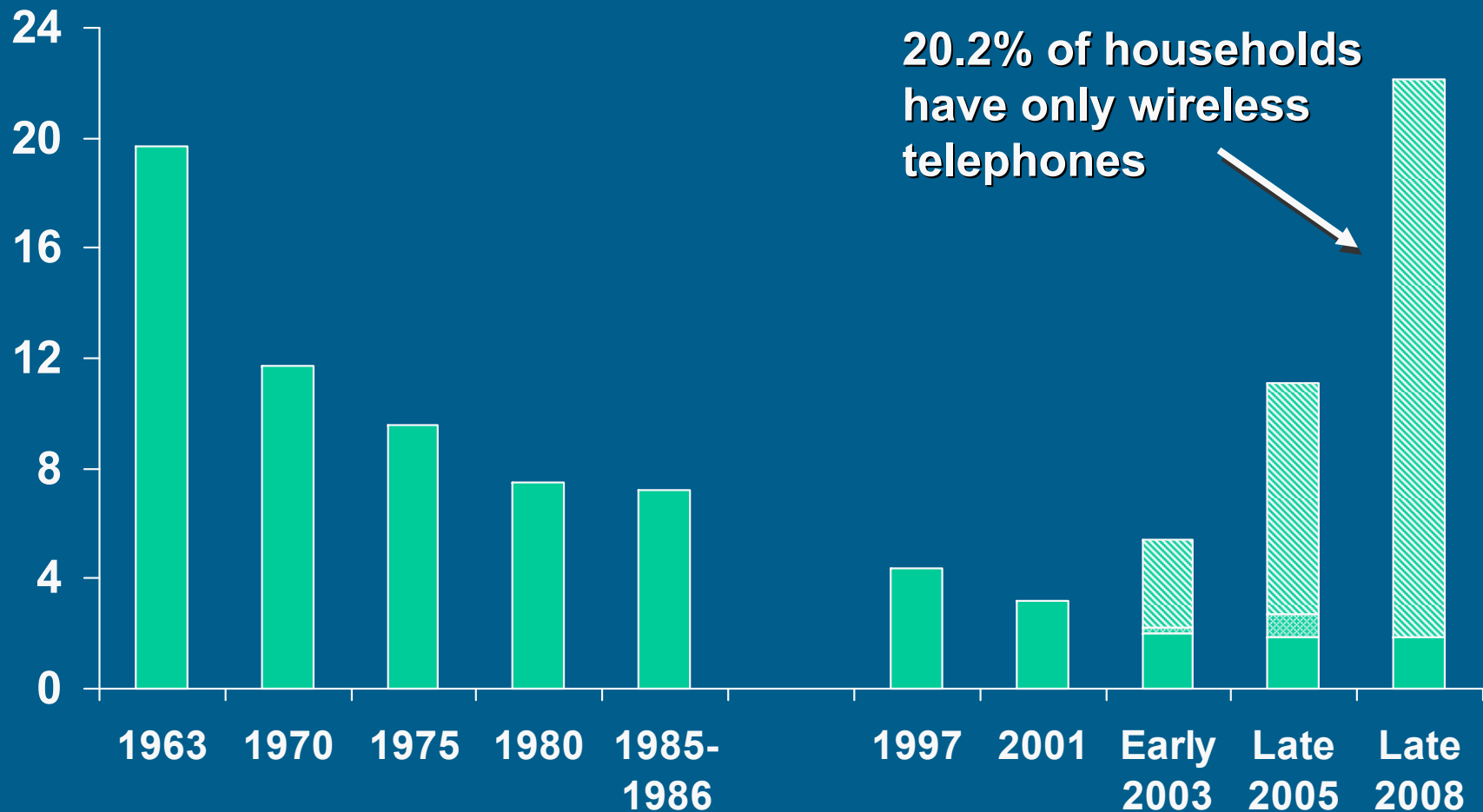


Centers for Disease Control and Prevention
National Center for Health Statistics

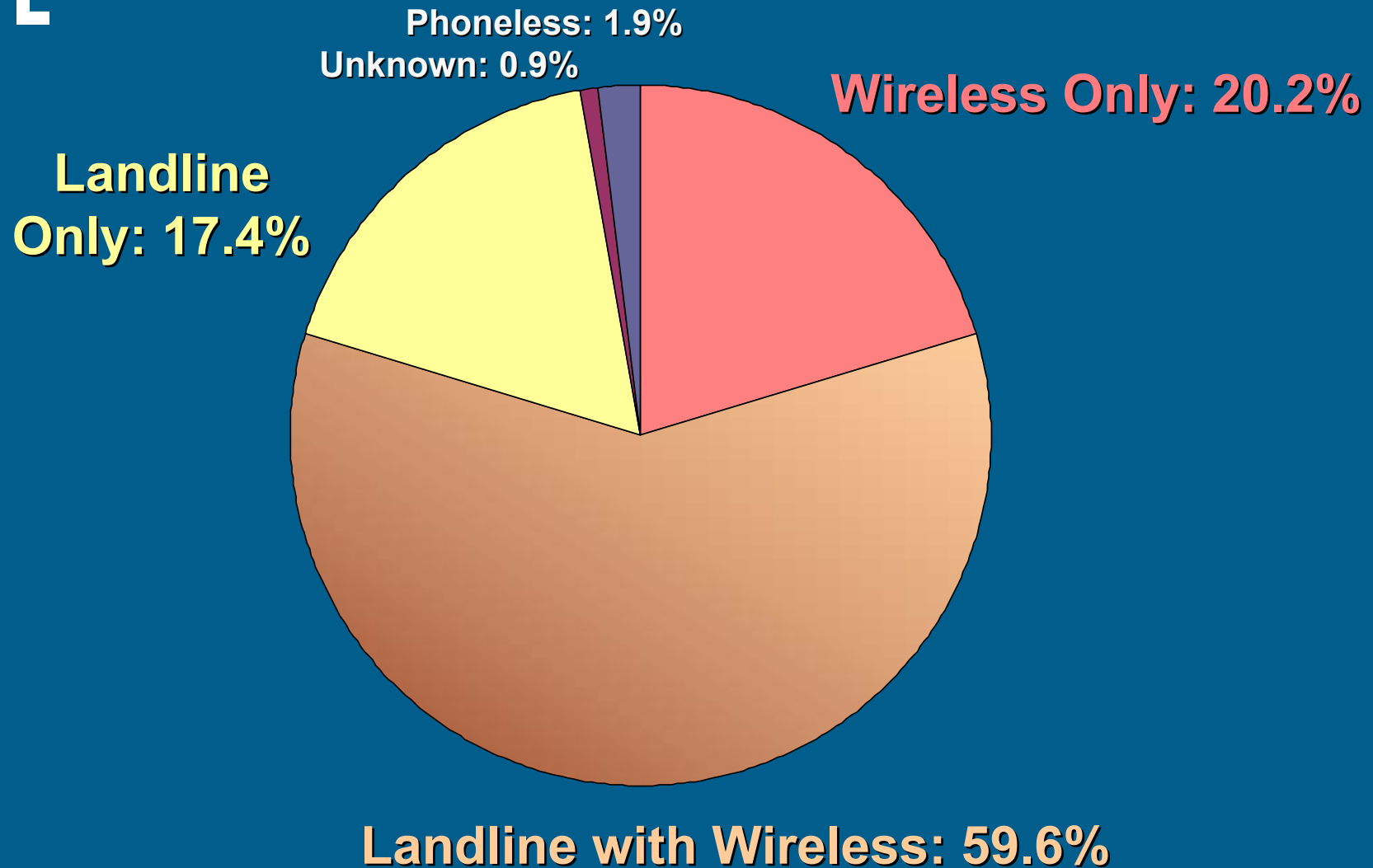
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Percentage of U.S. Households Without Landline Telephones

■ Based on National Health Interview Survey data



Percent Distribution of Household Telephone Status, July-December 2008



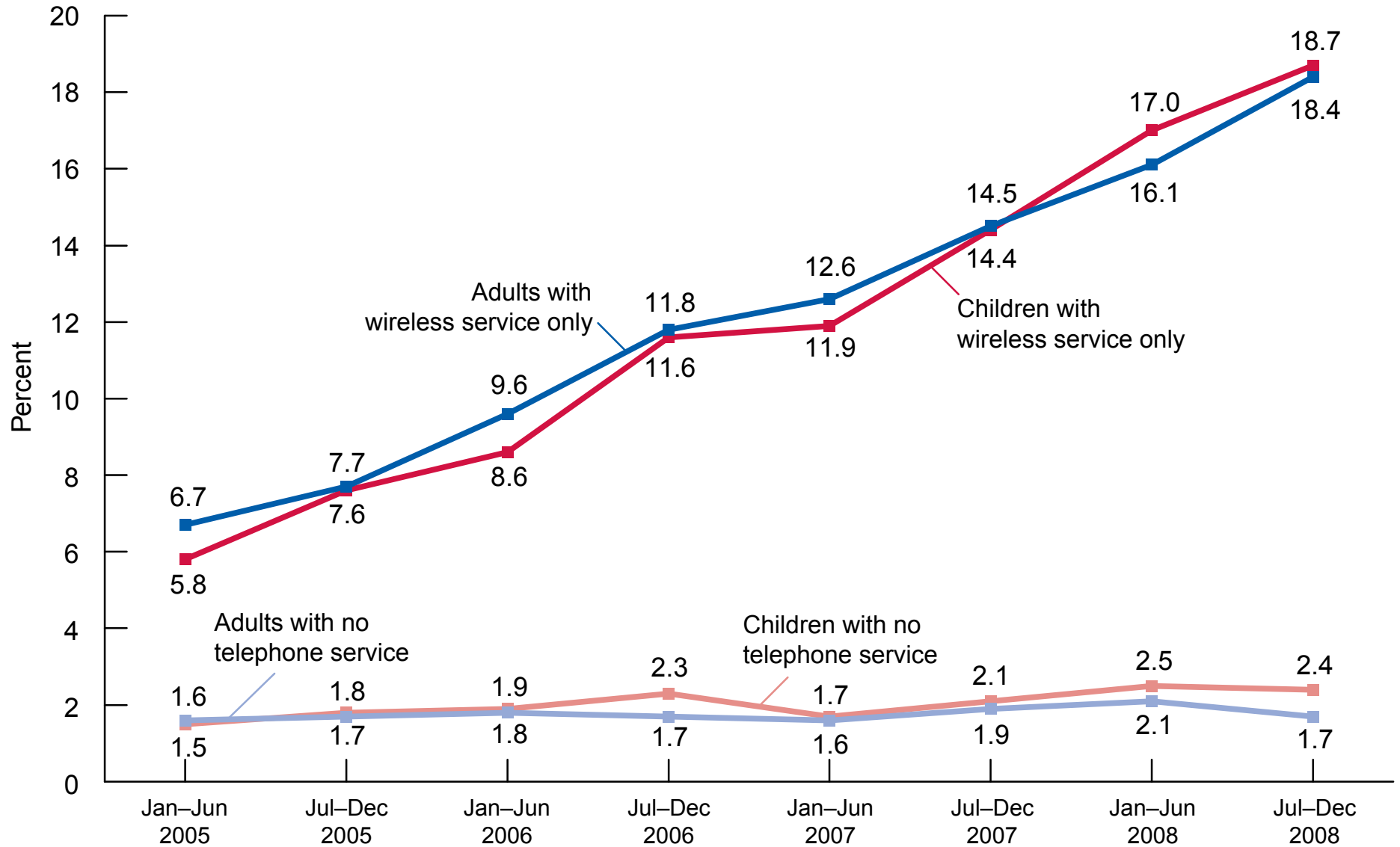
National Health Interview Survey

- In-person survey of the civilian noninstitutionalized U.S. population with high annual household-level response rates
- Includes questions on residential telephone numbers to permit recontact of participants
 - 2003: Added questions on working cellular telephones
 - 2007: Added questions on relative frequency of calls received on landlines and cell phones
 - 2007: Added a question on the number of cell phones in each household

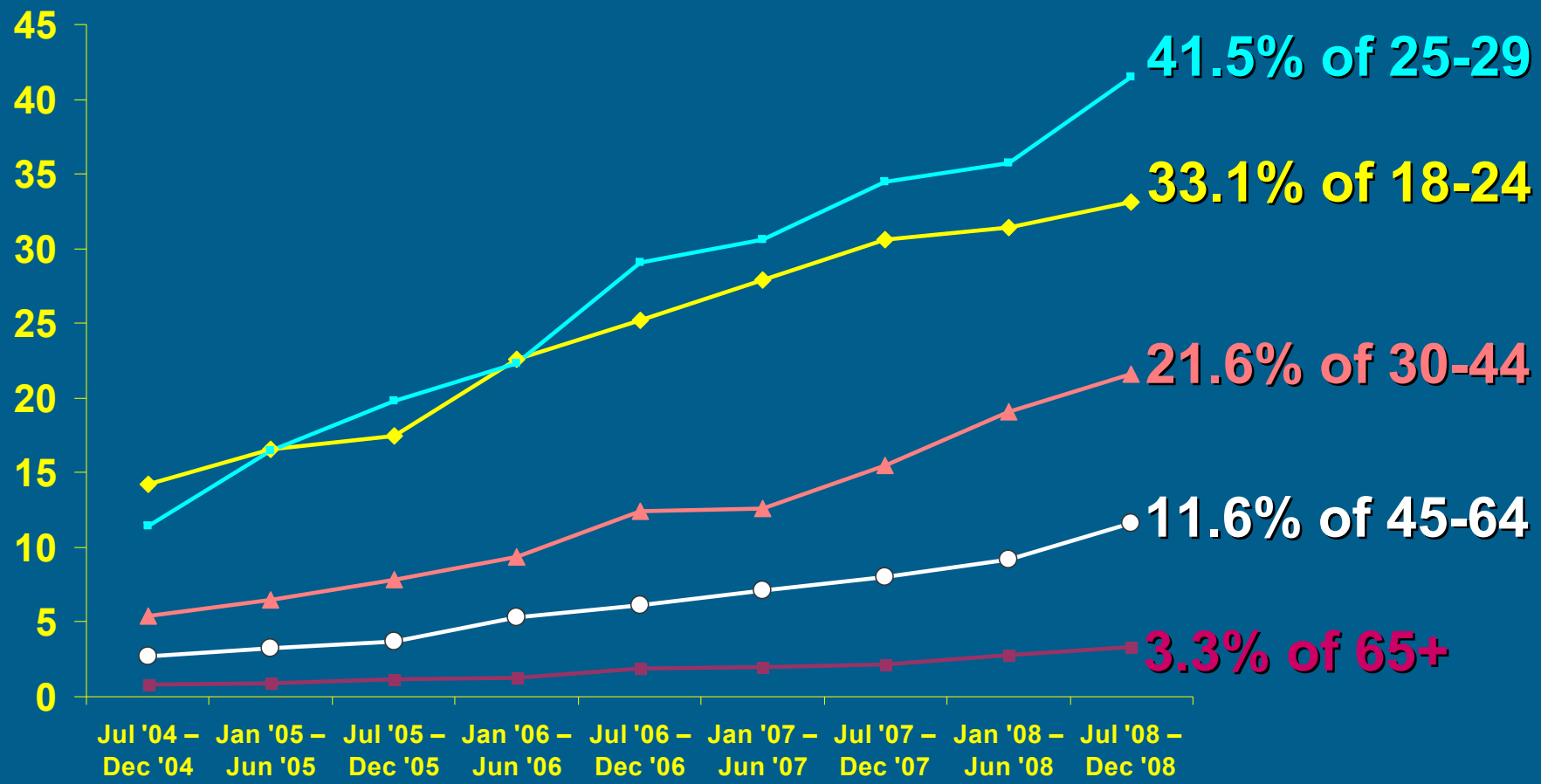
Outline for Today

- Prevalence and characteristics of
 - Wireless-only population
 - Wireless-mostly population
 - Landline-only population
- Number of wireless telephones in each household

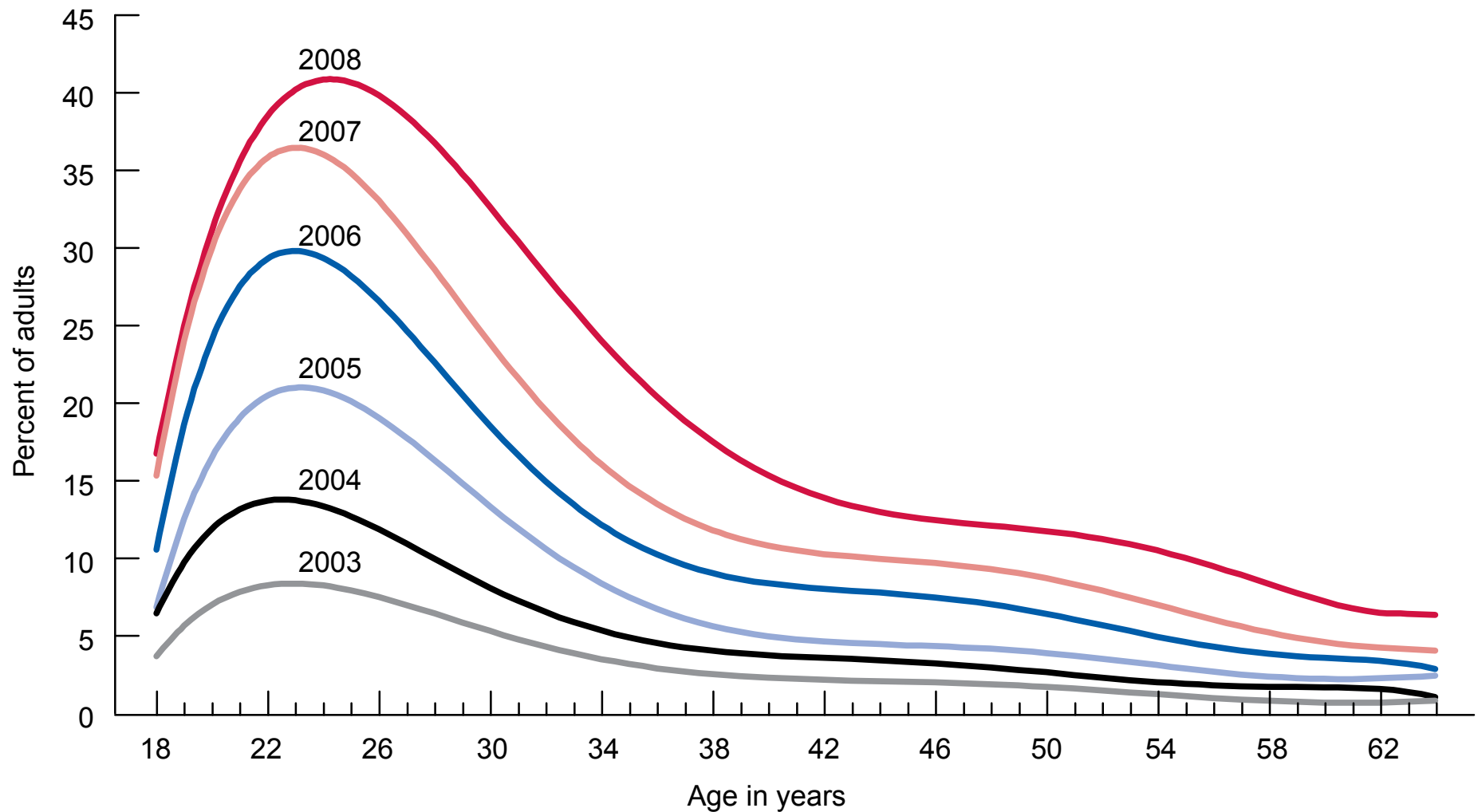
Percentages of adults and children living in households with only wireless telephone service or no telephone service: United States, 2005–2008



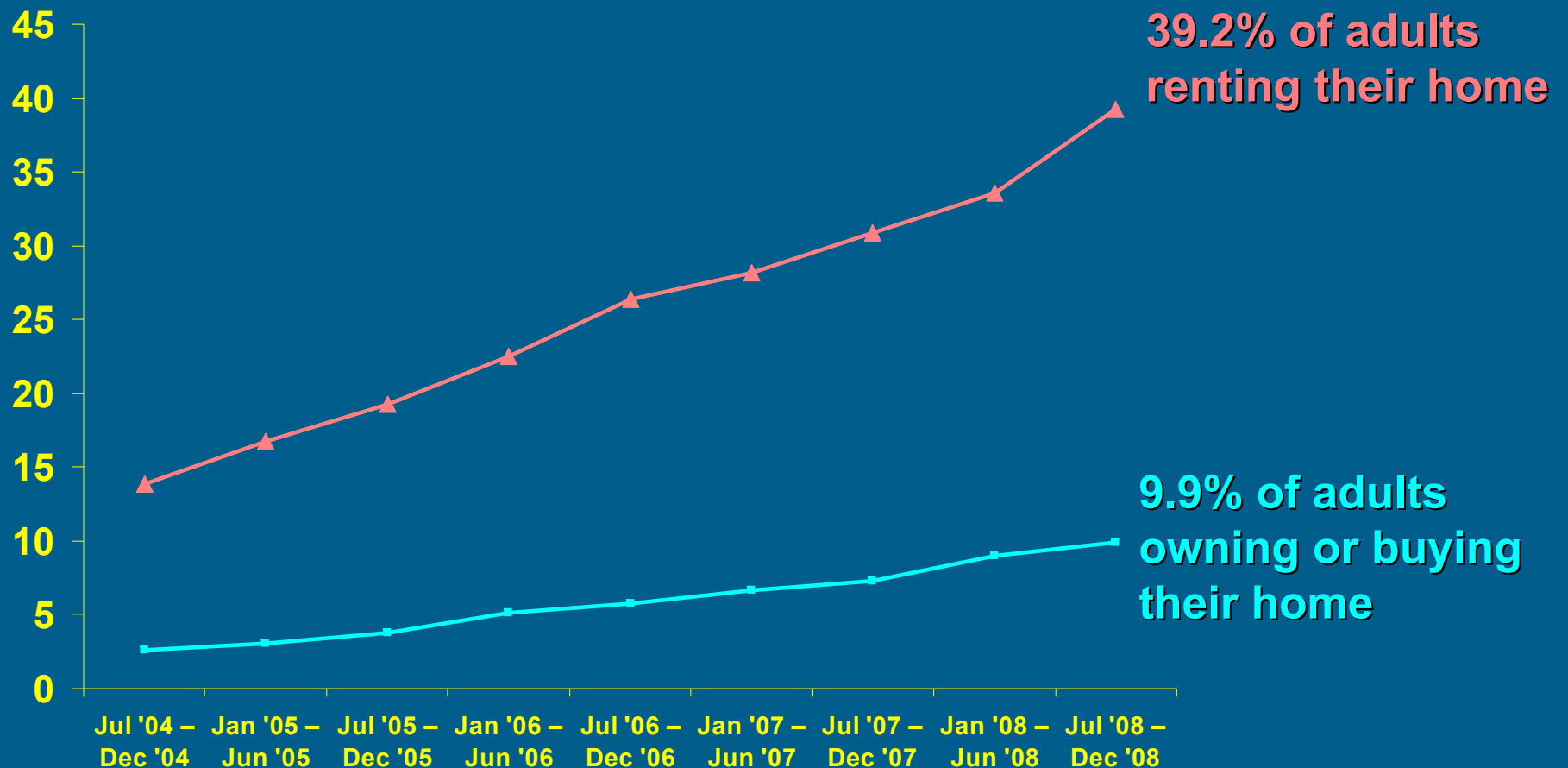
Prevalence of Wireless-Only Adults by Age



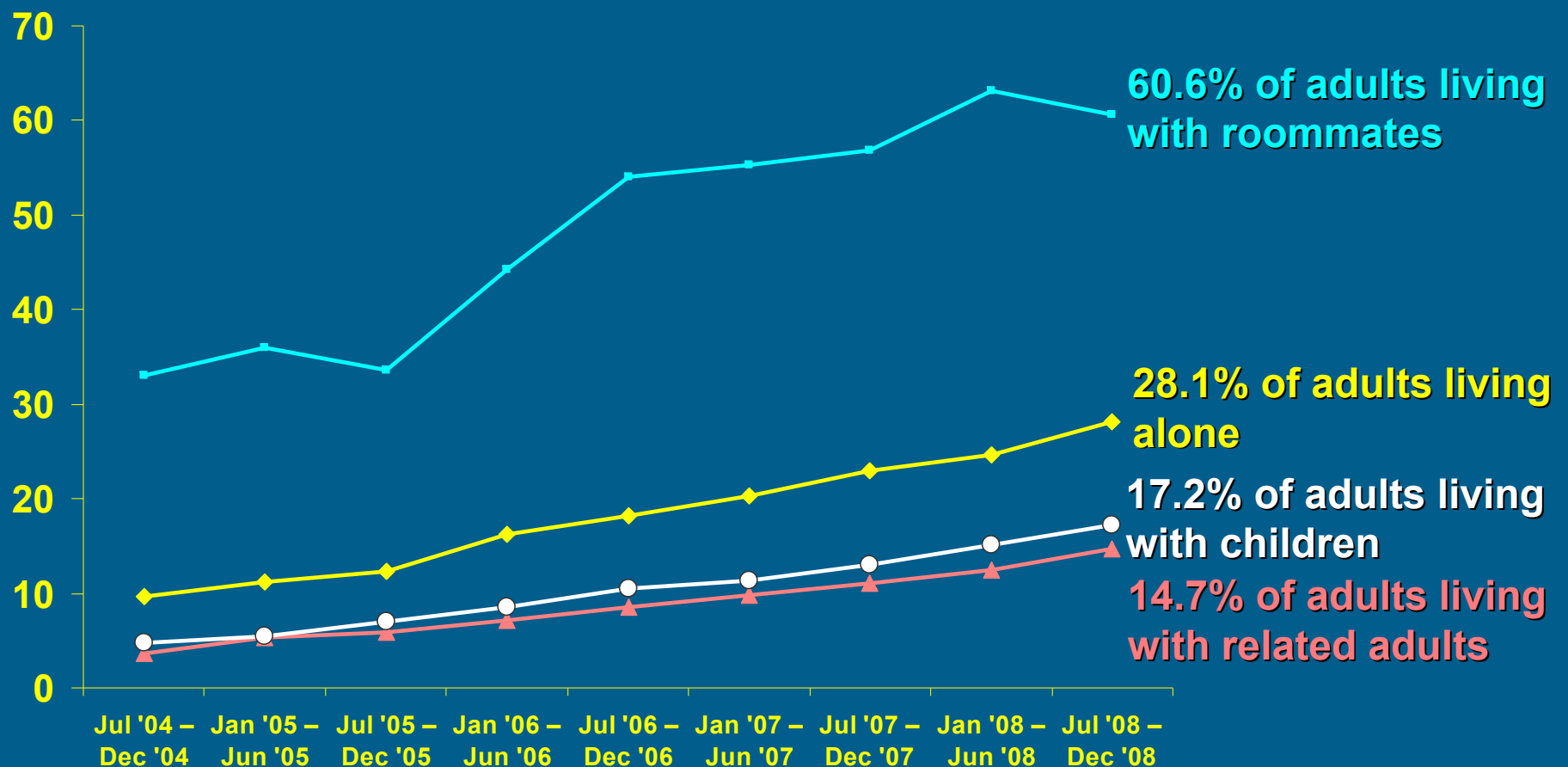
Polynomial regression equations fitted to a plot of the percentage of adults living in households with only wireless telephone service, by single year of age and by year of interview: United States, 2003–2008



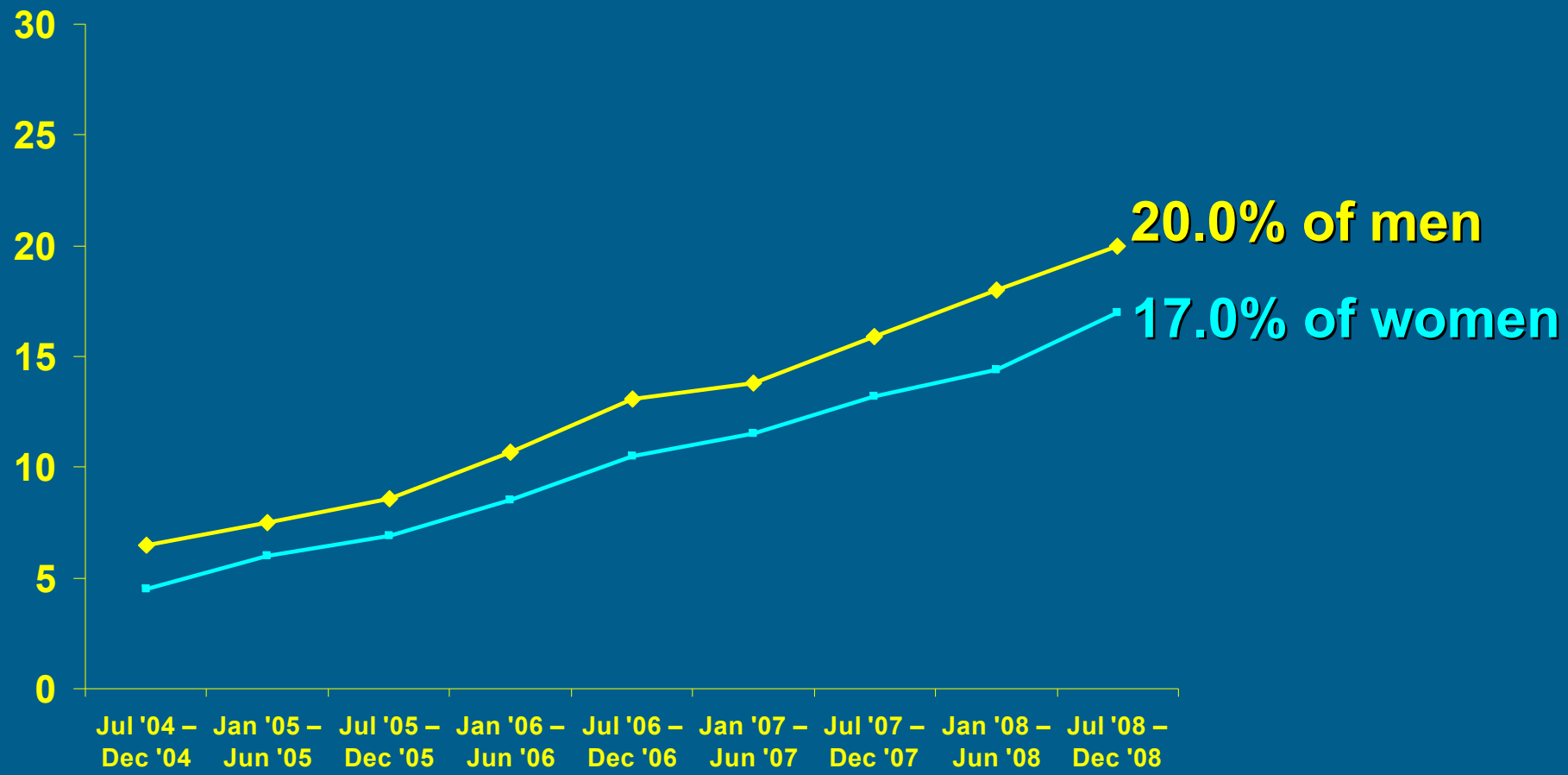
Prevalence of Wireless-Only Adults by Home Ownership Status



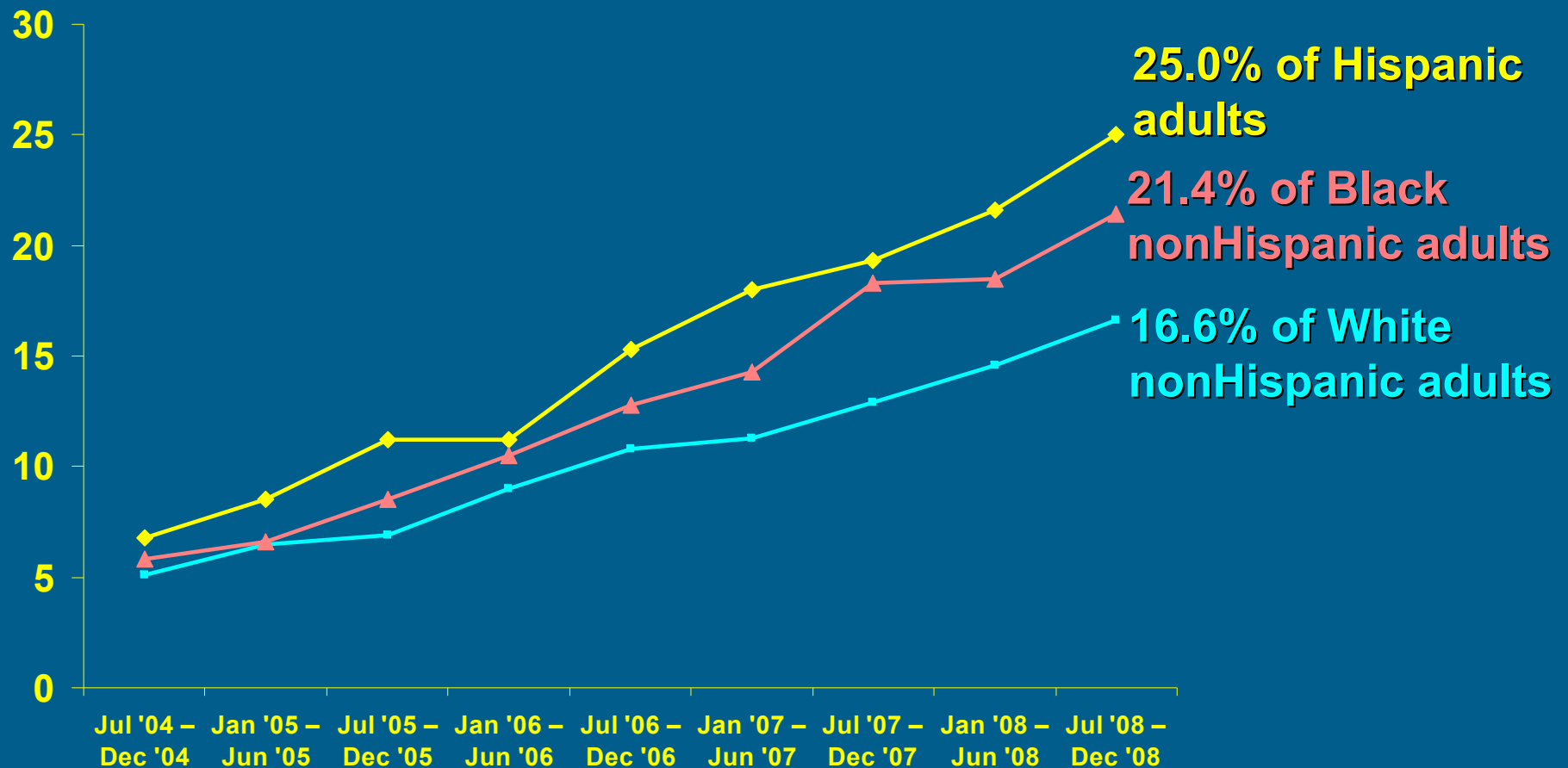
Prevalence of Wireless-Only Adults by Household Structure



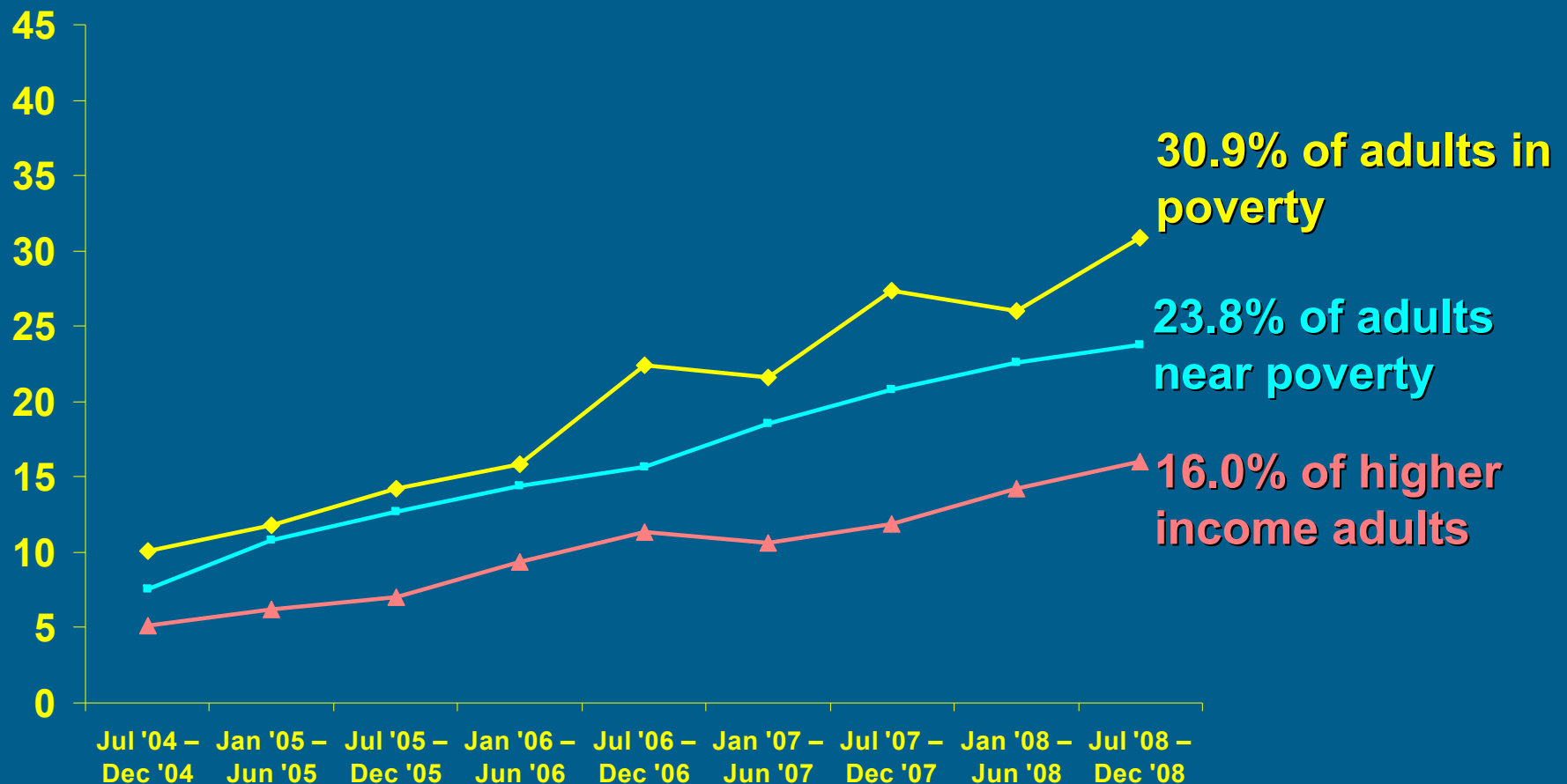
Prevalence of Wireless-Only Adults by Sex



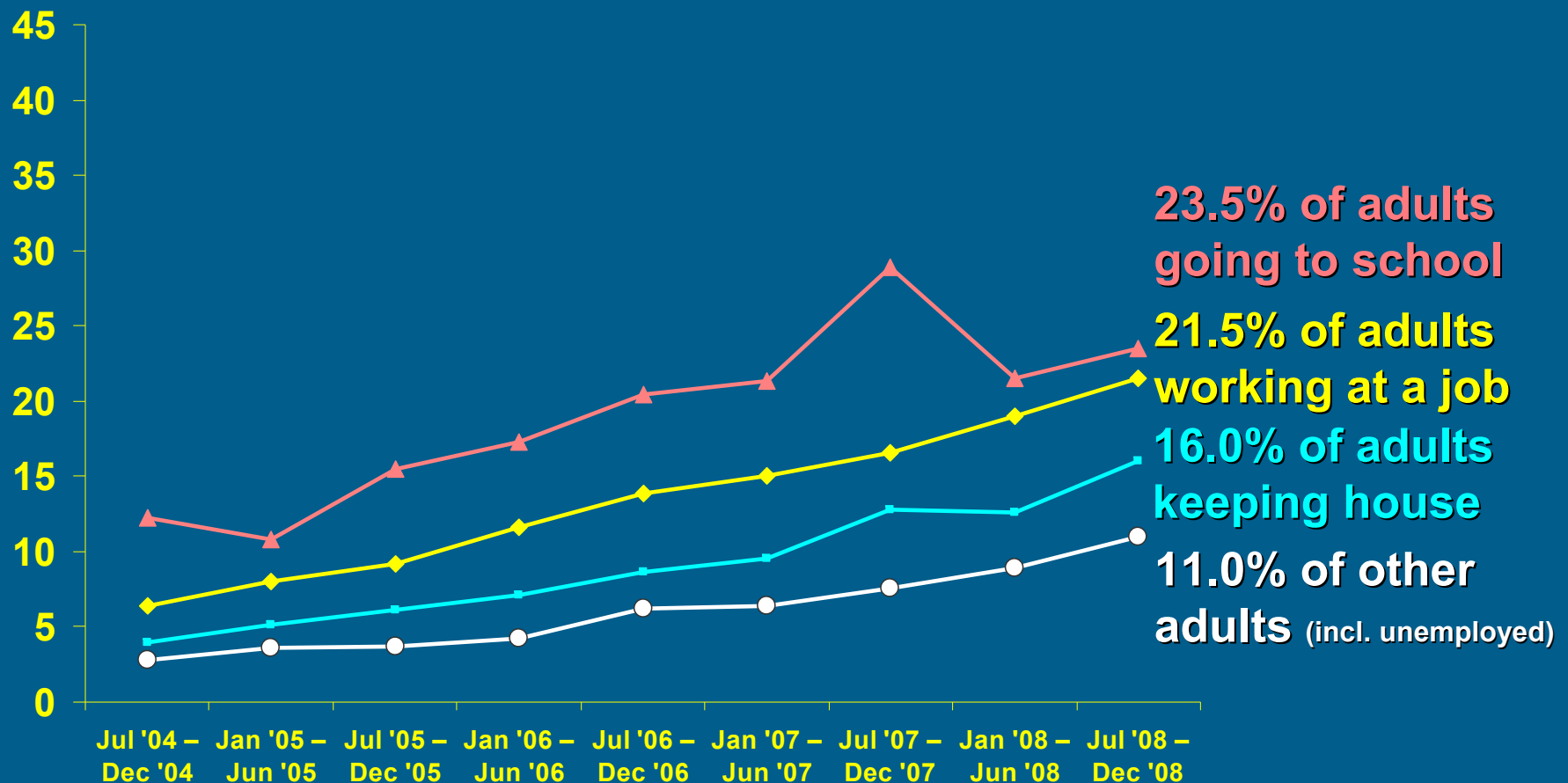
Prevalence of Wireless-Only Adults by Race/Ethnicity



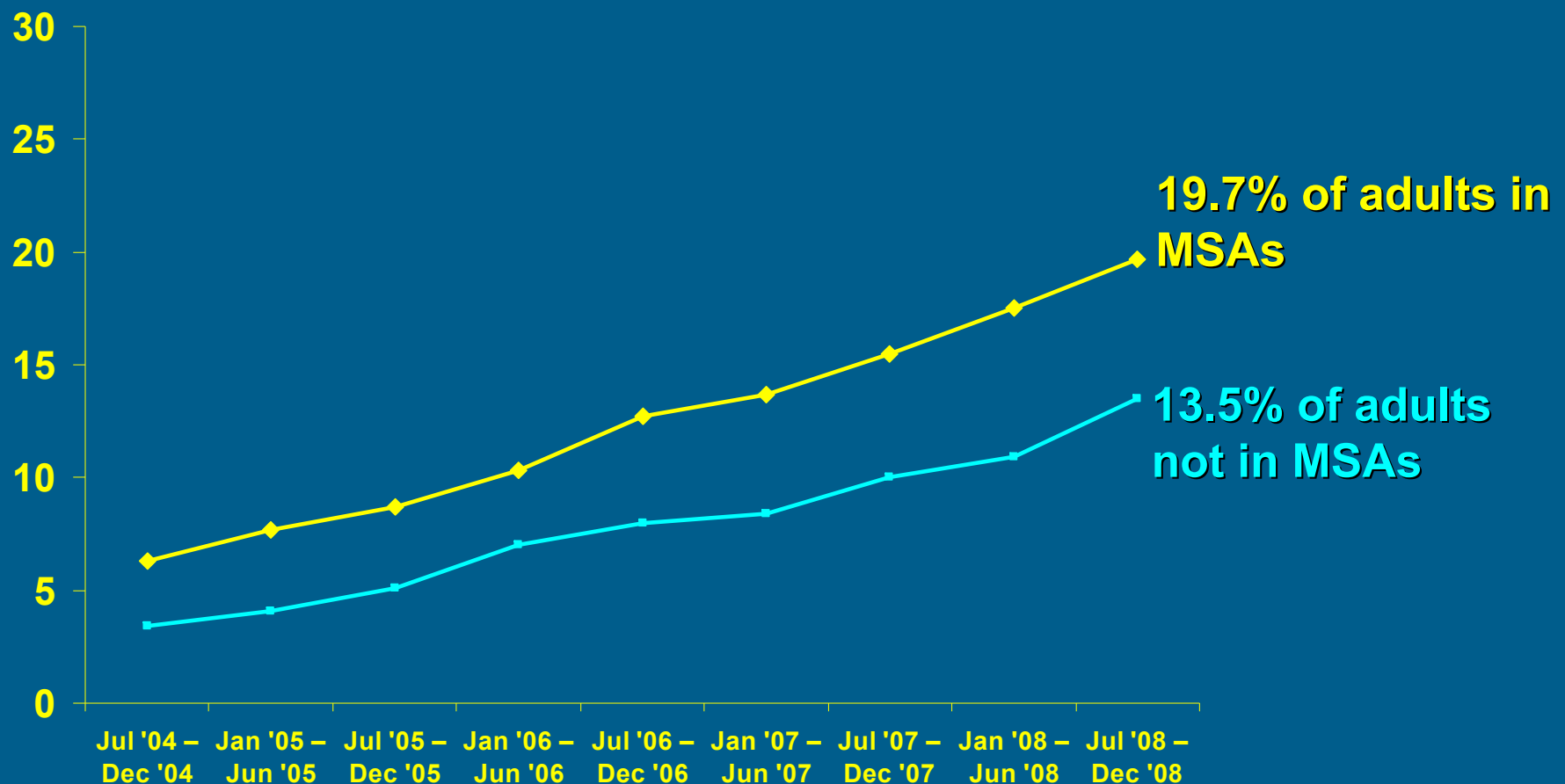
Prevalence of Wireless-Only Adults by Household Poverty Status



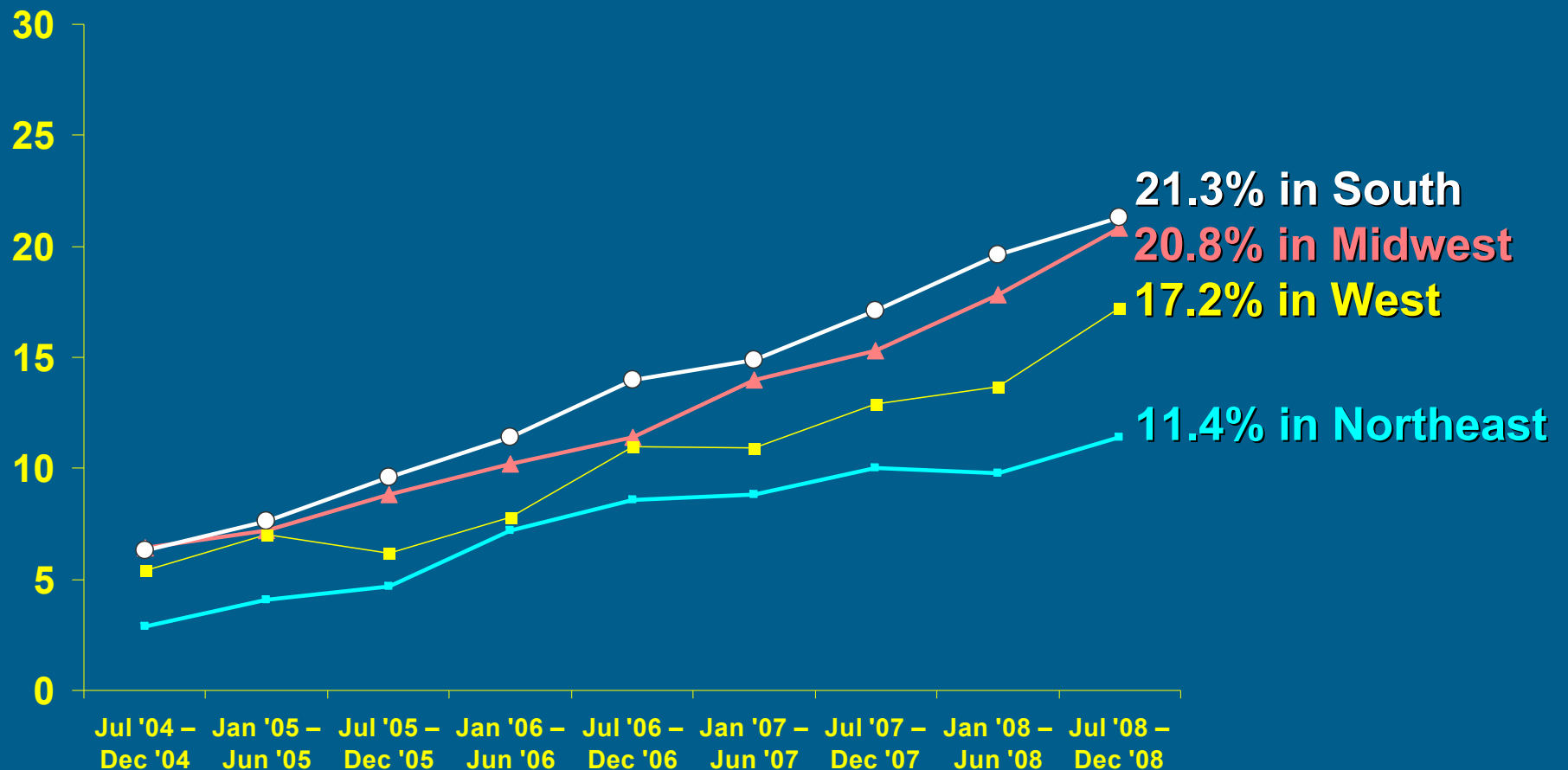
Prevalence of Wireless-Only Adults by Employment Status Last Week



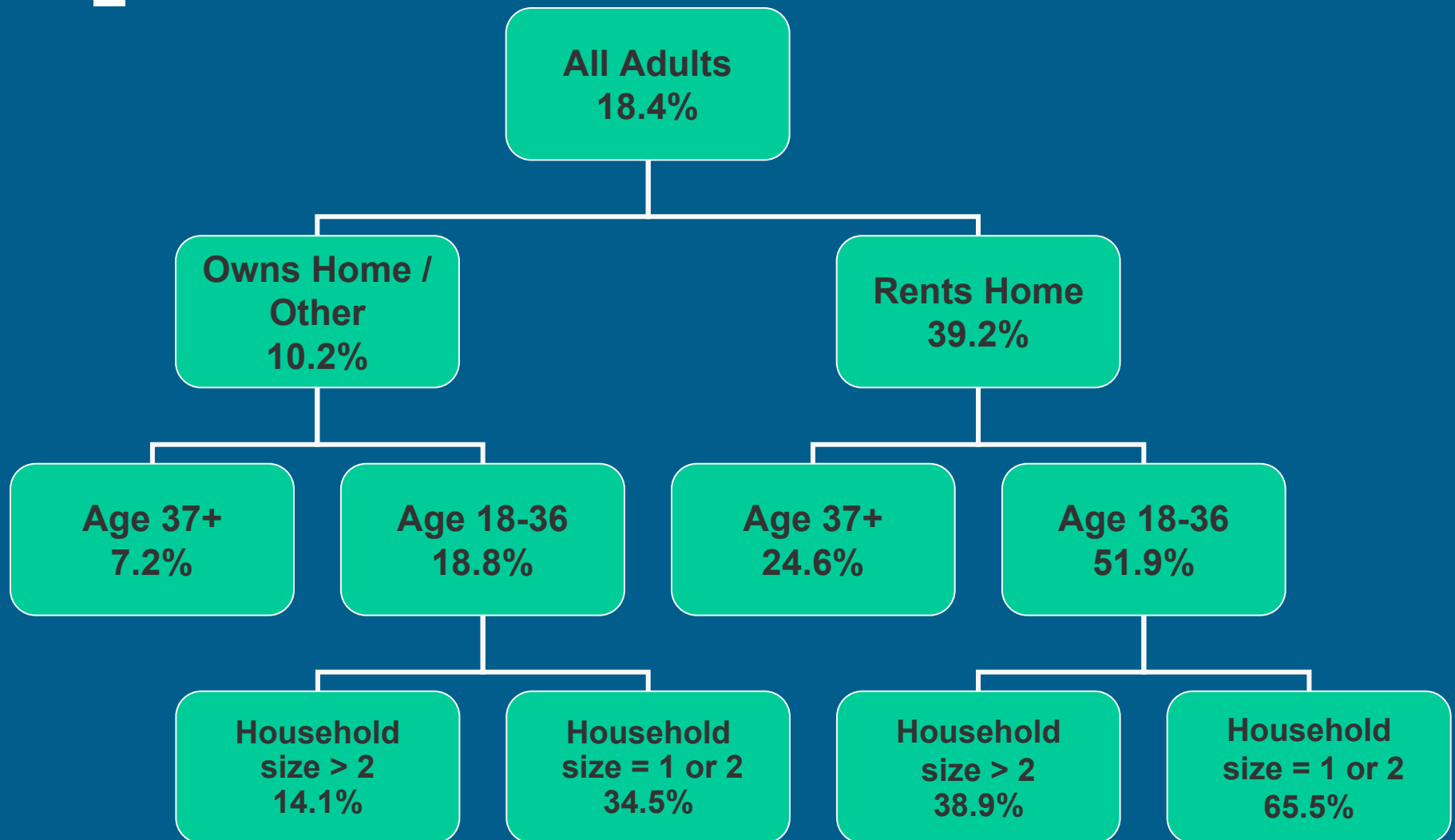
Prevalence of Wireless-Only Adults by Metropolitan Statistical Area Status



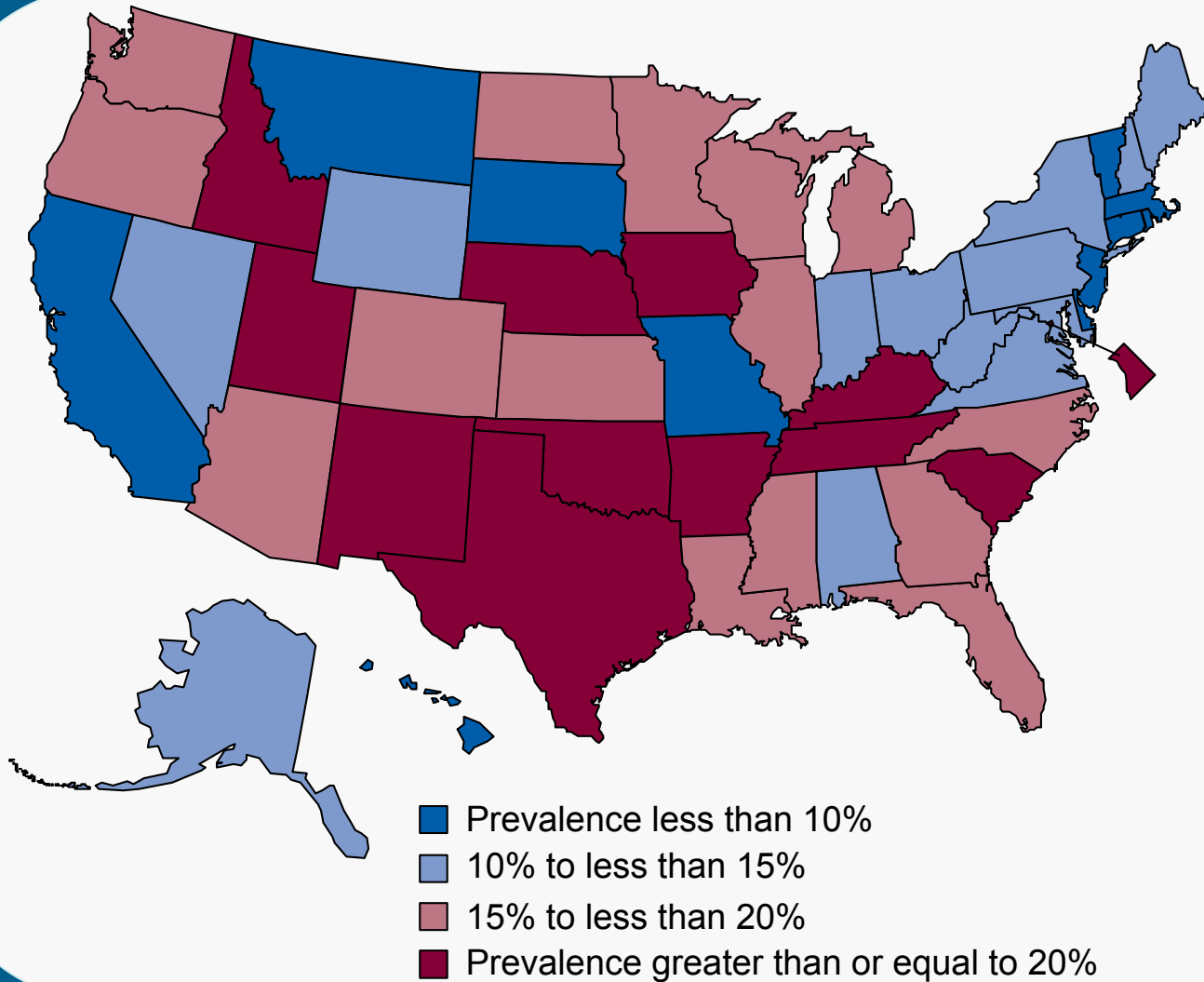
Prevalence of Wireless-Only Adults by Geographic Region



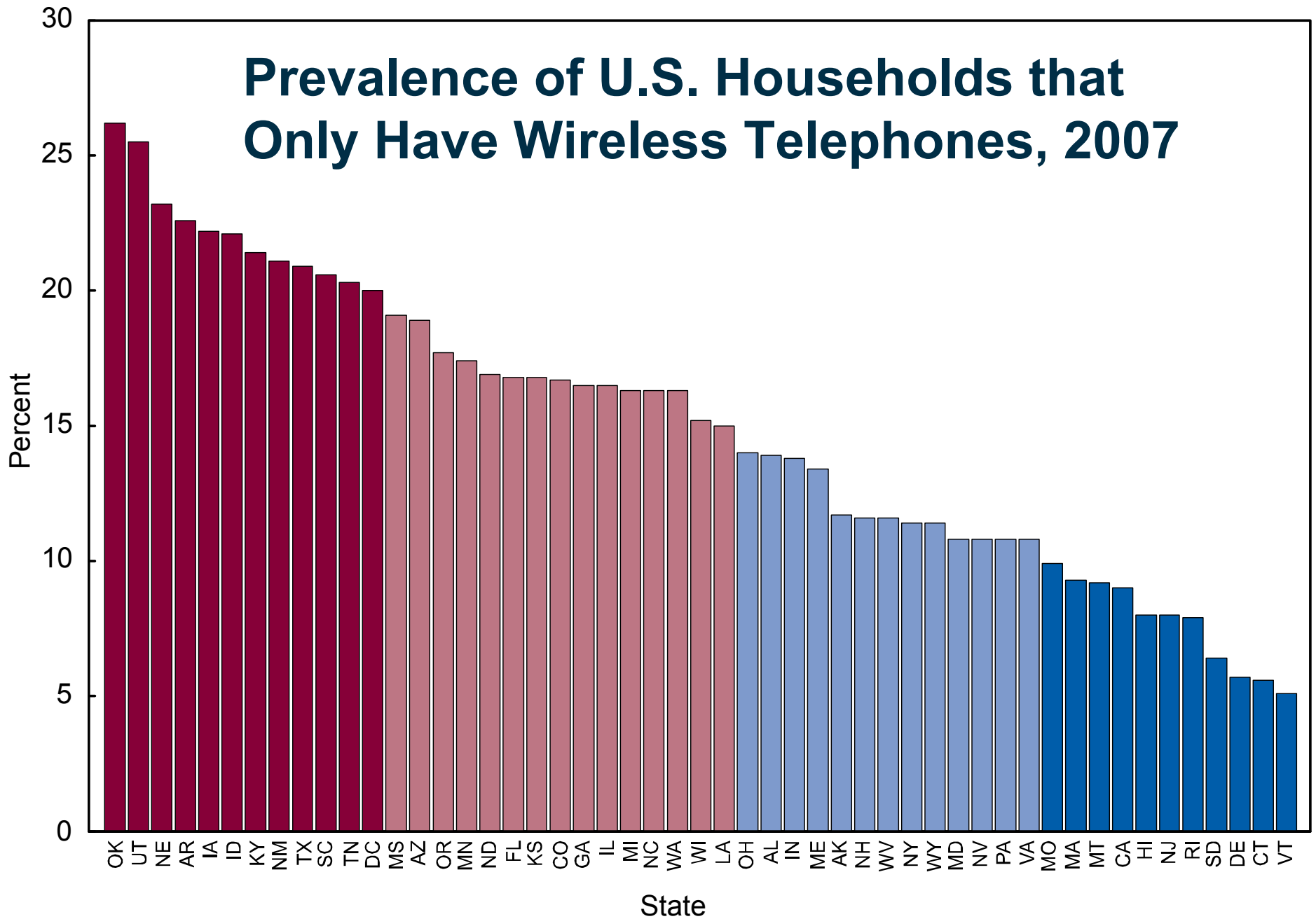
Prevalence of Adults Living in Wireless-Only HHs, July-December 2008



Prevalence of U.S. Households that Only Have Wireless Telephones, 2007



Prevalence of U.S. Households that Only Have Wireless Telephones, 2007



Covariates Most Strongly Related to Household Wireless-Only Status

■ Age

- Percent of HHs with all adults ≤ 30 years of age ($\rho = .55$)
- Percent of HHs with no elderly residents ($\rho = .32$)

■ Age x Own/Rent Interaction

- Percent of HHs that are rented and in which all adults ≤ 30 years of age ($\rho = .43$)

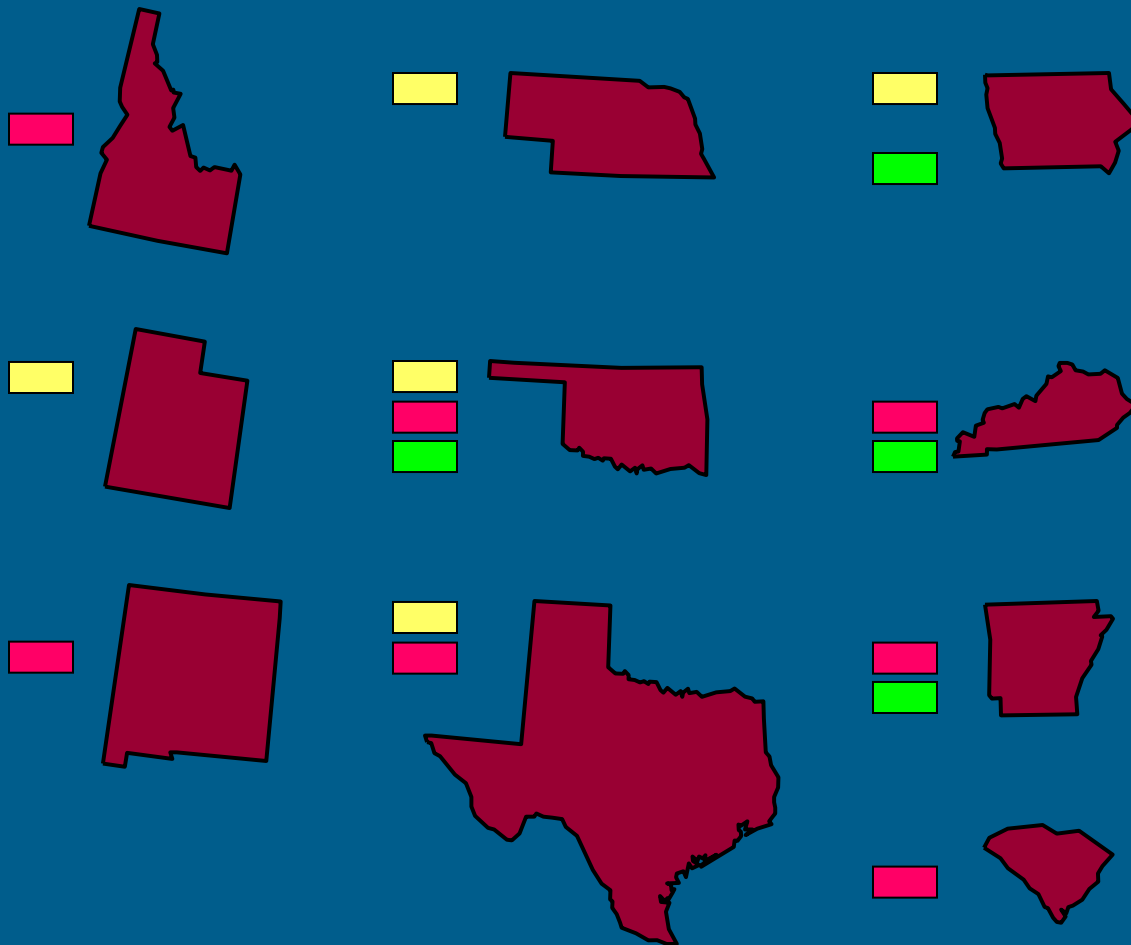
■ Household Poverty Status

- Percent of HHs living near poverty line ($\rho = .53$)
- Percent of HHs living in poverty ($\rho = .30$)

■ Other

- Percent of HHs with only 1 or 2 adults ($\rho = .33$)
- Percent of HHs with no college graduate ($\rho = .33$)

Top 10 States with Highest Prevalence of Wireless-Only Households

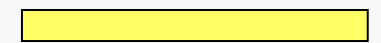
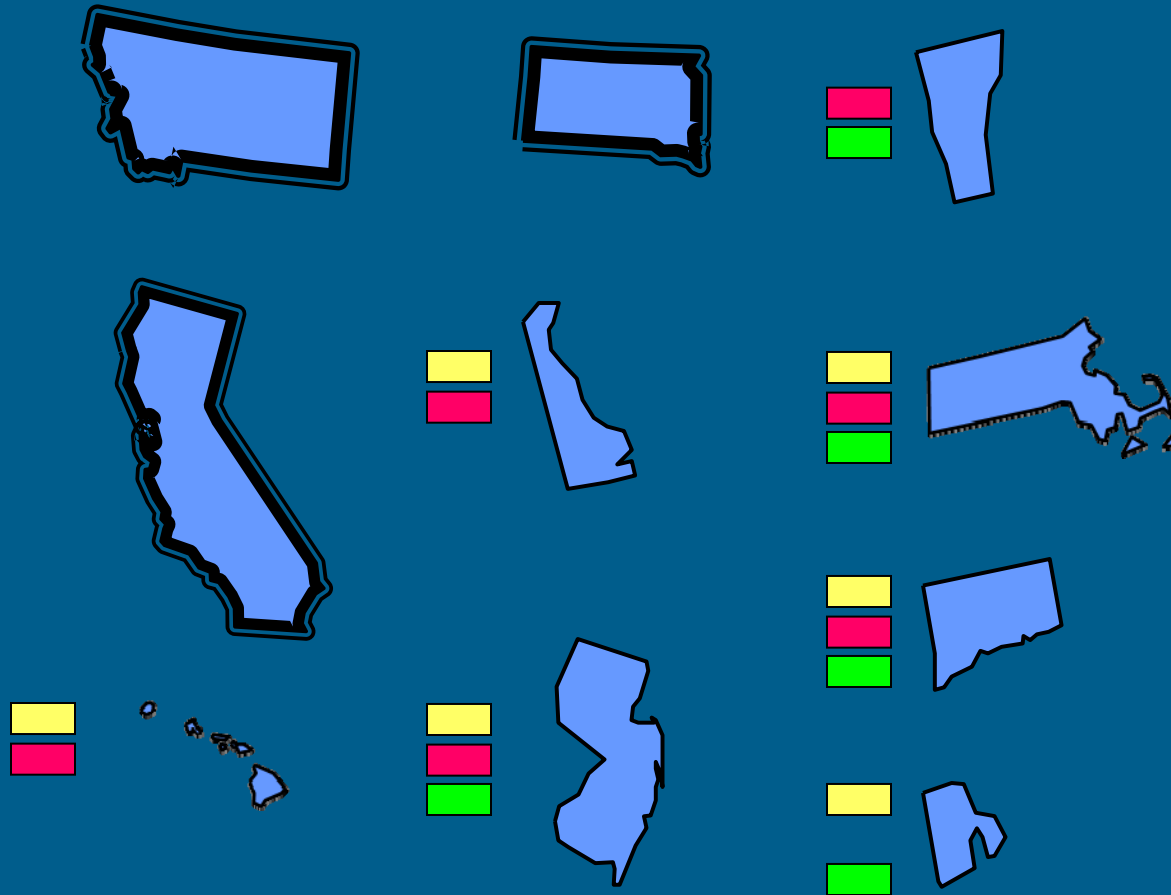


High proportion of young households and/or young rented households

High proportion of poor and/or near poor households

High proportion of households with no college graduate

10 States with Lowest Prevalence of Wireless-Only Households



Low proportion of young households and/or young rented households



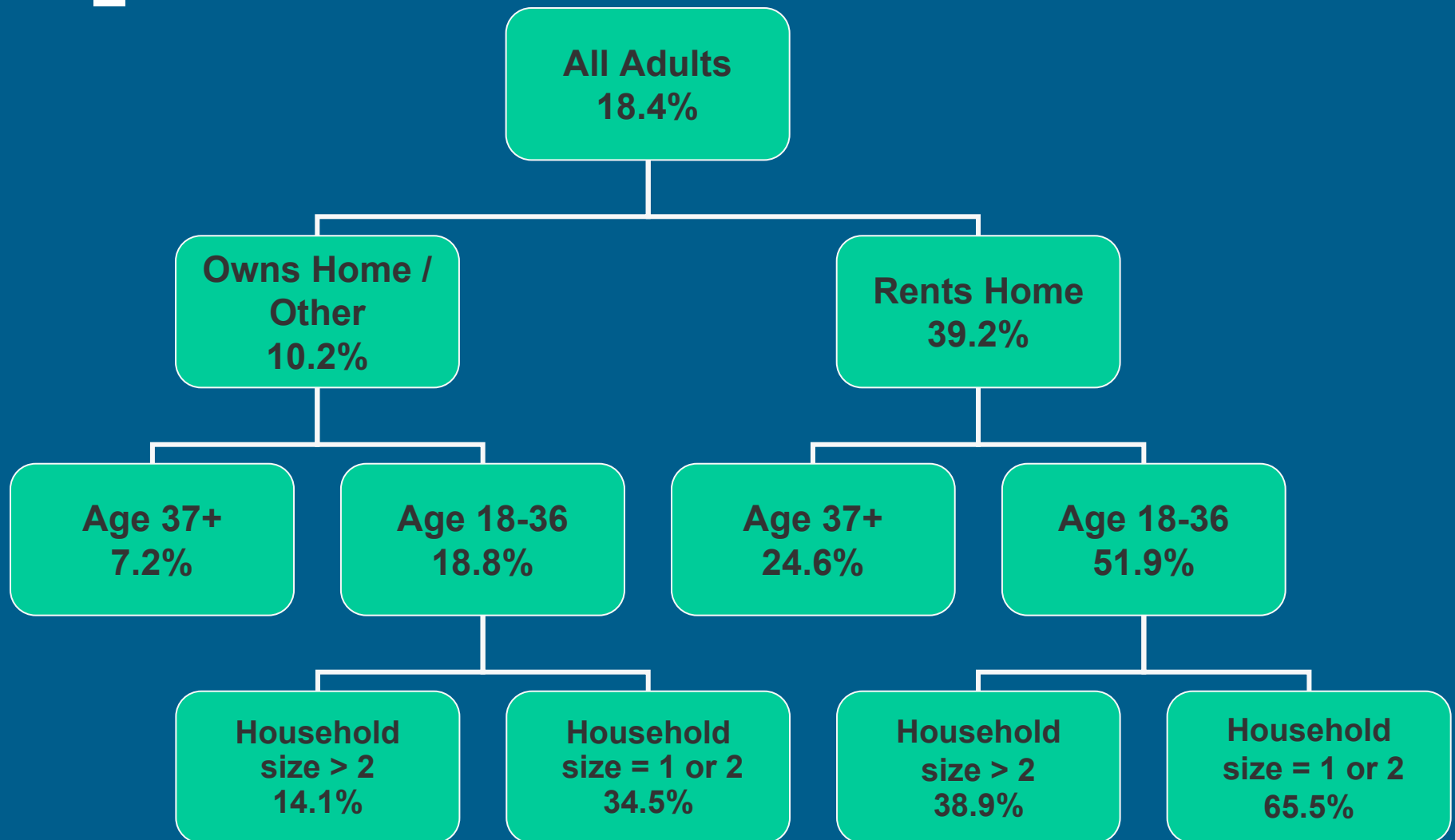
Low proportion of poor and/or near poor households



Low proportion of households with no college graduate

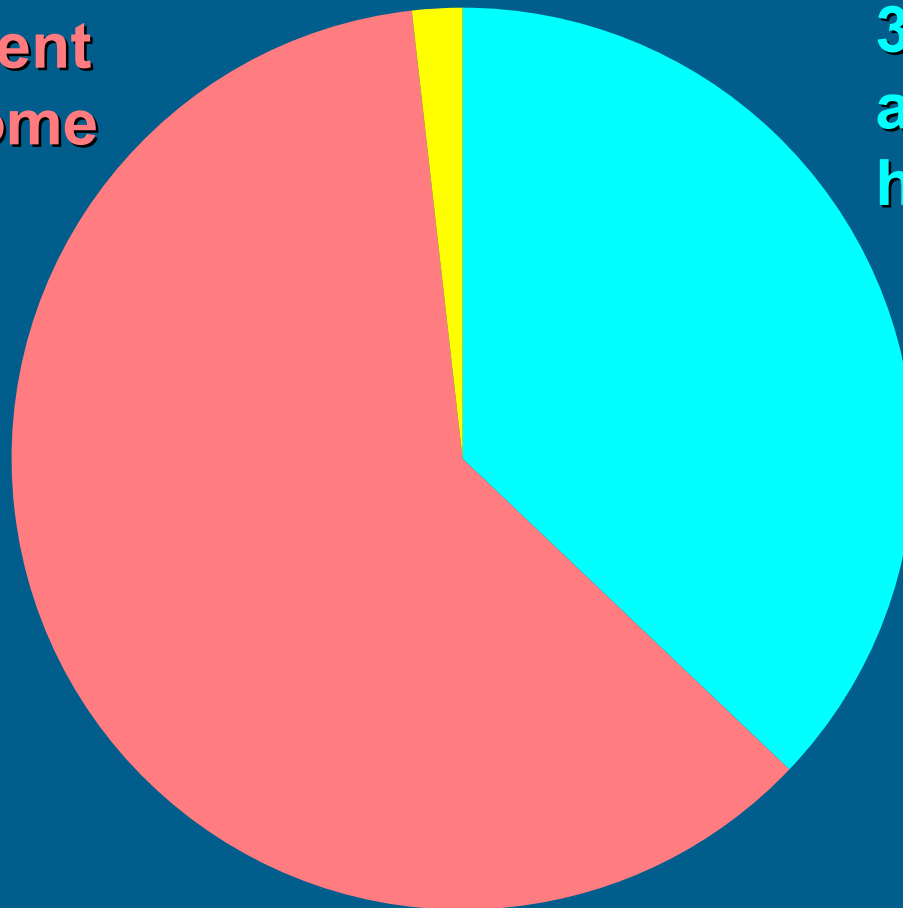
States are not drawn to scale

Prevalence of Adults Living in Wireless-Only HHs, July-December 2008



Prevalence of Home Ownership Status Among Wireless-Only Adults

61.1% rent
their home



37.1% own or
are buying their
home

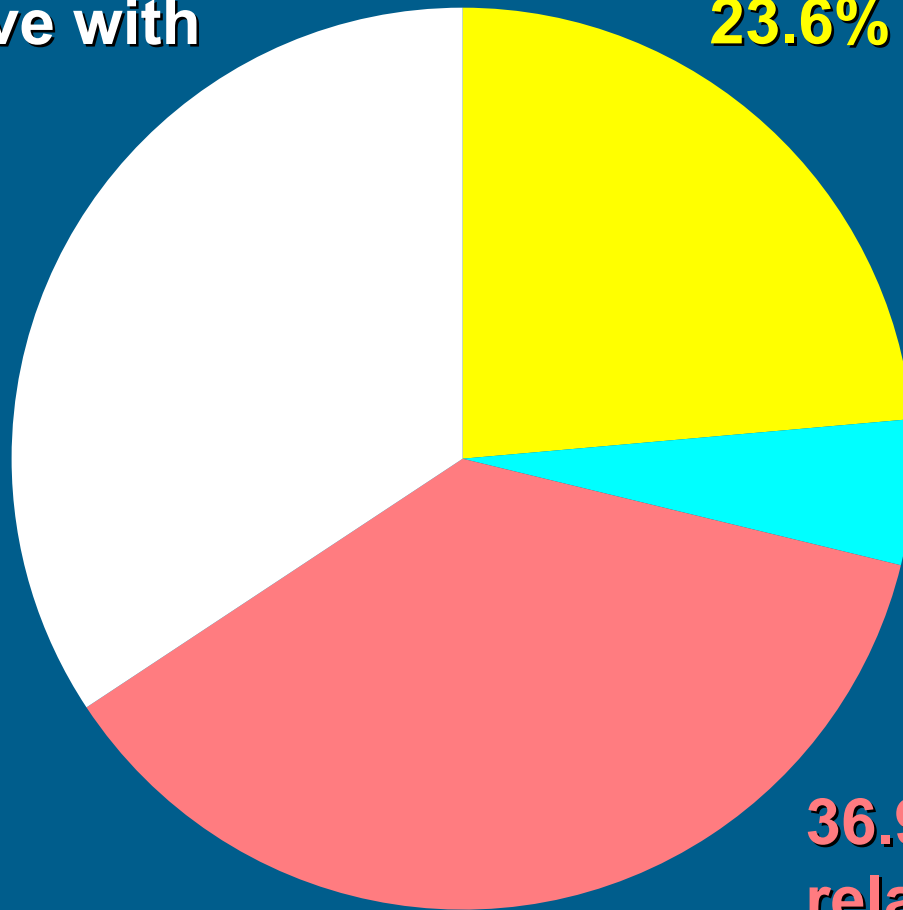
Prevalence of Household Structure Among Wireless-Only Adults

34.3% live with
children

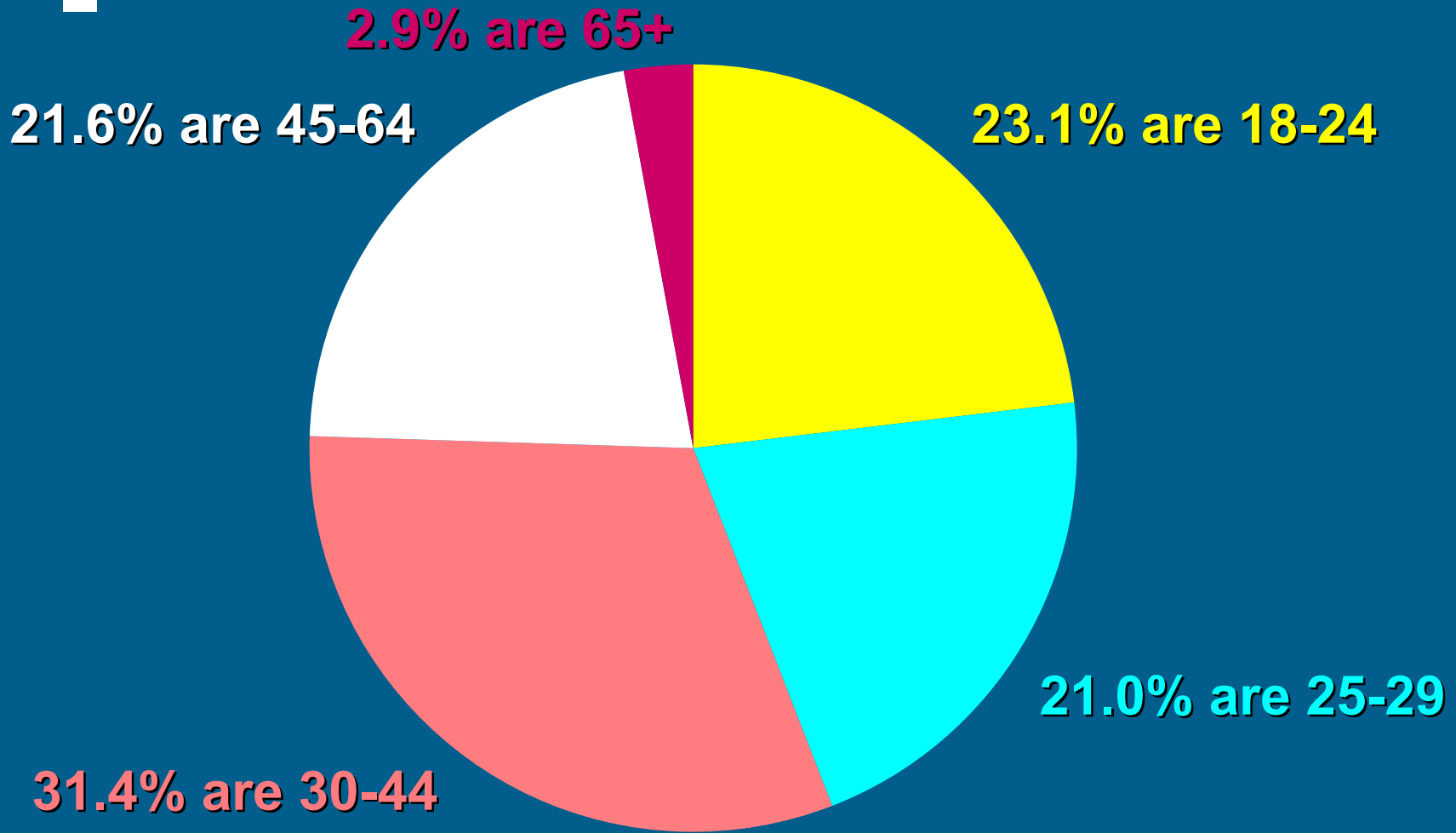
23.6% live alone

5.2% live with
roommates

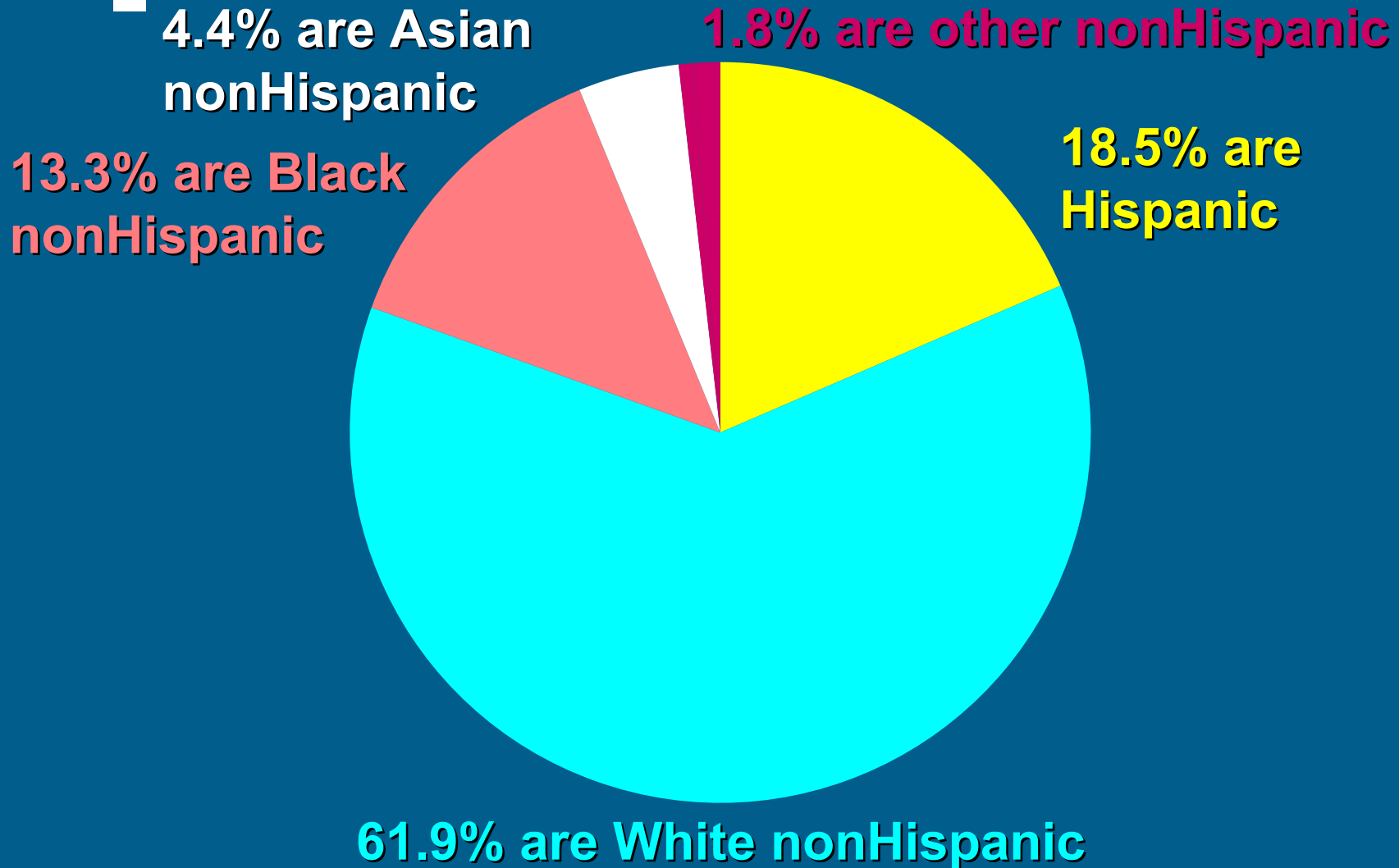
36.9% live with
related adults



Prevalence of Selected Age Groups Among Wireless-Only Adults



Prevalence of Selected Racial/Ethnic Groups Among Wireless-Only Adults



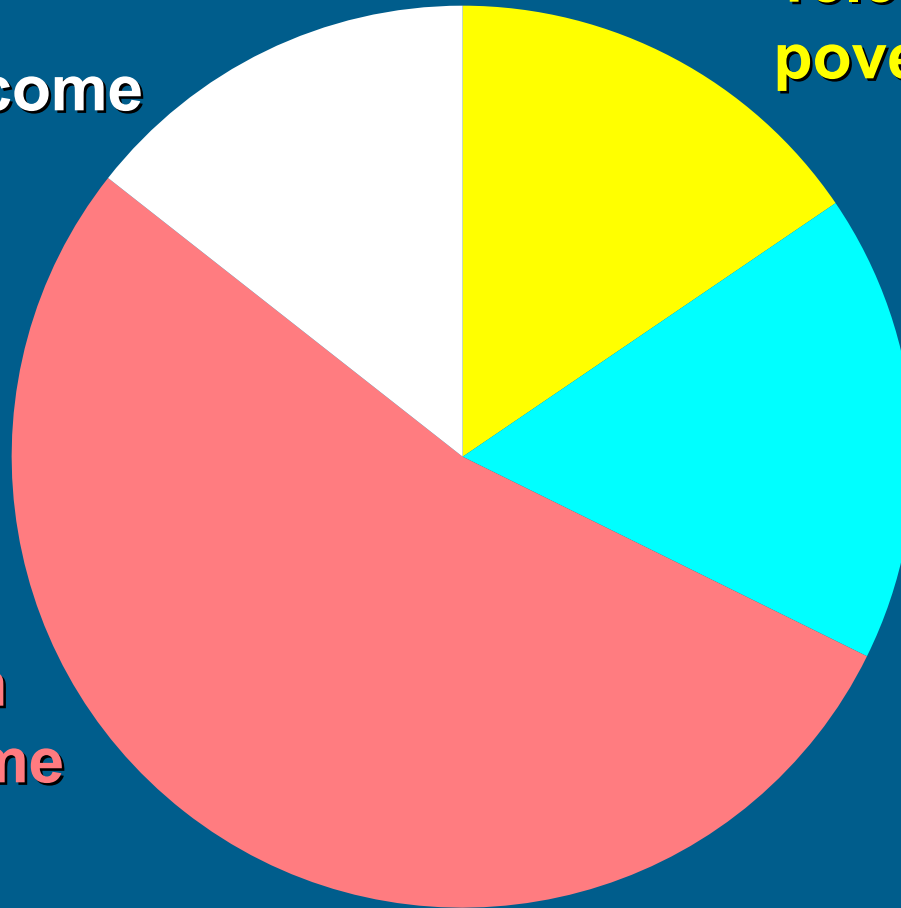
Prevalence of Household Poverty Status Among Wireless-Only Adults

14.4% have
unknown income

15.5% live in
poverty

16.8% live
near poverty

53.3% live in
higher income
households



Wireless-Only Conclusions

- Wireless substitution continues to grow
- Disproportionately high among young adults and renters
- Demographic differences in the prevalence of wireless substitution remain consistent over time

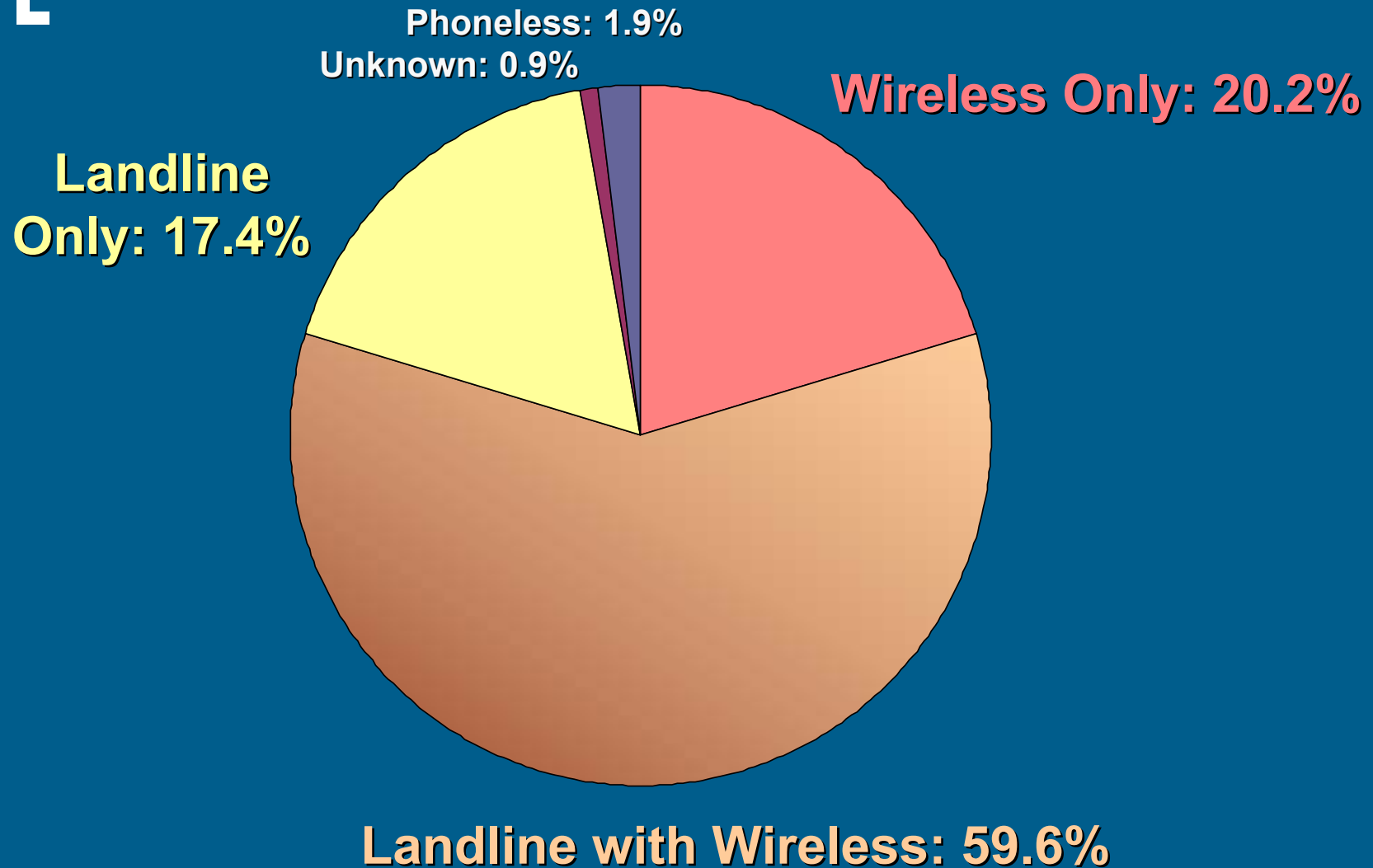
National Health Interview Survey

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- Includes questions on residential telephone numbers to permit recontact of participants

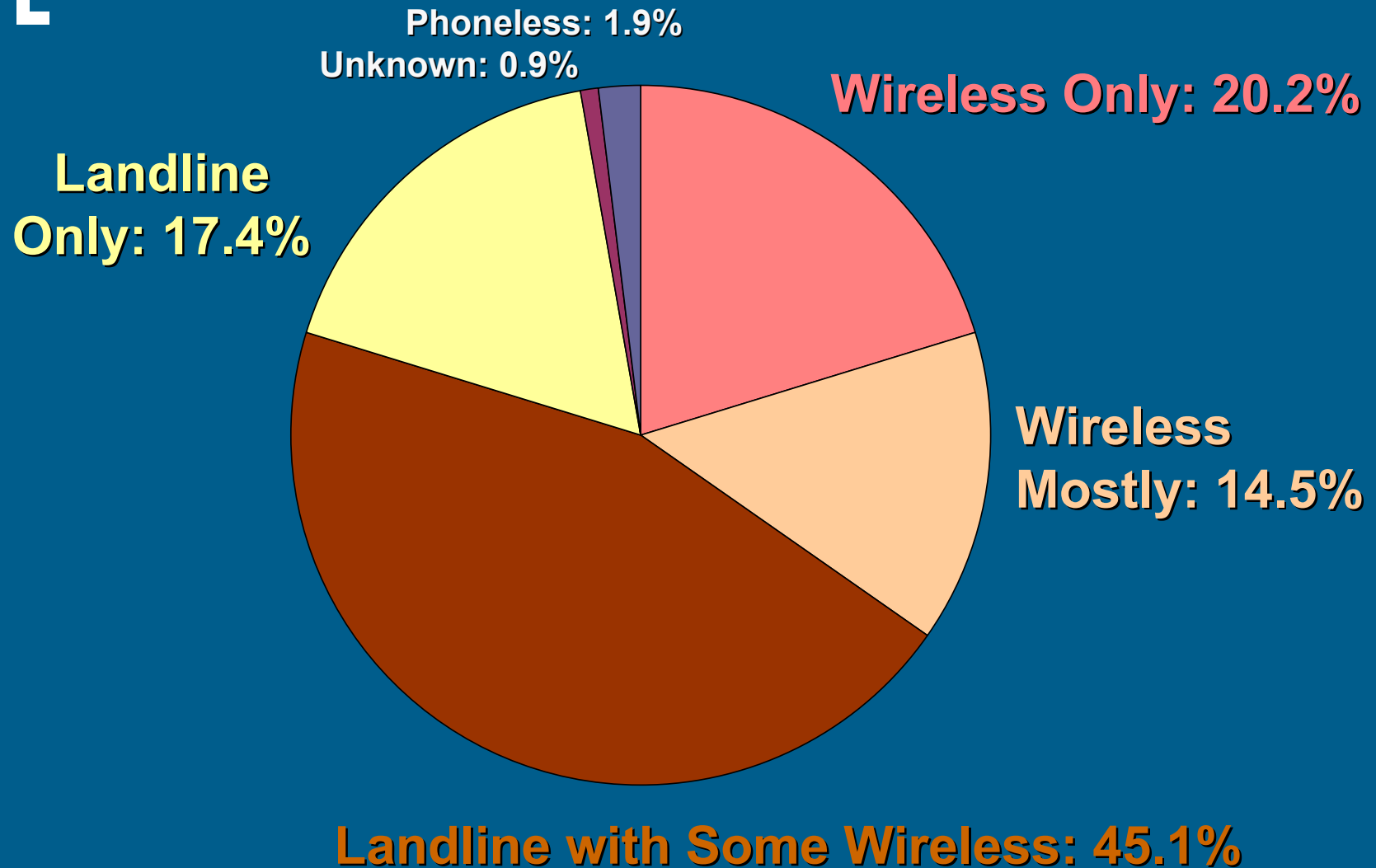
“Of all the calls that your family receives, are ...

- (1) All or almost all calls received on cell phones?**
- (2) Some received on cell phones and some on regular phones?**
- (3) Very few or none received on cell phones?”**

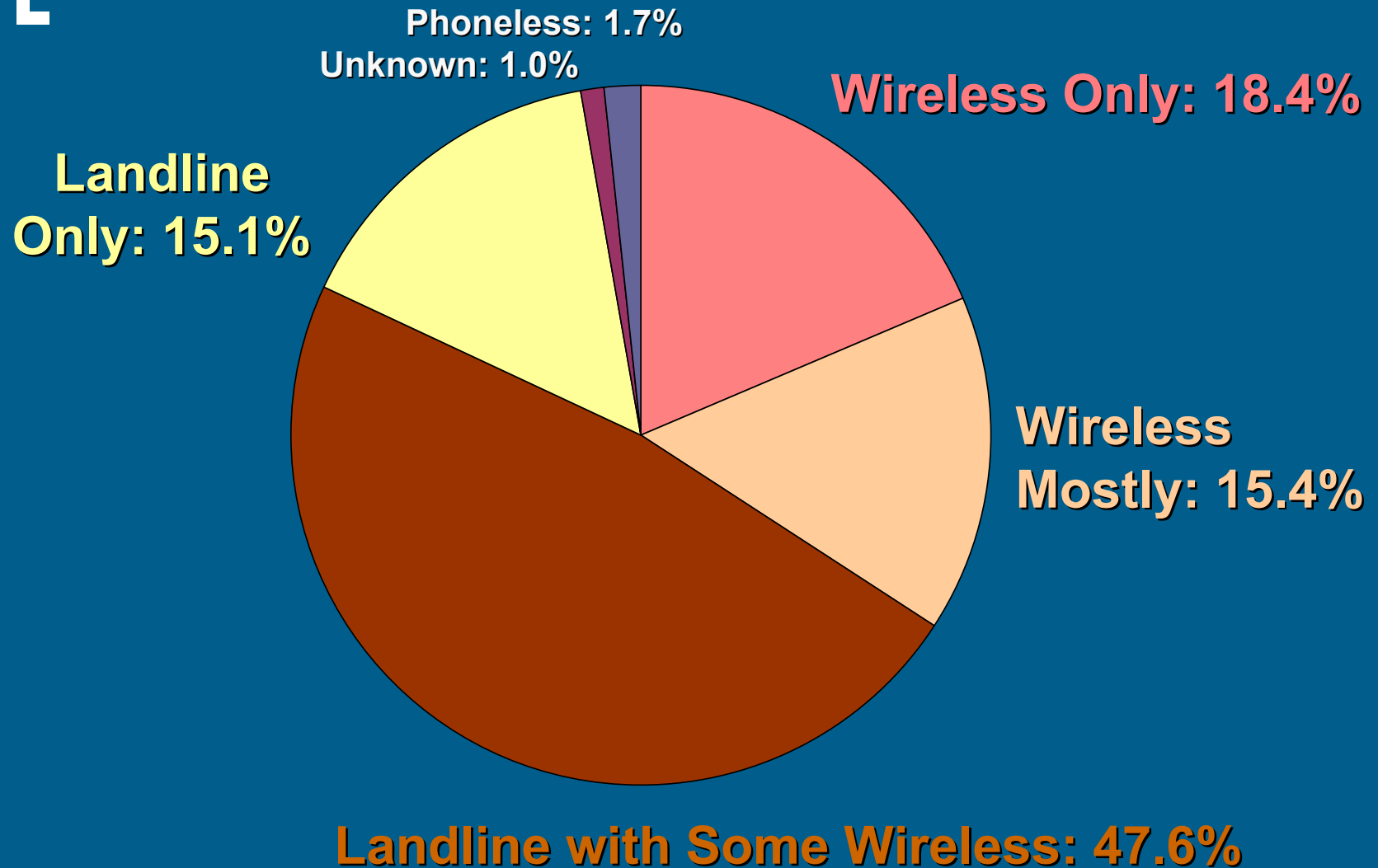
Percent Distribution of Household Telephone Status, July-December 2008



Percent Distribution of Household Telephone Status, July-December 2008

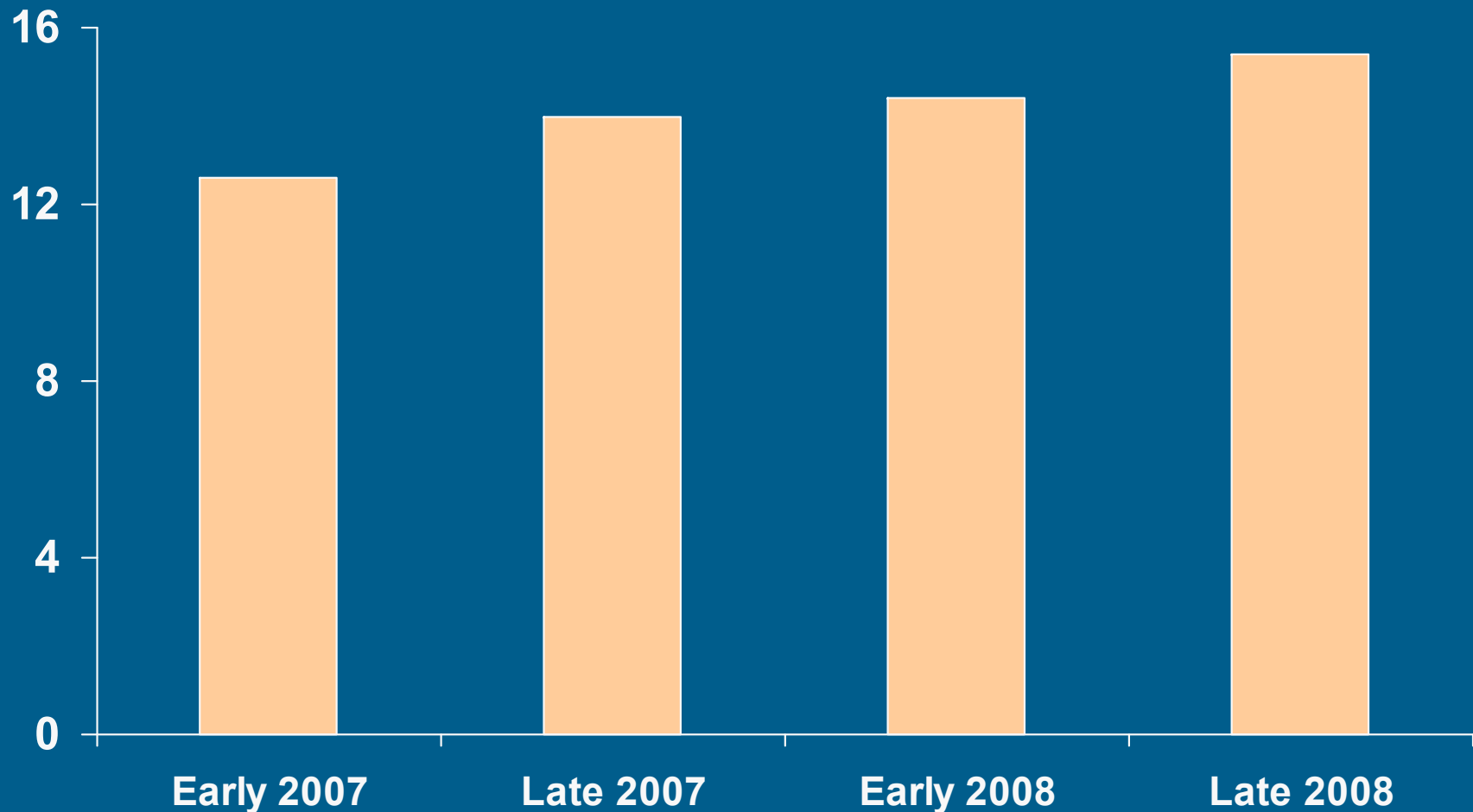


Percent Distribution of Household Telephone Status for Adults, July-December 2008

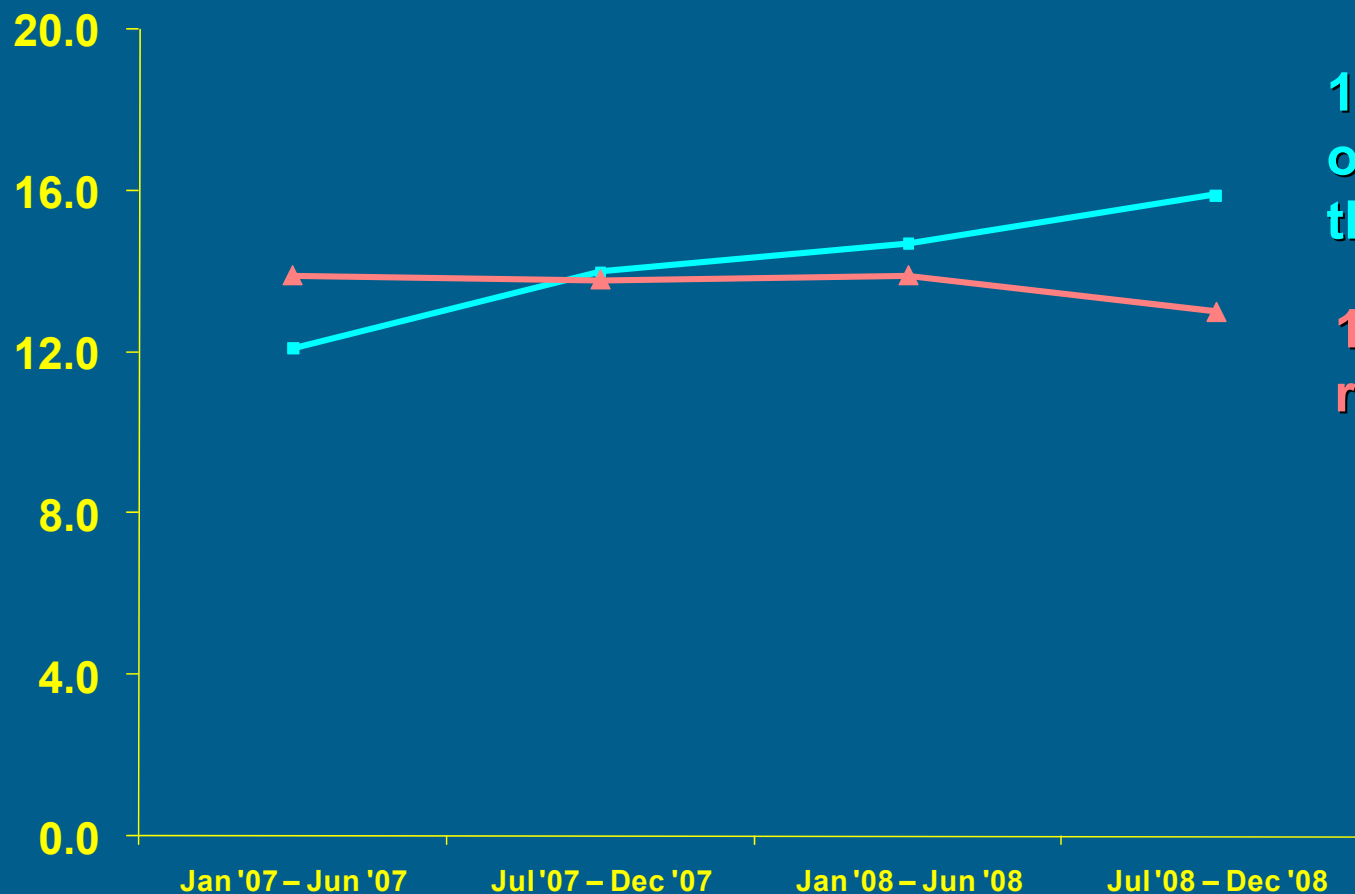


Percentage of Adults Living in Wireless-Mostly Households

■ Based on National Health Interview Survey data



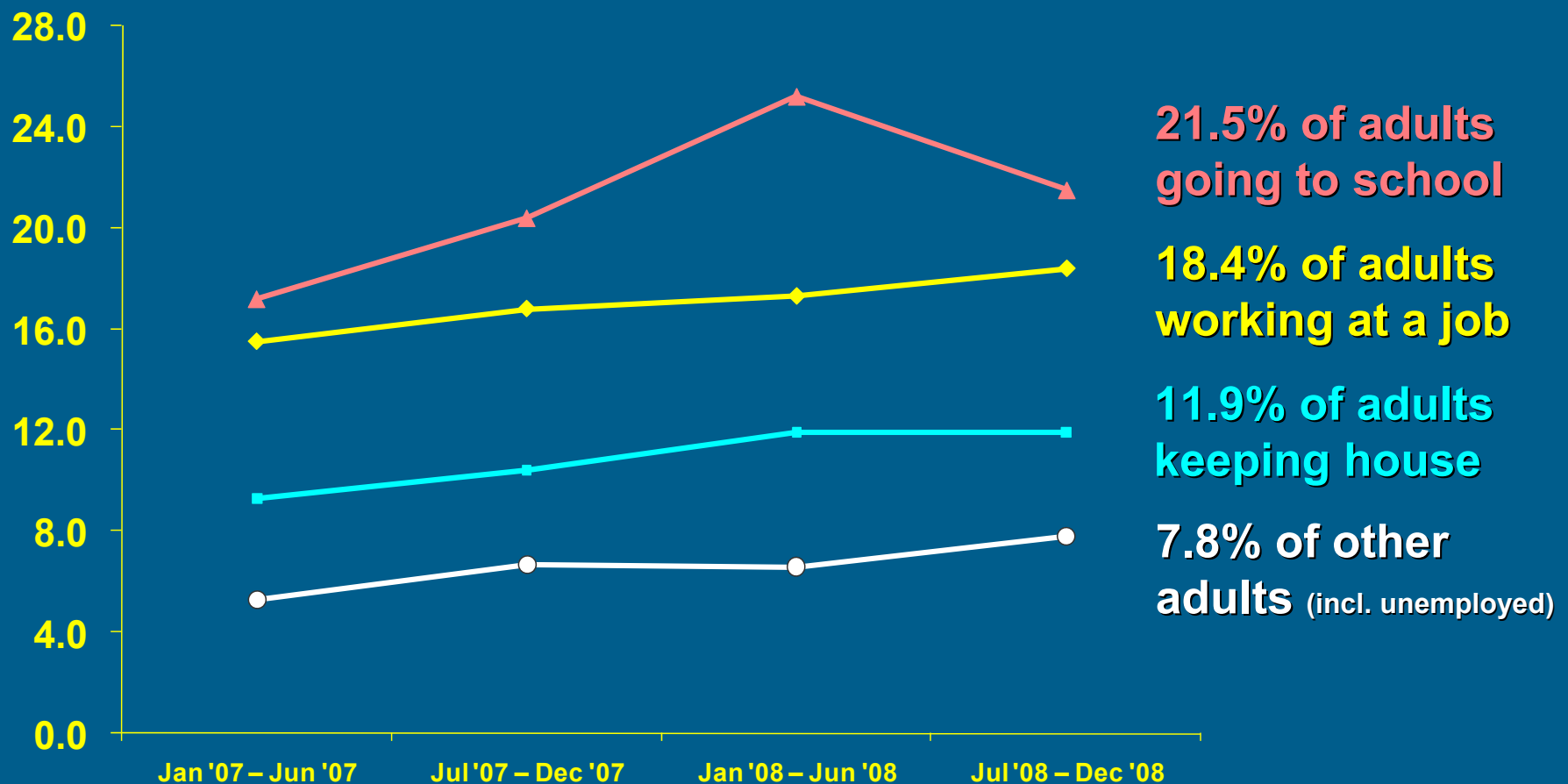
Prevalence of Wireless-Mostly Adults by Home Ownership Status



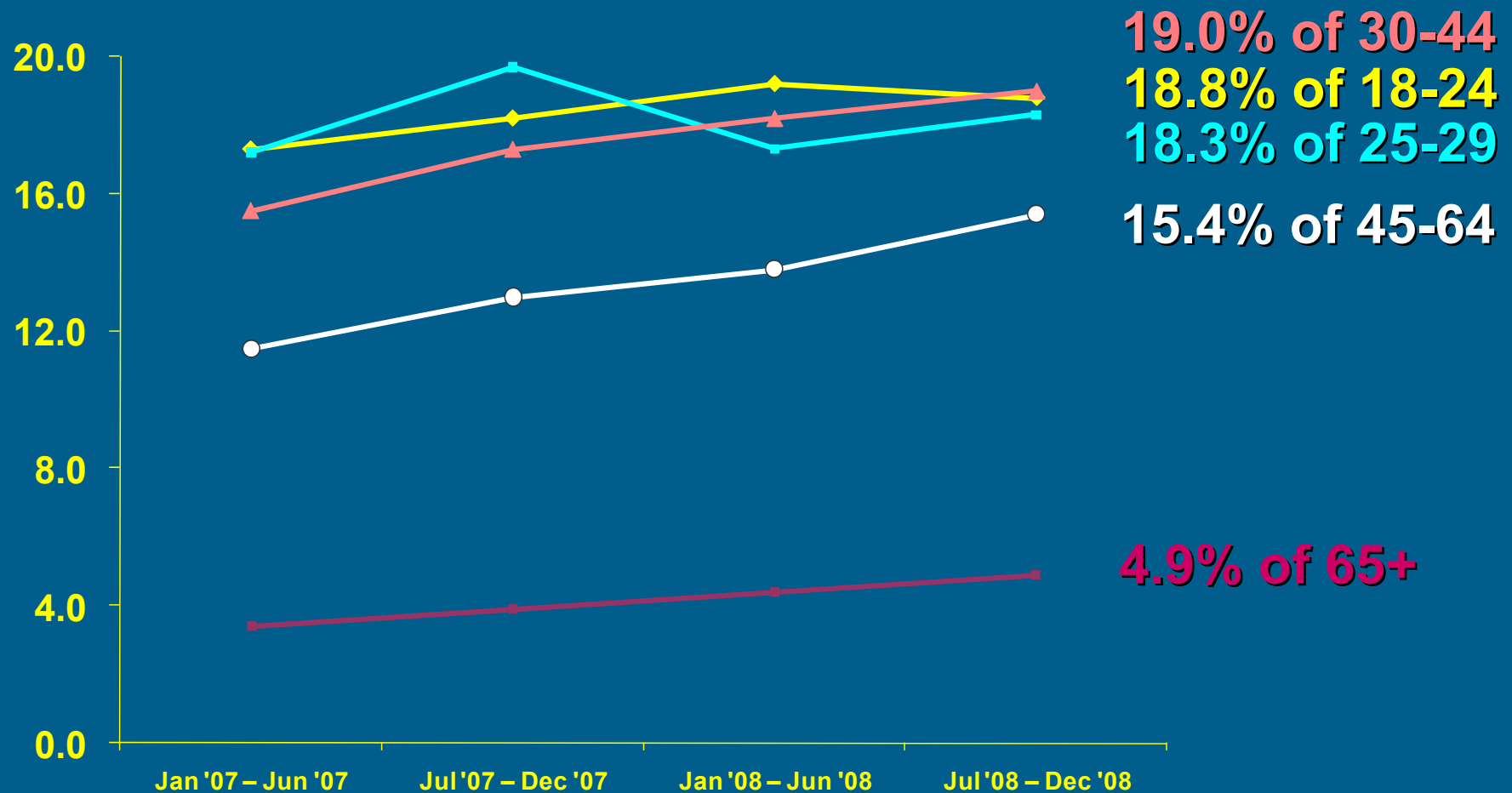
15.9% of adults owning or buying their home

13.0% of adults renting their home

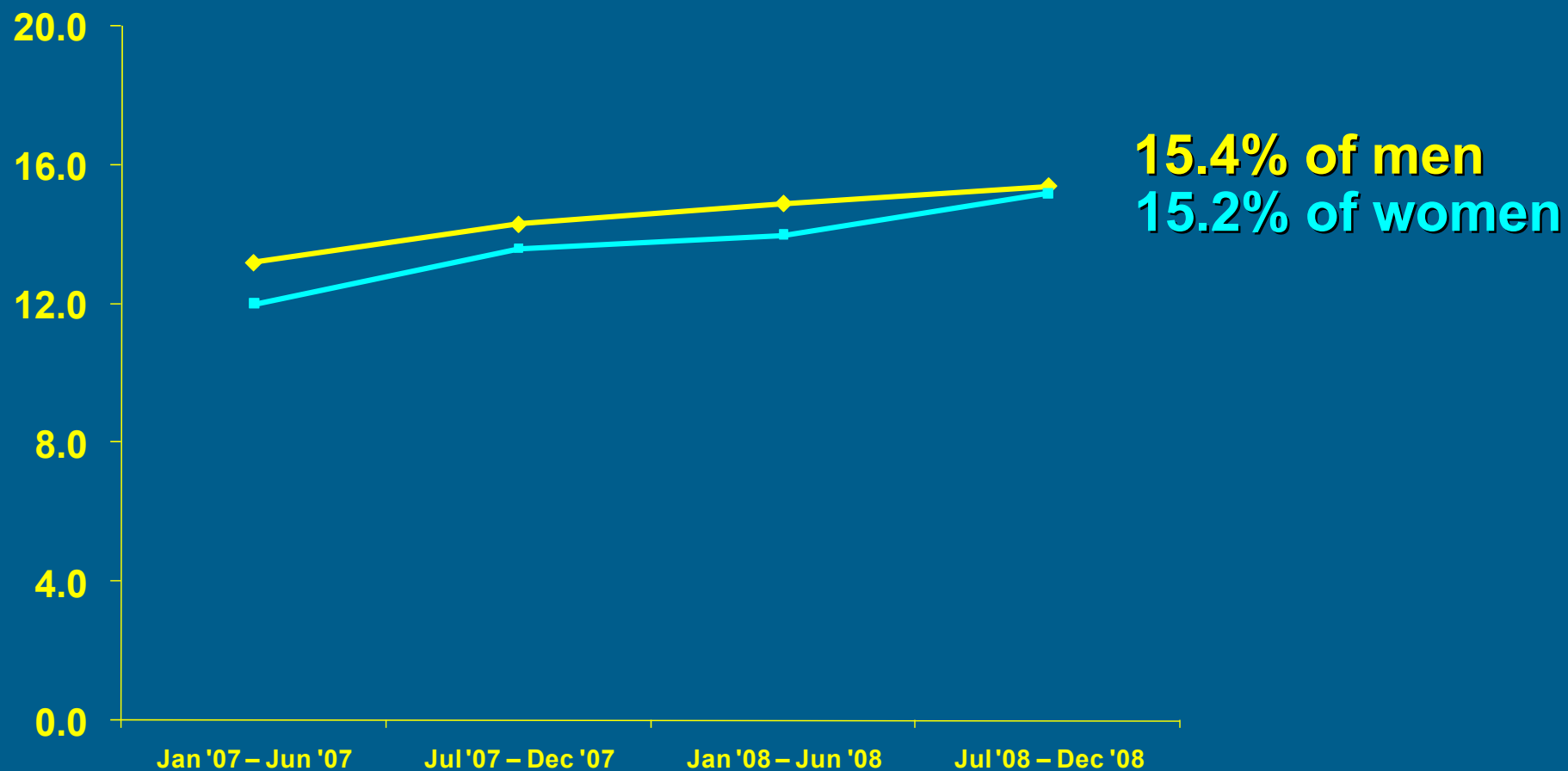
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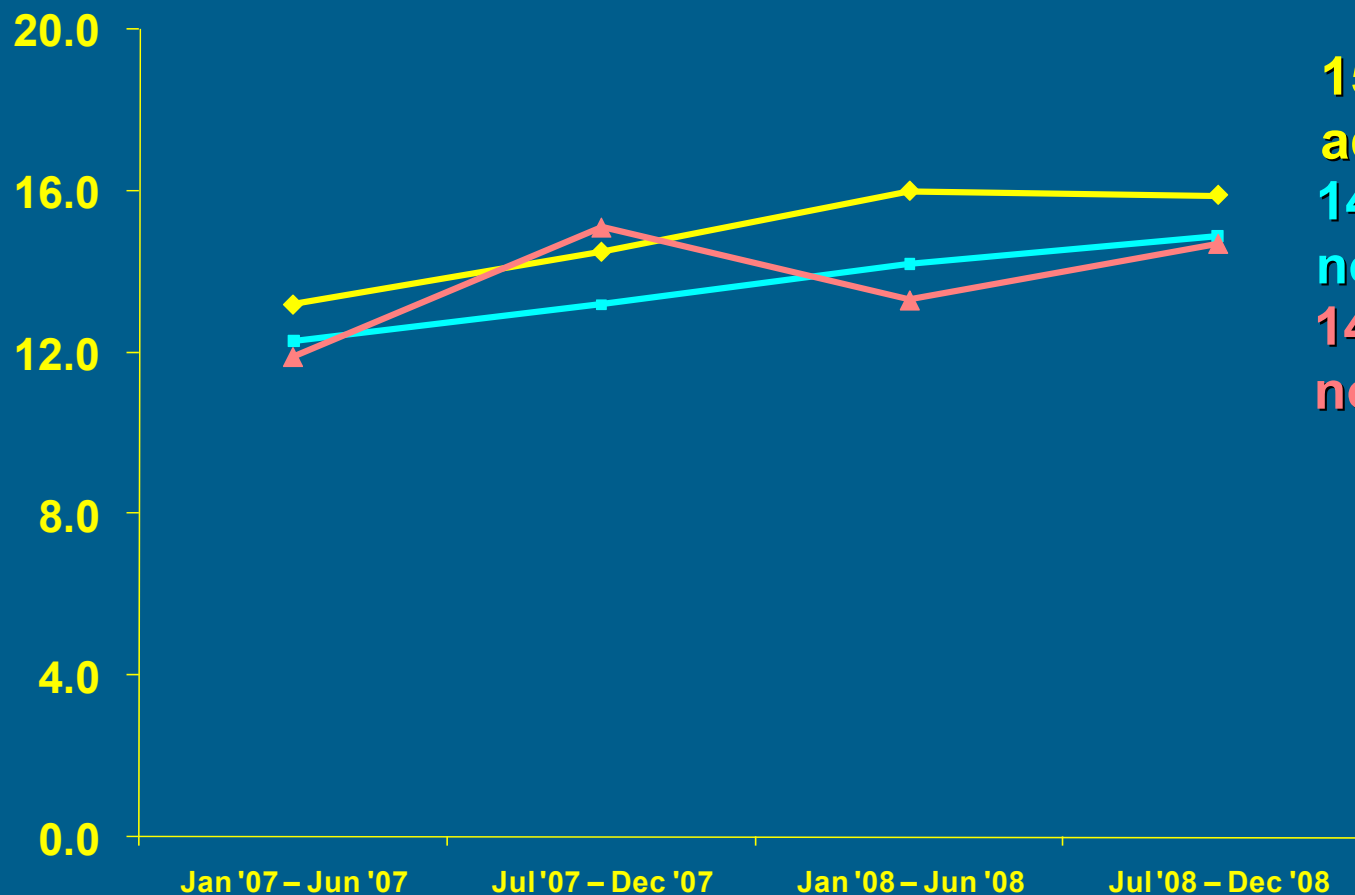
Prevalence of Wireless-Mostly Adults by Age



Prevalence of Wireless-Mostly Adults by Sex

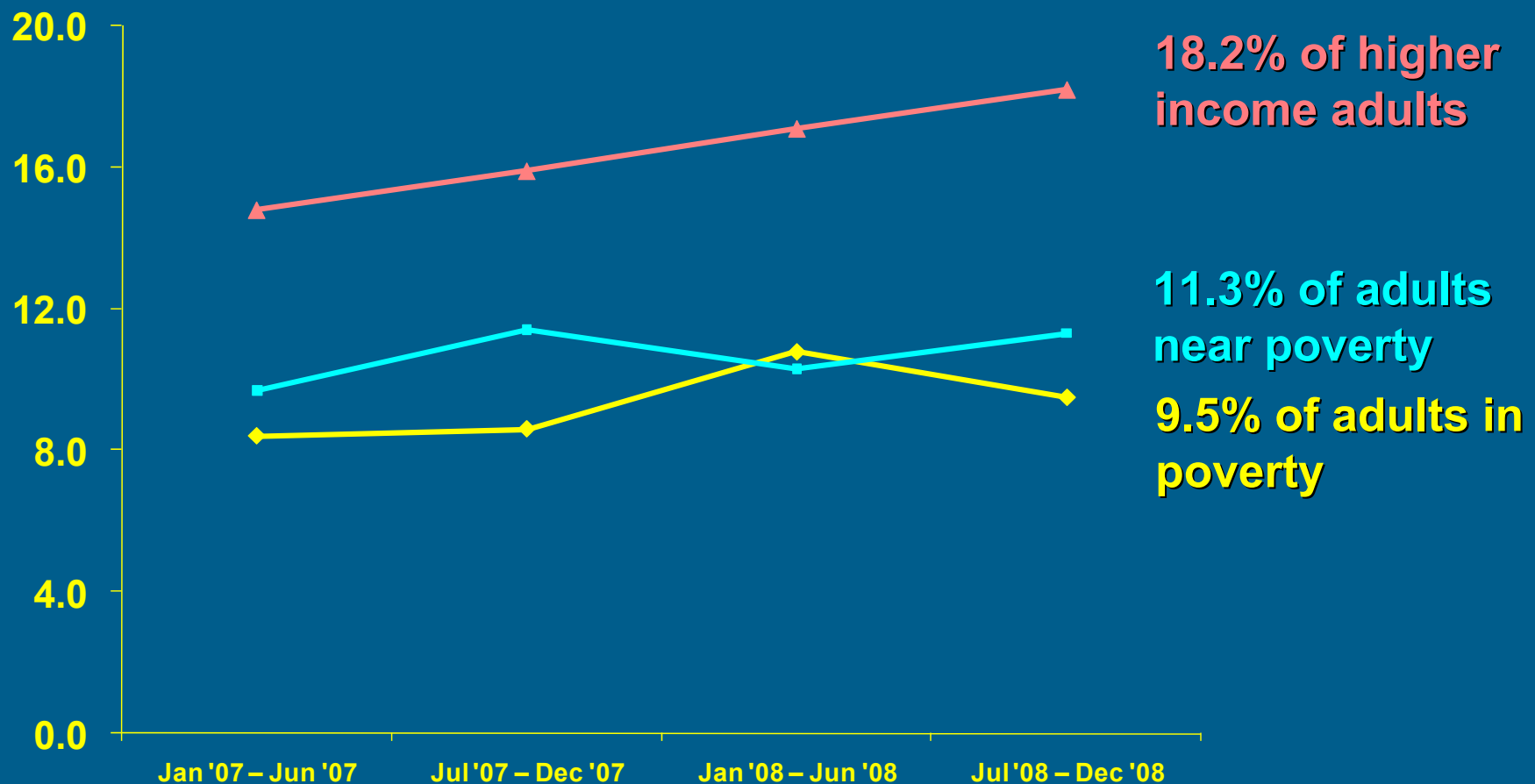


Prevalence of Wireless-Mostly Adults by Race/Ethnicity

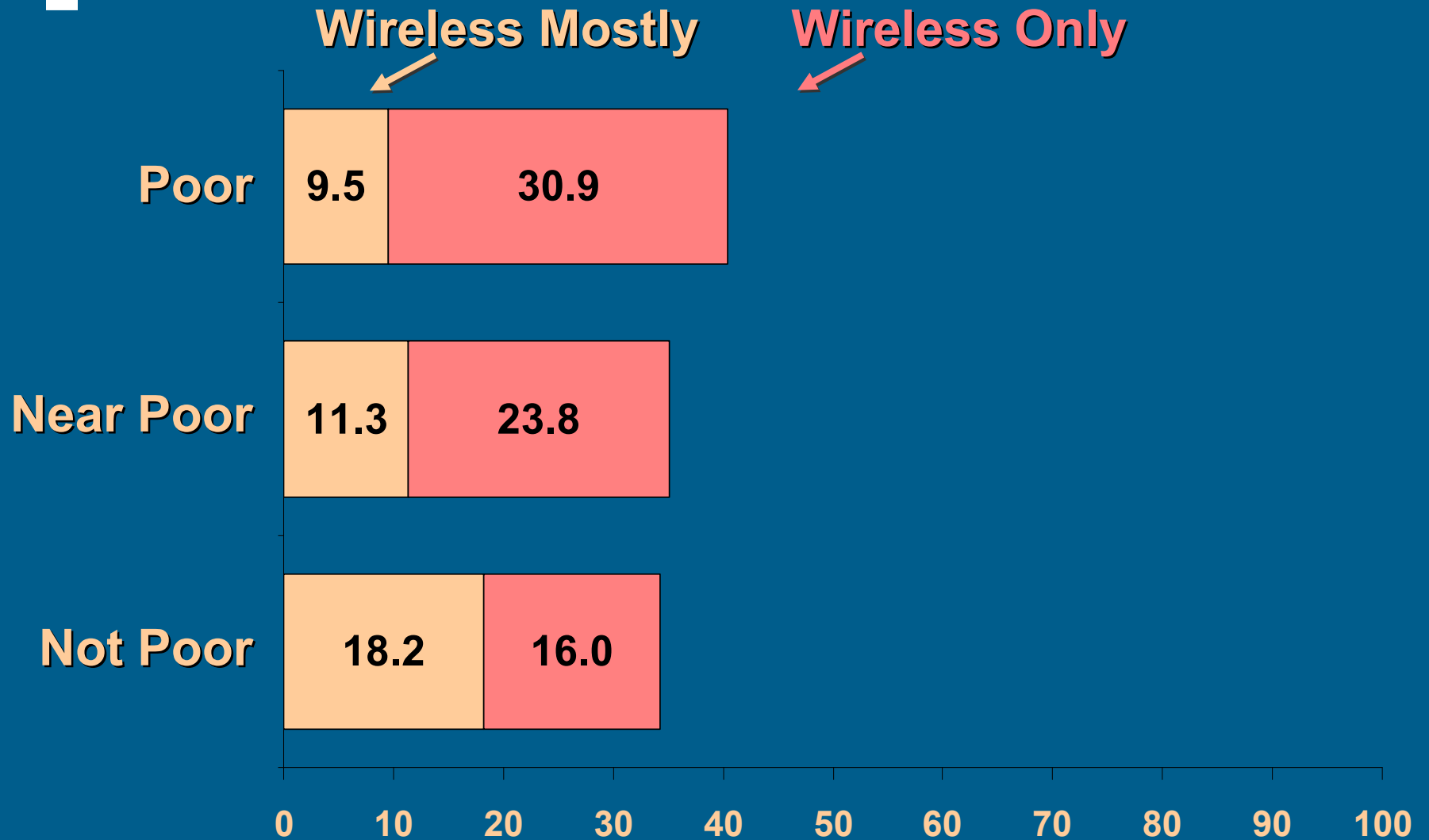


**15.9% of Hispanic
adults**
**14.9% of White
nonHispanic adults**
**14.7% of Black
nonHispanic adults**

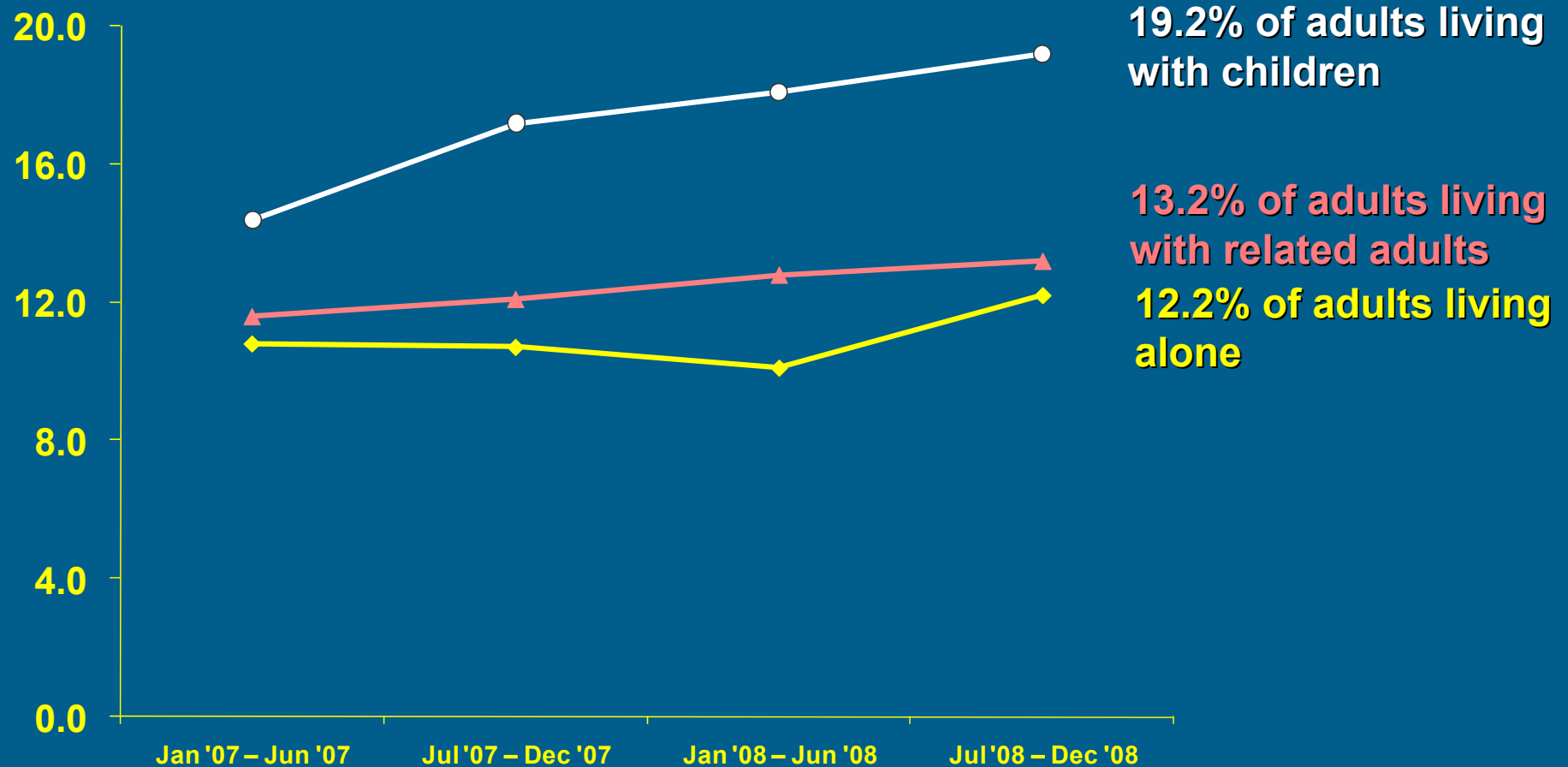
Prevalence of Wireless-Mostly Adults by Household Poverty Status



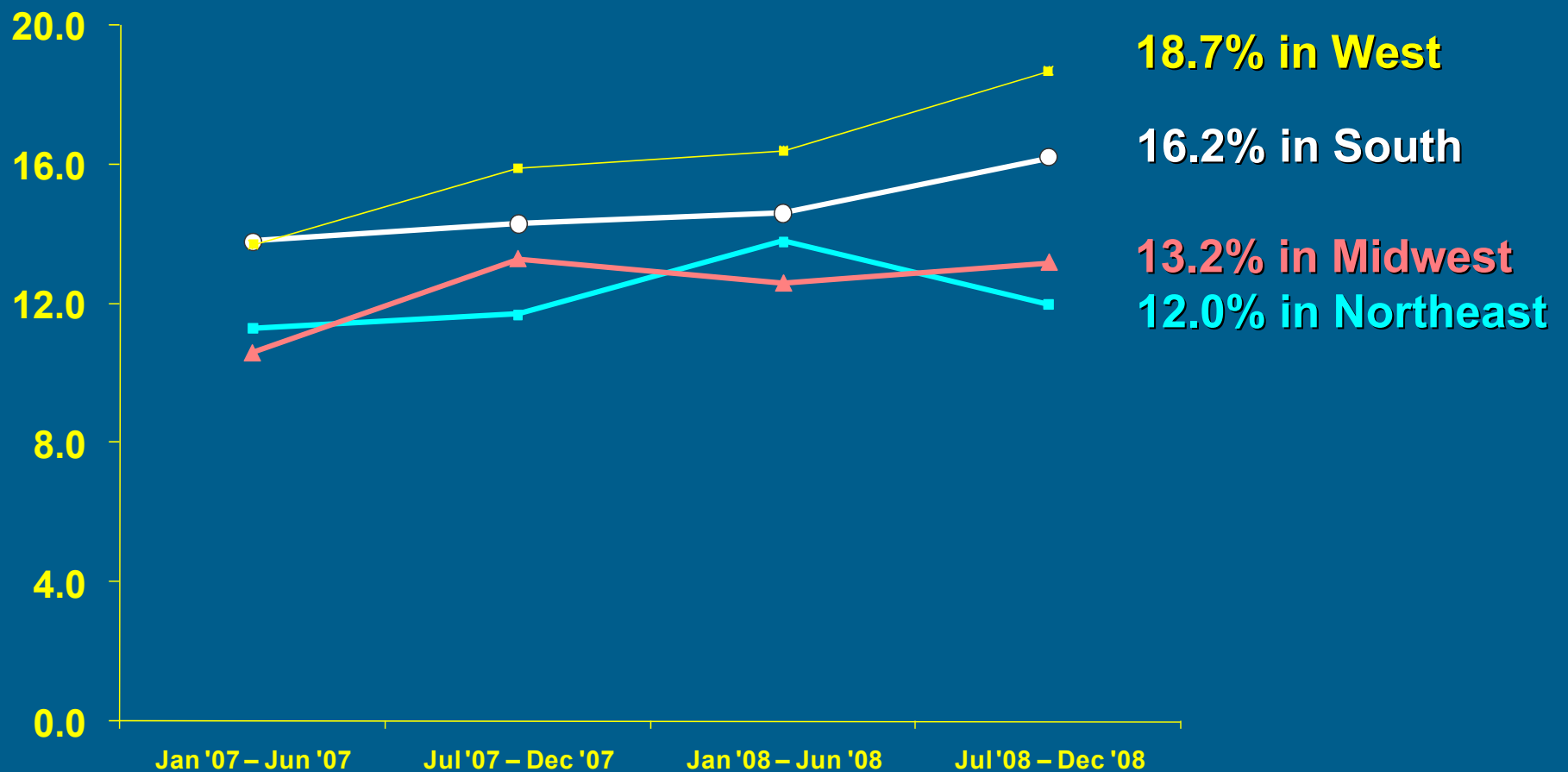
Percent of Adults who are Wireless-Only or Wireless-Mostly by Household Poverty Status



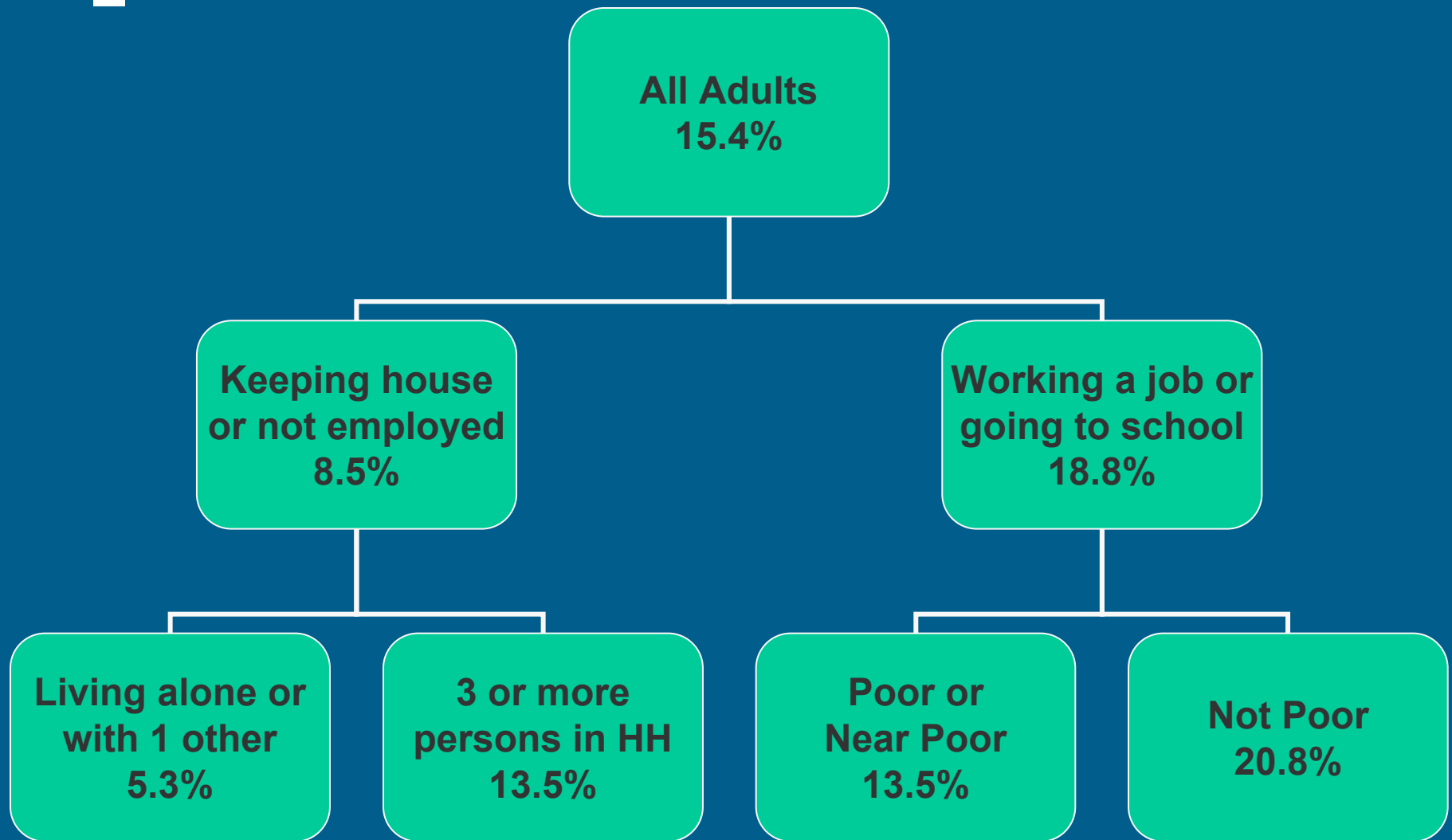
Prevalence of Wireless-Mostly Adults by Household Structure



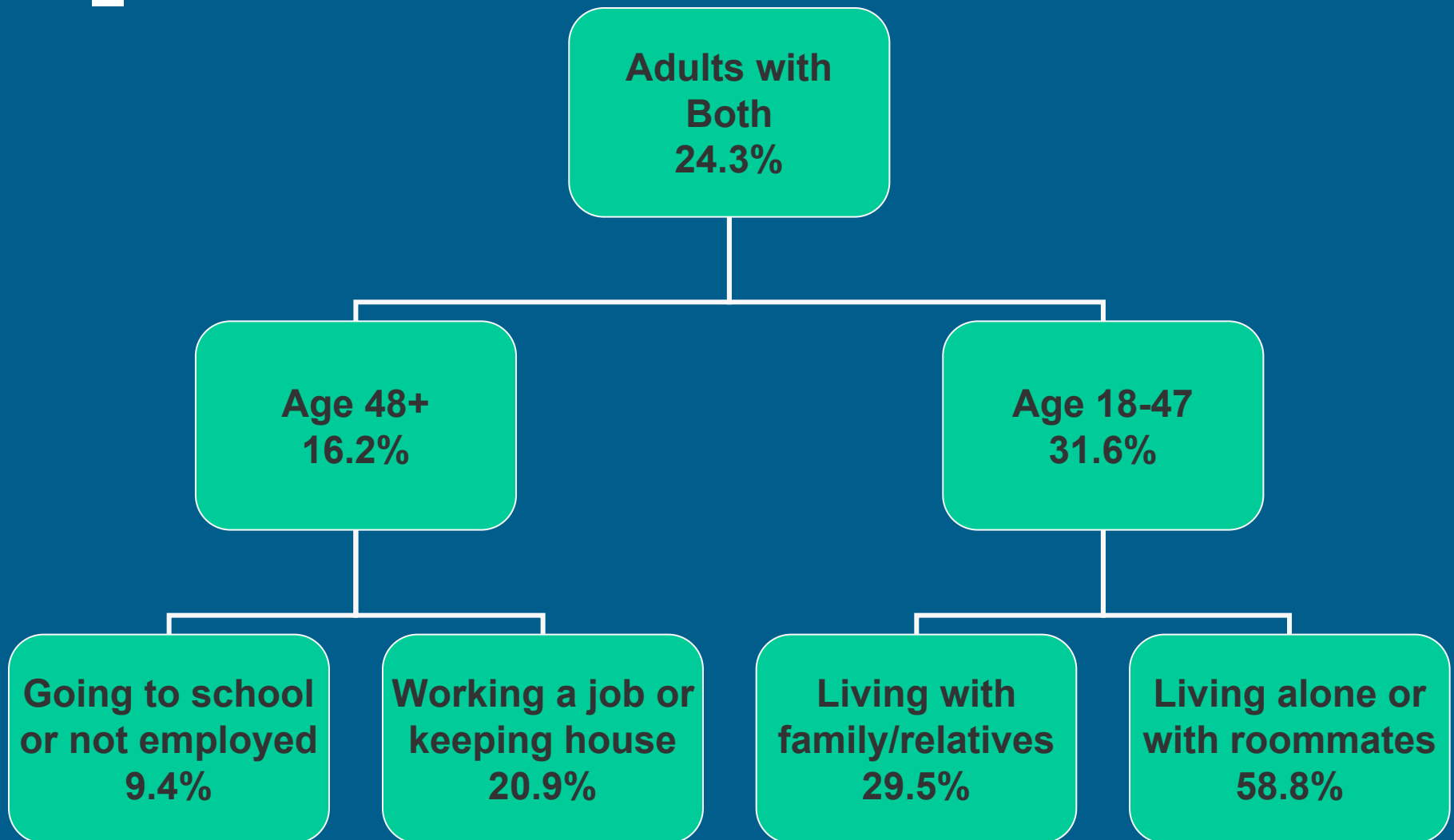
Prevalence of Wireless-Mostly Adults by Geographic Region



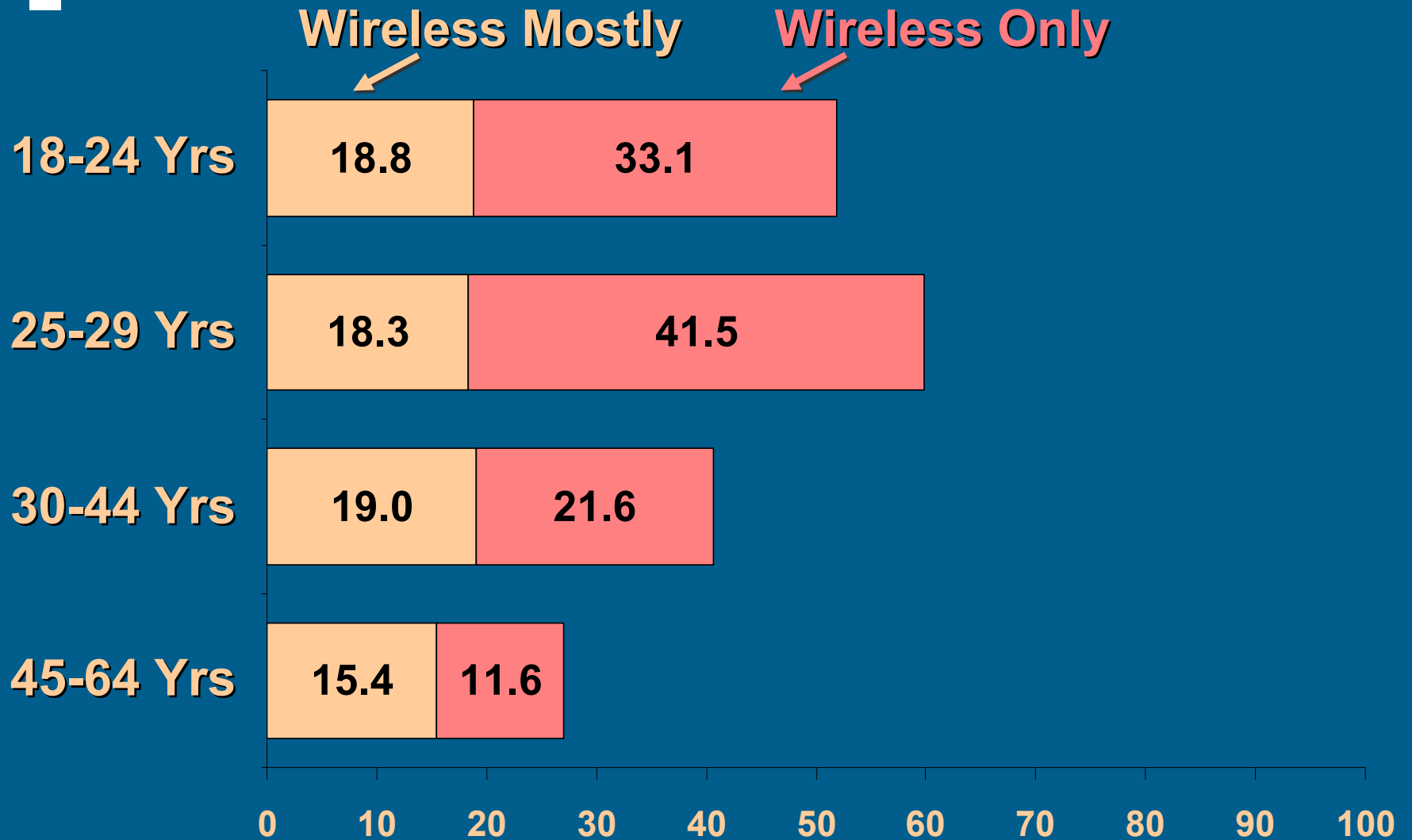
Prevalence of Adults Living in Wireless-Mostly Households, July-December 2008



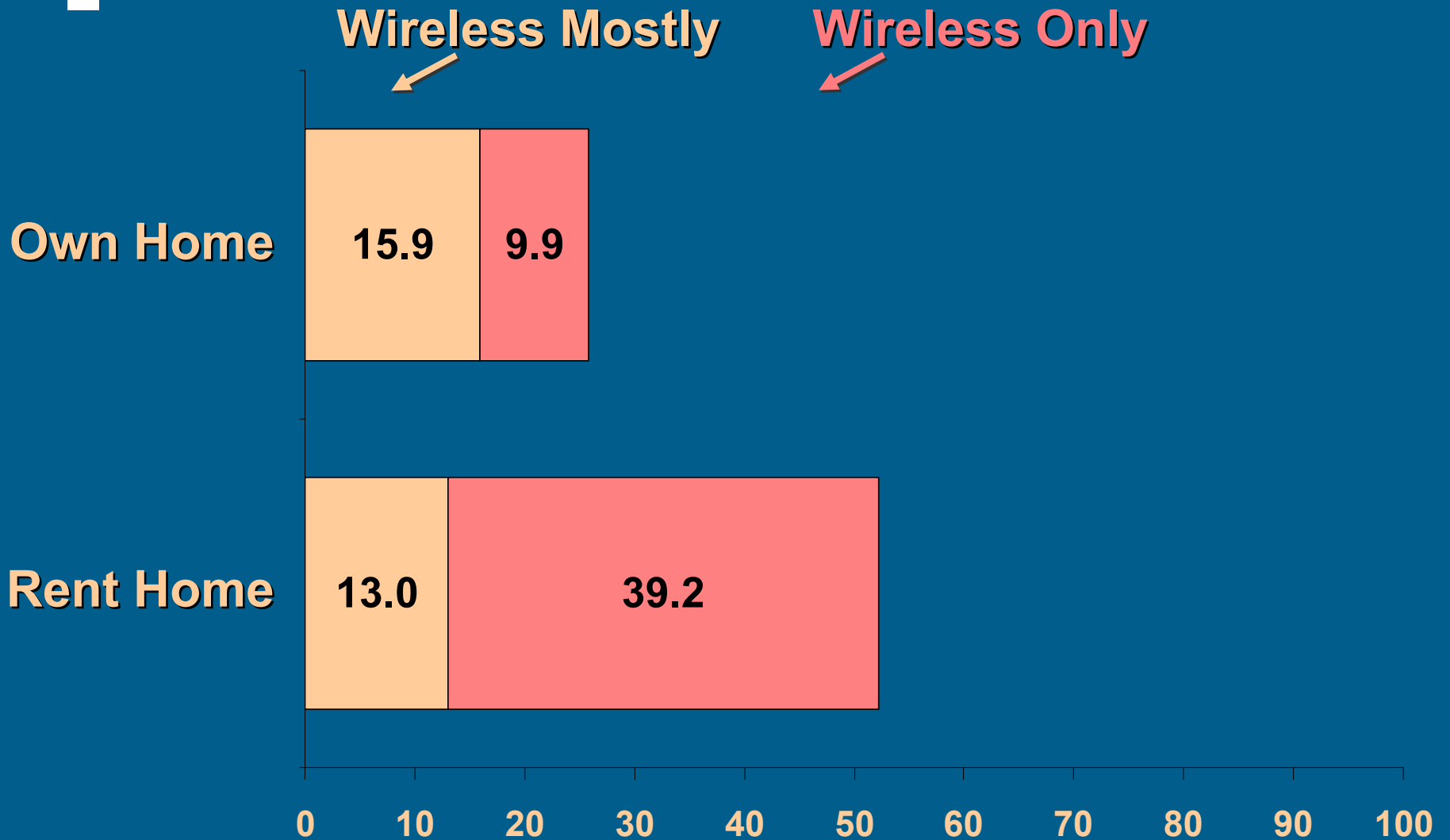
Prevalence of Wireless-Mostly Adults Among Adults with Landlines and Cell Phones



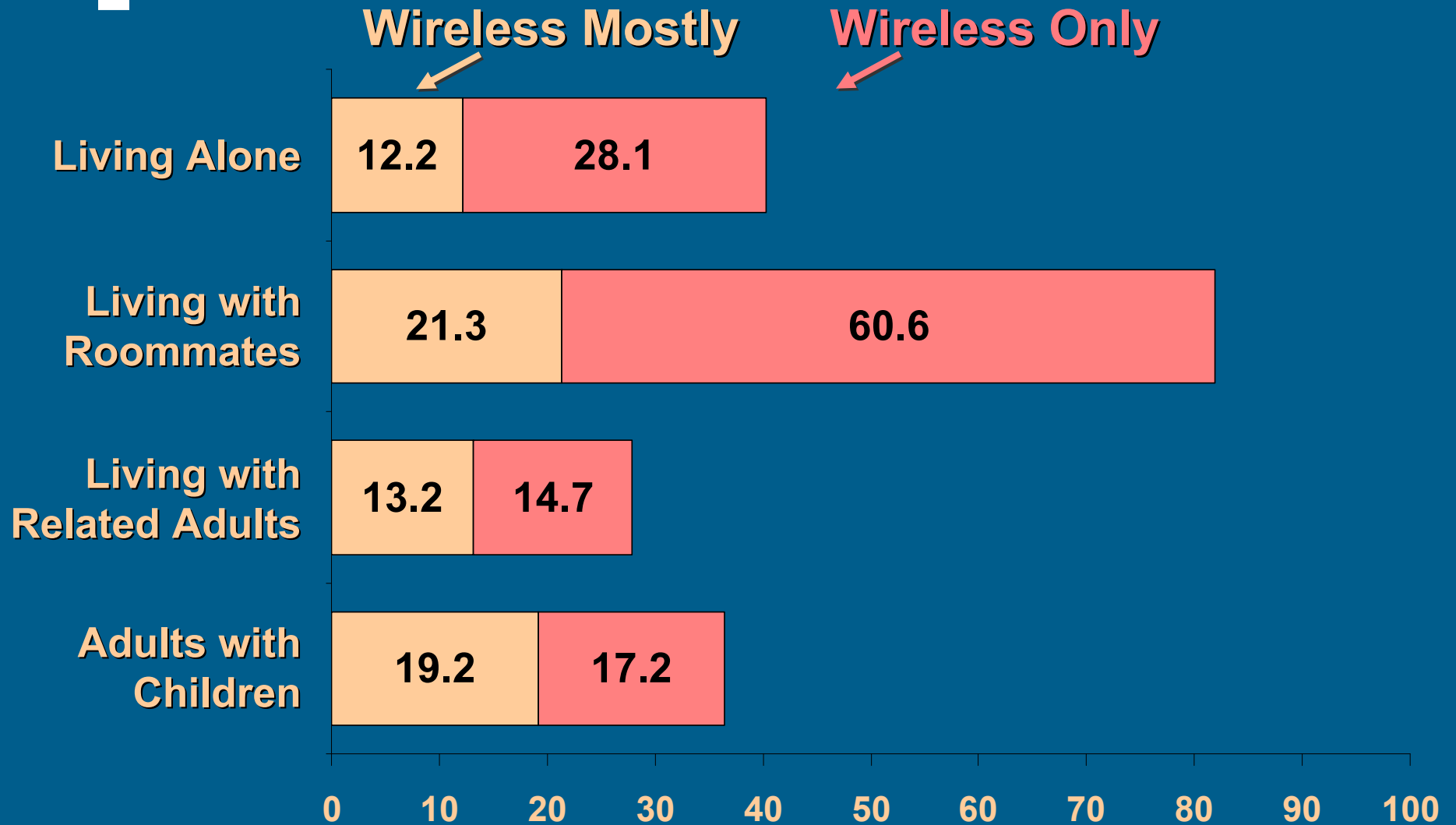
Percent of Adults who are Wireless-Only or Wireless-Mostly by Age



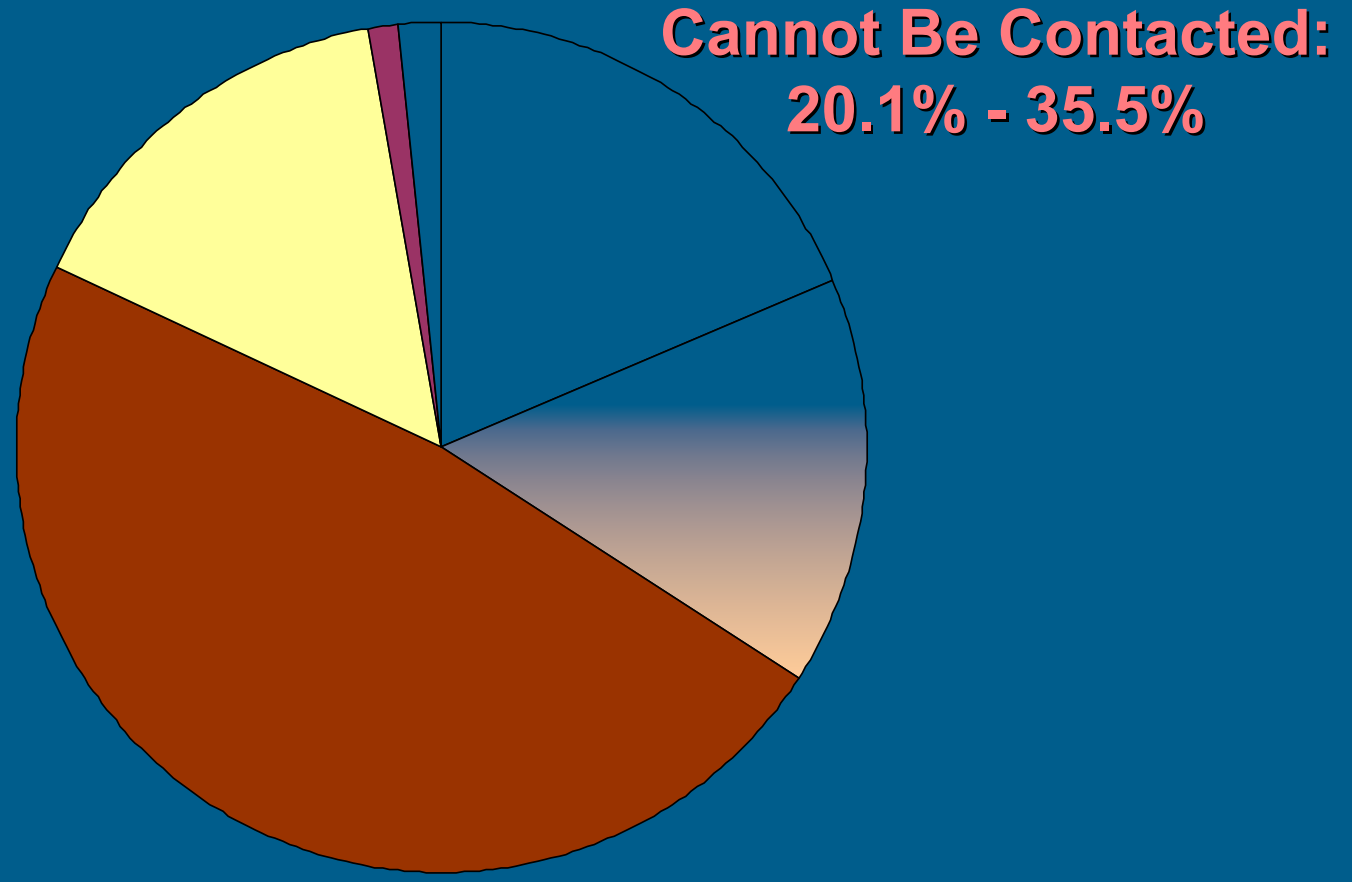
Percent of Adults who are Wireless-Only or Wireless-Mostly by Home Ownership Status



Percent of Adults who are Wireless-Only or Wireless-Mostly by Household Structure



Proportion of Adults Who Cannot Be Contacted by Landline



“Wireless-Mostly” ≠ “Wireless-Mainly”

- “Thinking just about the landline, if it rang and someone was home, under normal circumstances, how likely is it that it would be answered?”
 - **17% of the wireless-mostly population reached on a landline and 31% of the wireless-mostly population reached on a cell phone in New Jersey said they would be somewhat unlikely or not-at-all likely to answer the landline**

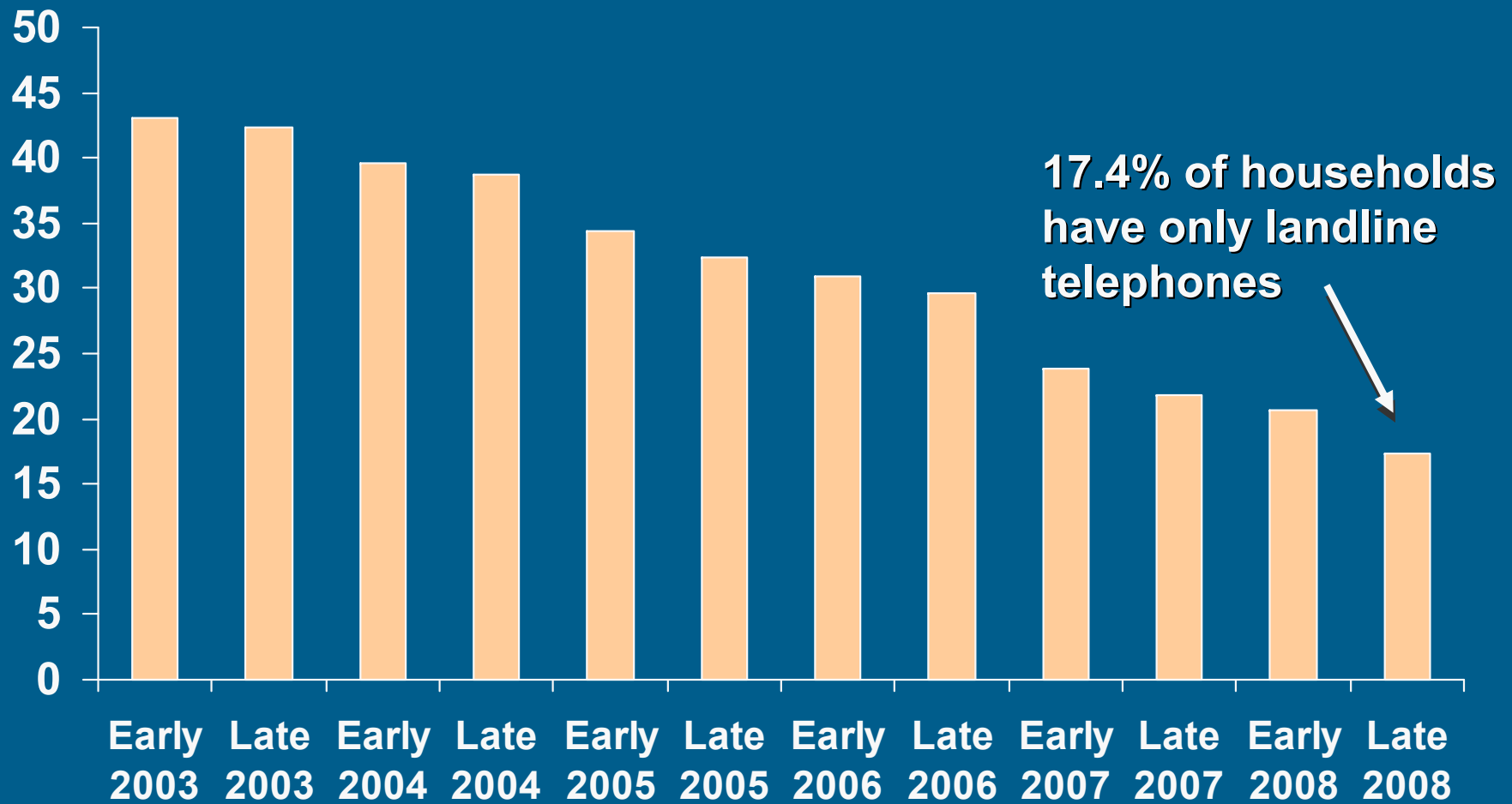
from Cell Phone Mainly and Cell Phone Mostly: A Comparison of Two Approaches to Dual Frame Cell Phone and Landline Samples, by John Boyle and Joel Cantor (AAPOR 2009)

Landline-Only Households

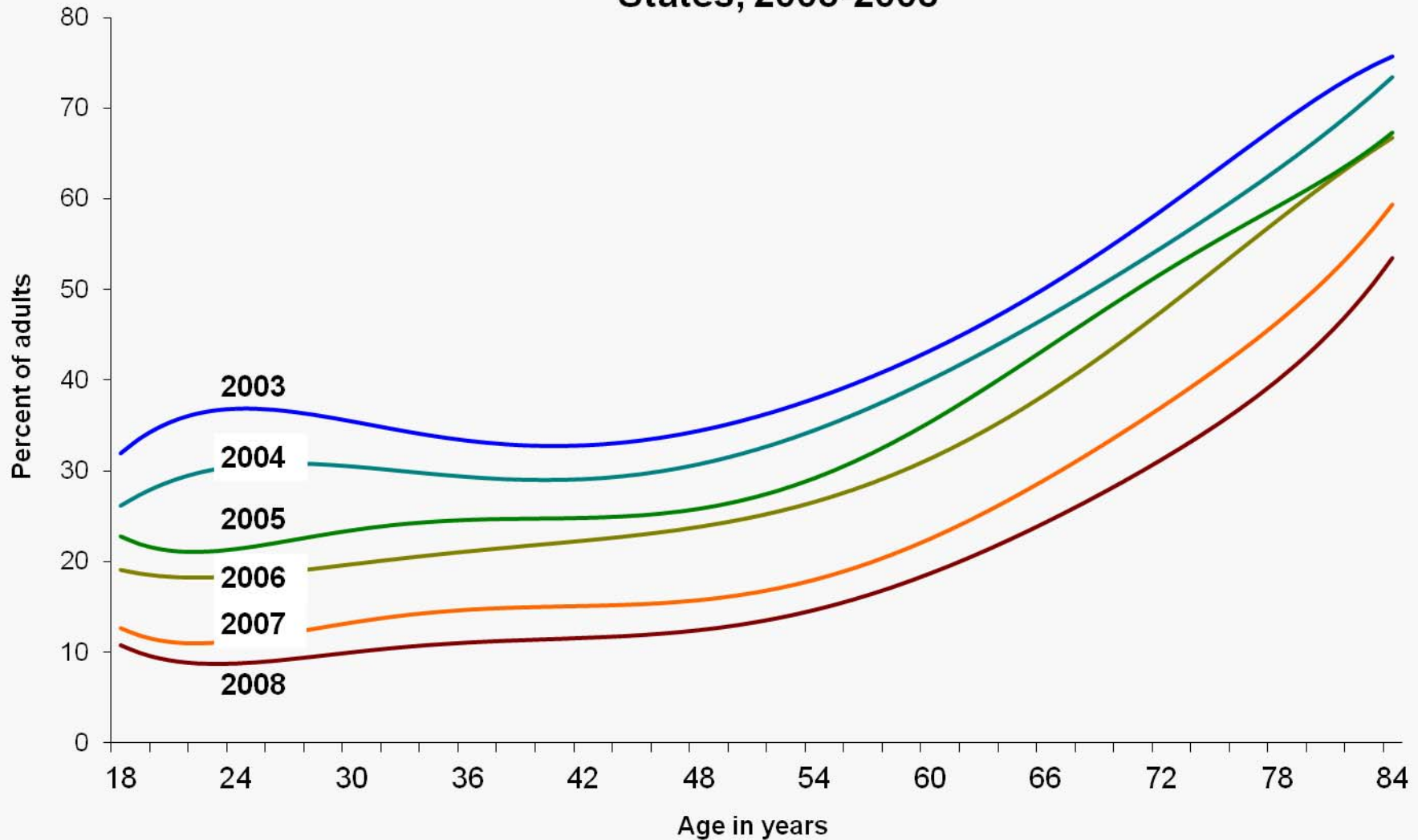
- “The new minority”
 - With the July-December 2008 estimates, the prevalence of wireless-only households exceeded the prevalence of landline-only households for the first time
- Overhead at AAPOR 2009
 - “Why not just conduct cell-phone interviews? The landline-only population will soon be small enough to be ignorable.”

Percentage of Landline-Only Households

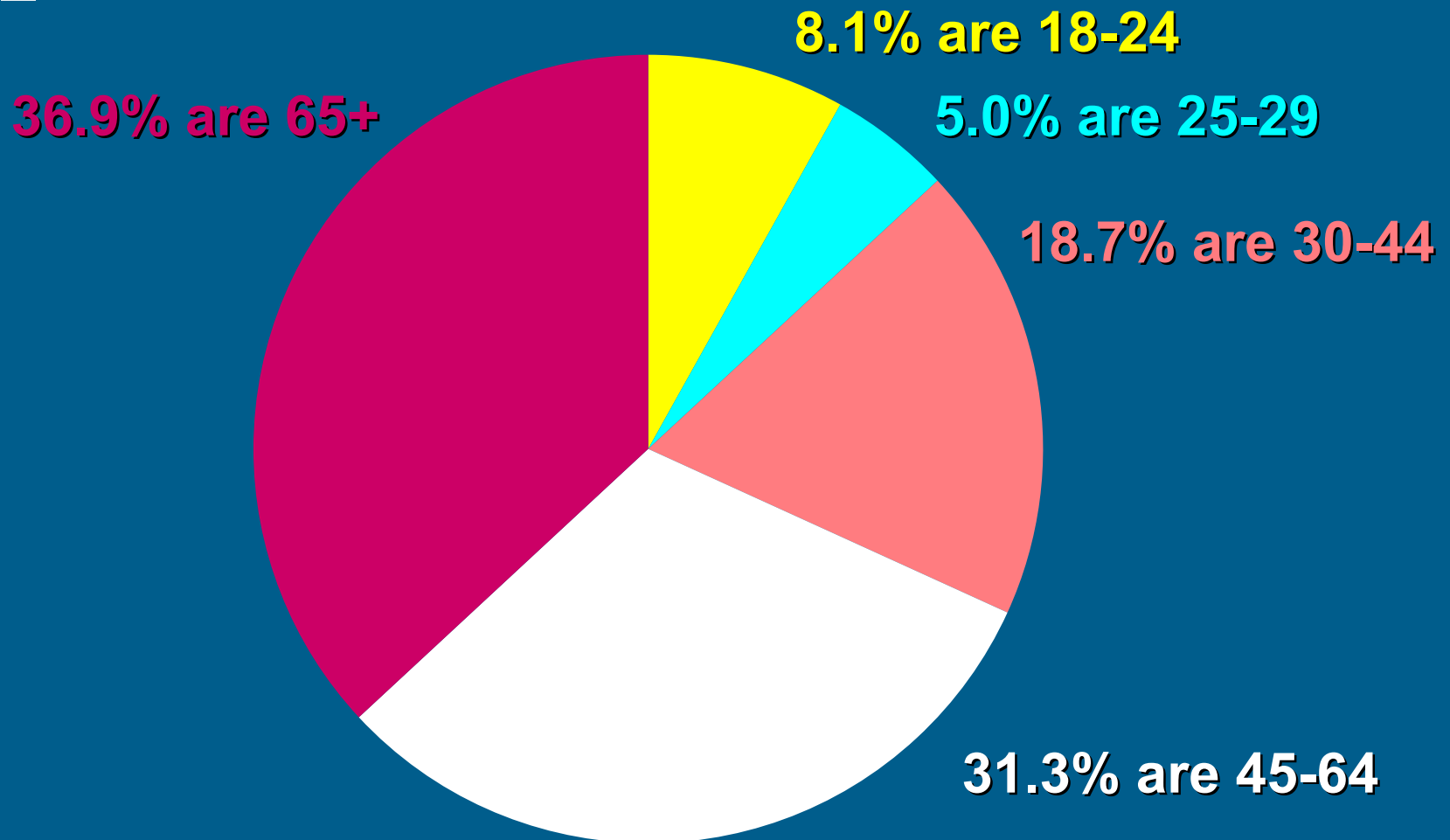
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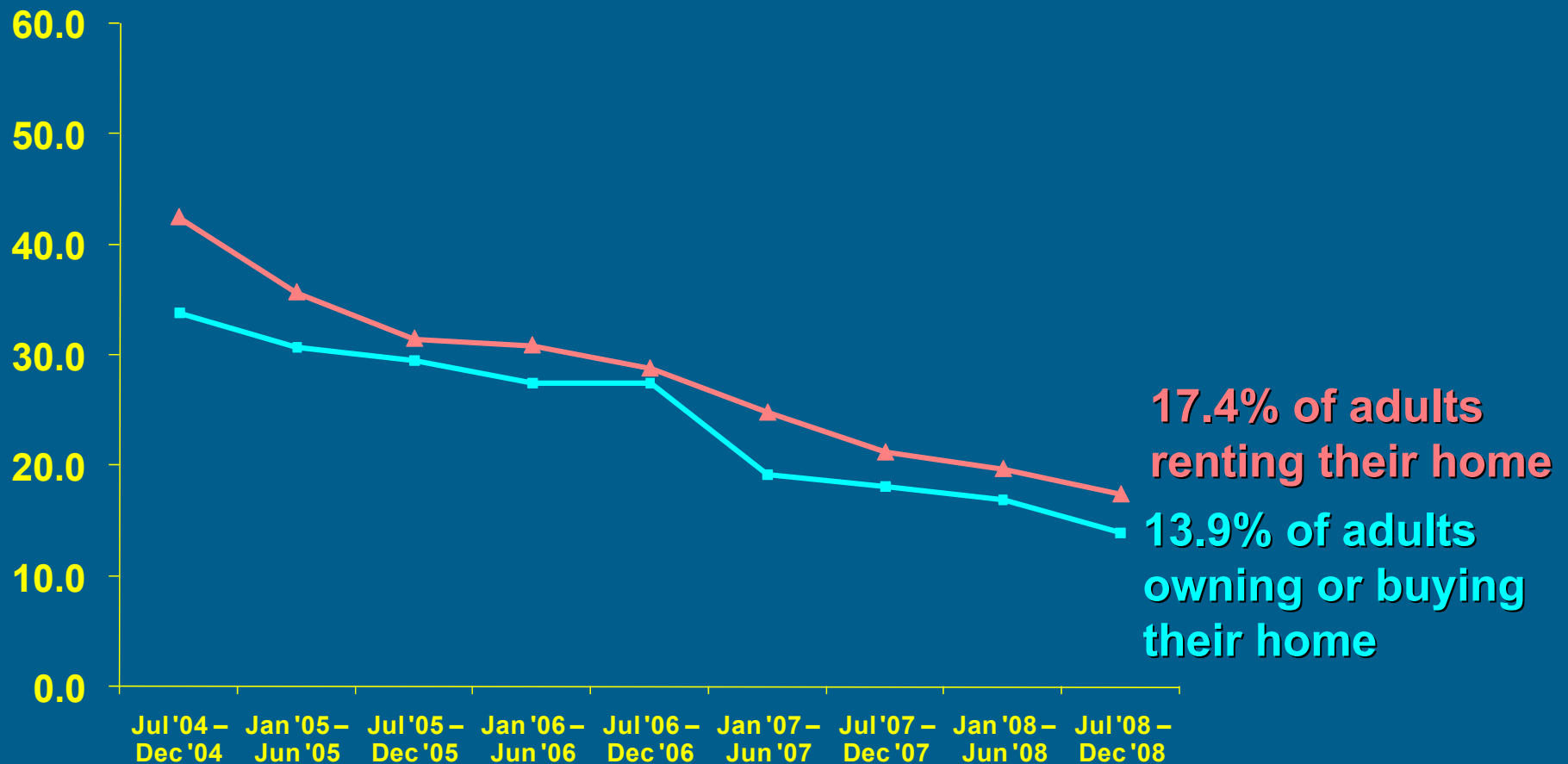
Polynomial regression equations fitted to a plot of the percentage of adults living in households with only landline telephone service, by single year of age and by year of interview: United States, 2003-2008



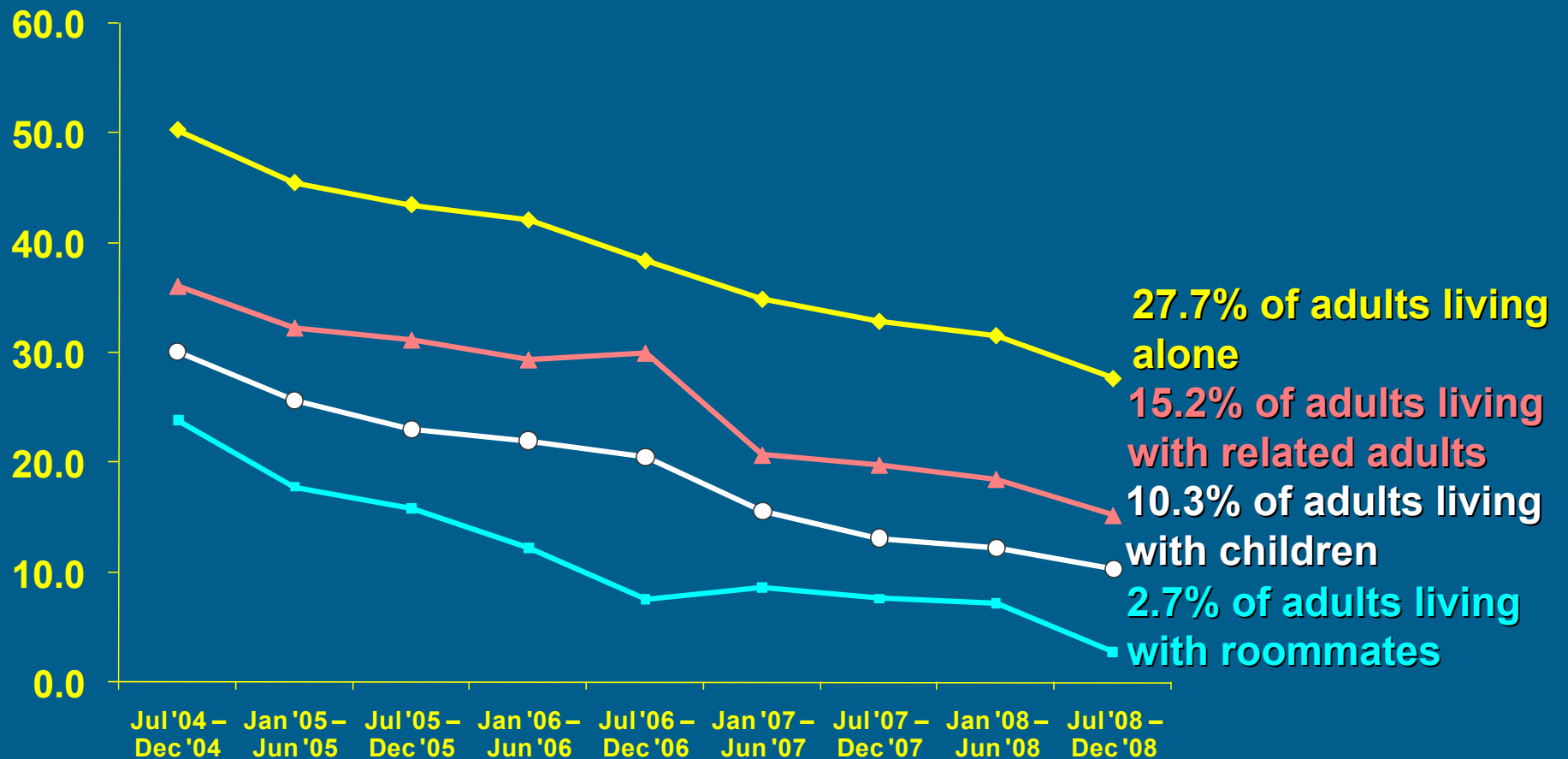
Prevalence of Selected Age Groups Among Landline-Only Adults



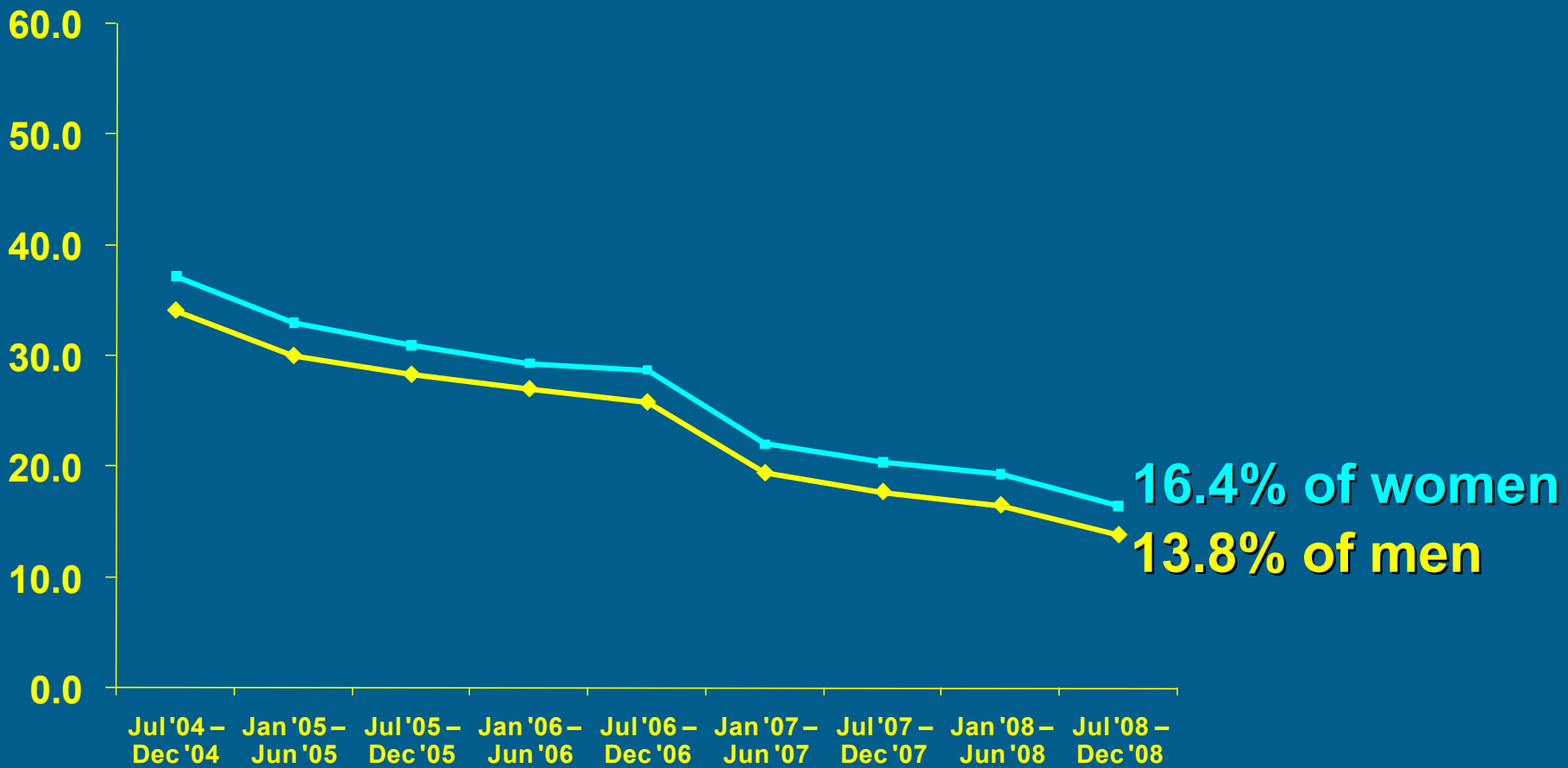
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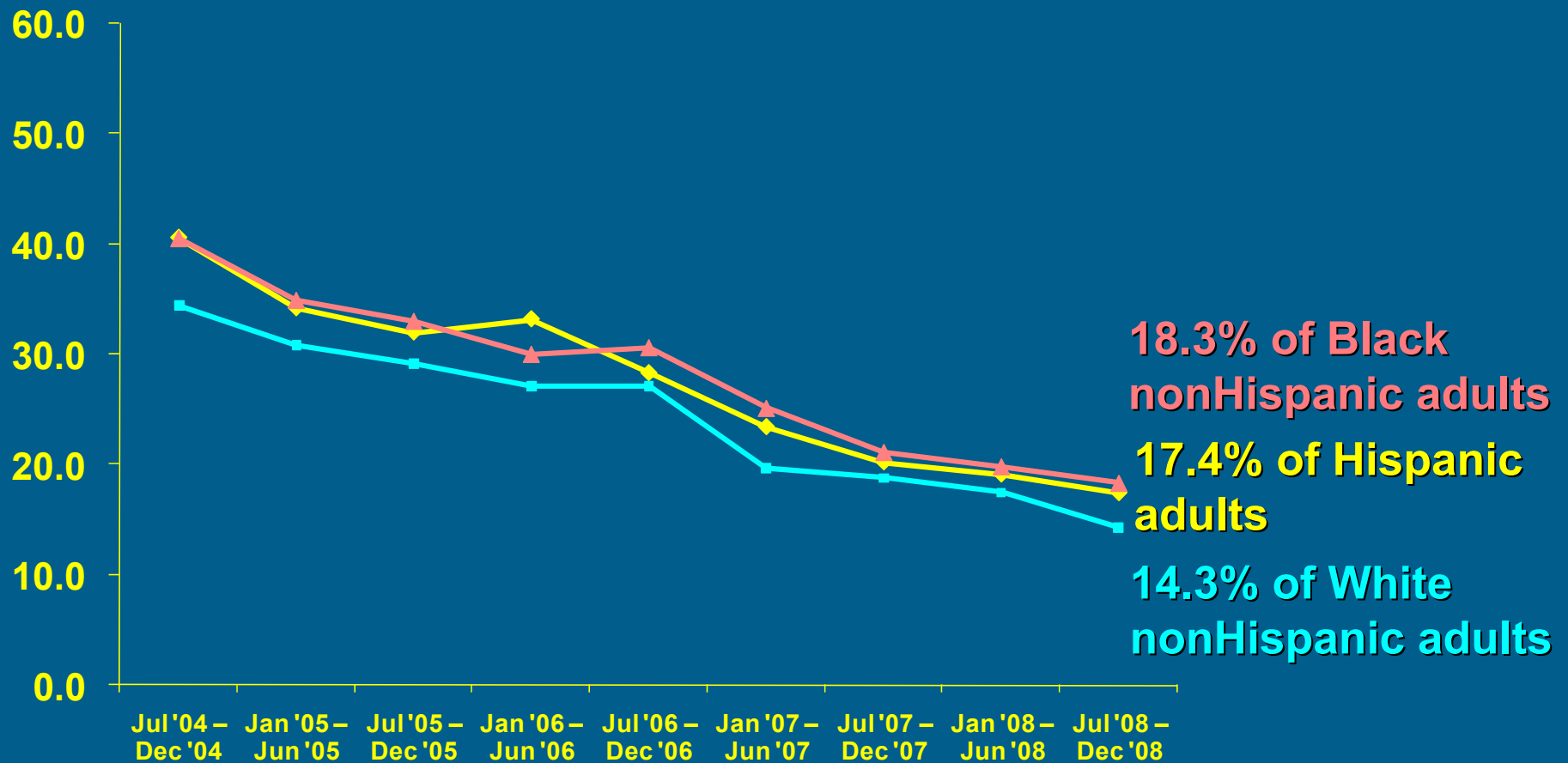
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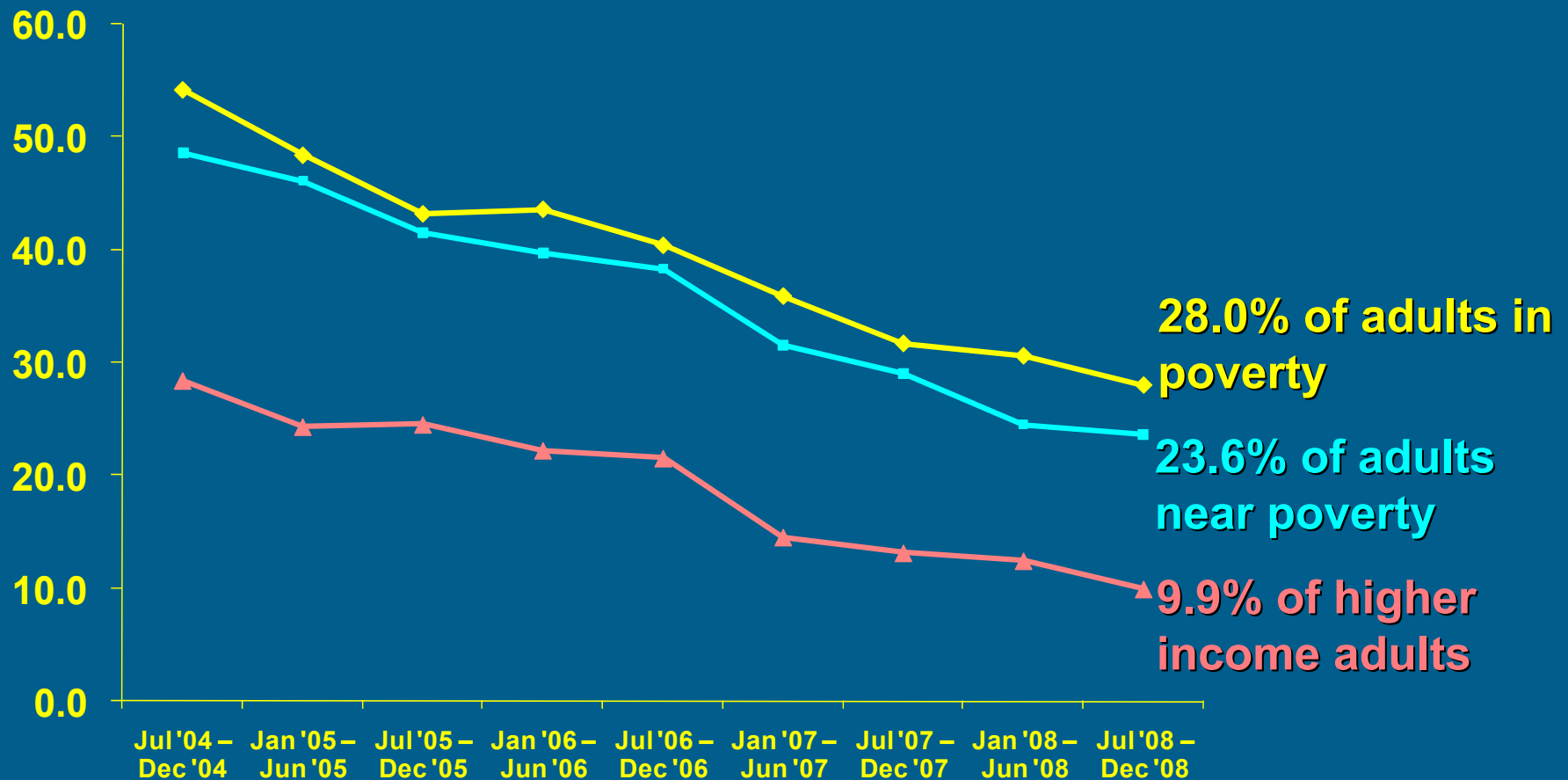
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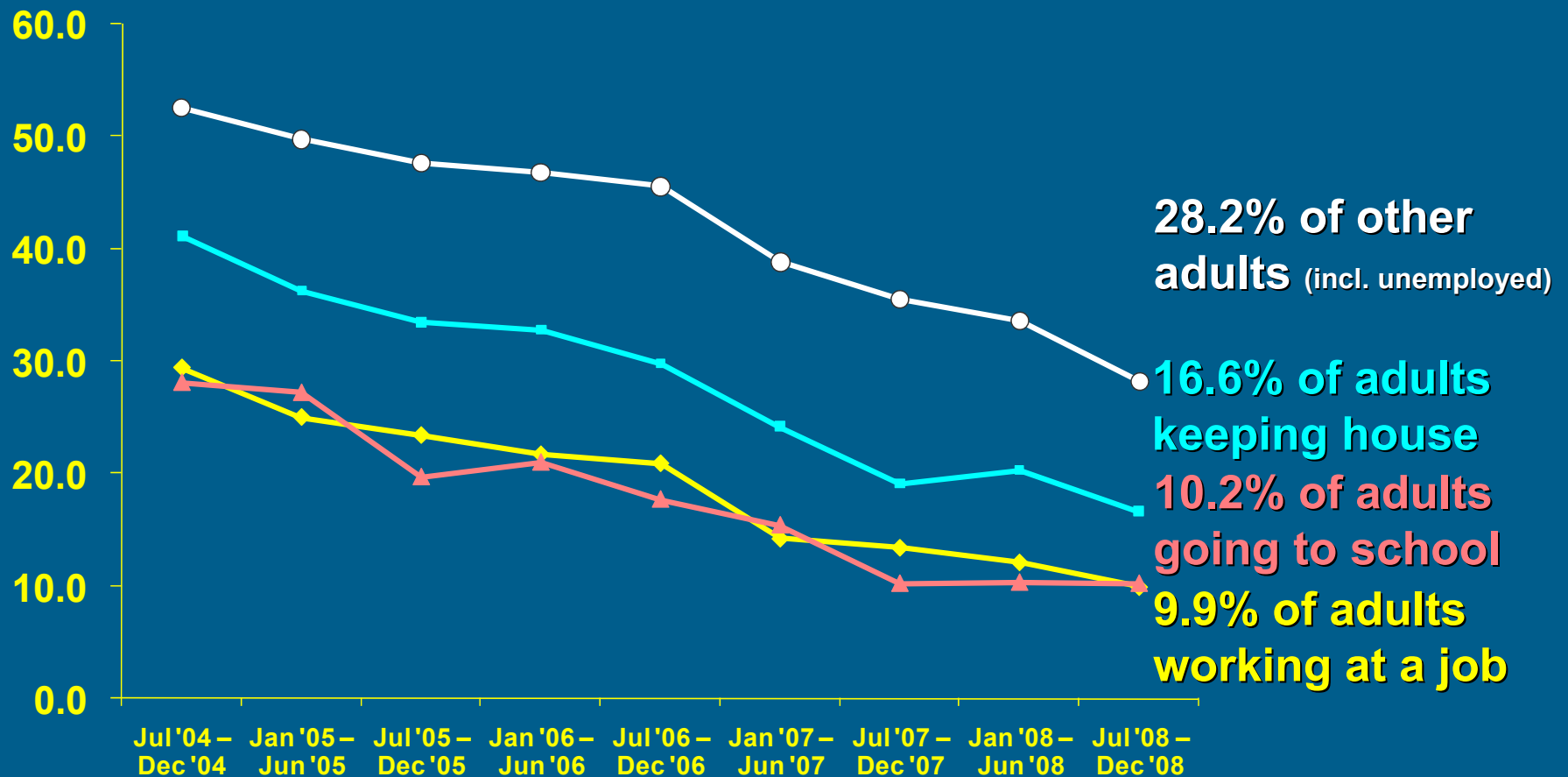
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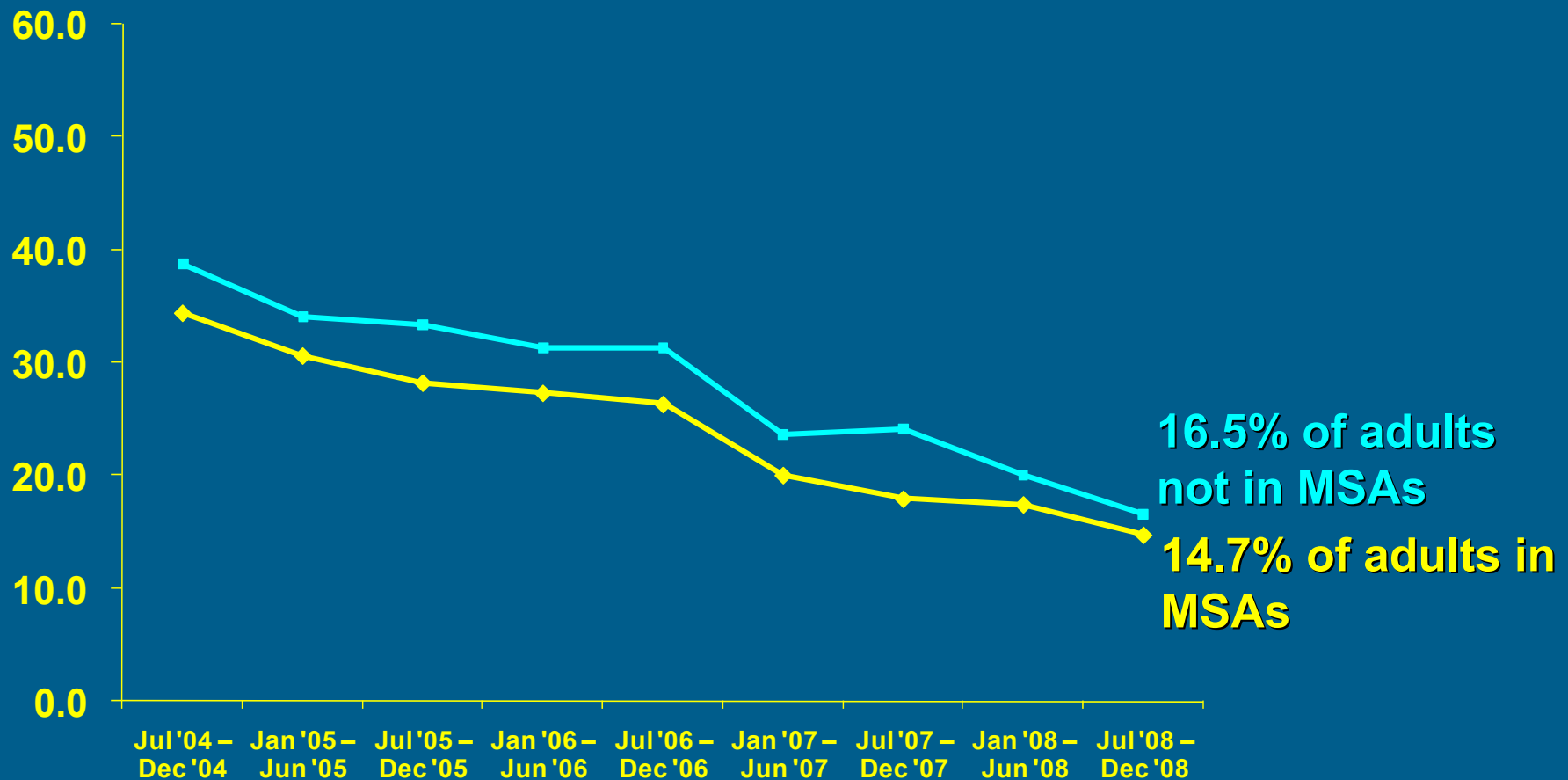
Prevalence of Landline-Only Adults by Household Poverty Status



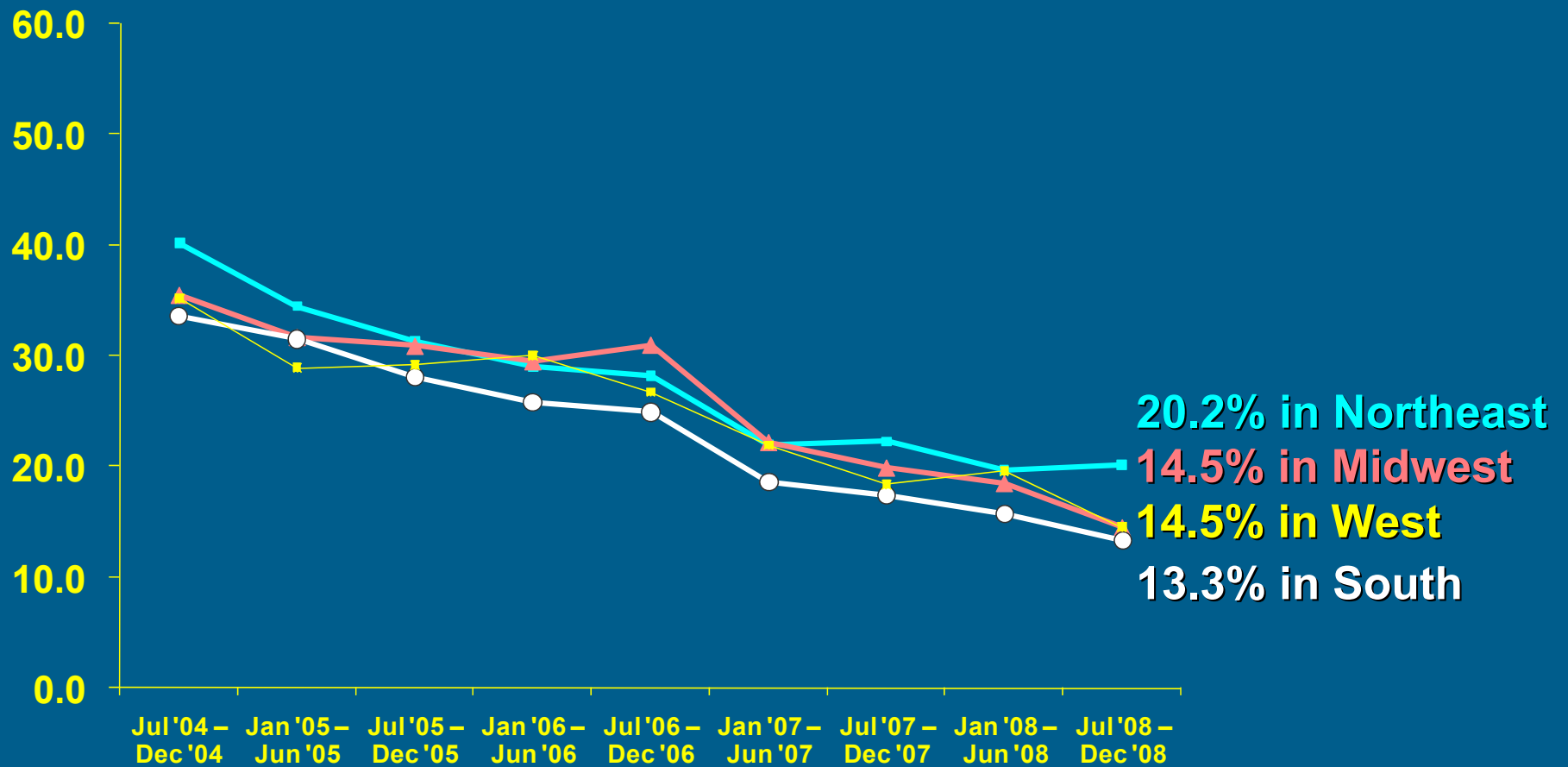
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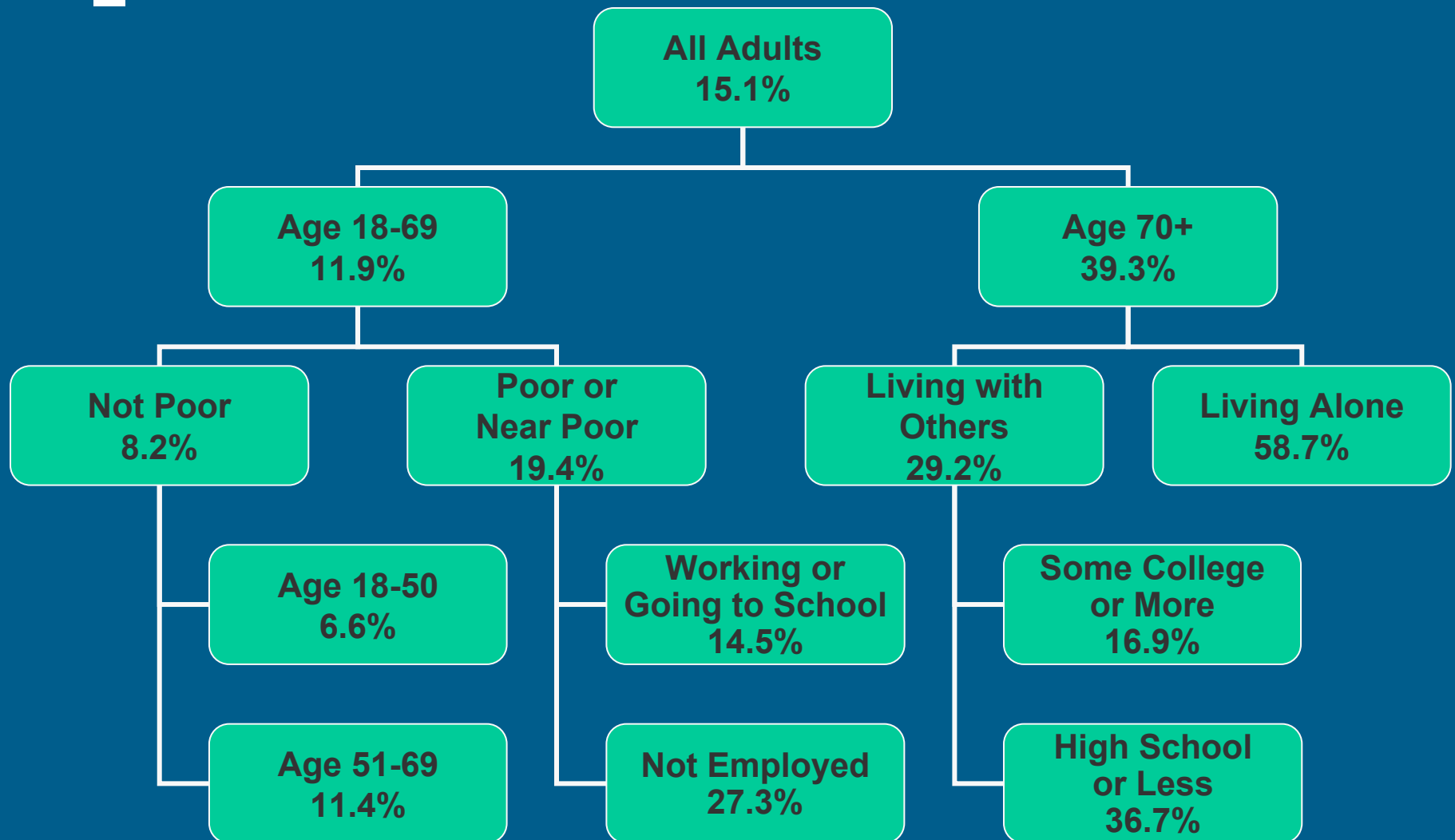
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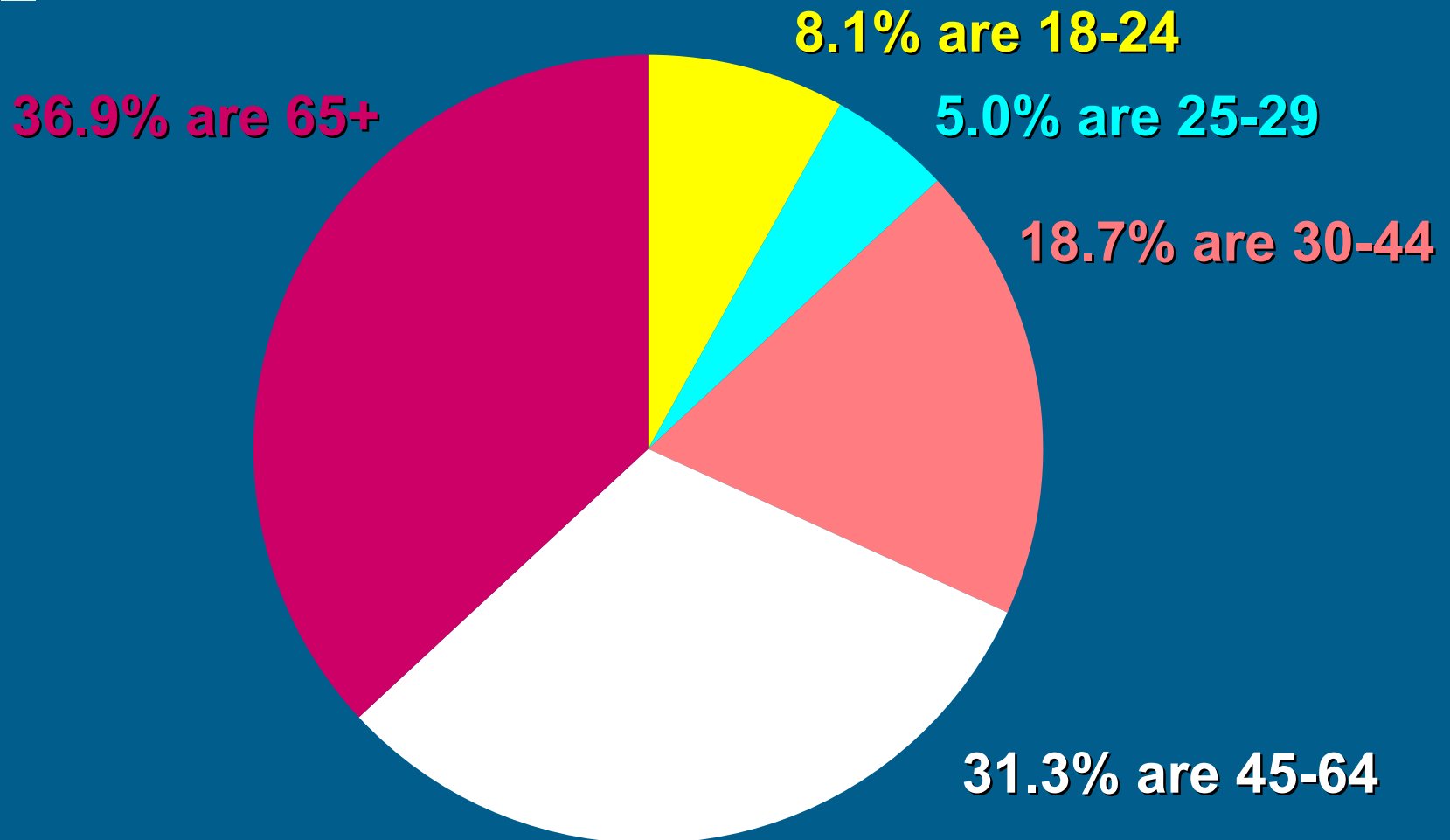
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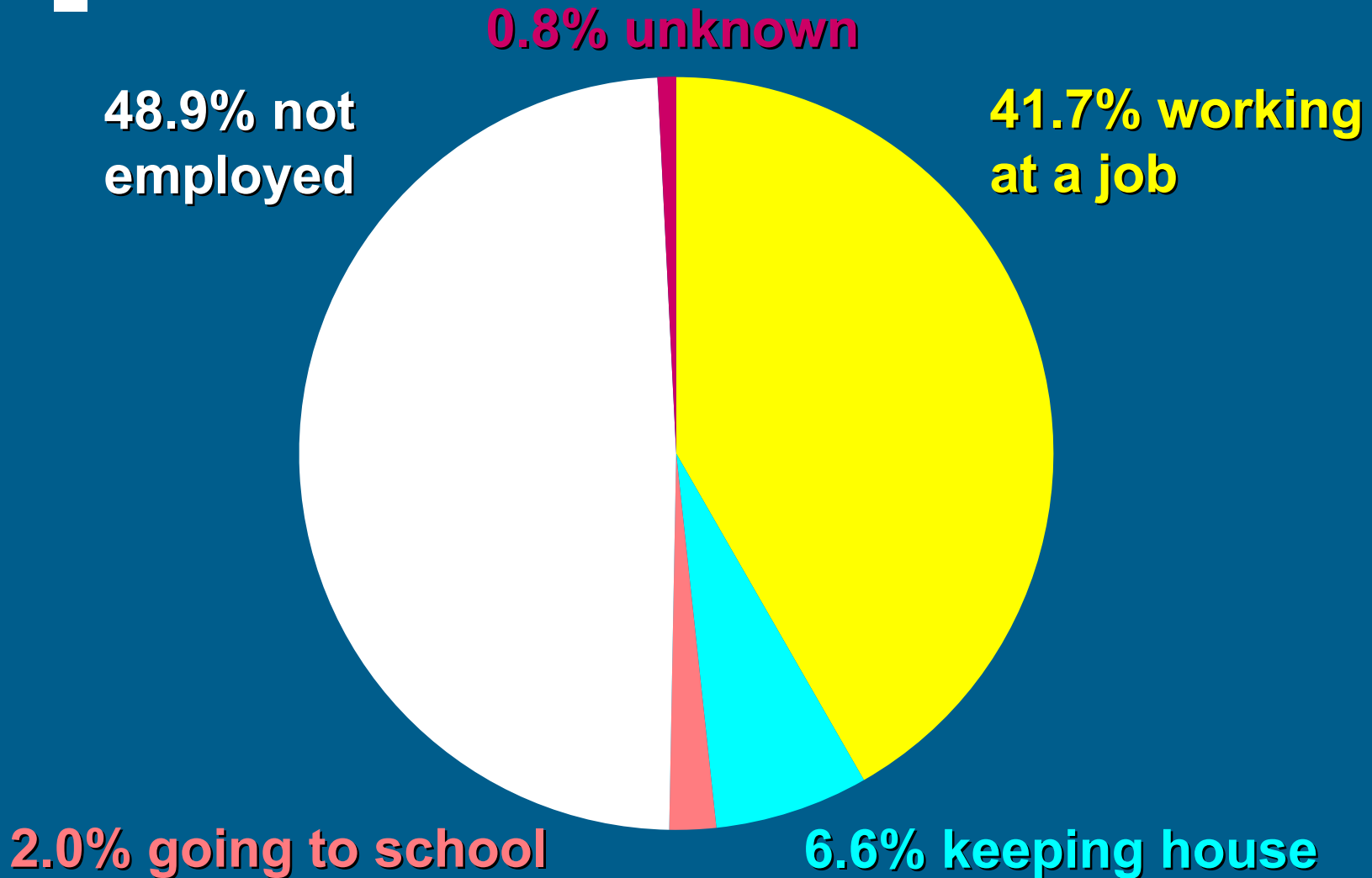
Prevalence of Adults Living in Landline-Only HHs, July-December 2008



Prevalence of Selected Age Groups Among Landline-Only Adults



Prevalence of Employment Status Among Landline-Only Adults



Landline-Only Conclusions

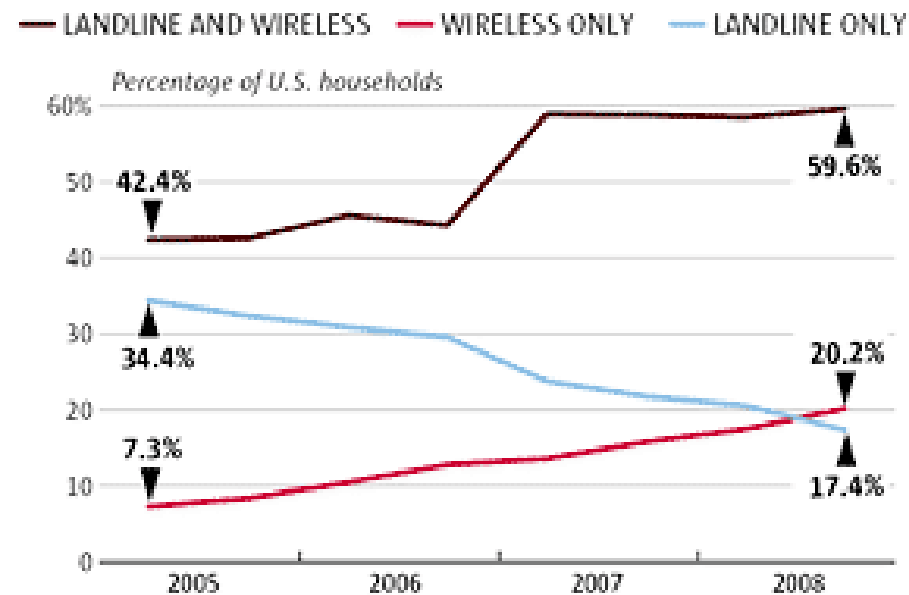
- 17.4% of households are landline-only
- 15.1% of adults live in landline-only households
 - 30% are age 70+
 - 28% are age 18-69 years and not employed
 - 15% are age 18-69 years, employed, and living in or near poverty
- A unique population that may need to be weighted separately from dual users

Landline-Only Conclusions

- Prevalence of landline-only households is declining as rapidly as the prevalence of wireless-only households is growing

We've grown more dependent on cellphones

Percentage of U.S. households using only land-line telephone service, only wireless service, or both:



Source: National Center for Health Statistics A. RAYMOND / THE SEATTLE TIMES

Mean Number of Cell Phones Per Household (Among Households with Cell Phones)

- Household has a landline: 1.96
 - Wireless-only household: 1.70
- (Data source: NHIS, July-December 2008)

Likelihood that a Residential Cell Phone Belongs to a Wireless-Only Household

- Household has a landline: 78.2
 - Wireless-only household: 21.8
- (Data source: NHIS, January-December 2008)

Are Cell Phones Personal or Household Devices?

- Has significant implications for whether a within-unit selection procedure is necessary
- If cell phones are treated as household devices, how do we do within-household selection?
 - Ask for cell phone to be handed to selected respondent?
 - Call back at another number?
 - When person who answers is not selected, response rate drops by half

Wireless Sharing

- If cell phones are treated as individual devices, it assumes all persons in household have a cell phone
- Is there a one-to-one correspondence between cell phones and people in the household?
 - Can compare the number of cell phones to the number of people in the household
 - Fewer cell phones than persons suggests that people in the household share the cell phones

Distribution of Wireless Telephones Given Number of Household Members

July – December 2008

	More wireless phones	Equal number of wireless phones	Fewer wireless phones
Relative to number of persons aged 18 years and over	16.5	63.0	20.4
Relative to number of persons aged 14 years and over	11.2	64.7	24.1

Percent of Households with Fewer Wireless Phones Than Persons

July – December 2008

	Landline- Mostly	Some on Landline, Some on Wireless	Wireless- Mostly
Relative to number of persons aged 18 years and over	35.7	20.0	11.6
Relative to number of persons aged 14 years and over	38.5	24.7	15.3

Percent of Households with Fewer Wireless Phones Than Persons

Wireless-Only Households

July – December 2008

Relative to number of persons aged 18 years and over

13.7

Relative to number of persons aged 14 years and over

16.5

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Living alone	n/a	29.9
Unrelated adults, no children	0.0	6.5
Related adults, no children	50.7	33.3
Adults with children	49.3	30.3

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Poor	23.5	13.4
Near Poor	23.7	15.0
Not Poor	35.7	59.6
Missing	17.1	11.9

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Some high school or less	33.1	11.1
High school graduate or GED	33.9	25.5
Some post-high school, no degree	22.7	34.1
4-year college degree or higher	10.4	29.3

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Working at job or business	63.4	77.2
Keeping house	9.4	4.2
Going to school	2.9	3.9
Something else	23.4	13.5
Unknown	0.9	1.1

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Owned or being bought	32.7	38.3
Rented	65.3	59.9
Other arrangement	2.0	1.7

Characteristics of Adults in Wireless-Only HHs, by Number of Wireless Telephones

July – December 2008

	Fewer Phones than Adults	At Least As Many Phones as Adults
Hispanic, Any Race	37.3	13.5
Non-Hispanic, White	41.5	67.5
Non-Hispanic, Black	15.4	12.7
Non-Hispanic, Asian	4.5	4.4
Non-Hispanic, Other	1.4	1.9

Wireless Sharing

- Are cell-phones personal devices or shared household devices?
 - Cell phones are likely being shared in approx 20% of households with cell phones
 - And in at least 14% of wireless-only households!
- Who is most likely to share cell phones?
 - Among the wireless-only households where sharing is likely to occur...
 - Adults with lower income and less education
 - Adults who are not employed
 - Adults renting their homes
 - Hispanic adults

Percent Distribution of Household Telephone Status, July-December 2008

