

Exploring Ideas About Why Young Children Are Undercounted in the U.S. Decennial Census

Dr. William P. O'Hare

Senior Consultant, The Annie E. Casey Foundation
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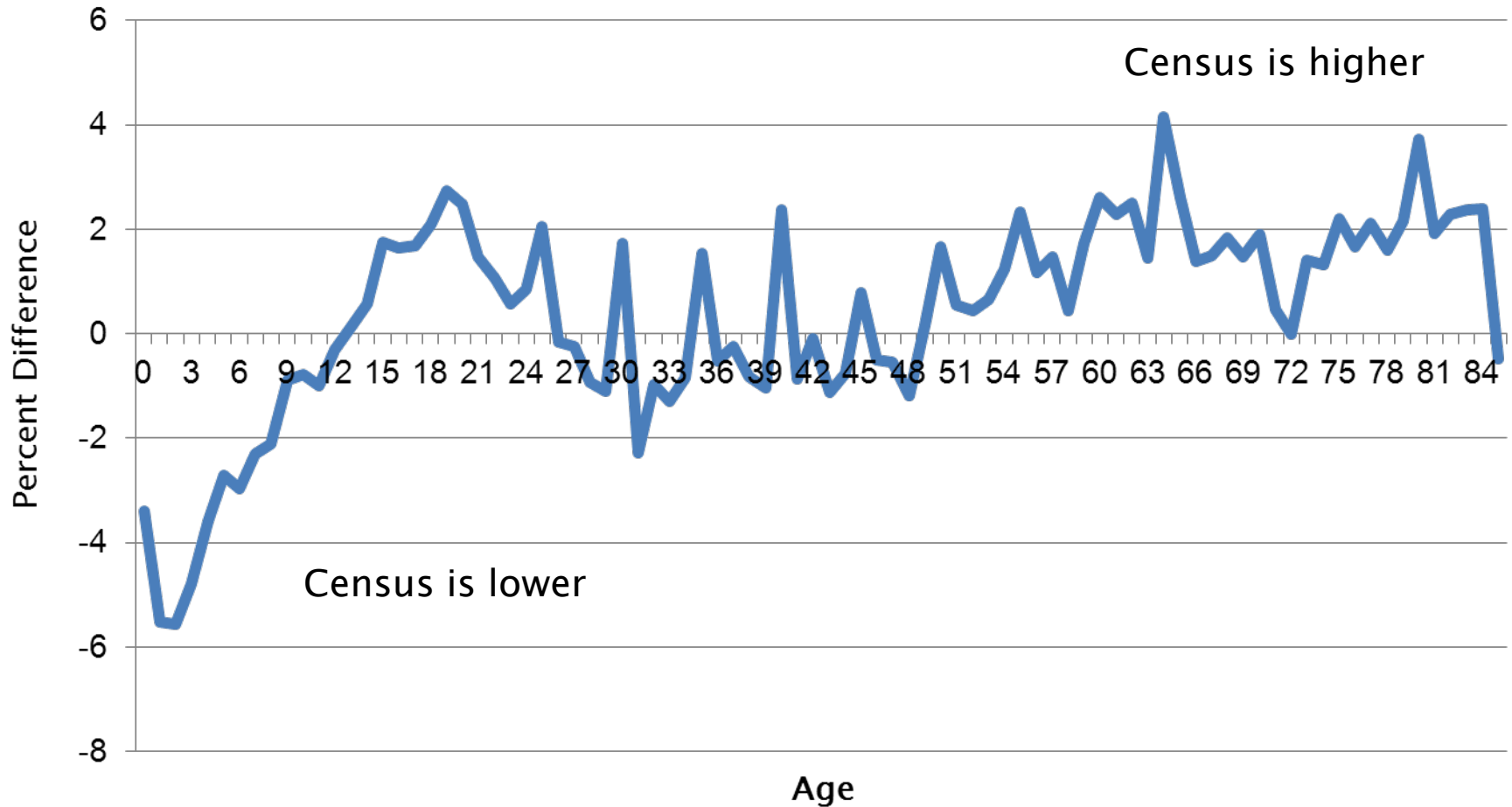
Outline of Presentation

- Background on undercount of young children
- Ideas about why young children missed provided in two groups:
 - 1) Ideas where there are some data to support or reject idea
 - 2) Ideas where there is no good data
- Conclusions

How Do We Know Who Is Missed In The Census?

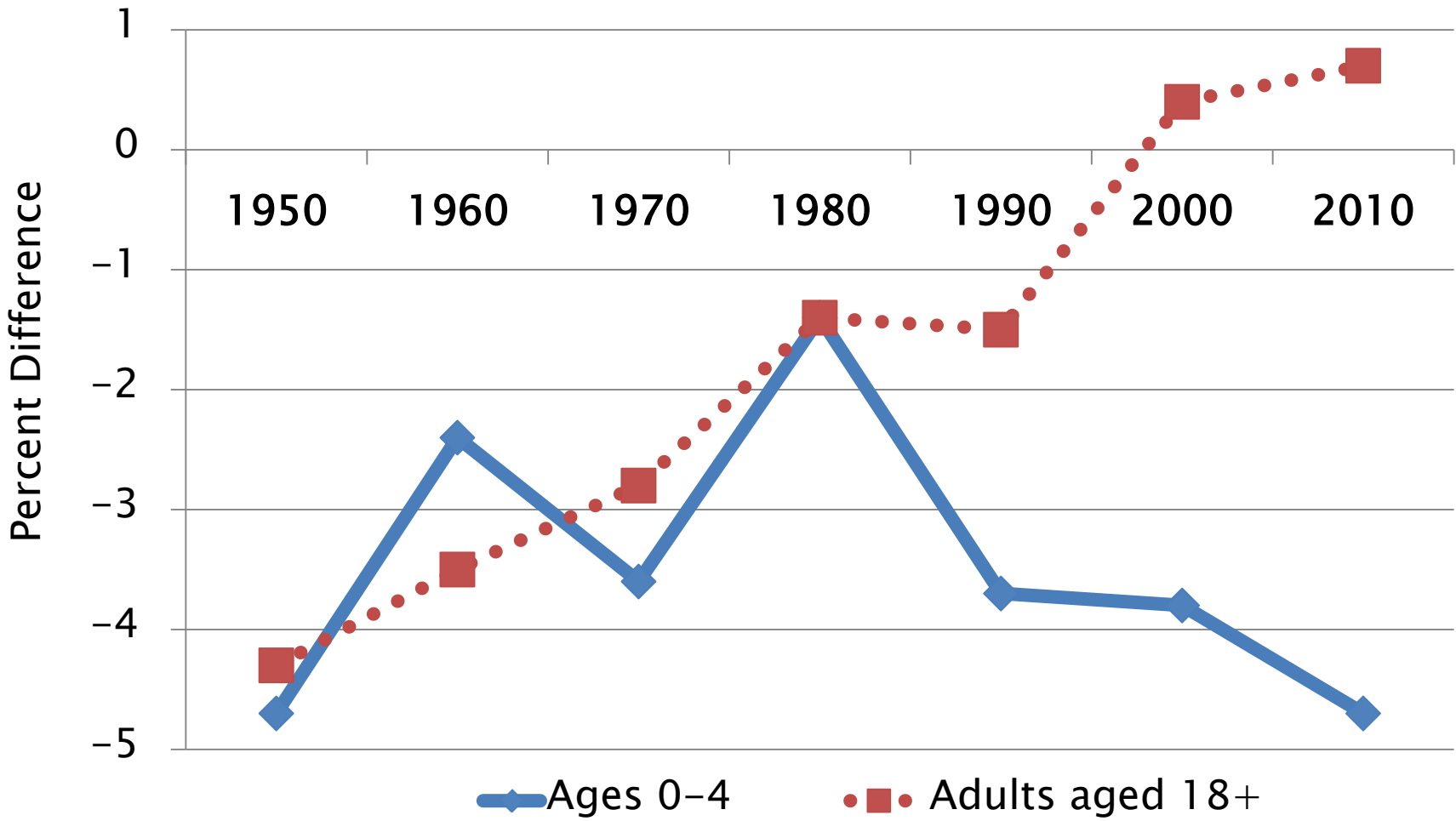
- Demographic Analysis (DA)
Compares census results to an independent estimate based largely on administrative records on births and deaths and estimates of international migration
- Dual-Systems Estimates (DSE)
Compares census results to a second follow-up survey conducted in selected areas (Called CCM in 2010)

Percent Difference Between 2010 Census Counts and DA Estimates by Single Year of Age: 0–85



Source: U.S. Census Bureau, 2010 Demographic Analysis, May 2012 release.

Percent Difference Between Census Counts and DA Estimates for Adults and Young Children: 1950 to 2010



Source: U.S. Census Bureau, 2010 Census and 2010 Demographic Analysis, May 2012 release.

Difference Between 2010 Census Counts and DA Estimates for Children Under Age 5, by Sex, Race, and Hispanic Origin

	Number	Percent Difference
Total	972,000	-4.6
Female	471,000	-4.5
Male	501,000	-4.6
Black Alone or in Combination	247,000	-6.3
Hispanic	414,000	-7.5
Not Black Alone or in Combination and Not Hispanic	309,000	-2.6

Note: Estimates by Hispanic origin are only available for the December 2010 DA release. Responses of "Some Other Race" from the 2010 Census are modified. This results in differences between the population for specific race categories shown for the 2010 Census population in this table versus those in the original 2010 Census data. For more information, see <<http://www.census.gov/popest/data/historical/files/MRSF-01-US1.pdf>>.

Source: U.S. Census Bureau, 2010 Census and 2010 Demographic Analysis, December 2010 release, and May 2012 release.

Key Findings

1. There is a large net undercount of young children (age 0-4).
2. The large undercounts for young children are concentrated among Blacks and Hispanics.
3. The net undercount for young children has increased dramatically since 1980...

OR

Net undercount of young children has always been high

Results are Counter-Intuitive and Inconsistent with Previous Research

“Without exception, every study that has examined response or cooperation finds positive effects of the presence of children in the household.”

Groves & Couper ,1998

Key Question

Why were 1 million young children missed in the 2010 Census?

2 Questions About Causes for Net Undercount

1) Why Are People Missed in
the Decennial Census?

2) Why Are Children Missed
More Than Others in the
Decennial Census?

3 POINTS

- Support is not the same as proof
- What is evidence?
- There is likely to be multiple causes for the high net undercount of young children

Key Question

Were children left off census questionnaires that were returned

or

Were children living in households that did not return a census questionnaire?

1) Ideas With Some Data Available

Undercounts of Housing Units and Young People

- DA indicates a net undercount of 4.6 percent of young children (972,000)
- DSE(CCM) indicates a net undercount of only 0.6 percent of housing units (790,000)

Modeling Census Tract-level mail return Rates (Erdman and Bates, 2013)

- It is widely believed that mail return rates are linked to undercounts.
- Percent of tract population that is young children (age 0-4) is only very minor factor in predicting return rates.
- So it appears most missed children were left off forms that were returned???

Net Undercount is Product of Erroneous Enumerations (Duplications) and Omissions

- Maybe there are too few duplications among young children?

Table 1. 2010 Census Count, Percent Duplications, and Percent Omissions by Age

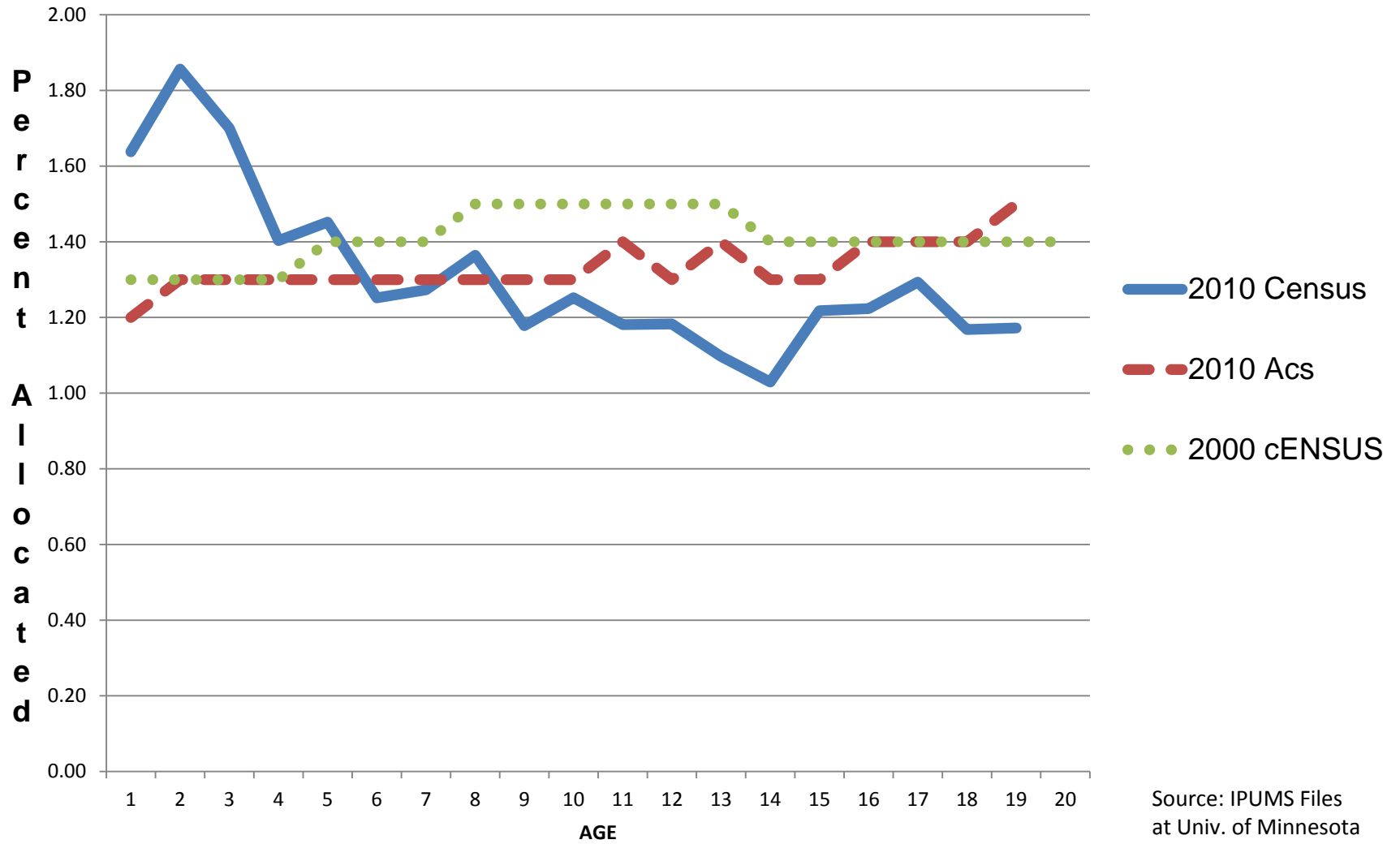
	Census count	Percent Duplications	Omissions
0 to 4	20,158	3.2	6.6
5 to 9	20,315	3.0	4.9
10 to 17	33,430	3.2	4.4
18 to 29 Males	23,982	4.0	9.3
18 to 19 females	23,912	4.2	7.6

Source: DSSD 2010 Census Coverage Measurement Memorandum Series #2001-G-01 2010 Census Coverage Measurement Estimates Report: Summary of Estimates of Coverage for Persons in the United States, Table 13 page 20

Maybe Age Imputation was Not Done Correctly

- If age data not given in the Census or what is given is not reasonable, age is allocated, imputed, or substituted.
- Maybe too few people had their age imputed as 0-4 (too many had age imputed as 14-17)???

Age Allocation Rates for 2010 Census, 2010 ACS and 2000 Census



Source: IPUMS Files at Univ. of Minnesota

Census Questionnaire Only Has Room for 6 People So Maybe Kids Are Left Off Form

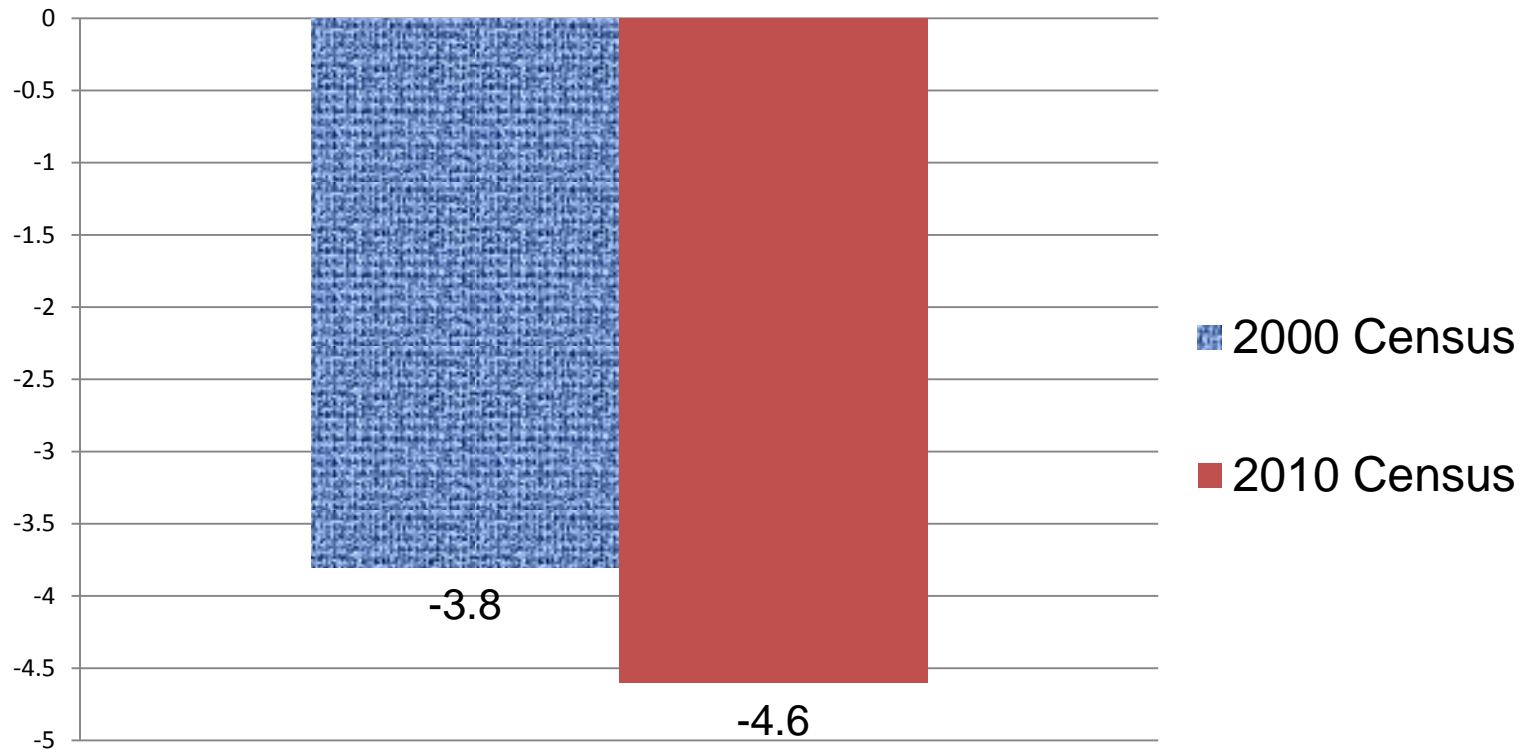
- 10 percent of young children live in 6+ person households
- 3.5 percent of adults live in 6+ person households
- “...children are generally listed after adults on questionnaires filled out by respondents.”

Wetrogan & Crease (2001, page iii)

2010 Census Questionnaire Much Different than 2000 Census Form

- Added –age information collected on persons 6-12 on primary questionnaire
- Added a new “administrative” question about people who were left off roster
- Added instruction about “including babies”
- Added instruction about “child custody”

Net Undercount Rate for Population Age 0 to4 in the 2000 and 2010 U.S. Decennial Census.



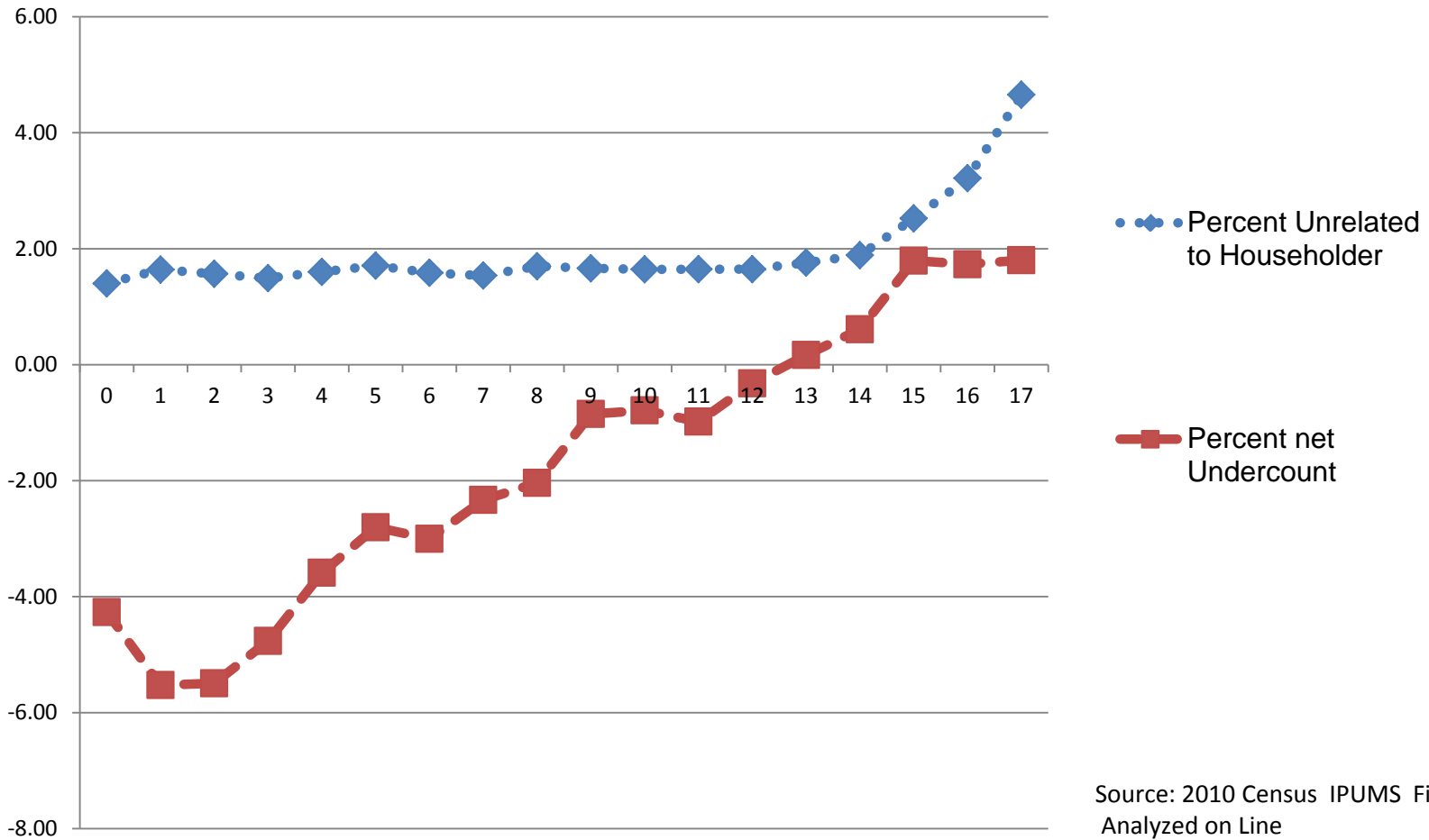
Improvements in Census
Questionnaire between 2000
and 2010 but net undercount
of young children increased
--- so this factor seems unlikely
to be a cause of the
undercount

Relationship to Head of Household

“Related individuals are more likely to be reported as usual residents and are reported more consistently with fewer disagreements and hence better coverage.”

Martin (1999. Page 223)

Relationship Between Percent of Children Unrelated to the Householder and Percent Net Undercount for Age 0 to 17



Parents of Young Children Face High Time Pressures

- “Respondents who are married with children have a lower mail-back rate (83 percent) than those who are married without children (90 percent), suggesting that the time demands of child care work against taking on this particular civic duty.”

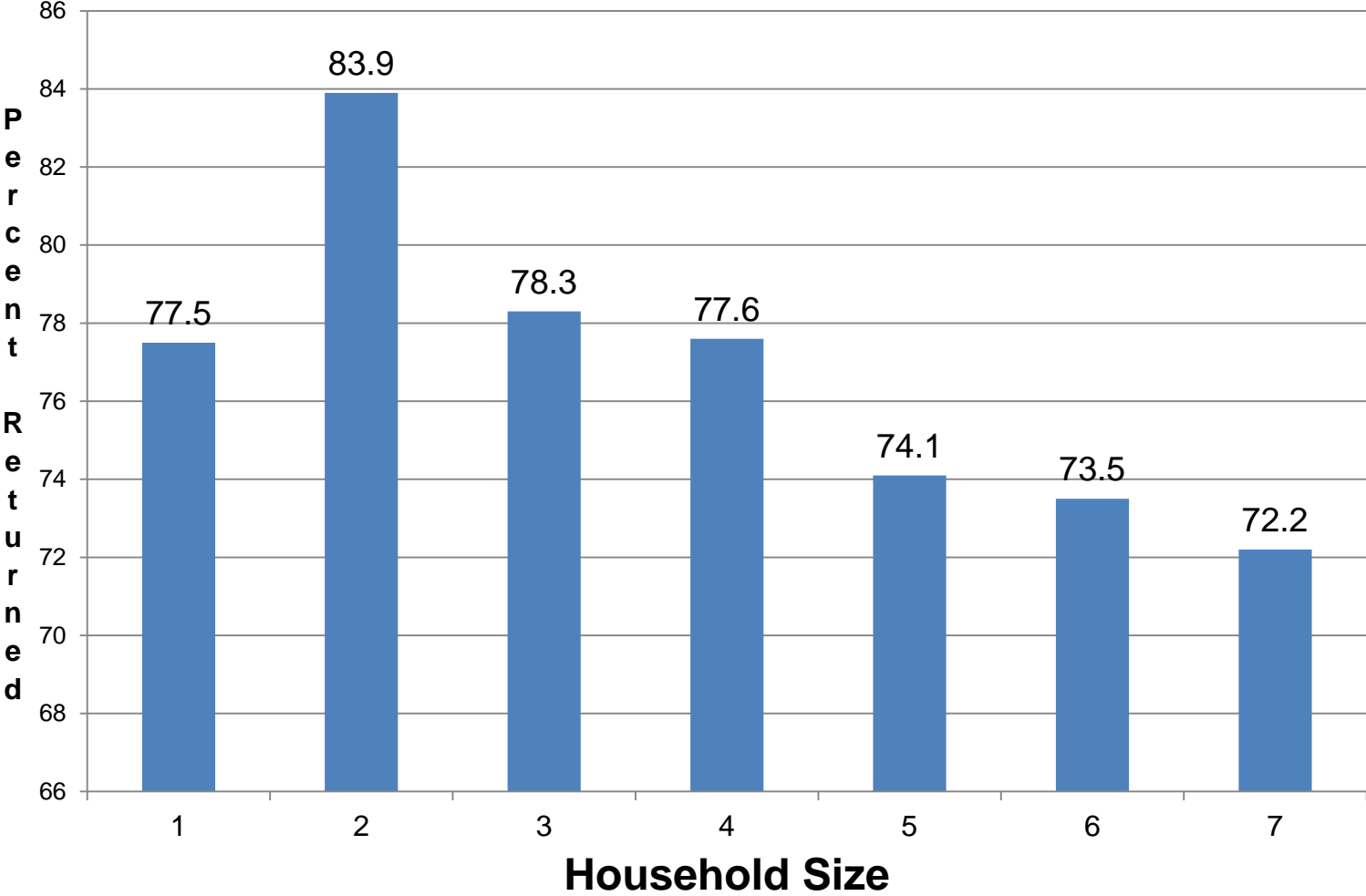
Hillygus et al (2006, page 103)

2000 Census Mail-Back Rates by Presence of Kids and Family Type

	Census Mail-Back Rate
Live Alone	86%
Single with adult roommates	73%
Single with kid(s)	63%
Married with no kids	90%
Married with kid(s)	83%
Household Size	
One-person household	86%
Two-person household	88%
Three-person household	82%
Four or more people	69%

Source: Hillygus, Nie, Prewitt & Pals, 2006, Table 4.4

2010 Census Mail Return Rate by Household size



Foreign-born women have babies in the U.S then leave the country undetected with their infant

- Pitkin and Parks (2005) Hypothesize many children born to foreign-born (Mexican) women in California are taken to Mexico and not picked up in DA emigration statistics.
- 13% difference for age 0-4 between number of children born to foreign-born mothers (From Birth Certificates) and Census count of this population in California (based on PUMS)

BUT

- Age 0-4 population in 2000 were counted accurately as 10-14 in 2010 Census
- Hypothesis does not account for high undercount of young black children (12% in same study).
- Pitkin and Parks methodology involves some tenuous assumptions about which children in the census were born to foreign-born mothers.

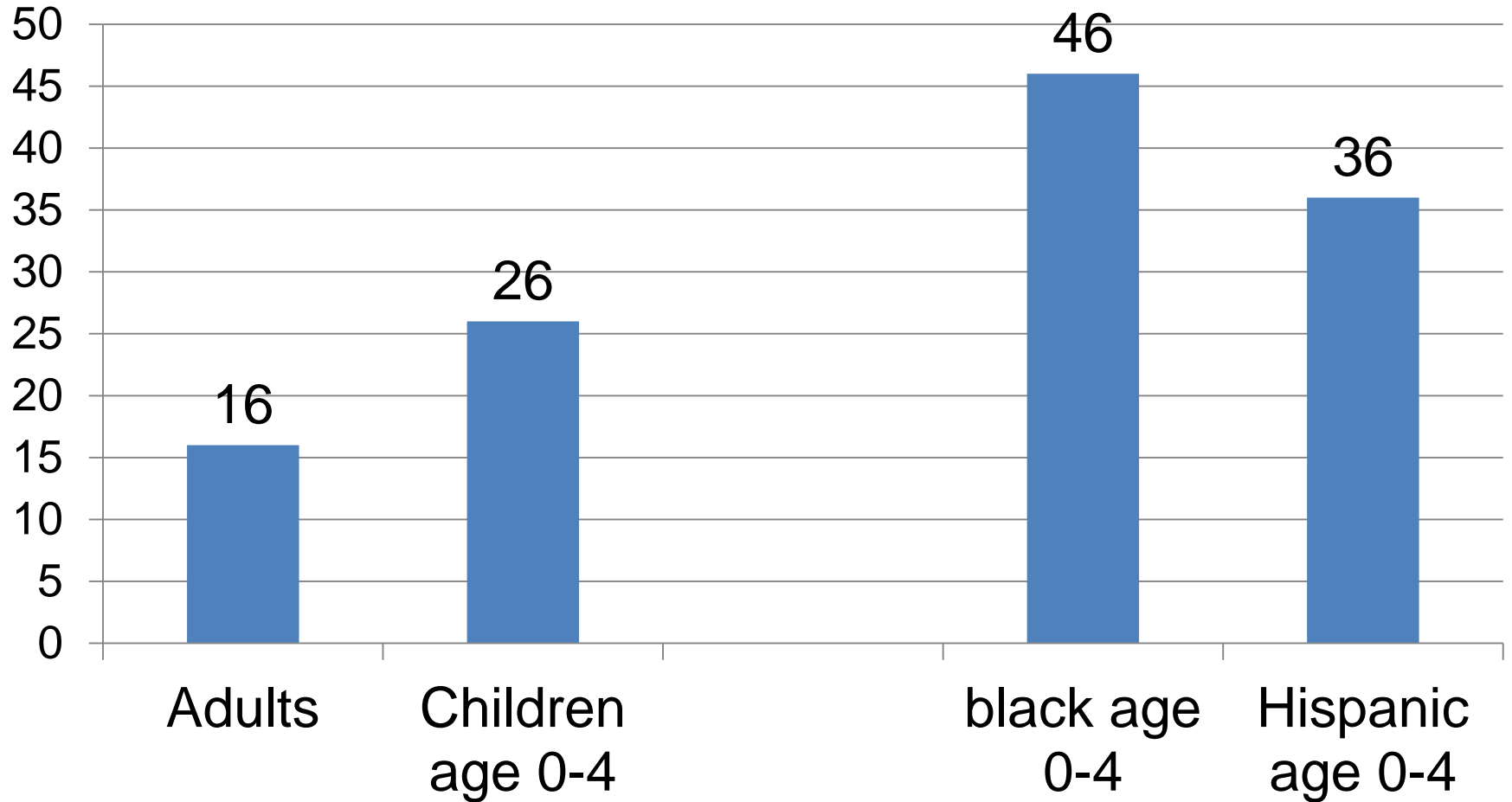
Young Children Live in the Kinds of Households and Living Arrangements that are Difficult to Enumerate

- I examined 10 of 12 characteristics of Hard-to-Count identified by Census Bureau in Planning Data Base.
- Young (age 0-4) Black and Hispanic children higher on most of the 10

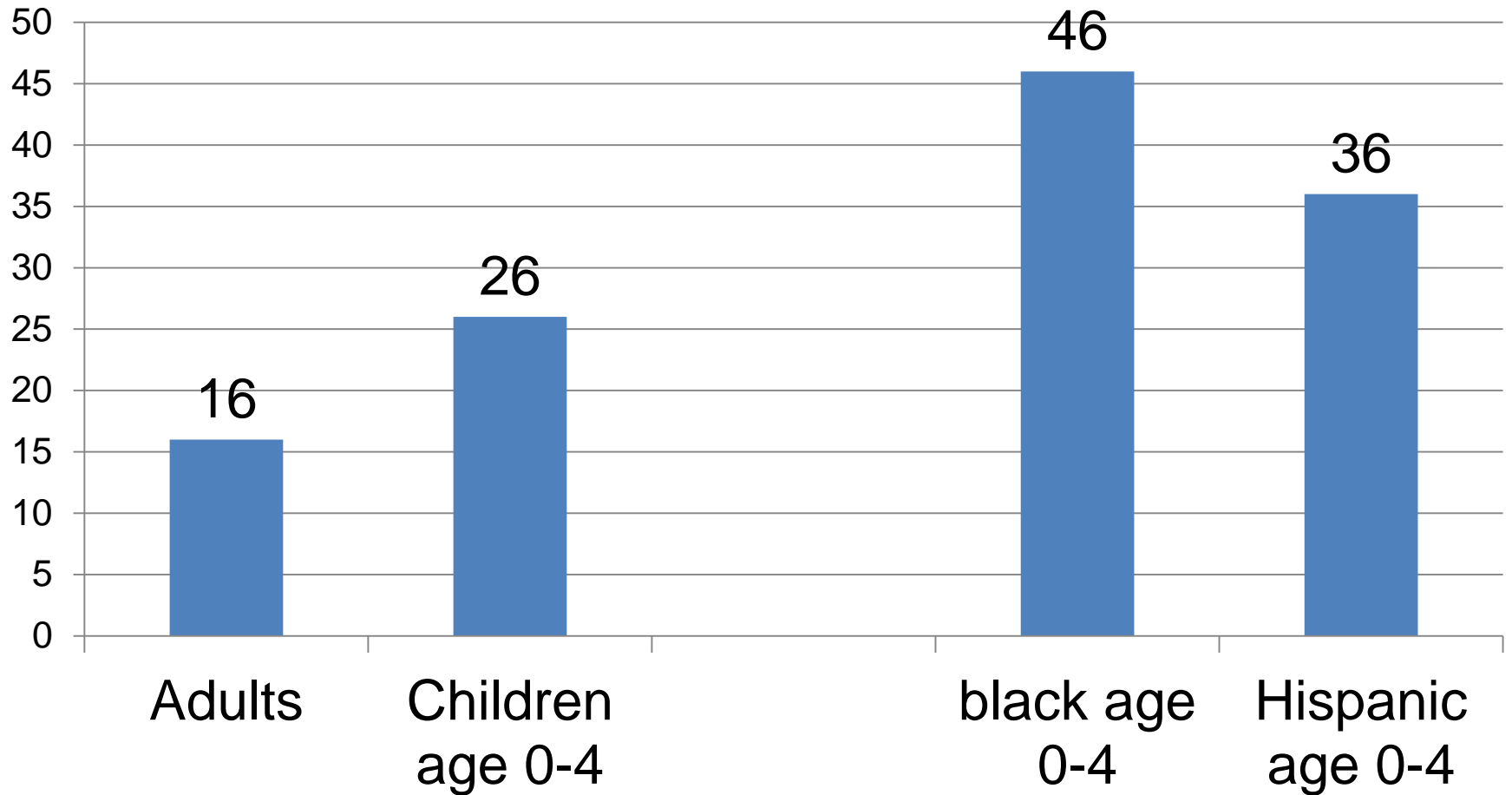
Hard-To-Count Characteristics of Young Black and Hispanic Children Compared to all Adults

	Black Children 0-4 Higher than Adults ?	Hispanic Children 0-4 Higher than Adults?
In Building with 10+ units	Yes	Yes
In Building with 2+ units	Yes	Yes
Living in Rental unit	Yes	Yes
In Crowded Household	Yes	Yes
Other than Husband/Wife Household	Yes	No
No Phone	Yes	Yes
In Poverty	Yes	Yes
Receiving Food Stamps	Yes	Yes
Linguistically Isolated	No	Yes
Recent Mover	Yes	Yes

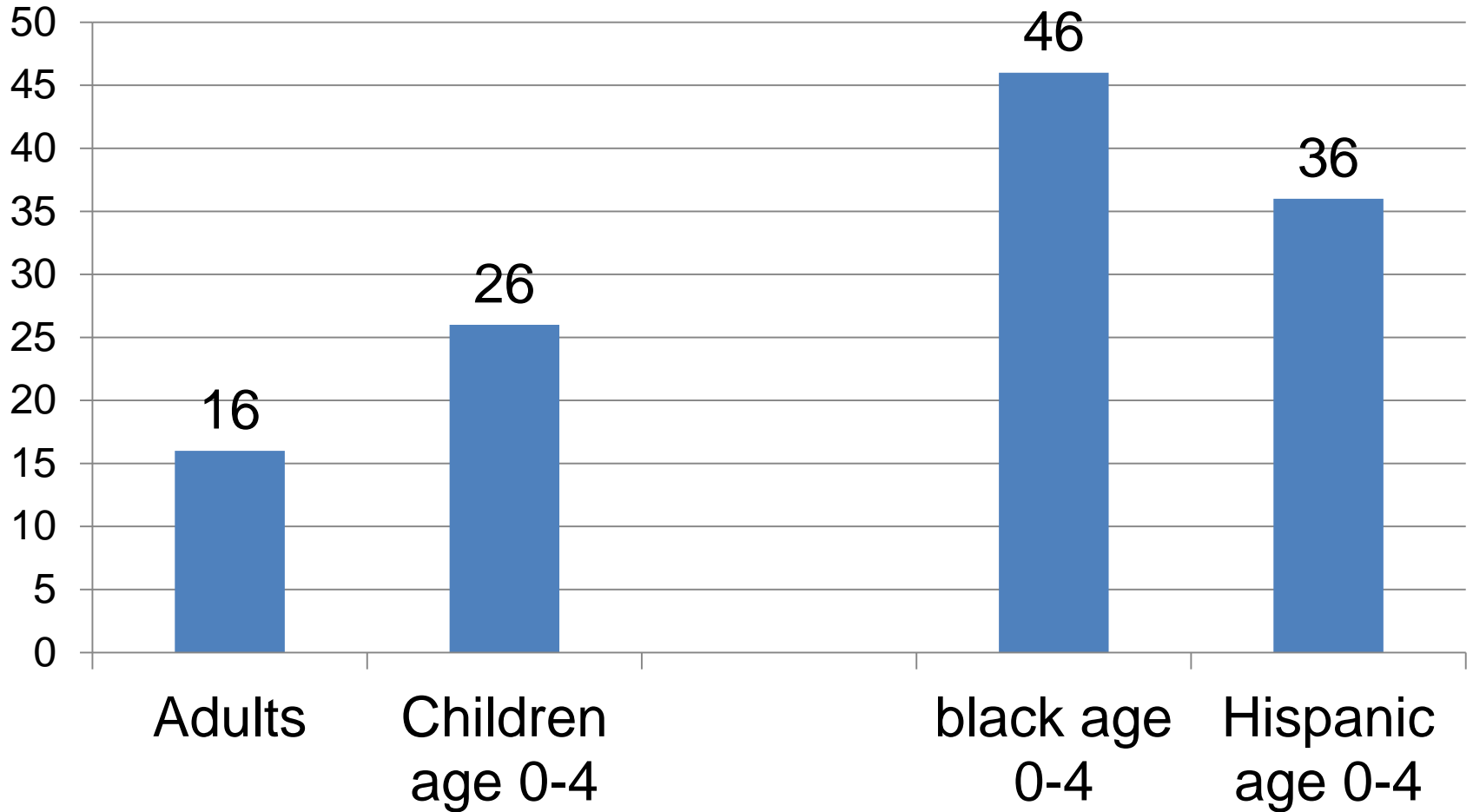
Percent in Rental Units



Percent Moving in Past Year



Percent in Poverty



2) Ideas without data

Children Intentionally left off the Census form

- Respondent didn't think children should be counted
- Respondent did not want to include children on the form (legal status of Parents may be an issue) – Would this impact age 0-4 more than age 14-17??

Evidence??

- Anecdotal evidence (from 2010 Census qualitative studies)
- But no good statistical evidence

Summary: Mixed Support for Ideas About Causes of Census Undercount for Young Children

	No Evidence	Evidence Supports Idea	Evidence Does Not Support Idea
Young children live in households that don't return census questionnaire			X
Dearth of erroneous inclusions			X
Age not imputed properly			X
Problem is the Census questionnaire (only room for 6 people)			X
Foreign-born mothers have births in U.S. then leave			X
Time pressures on parents of young children		X	
Young children live disproportionately in hard-to-count neighborhoods and families		X	
Young children are not included on census form because respondents don't think they should be reported	X		
Young children are not included on form because parents don't want them listed on form	X		

Summary

- Young Children have higher net undercount rate than any other age group in 2010
- Young children have had relatively high net undercount rates since 1950
- The trends in net undercount rates of young children and adults have diverged since 1980
- Need to develop understanding of WHY young children are missed in the census
- One focus of 2020 Census planning should be households with young Black or Hispanic children