

The High Net Undercount of Black and Hispanic Children in the 2020 Census  
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Introduction

A complete assessment of the accuracy of the 2020 Census will have to wait until the information from the Census Bureau's Post-Enumeration Survey and detailed data from the 2020 Census are released late in 2022. But preliminary assessments point to a continued high net undercounts for children, particularly Black and Hispanic children.

In this report, the term children refers to the population ages 0 to 17, the term young children refers to the population ages 0 to 4, and the term adults refers to the population ages 18 and older.

The Census Bureau's release of the redistricting data (Public Law 94-171) on August 12, 2021, provides an opportunity to examine the coverage of children and adults in the 2020 Census. The data from the 2020 Census can be compared to the estimates produced by the Census Bureau Demographic Analysis (DA) program to assess net undercounts and overcounts for a few demographic groups.

This analysis shows children have a higher net undercount than adults and that Black and Hispanic children have substantially higher net undercounts in the 2020 Census. A similar pattern was seen in the 2010 Census.

Data for Children and Adults

For the 2020 Demographic Analysis estimates, the Census Bureau produced three series (based on different assumptions) which they label low series, middle

series, and a high series. The results of all three series for adults and children are shown in Table 1.

In the text below, I focus on the results of the middle series from the 2020 DA estimates. In the 2010 Census, the Census Bureau issued five series in the December 2010 DA release, but when the Census Bureau released the updated Demographic Analysis estimates in May 2012, they only issued data for the middle series. Thus, DA middle series is the appropriate data for looking at change from 2010 to 2020.

The middle series estimate shows a net undercount of 0.3 percent for the total population in the 2020 Census. The net undercount for the total population is not too different than what was seen in the past few Censuses (O'Hare 2021) However, the 0.3 percent figure masks substantial differences for children and adults and among separate groups of children. The most crucial aspect of census accuracy is differential accuracy.

There was a significant net undercount for children and a small net overcount for adults in the 2020 Census. The net undercount of children in the 2020 Census was 2.1 percent based on the DA middle series. Adults had a 0.1 percent overcount in the 2020 Census based on the middle DA series. This is a similar pattern t that seen in the 2010 Census (O'Hare 2015). This suggests some stability in the age structure of census coverage between the 2010 Census and the 2020 Census.

Table 1. Coverage of Adults and Children in the 2020 Census Based on Demographic Analysis											
(net undercounts are highlighted in red)	2020 Census * (in millions)	2020 Demographic Analysis Estimates** (in millions)			2020 Census Numeric Difference (Census-DA) (in millions)			2020 Census Percent Difference ((Census-DA)/Census)*100			2010 DA Percent Undercount Estimate middle series***
		Low	Middle	High	Low	Middle	High	Low	Middle	High	
Total Population	331.4	330.7	332.6	335.5	0.7	<b>-1.2</b>	-4.1	0.2	<b>-0.4</b>	-1.2	0.1
Adults (Ages 18 and over)	258.3	256.3	257.9	260.7	2.0	<b>0.4</b>	-2.4	0.8	<b>0.1</b>	-0.9	0.7
Children (Ages 0 to 17)	73.1	74.4	74.7	74.8	-1.3	<b>-1.6</b>	-1.7	-1.8	<b>-2.1</b>	-2.3	-1.7
*2020 Census data, U.S. Census Bureau August 12 2021, "Population Under Age 18 Declined Last Decade," <a href="https://www.census.gov/library/visualizations/interactive/adult-and-under-the-age-of-18-populations-2020-census.html">https://www.census.gov/library/visualizations/interactive/adult-and-under-the-age-of-18-populations-2020-census.html</a>											
**2020 Demographic Analysis (DA) data from U.S. Census Bureau, Demographic Analysis Release on December 15 2020 <a href="https://www.census.gov/newsroom/press-kits/2020/2020-demographic-analysis.html">https://www.census.gov/newsroom/press-kits/2020/2020-demographic-analysis.html</a> ;											
*** calculated from DA tables released by The Census Bureau in May 2012, except for Hispanic data were calculated on DA tables released in December 2010.											

### Changes Between 2010 and 2020

The last column in Table 1 provides data from the 2010 Census DA middle series that corresponds to the middle Series DA estimates for 2020. The net undercount for children increased from 1.7 percent in the 2010 Census to 2.1 percent in the 2020 Census. The net undercount of children was more than 1.6 million in 2020 compared to about 1.3 million in 2010, based on the DA middle series estimates for both years.

The coverage of the adult population went from a net overcount of 0.7 percent in the 2010 Census to a net overcount 0.1 percent in the 2020 Census. It is not clear if this primarily reflects a decrease in overcounting, an increase in undercounting adults, or some combination of these two factors.

## Data for Black and Hispanic Children

Analysis in the previous section provides a little more information about the quality of the 2020 Census data but there are several points related to the net undercount of children in the Census that should be explored.

The 2020 Census coverage for all children, Hispanic children, and Black (Black Alone and Black Alone or in Combination) are shown in Table 2. Based on the DA middle series estimates, the net undercount of Hispanic children in the 2020 Census was 4.2 percent, which is double the rate in the 2010 Census (2.1 percent). Black and Hispanic are the only two race/ethnic groups for which DA data were produced.

Dr. Constance Citro, Senior Scholar at the Committee on National Statistics, has produced preliminary estimates of the coverage of the black population including adults and children. Only the data for children are shown here. The estimates are based on a simulation she conducted to produce a plausible reallocation of people from the "Some Other Race Alone" category in the census data to one of the five race categories used in DA. This is necessary to make the race data in the Census comparable to the race data in DA. Her estimates assume that the 2010 census allocation of Some Other Race Alone is a good proxy for 2020; she also allowed for an increase in the percentage of people checking Some Other Race and no other category from 2010 to 2020.

(net undercounts are highlighted in red)	2020 Census ** (in millions)	2020 Demographic Analysis Estimates* (in millions)			2020 Census Numeric Difference (Census-DA) (in millions)			2020 Census Percent Difference ((Census-DA)/Census)*100			2010 DA Percent Undercount Estimate middle series****
		Low	Middle	High	Low	Middle	High	Low	Middle	High	
Children (Ages 0 to 17)	73.1	74.4	<b>74.7</b>	74.8	-1.3	<b>-1.6</b>	-1.7	-1.8	<b>-2.1</b>	-2.3	-1.7
Hispanic Children (Ages 0 to 17)	18.8	18.0	<b>19.6</b>	20.8	0.8	<b>-0.8</b>	-2.0	4.3	<b>-4.2</b>	-10.6	-2.1
Black Alone Children (ages 0 to 17)****	10.8	11.1	<b>11.4</b>	11.8	-0.3	<b>-0.6</b>	-1.0	-2.7	<b>-5.8</b>	-8.6	-0.6
Black Alone or in Combination Children (ages 0 to 17)****	13.6	13.7	<b>14.2</b>	14.7	-0.1	<b>-0.6</b>	-1.1	-0.5	<b>-4.2</b>	-7.6	-1.6

\*2020 Census data, U.S. Census Bureau August 12 2021, "Population Under Age 18 Declined Last Decade," <https://www.census.gov/library/visualizations/interactive/adult-and-under-the-age-of-18-populations-2020-census.html>

\*\* 2020 Demographic Analysis (DA) data from U.S. Census Bureau, Demographic Analysis Release on December 15 2020 <https://www.census.gov/newsroom/press-kits/2020/2020-demographic-analysis.html>;

In the 2010 DA, the Census Bureau originally produced five series based on different assumption. In the May 2012 DA update they only produce data for the middle series.

\*\*\* calculated from DA tables released by The Census Bureau in May 2012, except for Hispanic data were calculated on DA tables released in December 2010.

\*\*\*\*2020 Census data were produced by Dr. Connie Citro, who is a Senior Scholar at the Committee on National Statistics. This figure are adjusted to move people from Some Other Race to the five race categories.

Dr. Citro's estimates shows a net undercount 5.8 percent for Black Alone children, based on the DA middle series estimates and a net undercount of 4.2 percent, for the net undercount for Black Alone or in Combination in 2020.

Data in Table 2 indicate the net undercount of Black Alone children increased from 0.6 percent in 2010 to 5.8 percent in 2020. For Black Alone or in Combination children, the net undercount increased from 1.6 percent in 2010 to 4.2 percent in 2020.

This preliminary evidence indicates the net undercount of children in the 2020 Census is relatively high, the net undercount rates of Black and Hispanic children are higher than others, and the net undercounts for children in the 2020 Census are higher than those seen in the 2010 Census.

### Net Undercount Differences Among Children by Age

Past Censuses show there are substantial differences in coverage of children by age that are not reflected in the assessment of all children shown in Tables 1 or 2. The data in Table 3 indicate that at least since the 1950 census, the net undercount rates for young children (ages 0 to 4) have been higher than the net undercount rates for all children (ages 0 to 17). Moreover, in the past few censuses, the gap between young children and all children has grown.

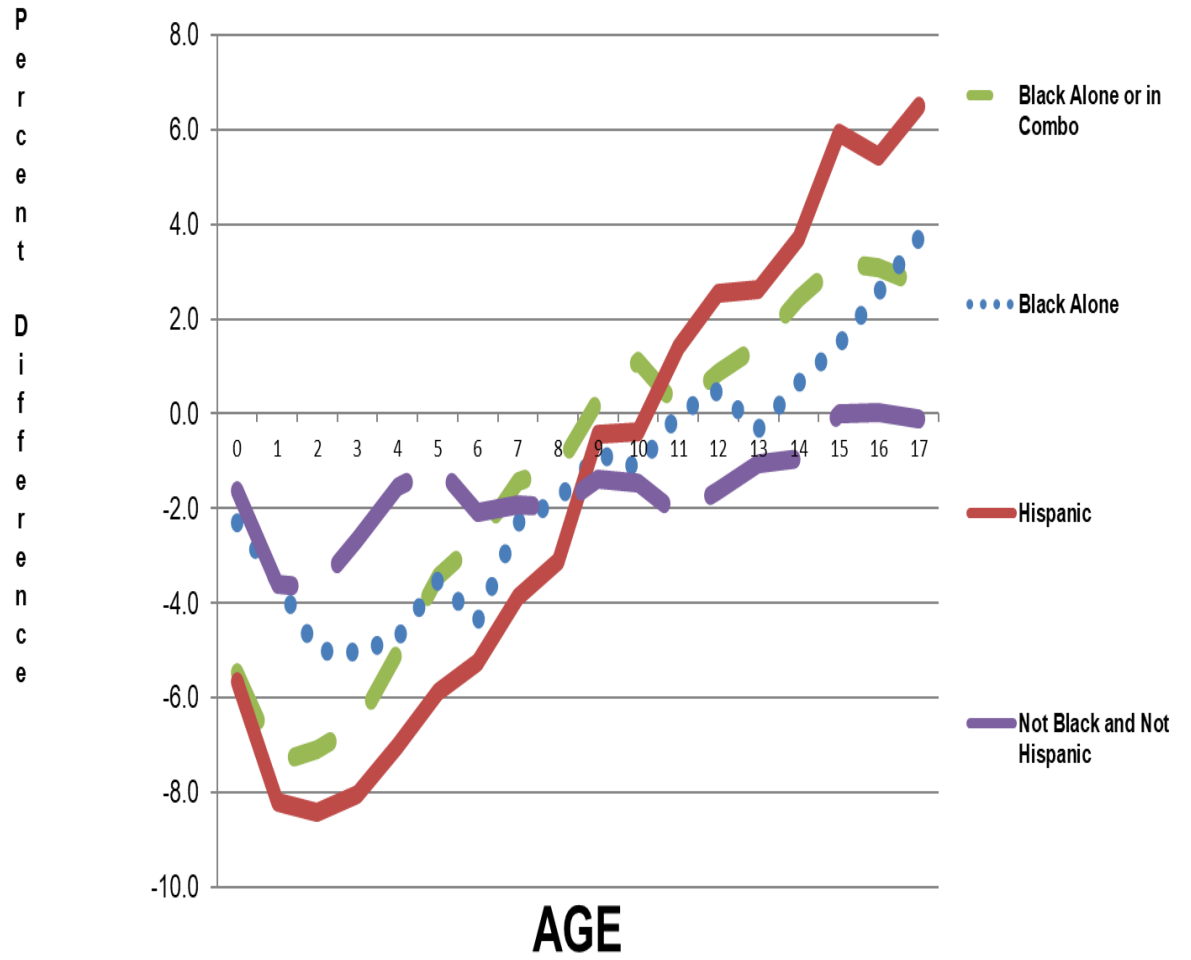
	1950	1960	1970	1980	1990	2000	2010
Ages 0 to 4	-4.7	-2.4	-3.6	-1.4	-3.7	-3.8	-4.6
Ages 0 to 17	-3.5	-2.3	-2.5	-0.7	-1.8	-0.7	-1.7

Source: U.S. Census Bureau (2014) Historical Examination of Net Coverage Error for Children in the U.S. Decennial Census: 1950 to 2010, Studies Series, Survey Methodology, #2014-03. Center for Survey Measurement, Research and Methodology Directorate, U.S. Census Bureau.

Figure 1 shows the coverage rates for groups of children from the 2010 Census by single year of age. For all groups of children included in the Figure 1, the data show that the net undercounts for children ages 0 to 17, are likely to mask big differences among children in different ages groups. In the 2010 Census, the net undercount of young children is very high compared to small overcounts for those in the 14-to-17-year-old cohort. We will have to wait for the Census Bureau to release more detailed data by age to assess the age differences in the 2020 Census.

Table 3 and Figure 1 show that over time and across demographic groups, the net undercounts of young children are higher than those of all children.

**Figure 1. Percent Difference Between 2010 Census Counts and DA Estimates for Race and Hispanic Groups by Single Year of Age: 0-17**



Source: 2010 Census & DA revised May 2012

Another way to look at data reflected in Figure 1 is to show the ratio of net undercount of young children to all children in the 2010 Census. Table 4 provides such figures for all children as well as for Black and Hispanic children.

Table 4. Ratio of Net Undercount Rates for Ages 0 to 4 and 0 to 17 in the 2010 Census			
2010 Census net undercounts (middle series DA)			
	Ages 0 to 4 (in 2010)	Ages 0 to 17 (in 2010)	Ratio of Net Undercount for Ages 0 to 4 to Net Undercount for Ages 0 to 17 in 2010
Hispanic	-7.5	-2.1	3.6
Black Alone or in Combination	-6.3	-1.5	4.2
Black Alone	-4.4	-0.6	7.3
All Children in this Age Group	-4.6	-1.7	2.7

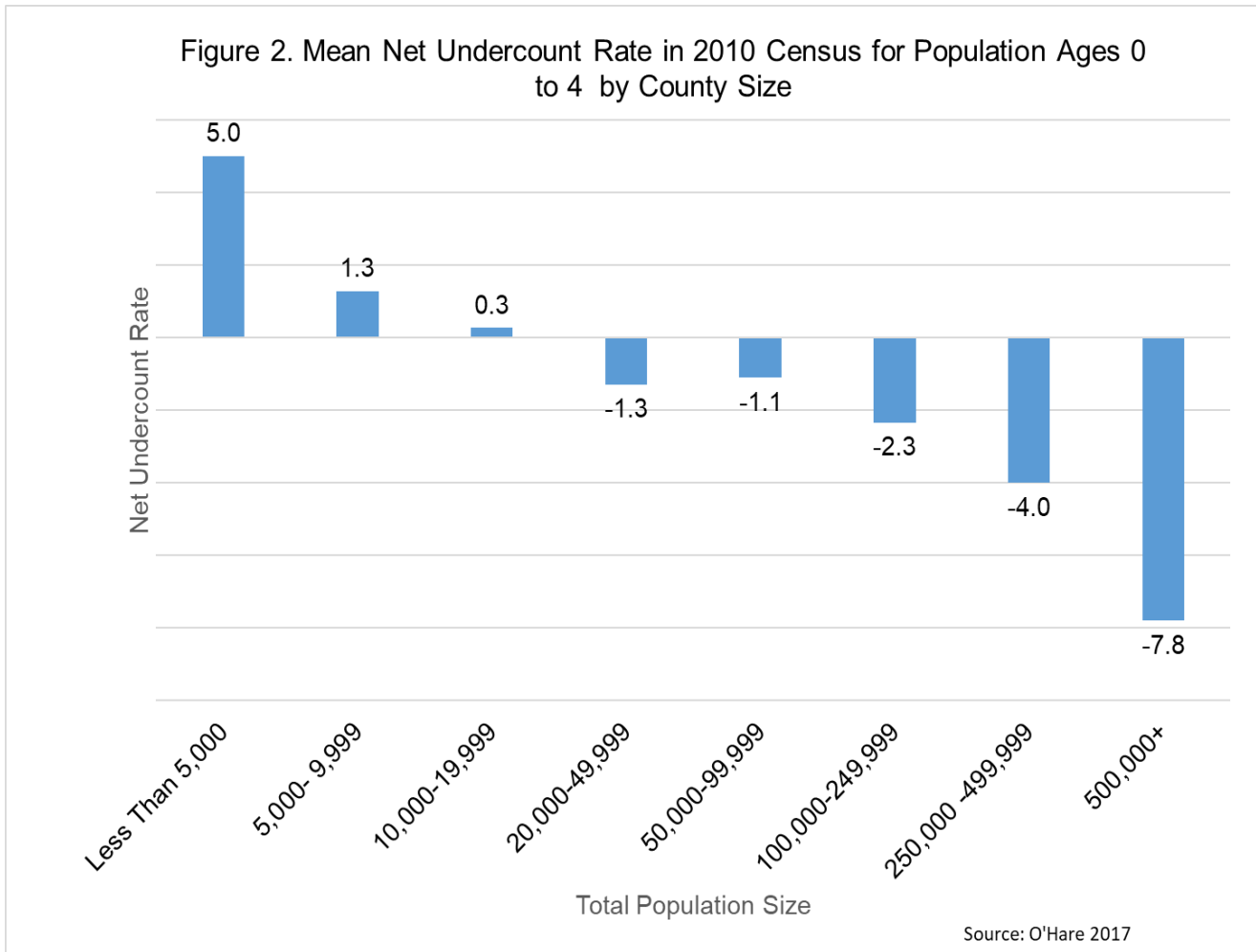
Source: Analysis of Census Bureau DA Estimates from May 2012 and December 2010

The third data column of Table 4 shows the ratio of net undercount rates for ages 0 to 4 compared to the net undercount rates for ages 0 to 17 in the 2010 Census for all children as well as for Black (Alone or Alone and in combination) and Hispanic young children. The data in Table 4 indicate that the net undercount for young children is systematically much higher than the net undercount for all children (ages 0 to 17). If the 2020 Census follows the patterns seen in recent Censuses, net undercount rates for young children are likely to be much higher than the net undercount rates for all children.

Geographic Unevenness of Net Undercounts



The 2020 Census data shown here are national figures, but past research indicates undercounts of children are not spread evenly across the country. Data from the 2010 Census related to young children indicate wide variation in the net undercount rates of young children across states. The estimated net undercount for young children in Arizona was 10.2 percent compared to a net overcount of 2.1 percent in North Dakota (O'Hare 2014). There is also solid evidence of substate differences in the net undercount rates for young children. Figure 2 shows a very pronounced pattern in the net undercount rates of young children by county size in the 2010 Census (O'Hare 2017). There is every reason to believe the distribution child undercounts within states and substate areas will be uneven in the 2020 Census and this has important implications.



### Discussion and Implications

One important implication is use of Census-derived data in federal funding formulas. Reamer (2021) found 316 federal funding formulas that use census-derived data for distribution of federal funds to states and localities. Many of these programs fund services for children.

Table 5 shows the amount of money distributed in the largest sixteen federal programs that use census-derived data to determine how much money states and localities receive each year. Many of these programs focus on or include children.

Table 5. Largest 16 Federal Assistance Programs that Distribute Funds on Basis of Decennial Census-derived Data, Fiscal Year 2015		
Program Name	Department	Obligations
Medical Assistance Program (Medicaid)	HHS	\$311,975,766,352
Supplemental Nutrition Assistance Program (SNAP)		\$69,489,854,016
Medicare Part B (Supplemental Medical Insurance) – Physicians Fee Schedule Services	HHS	\$64,176,725,988
Highway Planning and Construction	DOT	\$38,331,904,422
Section 8 Housing Choice Vouchers	HUD	\$19,087,549,000
Title I Grants to Local Education Agencies (LEAs)	ED	\$13,859,180,910
National School Lunch Program	USDA	\$11,560,852,485
Special Education Grants (IDEA)	ED	\$11,233,112,681
State Children's Health Insurance Program (S-CHIP)	HHS	\$11,089,152,000
Section 8 Housing Assistance Payments Program (Project-based)	HUD	\$9,238,092,008
Head Start/Early Head Start	HHS	\$8,259,130,975
Supplemental Nutrition Program for Women, Infants, and Children (WIC)	USDA	\$6,347,680,031
Foster Care (Title IV-E)	HHS	\$4,635,733,000
Health Center Program	HHS	\$4,181,407,055
Low Income Home Energy Assistance (LIHEAP)	HHS	\$3,370,228,288
Child Care and Development Fund – Entitlement	HHS	\$2,858,660,000
Total		\$589,695,029,211
Source: Reamer, A.D., (2017).Counting for Dollars (Washington, DC: George Washington University)		

In addition, there are several programs which target young children. Table 6 shows four programs that specifically use data for the population ages 0 to 4 in the funding formulas.

Table 6. Four Federal Assistance Programs Using Population Age 0 to 5 in the Distribution Formula	
	Fiscal Year 2013 (in billions)*
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC Program)	\$6.5
Head Start	\$7.6
Child Care and Development Block Grant (mandatory plus discretionary)	\$5.1
Maternal and Child Health Services Block Grant to the States	\$0.6
<b>TOTAL</b>	<b>\$19.8</b>
Source: Programs that use data on population age 0 to 4 are identified in <i>Surveying For Dollars</i> , Andrew Reamer, The Brookings Institution, Washington, DC.	
* taken from <i>Children's Budget 2014</i> , First Focus, Washington, DC.	

If the Census data for places with large numbers or percentages of Black and Hispanic children underestimate the true population, the children in these places are in danger of not getting their fair share of resources.

### Conclusion

The data presented here strongly suggests that the high net undercount of young children that has been seen in the past several U.S. Censuses is likely to be seen the 2020 Census. This evidence underscores the wisdom of the Census Bureau's recent decision to establish a cross-directorate team within the Census Bureau focused on the undercount of young children. The cross-directorate team was announced the Census Scientific Advisory Committee meeting on September 23, 2021. The parameters of the work that will be undertaken by the cross-directorate team are still being discussed, but it will include work to lower the net undercount of young children in the 2030 Census as well as improvements in other Census Bureau products such as the American

Community Survey. Hopefully, the work of this effort will result in more accurate data for children in 2030 Census.

## References

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