Undercount (and Overcount) Issues For 2020 Census
@DataGeekB

## Differential Undercount = Overcount and Undercount



Today's topics:

- Demographics of differential undercount
- Reducing undercount
- Citizenship Q

Longer slide deck, with additional info, will be available on workshop website or Tweet me
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## Young Children Undercounted <br> 2010 Census Net Undercount Rate, Nationwide <br> 4 <br> 4114 <br> 

Source: U.S. Census Bureau. 2014. The Undercount of Young Children.
https://www.census.gov/content/dam/Census/library/working-papers/2014/demo/2014-undercount-children.pdf
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## Communities of Color Undercounted



Source: U.S. Census Bureau. Census Coverage Measurement Estimation Report.
https://www.census.gov/coverage measurement/pdfs/g01.pdf
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## Men Undercounted



Source: U.S. Census Bureau. Census Coverage Measurement Estimation Report.
$\underline{\text { https://www.census.gov/coverage_measurement/pdfs/g01.pdf }}$
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## Renters Undercounted

2010 Census Net Undercount Rate, Nationwide

2

1
0.6

0
-1


Owners
Renters

Source: U.S. Census Bureau. Census Coverage Measurement Estimation Report.
https://www.census.gov/coverage measurement/pdfs/g01.pdf
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## What May Make a Group "Hard to Count?"




## (A Few) Ways to Reduce Undercount and Overcount

- Complete Count Committees
- Community partnerships
- Advertising
- Language assistance
- Enumerating at known
unsheltered homeless locations
- Clear
instructions
- Deduplication



## "Nudges" to Help Count Everyone

How many people were living or staying in this house, apartment, or mobile home on April 1, 2020?

Number of people $=$ $\square$
2. Were there any additional people staying here on April 1, 2020 that you did not include in Question 1?
Mark $\bar{X}$ all that apply.
$\square$ Children, related or unrelated, such as newbom bables, grandchildren, or foster childrenRelatives, such as adult children, cousins, or in-lawsNonrelatives, such as roommates or live-in babysitters
$\square$ People staying here temporarily
$\square$ No additional people

## Citizenship Question Complicates the Count

## Is this person a citizen of the United States?

Yes, born in the United StatesYes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern MarianasYes, born abroad of U.S. citizen parent or parentsYes, U.S. citizen by naturalization - Print year of naturalization
$\square$No, not a U.S. citizen

Citizenship Question Raises Undercount Risk in All States, Especially California


## Young Children Most Likely to Live With a At Least One Noncitizen

Percent of U.S. Population Living With Noncitizen(s)


Ages 0-4


5-17

18-24


25-44


45-64


65 and older

Source: Author's calculations based on U.S. Census Bureau American Community Survey (2016). https://www.prb.org/citizenship-question-risks-a-2020-census-undercount-in-every-state-especially-among-children/ PRB | INFORM. EMPOWER. ADVANCE.

## Asian, Hispanic/Latino Populations Most Likely to Live with Noncitizen(s)

Percent of U.S. Population Living With Noncitizen(s)


Source: Author's calculations based on U.S. Census Bureau American Community Survey (2016)
https://www.prb.org/citizenship-question-risks-a-2020-census-undercount-in-every-state-especially-among-children/
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## Renters and Lower-income Households Most Likely to Live with Noncitizen(s)

Percent of U.S. Population Living With Noncitizen(s)


Source: Author's calculations based on U.S. Census Bureau American Community Survey (2016)
https://www.prb.org/citizenship-question-risks-a-2020-census-undercount-in-every-state-especially-among-children/
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Q 2019 Population Reference Bureau. All rights reserved. www.prb.org

## So What?

> "If everyone knows there's a problem, can't they just correct the data so everyone is using the right numbers?"

## At Risk Due to Undercount

- Nearly a trillion dollars* in federal funds
- Representation in Congress and Electoral College
*FY2016 distribution by state of $\$ 883.1$ billion from 55 large federal expenditure programs. Analysis by Andrew Reamer at George Washington Univ.

Risk: A Decade of UnderInvestment in Children




## Undercount of Children

- Neighborhood-level factors associated with undercount of children are not the same as those in the Low Response Score
- PRB and William O'Hare analyzed factors associated with child undercount


# Counting Young Children in the 2020 Census 

William P. O'Hare, O'Hare Data and Demographic Services, LLC Linda A. Jacobsen, Mark Mather, Alicia VanOrman, Kelvin Pollard Population Reference Bureau

Population Association of America Annual Meeting
April 11, 2019

EXCERPTED FROM: W. O'Hare, L. Jacobsen, M.Mather, A.VanOrman, K.Pollard. 2019. "Counting Young Children in the 2020 Census" http://paa2019.populationassociation.org/abstracts/193988

## The Net Undercount of Young Children is Getting Worse While the Coverage of Adults Has Improved

Net Undercount Rates (in Percentages) of Young Children and Adults in the Census: 1950-2010


Source: O'Hare (2015), Chapter 4
EXCERPTED FROM: W. O'Hare, L. Jacobsen, M.Mather, A.VanOrman, K.Pollard. 2019. "Counting Young Children in the 2020 Census" http://paa2019.populationassociation.org/abstracts/193988
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## Implications

- Net undercount of young children in the U.S. Census is a large and growing problem
- What are we going to do about it?
- What work is being done outside the Census Bureau on this issue?

EXCERPTED FROM: W. O'Hare, L. Jacobsen, M.Mather, A.VanOrman, K.Pollard. 2019. "Counting Young Children in the 2020 Census" http://paa2019.populationassociation.org/abstracts/193988
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## Project With Population Reference Bureau (PRB)

- Develop a new metric for predicting areas where young children will be more difficult to count in the 2020 Census
- Make the new measure widely available and easy to use


## Comparing Our Preliminary Model With Census Bureau's Model for Low Response Score

Seven Most Powerful Explanatory Variables in Our Undercount Model Compared With Seven Most Powerful Explanatory Variables in Erdman-Bates Low Response Score Model

| OUR UNDERCOUNT MODEL <br> (County Level) | ERDMAN-BATES LOW RESPONSE MODEL <br> (Census Tract Level) |
| :--- | :--- |
| Percent of children ages 0-4 who live with nonrelatives or <br> in group quarters | Number of persons per household |
| Percent of all households that have 7+ people | Percent of population ages 65+ |
| Percent of households that are linguistically isolated (no <br> one ages 14+ speaks English very well) | Percent of housing units that are renter-occupied |
| Percent of children ages 0-5 living with a grandparent <br> householder | Percent of housing units that are vacant |
| Percent of persons living in renter-occupied households | Percent of population that is non-Hispanic White |
| Percent of children ages 1-4 who have moved in the past <br> year | Median house value (in dollars) |
| Percent minority (Families with related children) | Percent of housing units that are single-unit structures | | Note: Variables negatively associated with net undercount/low-response score are shaded in orange. |
| :--- |
| Source: Erdman and Bates (2017), Public Opinion Quarterly. |
| EXCERPTED FROM: W. O'Hare, L. Jacobsen, M.Mather, A.VanOrman, K.Pollard. 2019. "Counting Young |
| Children in the 2020 Census" http://paa2019.populationassociation.org/abstracts/193988 |
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## Results Will Be Disseminated Widely

- The new tract-level risk metric and associated data will be disseminated widely to groups working on the 2020 Census through the following:
- PRB's social media platforms and website (www.prb.org)
- The 2020 HTC Map developed by Steven Romalewski at City University of New York (CUNY) (www.censushardtocountmaps2020.us/)
- The website of the 2020 Census Complete Count Committee for Young Children (www.countallkids.org)
- The Annie E. Casey KIDS COUNT network and Partnership for America's Children network
- The results will also be made available to the Census Bureau

EXCERPTED FROM: W. O'Hare, L. Jacobsen, M.Mather, A.VanOrman, K.Pollard. 2019. "Counting Young Children in the 2020 Census" http://paa2019.populationassociation.org/abstracts/193988
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## Quality Declines if Household Does Not Self-Respond

| If household does not selfrespond: | Correct Enumeration Rate per Response Type |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 100 | 97.3 | 93.4 |  |
| Enumerator attempts interview | 80 |  |  | 70.2 |
| Enumerator tries to collect proxy response (from neighbor) | 60 40 |  |  |  |
| Impute characteristics for whole household | 20 0 |  |  |  |
|  |  | Self-response | Interview (enumerator follow-up) | Proxy |

Source: J.Brown M.Heggeness S.Dorinski L.Warren M.Yi. 2019. "Predicting the Effect of Adding a Citizenship
Question to the 2020 Census." https://www.census.gov/content/dam/Census/newsroom/press-
kits/2019/paa/20190405\%20journal\%20paper\%20presentation.pdf
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## Citizenship Question and Decreased Household Self-Response

## - Based on citizenship question

- Census Bureau estimated 8.0 percentage point drop in selfresponse (to $28.1 \%$ ) among housing units potentially having at least one noncitizen (2017 ACS)
- 2.2 point drop in overall housing unit self-response
- Increased cost
- Estimated increases $\$ 55$ million for every percentage point increase in nonresponse follow up
- 2.2 percentage point change $\rightarrow$ estimated increased fieldwork cost $\$ 121$ million

Source: J.Brown M.Heggeness S.Dorinski L.Warren M.Yi. 2019. "Predicting the Effect of Adding a Citizenship Question to the 2020 Census." https://www.census.gov/content/dam/Census/newsroom/presskits/2019/paa/20190405\ journal\ paper\ presentation.pdf
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| Estimated Number |  | Total Population | Population Living in Household With At Least One Noncitizen |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Number | Percent |
| and $\%$ of | Total population | 323,128,000 | 44,824,000 | 14 |
| nd \% of | Age Group |  |  |  |
| Pooulation Living | 0 to 4 | 19,726,000 | 3,943,000 | 20 |
| Populaton -iving | 5 to 17 | 53,825,000 | 9,438,000 | 18 |
| in Households With | 18 to 24 | 31,018,000 | 4,813,000 | 16 |
|  | 25 to 44 | 85,147,000 | 15,103,000 | 18 |
| L Least One | 45 to 64 | 84,182,000 | 8,860,000 | 11 |
| Noncitizen, by | 65 and older | 49,228,000 | 2,665,000 | 5 |
| Noncitzen; by | Race/Ethnicity |  |  |  |
| Demographic | Hispanic/Latino | 57,390,000 | 25,775,000 | 45 |
|  | Asian* | 17,362,000 | 7,916,000 | 46 |
| Characteristics, | White* | 197,487,000 | 6,772,000 | 3 |
| $2016$ | Black* | 39,809,000 | 3,214,000 | 8 |
|  | Multiracial* | 7,689,000 | 726,000 | 9 |
|  | Other* | 741,000 | 226,000 | 30 |
| Non-Hispanic. Data for American | Native Hawaiian/Pacific Islander* | 533,000 | 153,000 | 29 |
| Indian/Alaska Native, Asian, Black, Native Hawaiian/Pacific Islander, Other, | American Indian/Alaska Native* | 2,117,000 | 42,000 | 2 |
| and White are for one race alone. | Citizenship |  |  |  |
| Source: Author's calculations based on U.S. Census Bureau American Community Survey (2016). https://www.prb.org/citizenship-question-risks-a-2020-census-undercount-in-every-state-especially-among-children/ | Citizen | 300,712,000 | 22,408,000 | 7 |
|  | Noncitizen | 22,415,000 | 22,415,000 | 100 |
|  | Housing Tenure |  |  |  |
|  | Renter | 110,685,000 | 24,306,000 | 22 |
|  | Owner | 204,362,000 | 20,065,000 | 10 |
|  | Poverty Status |  |  |  |
|  | Income below poverty | 44,208,000 | 9,369,000 | 21 |
|  | At or above poverty | 270,961,000 | 34,933,000 | 13 |
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