

Commentary paper

Commenting on An international perspective on the undercount of young children in the U.S. Census (DOI: 10.3233/SJI-161008)

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In 2013, I chaired a Census Bureau task force on the undercount of young children. Our goal was to determine what the Census Bureau knows, and perhaps more important what the Census Bureau could know, about the undercount of young children if existing data were examined. I am convinced that the 2010 Census undercounted children under the age of 5. The task force concluded that this undercount is real and that the Census Bureau had not given the issue adequate attention prior to the 2010 Census. The task force found that managers at the Census Bureau, including those responsible for 2010 coverage improvement and 2010 coverage measurement design, were largely unaware of this coverage concern.

This is changing. Senior Census Bureau managers have commissioned an inter-directorate team to research this issue and educate staff about the need to improve the methods used to count young children in the 2020 Census. In the past 18 months, the team conducted dozens of briefings with demographers, survey researchers, statisticians, and operational experts across the Census Bureau. As part of this research team, I had the opportunity to discuss this issue and encourage staff to look for opportunities to address this problem as they make decisions about 2020 methods.

As the research team began to measure the extent of this problem, we acknowledged that the Census Bureau does not possess any one perfect measure of cov-

erage, certainly not for young children. The tools available to measure quality, specifically, coverage error, all come with some flaws. The Census Bureau chose to use three different approaches to evaluate the quality of the 2010 Census – process indicators, comparisons with other estimates, and a post-enumeration survey. Our research team is looking closely at each of these approaches. While none of the 2010 research was optimized to study young children, each approach provides important clues that collectively are helping us to understand enumeration errors involving young children.

Process indicators such as participation and nonresponse rates and the results of coverage improvement and quality assurance operations describe key performance metrics known to be associated with error. In 2010, process indicators revealed problems with the misclassification of units as vacant. Operational analysis found greater numbers of nonresponding households requiring imputation of a count. Results from coverage improvement efforts confirmed that households made errors involving children when they completed their census forms. The team is studying the characteristics of the households that self-reported that they might have omitted a child in error and the characteristics of the young children that coverage improvement procedures identified as initially omitted in error. From these observations we are learning about the types of errors that respondents made in 2010 that in-

volved young children. We continue to study these operational results to look for correlates that may lead us to potential causes.

Comparisons with other estimates identify differences which may point to potential errors. The Census Bureau has a long history of using Demographic Analysis (DA) techniques to understand the age, sex, and racial composition of the population and how it has changed over time through the basic demographic processes of birth, death, and migration. In 2010, unlike in previous censuses, the Census Bureau acknowledged weaknesses with DA as a census evaluation tool and stated that differences between the DA estimates and the 2010 Census counts were not estimates of the net undercount of the census. Despite those cautions, we find these differences very appealing as a possible proxy for net undercoverage by age. But before doing this it is critical that we consider age-specific strengths and weaknesses. The national-level DA estimates for the youngest children appear to be very clean, given the high quality of birth records in the U.S. and the low migration rates expected for young children. As the population ages, however, we begin to see the potential for greater error in the DA estimates, suggesting the difference, when labelled as net undercoverage, may be misleading. I believe that we need to use the DA estimates with the fewest limitations (e.g., DA estimates of children under age 5) while exercising caution when we compare these estimates with other DA estimates with greater limitations (e.g., DA estimates for older children and adults). The research team is assessing how best to use available 2010 DA estimates.

Analysis from a post-enumeration survey provides detailed information about the quality of a sample of enumerations that allow us to draw conclusions about census errors. The 2010 Census Coverage Measurement (CCM) Program provides data on estimated net coverage error by characteristics including age. But CCM limitations are important to note. The production of accurate estimates of differential undercoverage (e.g., by age) is an ideal that the Census Bureau recognizes is never fully achieved. The 2010 CCM was technically complex with many underlying assumptions that were vulnerable to violation. We believe that

some of these assumptions may not hold for young children and for this reason we have chosen not to work with the CCM-based net undercount estimates. Instead, we limited our use of available CCM data, identifying the results with the fewest shortcomings. For example, we are analyzing micro-level results of the young children that the CCM included but were not found in the 2010 Census. Understanding the characteristics of these young children identify real examples of census errors.

As our team looks at process indicators, comparisons with DA and CCM data, we are starting to identify important results that are helping us to quantify the extent of this coverage problem. We have data that point us to households and children who appear to be most at risk of undercoverage. We are beginning to develop specific recommendations for changes in 2020.

There is no reason to believe that the types of errors observed in the U.S. differ in dramatic ways from those of other countries. It is very useful to look at what other countries, with their own methods of evaluation, have found. This paper finds that in many countries around the world, coverage evaluations have measured a net undercount of young children. This is important to acknowledge and validates the U.S. finding. The additional comparisons in this paper are less compelling to me. Based on the evaluation data in the U.S., it is likely that young children have some of the highest levels of undercoverage. Our measurement of coverage error for the older groups is less precise. Without information about the methods and potential weaknesses of the coverage measurement evaluations in other countries, the differences between the youngest and oldest children (or selected adult populations) may not be meaningful. The critical result is that censuses, in the U.S. and around the world, undercount young children and despite this finding, little is known about the basis for the problem. Efforts, such as those currently being undertaken at the Census Bureau, hold promise to inform a broad audience that shares this coverage problem. International collaboration on the topic of the undercount of young children in censuses is long overdue.