



Testimony

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2020 CENSUS

Census Bureau Needs to Ensure Transparency over Data Quality

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Strategic Issues

Accessible Version

December 3, 2020

Chairwoman Maloney, Ranking Member Comer, and Members of the Committee:

I am pleased to be here today to discuss the U.S. Census Bureau's (Bureau) progress to deliver apportionment counts for the 2020 Decennial Census. As you know, the census was taken under extraordinary circumstances. In response to the Coronavirus Disease 2019 (COVID-19) pandemic and related executive branch decisions, the Bureau made a series of late changes to the design of the census.

These changes affected the way the Bureau did its work as well as the time it took to do the work. The changes also introduced risks to the quality of data that the Bureau provides for congressional apportionment and redistricting purposes.¹ My bottom line today is that it will be important—both for transparency and ensuring public confidence in the quality of the 2020 Census—that the Bureau share key quality indicators in near real time as it releases apportionment and redistricting data.

Today, we are issuing the first in a series of planned reports that will assess the operations of the 2020 Census and identify lessons learned as planning begins for 2030. My statement today is based on that report entitled, *2020 Census: Census Bureau Needs to Assess Data Quality Concerns Stemming from Recent Design Changes*.² The report describes the key changes that the Bureau made in response to the COVID-19 outbreak and how those changes affect the quality of the census. For that work, we reviewed Bureau decision memos and planning documents. We also reviewed Bureau announcements related to the COVID-19 response and any characterizations of the resulting operational changes.

We interviewed Bureau officials to better understand downstream effects of operational changes made during the COVID-19 response, as well as to learn about any actions the Bureau is taking to monitor cost and quality effects of the changes. More detailed information on our objectives, scope, and methodology can be found in the issued report. Our work was

¹Census data are used, among other purposes, to apportion the seats of the U.S. House of Representatives and redraw congressional districts in each state.

²GAO, *2020 Census: Census Bureau Needs to Assess Data Quality Concerns Stemming from Recent Design Changes*, [GAO-21-142](#) (Washington, D.C.: Dec. 3, 2020).

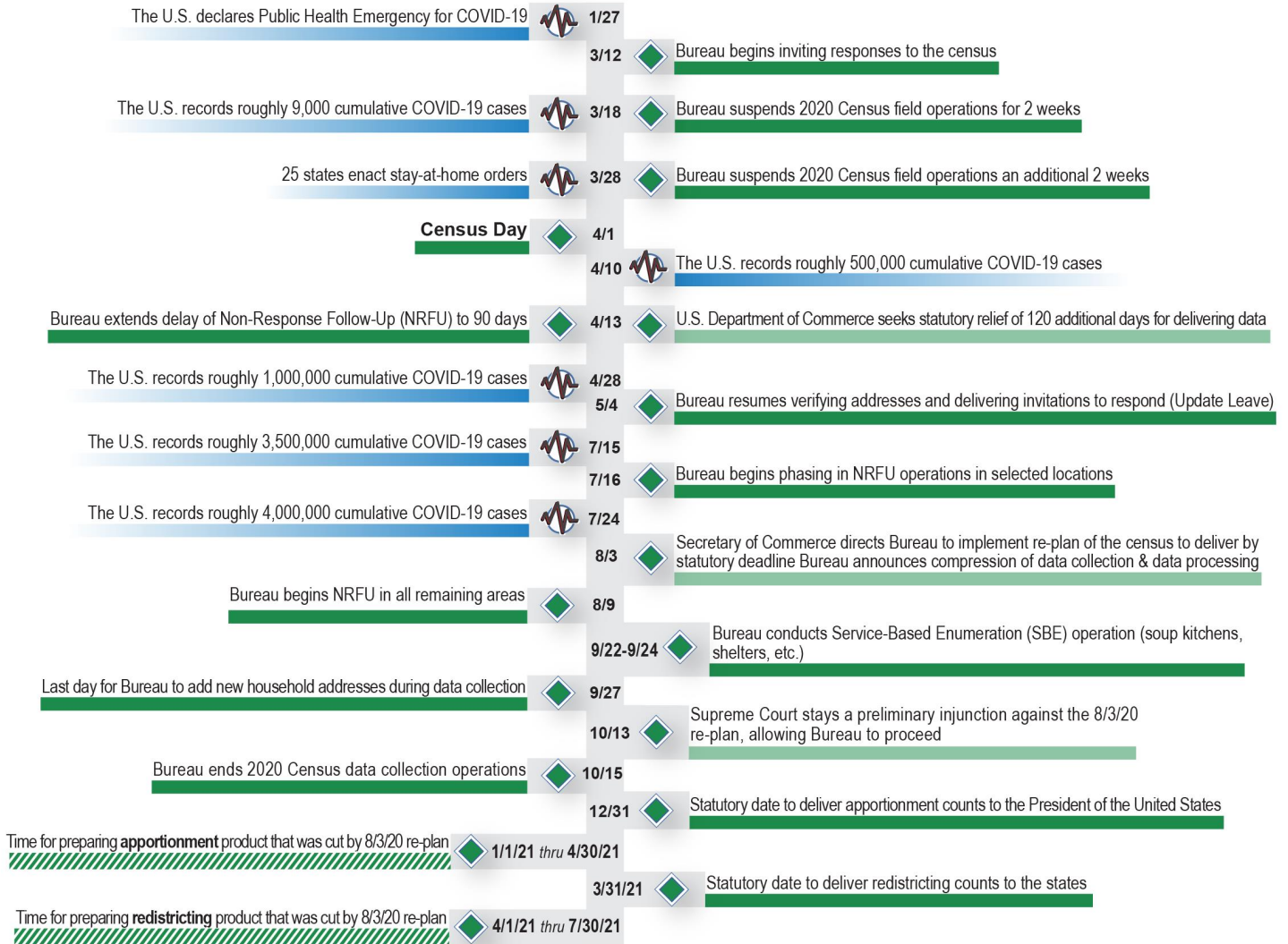
conducted in accordance with generally accepted government auditing standards.

Bureau Needs to Examine Effects on Data Quality of Its Design Changes in Response to COVID-19 and Related Executive Branch Decisions

As figure 1 shows, the changes to the Bureau's operations took place amid escalating COVID-19 case counts and state-level policy responses.

Figure 1: The Census Bureau Adjusted Its Operational Timeline during the COVID-19 Pandemic

2020 U.S. Census Bureau's (Bureau) Operations Timeline



Pandemic event denotes an occurrence external to the census that impacted Bureau decisions
 Operational development denotes a key marker of progress or a decision made in implementing 2020 operations

Source: Bureau documentation and data from the Centers for Disease Control and Prevention and John Hopkins University of Medicine. | GAO-21-262T

Initial suspensions. As part of its initial COVID-19 response and to promote the safety of its workforce and the public, the Bureau delayed its field operations multiple times. On March 18 and 28, 2020, the Bureau announced it would suspend operations for 2 weeks, respectively. In recognition of the pandemic's community spread, the Bureau on April 13,

2020, announced that it would extend the suspension of nonresponse follow-up (NRFU)—an operation where enumerators collect responses from households that had not yet self-responded—to a total of 3 months.

Plan for delayed delivery of population counts. Also on April 13, 2020, the Bureau and the Department of Commerce announced plans to deliver population counts for apportionment purposes by April 30, 2021, and for redistricting purposes by July 31, 2021—4 months later than the respective statutory deadlines. According to the announcement, the Department of Commerce had requested that Congress grant a 120-day extension to the Bureau’s reporting deadlines. The Bureau also announced an extension to the self-response period and planned to conduct the NRFU operation through October 31, 2020.

Gradual resumption of operations. The Bureau first resumed a revised Update Leave operation—where temporary staff verify addresses and deliver invitations to respond to the census—on May 4, 2020, and announced a phased approach to starting NRFU.³ Between July 16 and August 9, 2020, the Bureau deployed three waves of a “soft launch” of NRFU by area census offices (ACO) in areas that the Bureau deemed sufficiently safe.⁴

Time frames revised again to meet original statutory deadlines. On August 3, 2020, the Bureau announced that it would accelerate its operational time frames, as directed by the Secretary of Commerce, to deliver population counts for apportionment and redistricting purposes by the statutory deadlines—4 months earlier than the plan the Bureau was implementing. To meet the revised timeline, the Bureau announced that NRFU and the self-response period would now end on September 30, 2020—1 month earlier than previously announced. Bureau officials stated that streamlined post-data collection processing would account for the remainder of the necessary timeline compression.

The Bureau also announced a series of operational changes to meet the new timeframes. During the final 2 planned months of NRFU, enumerators received awards for working more hours in the field and

³During the resumption of operations, the Bureau instructed enumerators to no longer interview respondents about their address information when delivering questionnaires during Update Leave in order to minimize possible in-person contacts.

⁴The Bureau implemented field operations through a nationwide network of 248 ACOs, which oversee local recruiting and operations and are organizational subunits of offices in the Bureau’s six regions.

were also given the option in most places of making phone calls to collect data instead of making personal visits. Additionally, the Bureau implemented a revised NRFU contact strategy to make fewer-than-originally-anticipated visits to households self-reported as vacant on Census Day.

The Bureau also temporarily reduced the scope of its NRFU re-interview quality control operation and compressed the time that internal Bureau subject matter experts have to review apportionment population counts.

In September 2020, however, the U.S. District Court for the Northern District of California issued a preliminary injunction, staying the August 2020 design changes, enjoining the Bureau's adherence to the statutory deadlines, and requiring the Bureau to continue data collection through the end of October.⁵ On October 13, 2020, the Supreme Court granted a stay allowing the Bureau to cease data collection, while the appeal of the preliminary injunction continues to be reviewed by the United States Court of Appeals for the 9th Circuit.⁶ On October 15, 2020, the Census Bureau ended all data collection operations.

Processing census data. On November 20, 2020, senior Bureau officials told us that they are running into what the Bureau is referring to as anomalies as they process responses for the apportionment count. For example, as they integrate data in group quarter counts they are finding mismatches and duplicates. In addition, as they change the year for the date of birth to align with a person's age they have found that the system is sometimes aging people incorrectly. According to Bureau officials, processing anomalies are not unexpected, in that they occur with each census, and time is typically built into the schedule to identify and address them.

However, due to the compressed processing schedule for 2020, Bureau officials are unable to provide a firm date for when the apportionment counts will be delivered to the President, reiterating that the Bureau's plan is to provide the counts as close to December 31, 2020 as possible. We

⁵National Urban League v. Ross, Case No. 20-cv-05799 (N.D. Cal. Sept. 24, 2020) (order granting motion for stay and preliminary injunction). The Department of Justice, on behalf of the Department of Commerce and the Bureau, appealed the order. National Urban League v. Ross, Case No. 20-16868 (9th Cir., Sept. 25, 2020). When the 9th Circuit denied a stay of part of the preliminary injunction, the ruling was appealed to the U.S. Supreme Court.

⁶Ross v. National Urban League, Case No. 20A62, 592 U.S. ____ (2020).

have requested, but have not yet received, additional information and documentation from the Bureau on the anomalies, and will continue to monitor this situation and keep the Congress informed of what we learn.

Initial Indicators of Census Quality

The report we are releasing today discusses how late changes to the census design could affect data quality. The Bureau has numerous planned assessments and evaluations of operations which, in conjunction with its post-enumeration survey (PES)—a survey conducted independently of each census to determine how many people were missed or counted more than once—help determine the overall quality of the census and document lessons for future censuses.

The Bureau has multiple mechanisms to assess the quality of the 2020 Census. For example, through its Data Quality Executive Governance Group, the Bureau oversees several teams of officials dedicated to studying the effects on quality of the initial COVID-19 response, each with a set of objectives or near and long-term deliverables that they are planning in order to facilitate retrospective determinations of data quality. Addressing the concerns we highlight in our report as part of updating the Bureau's overall assessment of the quality of the 2020 Census will help to ensure public confidence and help the Bureau begin to plan for 2030.

We recommend in our report that the Secretary of Commerce and the Director of the U.S. Census Bureau update and implement assessments, evaluations, and coverage measurement efforts to address the effects of the Bureau's response to COVID-19 that we identified, including data quality concerns and potential operational benefits from innovations. The Department of Commerce agreed with that recommendation.

The American Statistical Association and the Census Scientific Advisory Committee (CSAC) issued numerous recommendations in the fall of 2020, including for the Bureau to document what it knows in near real-time about the quality of the population counts that it provides to the

President and to Congress.⁷ The Bureau is also working with a group of independent scientific consultants known as the JASON group to assess Bureau plans, processes, procedures, and metrics around 2020 Census data quality and help develop a near-term strategy for sharing indicators of the quality of census data that are produced for apportionment and redistricting purposes, according to Bureau draft documentation.

Transparency of 2020 Census Quality Indicators Can Provide the Public with Confidence in the Apportionment Counts

Consistent with our report and recommendation and the work of both the ASA and CSAC, my statement today highlights some of the census quality indicators that the Bureau should consider providing when it releases the apportionment counts. Transparency over what is known and not yet known about census quality would help to increase public and congressional confidence in the quality and completeness of the census despite all of the challenges the Bureau faced.

While the Bureau believes that self-response from households provides the most accurate data, in an attempt to count every person, the Bureau uses alternative data collection methods when it is unable to collect census data directly from the household. Looking at the rates at which the Bureau uses each of these alternative methods of data collection may provide some insight into the quality of the data collected as part of the 2020 Census.⁸ Nationwide rates provide a high-level indication of overall census quality. However, and very importantly, the Bureau also would need to examine the rates at which the Bureau uses these alternative methods at smaller levels of geography and by demographic group to provide a complete picture.

⁷American Statistical Association 2020 Census Quality Indicators Task Force, *2020 Census Quality Indicators*, (Alexandria, VA.: October 2020). The Census Scientific Advisory Committee is an advisory body to the Director of the Census Bureau and composes recommendations on major programs, such as the decennial census. The members advise the Bureau on the uses of scientific developments in, among other things, statistical data collection and statistical analysis, as they pertain to the full range of Bureau programs and activities.

⁸In addition to the information presented here on the use of administrative records and proxies in closing NRFU cases, the Bureau will likely provide additional information on the use of these methods in the Operational Assessments produced after the 2020 Census.

According to Bureau officials it has not provided data on use of these indicators at smaller levels of geography or by demographic group in previous censuses. Rather, since 1980, the Bureau has used its PES to produce measures of coverage errors for geographic areas and demographic groups. Bureau officials told us they understand the importance of providing this information below the national level to the public in as near real time as possible this decennial census and are working to provide those data. Bureau officials cautioned that variations will exist at the more granular level and they will not be able to fully understand those variations and would need to further study those variations before drawing any conclusions.

- **Proxy responses for occupied, vacant, and nonexistent housing units:** The Bureau uses proxy responses—information from a neighbor or other knowledgeable person about a household—to collect data when a resident of the household is not available or cannot be found during the NRFU operation. Proxy responses are also allowable after one unsuccessful contact attempt to an address considered vacant or nonexistent and after three unsuccessful contact attempts for addresses considered occupied. For the 2020 Census, preliminary results indicate that, nationally, the Bureau enumerated approximately 7.4 million occupied households using proxies, or 24.1 percent of occupied households in the NRFU workload, and identified approximately 9.9 million housing units as vacant and 3.4 million housing units as nonexistent.

By comparison, for the 2010 Census, the Bureau reported that nationally, a proxy was the respondent for approximately 23.8 percent of occupied households (6.8 million households), approximately 97.5 percent of vacant housing units (13.8 million housing units), and approximately 90 percent of nonexistent housing units (3.6 million housing units) in the NRFU workload.

- **Population-count only responses:** The Bureau receives incomplete NRFU interviews in cases where an enumerator is unable to complete the entire census questionnaire for a household with either a household member or a proxy. Enumerators are directed to try to obtain, at a minimum, an indication of the household status (vacant, not a household, or occupied) and, if occupied, the number of the people in the housing unit by talking to a proxy. These are referred to as population-count only responses. The total number of population-count only responses can be an indicator of the quality of data collected. According to Bureau officials, the number of population-count only responses for the 2020 Census is not yet available. Moreover, according to Bureau officials in 2010, the number of

households enumerated with population-count only responses was not reported.

- **Administrative records responses:** The Bureau incorporated increased use of administrative records into the design of the 2020 Census as a major cost saving innovation and to improve the overall quality of the data. Administrative record data refer to information from federal and state governments and third-party vendors that people have already provided, such as, information from the United States Postal Service, the Internal Revenue Service, the Social Security Administration, the 2010 Census, and the American Community Survey.

These data are used to identify vacant and non-housing units and to enumerate occupied households if, after one visit, a NRFU contact attempt was not successful. Specifically, for some households, after one visit, the Bureau used administrative records it determined in advance of NRFU met a certain quality threshold. According to preliminary Bureau data, after a single NRFU attempt, the Bureau was able to resolve 13 percent of NRFU cases (8 million cases) that were either occupied, vacant, or not a housing unit using administrative records.

The Bureau also used administrative records to resolve an additional approximately 450,000 cases (0.73 percent of the NRFU workload, according to preliminary data). Specifically, in the final phases of the NRFU operation, households that received the maximum number of contact attempts (typically six) were reopened. For these households, if the Bureau was still unable to conduct an interview, then the Bureau used administrative records that met the Bureau's quality standards. According to Bureau planning documents, while these administrative records used at the end of NRFU do not meet the threshold for early removal after the first visit, they do provide adequate data to support apportionment.

The Bureau's original plan had been to use an administrative record in the final phase of NRFU to determine the population of a household only when corroborated by a second administrative record. However, as part of its plans to meet the statutory date for delivering apportionment data on December 31, the Bureau decided, after NRFU had already begun, to enumerate some cases using a single source of administrative records when available.

This decision to use a single source of administrative records introduced a data quality risk, since there is no corroborating source. Bureau officials said that they will be examining the effects on quality

of the late design changes to the use of administrative records. However, the Bureau believes that the risk to overall data quality should be mitigated by the fact that the Bureau only used such single source records for households that lack a population count during the final stage of NRFU, after most households have already been counted. The Bureau is still working on an estimate on the extent of use of single source records. In total, according to preliminary data, the Bureau used administrative records to close NRFU cases for 8.4 million households (approximately 14 percent of the NRFU workload), or approximately 5.6 percent of households nationwide.

- **Count imputation:** To resolve missing household responses following data collection, as it did in 2010, the Bureau is using for 2020 a technique it refers to as count imputation, which draws data from similar nearby households to determine whether a housing unit exists, whether it is occupied, and, if so, by how many people. The Bureau has used some form of imputation since the 1940 Census, and reported on the use of imputation in its operational assessment reports for the 2010 Census.

According to Bureau reporting, in 2010, about 500,000 of 137 million addresses counted in the decennial (0.4 percent) were missing an entire response and the Bureau therefore used count imputation to determine a combination of their residence and occupancy status and household size.⁹ The Bureau's count imputation in 2010 added about 1.2 million people to the final census count. According to Bureau officials, data on count imputation for the 2020 Census is not yet available.

As the 2020 Census continues, we are monitoring the Bureau's response processing operations. Our work will continue to examine the quality and cost implications of the Bureau's COVID-19 response and late design changes. As we begin to look forward to the initial planning for the 2030 Census, we will also report on the Bureau's experience with its innovations to the 2020 Census and any lessons learned that can inform 2030 planning.

⁹The Bureau imputed whether an address was livable for 0.12 percent of addresses, whether it was occupied or vacant for 0.03 percent, and its household size for 0.24 percent.

Chairwoman Maloney, Ranking Member Comer, and Members of the Committee, this completes my prepared statement. I would be pleased to respond to any questions that you may have.

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