

## BRIEF #2

# 2018 Census E2E Test

## RESULTS & CHALLENGES FOR THE 2020 CENSUS

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### KEY TAKEAWAYS

- The self-response rate for the 2018 End-to-End Test was 52.3%, though it varied by race, homeownership, and Hispanic origin, among other characteristics. Most self-respondents answered the survey online.
- Challenges for the 2020 Census include the hiring of enumerators and other field staff, the readiness of the IT support systems, and distrust as a result of the proposal of the citizenship question (which was later rejected).
- Due to uncertain funding, the test did not include essential programs and operations focused on counting hard-to-count populations, and peak operations in the two of the planned locations for the test were cancelled.

The 2018 End-to-End (E2E) Census Test was the most comprehensive evaluation of census operations and systems before early 2020 Census operations begin in January 2020.<sup>1</sup> The test illuminated challenges related to the recruitment, hiring, and training of enumerators; the identification of vacant housing units; the preparation and scaling-up of the Information Technology (IT) systems; and heightened distrust and fear as a result of the proposal of the citizenship question (which was later rejected). While the Census Bureau has made progress in implementing mitigation and contingency plans to address risks since the test,<sup>2</sup> the 2020 Census remains on the Government Accountability Office's (GAO's) list of high-risk projects.<sup>3</sup>

### RECRUITMENT, HIRING, & TRAINING

The Census Bureau hired over 700 enumerators (the Census Bureau employees who follow up in person with households who have not self-responded) for the 2018 E2E Test in Rhode Island—short of the bureau's hiring goal.<sup>4</sup> Despite the hiring shortfall, the bureau believes that increased productivity made up for the staffing shortfalls.<sup>5</sup> According to the Census Bureau, enumerators were approximately

50% more productive than in the 2010 Census, primarily due to the implementation of new automated systems that optimized driving routes and assignments, as well as a new census application on the iPhones utilized by enumerators.<sup>6, 7</sup>

GAO, on the other hand, raised concerns about the efficiency and productivity of the enumerators. GAO observed that some enumerators were uncertain about how to perform the core duties of their roles. For example, they did not know when to use their own discretion to deviate from the automated systems when performing enumeration duties.<sup>8</sup> Further, supervisors did not have the information or authority to help enumerators with procedural questions. As a result, enumerators went to higher level Census Bureau staff with questions, resulting in inefficiencies.<sup>9</sup> Finally, the Census Bureau lacked standardized mid-operations training and guidance for new procedures implemented during the 2018 test, which resulted in insufficient preparation and confusion among enumerators.<sup>10</sup>

The tight labor market could make it more difficult for the Census Bureau to hire and retain enough qualified enumerators, field supervisors, and other temporary staff for the 2020 Census. The bureau plans to target recruitment advertisements towards people who can work on weekends and evenings, which are the best times to follow up with households who have not self-responded.<sup>11</sup> The 2018 E2E Test showed that the Census Bureau had difficulty in hiring enumerators to work on Saturdays.<sup>12</sup>

Under federal law, non-citizens are not eligible to work in census positions. The exclusion of work-eligible non-citizens has raised concerns from stakeholders, such as NALEO, who argue that the policy could make it harder to hire enough bilingual enumerators who are familiar with historically hard-to-count communities.<sup>13</sup> In past decennial censuses the bureau obtained a waiver from federal agencies to hire non-citizens with work authorization in outreach and enumerator positions. The bureau has stated that it would potentially hire non-citizens with work authorization in situations in which citizens are not available for Census 2020. As of July 2019 the U.S.

citizenship requirement is on the online application for census jobs and it remains unclear how non-citizen applicants will be informed of their potential eligibility for census jobs.<sup>14</sup> Overall, the challenges related to hiring could make it difficult for the Census Bureau to employ a sufficient number of qualified field staff for the 2020 Census.<sup>15</sup>

## ENUMERATION

The enumeration phase of the test was conducted from March 16, 2018 to August 31, 2018 in Providence County, Rhode Island.<sup>16, 17</sup> Due to funding uncertainty, peak operations were not tested at the other two planned sites: Bluefield-Beckley-Oak Hill area of West Virginia, and Pierce County, Washington.<sup>18</sup> The canceled tests in West Virginia and Washington were missed opportunities to evaluate how census operations would perform in places with low-internet connectivity, military bases, and American Indian reservations and tribal lands—and to mitigate potential challenges to counting those areas.<sup>19</sup>

## SELF-RESPONSE

The Census Bureau evaluated two self-response contact strategies to reach 277,000 housing units.<sup>20</sup> Approximately 70% of households (~195,000 households) received a letter in the mail that prompted them to respond to the census questionnaire online (“Internet First”). The remaining 29.7% of households (~82,000 households) received in the mail a paper questionnaire and information about how to respond online (“Internet Choice”).<sup>21</sup> Approximately 78% of housing units received English questionnaires, and approximately 21% of housing units received the bilingual (English/Spanish) questionnaires.<sup>22</sup>

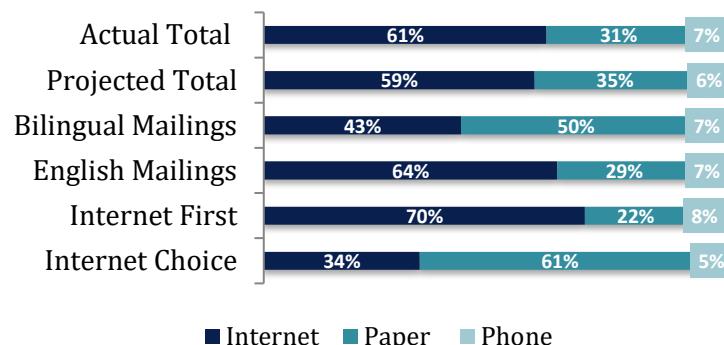
The overall self-response rate (i.e., the percent of households who responded online, by telephone, or using a paper questionnaire) was 52.3%, which exceeded the Census Bureau’s projected 49.3% self-response rate.<sup>23</sup> However, the self-response rate varied among groups. Approximately 75% of homeowners self-responded to the census questionnaire, compared to only 48% of renters.<sup>24</sup> While 68% of White respondents self-responded, just 59% of Asian respondents, 42% of Hispanic respondents, 44% of American Indian and Alaska Native respondents, 39% of Black respondents, and 37% of Native Hawaiian and Pacific Islander respondents did so.

The majority (61%) of self-responses were submitted online, followed by paper questionnaire (31%) and phone (7%).<sup>25</sup> The NALEO Educational Fund conducted a survey of Providence County residents who participated in the E2E Test, and found that, among those surveyed, 40% of Latinos reported that they self-responded using a paper

questionnaire, 35% of Latinos gave their responses to an enumerator in person, and just 20% self-responded online. (Another 3% said they responded by phone and 4% were not sure.)

Other groups who may prefer not to respond online or face barriers to responding online include those with lower access to the internet, such as people with disabilities<sup>26</sup> and people living in some rural areas.<sup>27</sup> Outreach and education campaigns must address this reality—and work to ensure that all households are aware of the full range of response options which will be available, including phone assistance and paper questionnaires.

**Figure 1. 2018 E2E Test Self-Response Breakdown**



Source: US Census Bureau, 2019

## UPDATE LEAVE

The Update Leave (UL) operation focuses on housing units located in areas where most residences do not have mail delivered or where mailing addresses cannot be verified.<sup>28</sup> Field staff walked every street in UL areas, to “update” the address file and “leave” a package of census materials at the door (if no one answered to accept the packet in person) containing an invitation to respond online, information about the toll-free telephone lines, and a paper questionnaire. According to the Census Bureau, the test successfully used the Listing and Mapping Application (LiMa) to help enumerators add missing housing units to the address list for their assigned area in real time.<sup>29</sup>

## GROUP QUARTERS

According to the Census Bureau, the 2018 test successfully integrated new policies and procedures that supported a paper-based operation for counting people living in Group Quarters (GQs). Examples of group quarters living arrangements include hospitals and shelters for people experiencing homelessness.<sup>30</sup>

The Group Quarters operation included Service-Based Enumeration (SBE), which is an operation that counts

people experiencing homelessness at the places where they receive services (e.g., meal centers) and at targeted (pre-identified) non-sheltered outdoor locations.<sup>31</sup> To ensure that people living in GQs were counted, enumerators and group quarters administrators provided the bureau with paper listings of census response data for each person who was served or was staying at the service-based locations.<sup>32</sup>

## 52.3% Self-Response Rate

More than half of households responded to the test on their own

### NONRESPONSE FOLLOW-UP

During the Nonresponse Follow-Up (NRFU) operation enumerators visited housing units that did not self-respond during the initial response period.<sup>33</sup> The NRFU operation is the largest, costliest decennial census operation.<sup>34</sup> NRFU is crucial to ensuring a fair and accurate count.

The operation utilized new automated processes for assigning work to enumerators and a smartphone (iPhone) application for collecting data in the field. The automated case management system did not allow non-headquarters staff to assign multiple cases to an enumerator at one time. Therefore, field managers had to manually assign thousands of cases to enumerators during the late stages of the operation.<sup>35</sup> The bureau was unable to finalize standard procedures for data collection for the late stages of the NRFU operation, resulting in uncertainty about the effectiveness of these procedures.<sup>36</sup>

The NRFU operation used administrative data to remove unoccupied housing units from the list of addresses for follow-up before enumerators began their door-to-door visits.<sup>37</sup> There were significant challenges in differentiating between vacant and occupied addresses; the Census Bureau found that a significant portion of addresses designated as vacant based on the U.S. Postal Service “Undeliverable As Addressed” (UAA) file were actually occupied.<sup>38</sup> In the 2020 Census, enumerators will visit each unresponsive housing unit at least once, even if the unit is designated as “vacant” in the administrative data.<sup>39</sup> (Previously, the 2020 Census plan only called for mailing one follow-up postcard to households designated as vacant in the UAA file.)

At the follow up visit, census takers will try to determine if the unit is indeed vacant by knocking and looking for evidence that it is occupied (e.g., lights are on, there are toys in the yard, or a neighbor says that someone is living there).<sup>40</sup> A determination of possible occupancy, even if the attempted contact is unsuccessful, will shift the address back into the NRFU workload for subsequent visits.

### IT SYSTEMS & CYBERSECURITY

The Census Bureau plans to use new information technology (IT) applications and systems for the 2020 Census. As of April 30, 2019, the bureau has evaluated 44 of the 52 IT systems planned for use in the 2020 Census.<sup>41</sup> Further development and testing, however, is necessary. GAO reviewed the processes and results of the 2018 E2E Test and observed numerous challenges with the IT systems including difficulties managing schedules, contracts, and costs, as well as challenges related to internal coordination and cybersecurity.<sup>42</sup>

Necessary changes and improvements to systems are tracked in a plan of action and milestones (POA&M). As of March 2019, there were over 500 open Plan of Action and Milestones (POA&Ms)—including 247 considered high-risk or very high-risk. In April 2019, GAO determined that the bureau may not meet its near-term IT system development and testing schedule milestones for the address canvassing that listers will use or for the peak recruiting and hiring systems.<sup>43</sup>

According to GAO, the Census Bureau identified about 3,100 security weaknesses in the IT systems being developed for the 2020 Census.<sup>44</sup> IT systems were deployed in tests before the security of all of the system components were assessed.<sup>45</sup> GAO also determined that, “as of March 2019, the bureau had over 500 corrective actions from its security assessments that needed to be addressed, including nearly 250 that were considered “high-risk” or “very high-risk.”<sup>46</sup> Of the 250 corrective actions that had higher probabilities of risk, 115 actions are delayed (70 of which for 60 or more days).<sup>47</sup> Approximately 86% of systems contain personally identifiable information.

The bureau conducted the Census Barriers, Attitudes, and Motivators Study (CBAMS) from February to April 2018 in all 50 states and Washington, DC. CBAMS results indicate that data confidentiality and privacy are important concerns among respondents.<sup>48</sup> The Census Bureau must be able to reassure the public that its cybersecurity systems have been fully tested and are prepared for external threats. The bureau also must proactively work with other parts of the federal government, private sector (e.g., Google and Facebook), advocacy groups, and civil society to find and shut down fake census websites, and educate the public on how to avoid phishing emails that could attempt to steal respondents’ personal information. To this end, the Census Bureau has been working closely with the Department of Homeland Security (DHS) on efforts to identify and respond to potential cybersecurity threats.<sup>49</sup>

## WHAT WAS NOT INCLUDED IN THE E2E TEST?

### PARTNERSHIPS & ADVERTISING

The 2020 Census plan includes a robust campaign called the Community Partnership and Engagement Program (CPEP) to engage local community partners and Complete Count Committees (CCCs) to increase self-response—especially for traditionally hard-to-count groups.

Most states have formed CCCs, as have the District of Columbia and Puerto Rico.<sup>50</sup> The Census Bureau planned to hire 1,501 partnership specialists for the decennial census by June 30, 2019.<sup>51</sup> As of July 2019 the bureau has hired approximately 900 partnership specialists.<sup>52, 53</sup>

Although there were informal partner outreach efforts which included meetings with community groups, the 2018 E2E Test did not include a dedicated partner outreach or community engagement program. The E2E Test also did not include a paid advertising campaign.<sup>54</sup> The lack of a formal partnership program and advertising campaign could have affected self-response rates and contributed to hiring shortfalls.

### COVERAGE MEASUREMENT

Coverage measurement is the estimation of how many housing units or individuals were missed or counted in error in the census. Coverage measurement was planned for the E2E Test to evaluate the quality of the collected data using a Post-Enumeration Survey (PES). Due to budgetary concerns, however, the coverage measurement operation was not implemented.<sup>55</sup> As a result, operational issues may have gone undiscovered and opportunities to improve the operation may have been missed.

### CITIZENSHIP QUESTION & DISTRUST

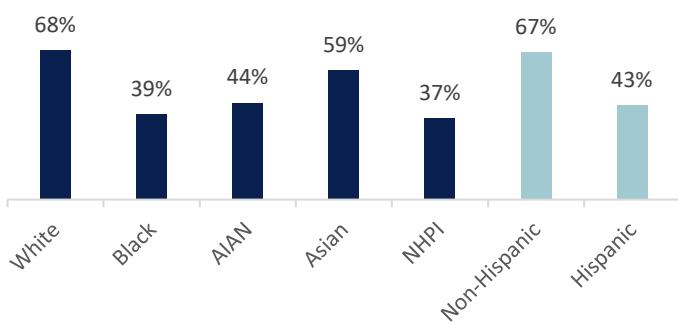
In March 2018, Secretary of Commerce Wilbur Ross directed the Census Bureau to add a question asking about citizenship to the 2020 Census.<sup>56</sup> The question was then challenged in court by a broad coalition of advocacy groups and several states. In July 2019, the Supreme Court ruled that the citizenship question could not be included without a plausible justification. Ultimately, the Trump Administration decided to stop pursuing the question.<sup>57</sup>

The inclusion of the citizenship question was announced while the E2E Test was underway and was not included in the questionnaire completed by respondents in Rhode Island. NALEO Educational Fund's survey found that both foreign-born and U.S.-born individuals, regardless of Latino ethnicity, believed that the citizenship question would raise anxiety about participating in the 2020 Census and that the announcement of the question impacted their community's participation in the E2E Test.<sup>58, 59</sup>

The CBAMS survey found that 47% of respondents believe that the census is used to locate people living in the country without documentation,<sup>60</sup> despite strict federal laws prohibiting any use of census responses beyond compilation of anonymous statistical datasets.<sup>61</sup>

Although the citizenship question will not be included in the 2020 Census, the proposal to include the question has heightened concerns among immigrant and other hard-to-count communities about participating in the 2020 Census.<sup>62</sup> Outreach efforts are important in order to reach these communities and help ensure they are counted accurately in 2020.

**Figure 2. E2E Test Response Rates Varied by Race & Hispanic Origin**



Source: US Census Bureau, 2019

## **ACKNOWLEDGEMENTS**

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References are listed as URLs for brevity.

<sup>1</sup> <https://www2.census.gov/programs-surveys/decennial/2020/program-management/pmr-materials/01-26-2018/pmr-2020-slides-01-26-2018.pdf>

<sup>2</sup> <https://www.gao.gov/assets/710/700440.pdf>

<sup>3</sup> Ibid.

<sup>4</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>5</sup> Ibid.

<sup>6</sup> Productivity increased from 1.015 cases per hour in 2010 to 1.5 cases per hour in the 2018 E2E Test.

<sup>7</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>8</sup> <https://www.gao.gov/assets/700/695874.pdf>

<sup>9</sup> Ibid.

<sup>10</sup> Ibid.

<sup>11</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>12</sup> <https://www.gao.gov/assets/700/695874.pdf>

<sup>13</sup> <https://www2.census.gov/cac/nac/meetings/2018-06/vargas-discussant-remarks-2020-census.pdf>

<sup>14</sup> [https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/1489/attachments/original/1558496505/1.TheCommunitySpeaks-Report\\_1.pdf](https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/1489/attachments/original/1558496505/1.TheCommunitySpeaks-Report_1.pdf)

<sup>15</sup> [https://uploads-ssl.webflow.com/59fb4f76691c1b000103c309/5bdb6b84a310d350165b9ba4\\_Field\\_recruitment\\_white\\_paperpdf.pdf](https://uploads-ssl.webflow.com/59fb4f76691c1b000103c309/5bdb6b84a310d350165b9ba4_Field_recruitment_white_paperpdf.pdf)

<sup>16</sup> <https://www2.census.gov/programs-surveys/decennial/2020/program-management/pmr-materials/01-26-2018/pmr-2020-slides-01-26-2018.pdf>

<sup>17</sup> Address Canvassing was conducted in Providence, Rhode Island, West Virginia, and Washington from August 28, 2017 to October 6, 2017.

<sup>18</sup> <https://www2.census.gov/cac/sac/meetings/2017-09/hull-2018-address-canvassing.pdf>

<sup>19</sup> <http://www.georgetownpoverty.org/wp-content/uploads/2018/07/GCPI-ESOI-E2E-Test-Memo-20180713.pdf>

<sup>20</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>21</sup> Ibid.

<sup>22</sup> Ibid.

<sup>23</sup> Note: For bilingual questionnaires a much lower percentage of respondents chose to respond online. Most responses were submitted via paper questionnaire (50%), followed by online responses (43%), and phone responses (7%).

<https://www.census.gov/newsroom/blogs/director/2018/09/final-census-test-proves-successful.html>

<sup>24</sup> <https://www2.census.gov/cac/nac/meetings/2019-05/fontenot-update-on-2020-Census.pdf?#>

<sup>25</sup> Ibid.

<sup>26</sup> <http://www.georgetownpoverty.org/wp-content/uploads/2019/07/People-with-Disabilities-Brief.pdf>

<sup>27</sup> <http://www.georgetownpoverty.org/wp-content/uploads/2018/10/GCPI-ESOI-Counting-Rural-America-20181010.pdf>

<sup>28</sup> [https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/UL\\_detailed\\_operational\\_plan.pdf](https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/UL_detailed_operational_plan.pdf)

<sup>29</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>30</sup> <https://www.census.gov/2018censustest/gq>

<sup>31</sup> <https://www.census.gov/programs-surveys/decennial-census/2018-census-test/test/providence/group-quarters/sbe.html>

<sup>32</sup> Ibid.

<sup>33</sup> <https://www.census.gov/programs-surveys/decennial-census/2020-census/planning-management/planning-docs/operational-plan.html>

<sup>34</sup> <https://www.gao.gov/assets/700/695874.pdf>

<sup>35</sup> Ibid.

<sup>36</sup> Ibid.

<sup>37</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>38</sup> <https://www2.census.gov/programs-surveys/decennial/2020/program-management/pmr-materials/02-01-2019/pmr-op-plan-2019-02-01.pdf?#>

<sup>39</sup> <https://www2.census.gov/programs-surveys/decennial/2020/program-management/planning-docs/2020-oper-plan4.pdf>

<sup>40</sup> Ibid.

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<sup>41</sup> <https://www.gao.gov/assets/700/698794.pdf>

<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> <https://www.gao.gov/assets/700/694169.pdf>

<sup>45</sup> Ibid.

<sup>46</sup> <https://www.gao.gov/assets/700/698794.pdf>

<sup>47</sup> Ibid.

<sup>48</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/mcgeeney-evans-cbams.pdf?#>

<sup>49</sup> <https://www.gao.gov/assets/700/698794.pdf>

<sup>50</sup> <https://www.census.gov/newsroom/press-releases/2019/census-day-briefing.html>

<sup>51</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/olmedo-malagon-johnson-cisneros-partnership.pdf?#>

<sup>52</sup> <https://www.sfgate.com/news/us/article/Government-watchdog-Census-Bureau-running-short-14121170.php>

<sup>53</sup> Note: As of July 2019, 830 applicants were waiting to have their background checks completed for the partnership specialist positions.

<sup>54</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/fontenot-2020-update.pdf?#>

<sup>55</sup> <https://www.gao.gov/assets/710/700440.pdf>

<sup>56</sup> <https://www.npr.org/2018/11/04/661932989/how-the-2020-census-citizenship-question-ended-up-in-court>

<sup>57</sup> <https://www.politico.com/story/2019/07/11/trump-expected-to-take-executive-action-to-add-citizenship-question-to-census-1405893>

<sup>58</sup> [https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/190/attachments/original/1544560063/ETE\\_Census\\_Report-FINAL.pdf?1544560063](https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/190/attachments/original/1544560063/ETE_Census_Report-FINAL.pdf?1544560063)

<sup>59</sup> Ibid.

<sup>60</sup> <https://www2.census.gov/cac/nac/meetings/2018-11/mcgeeney-evans-cbams.pdf?#>

<sup>61</sup> <https://www.brennancenter.org/what-census>

<sup>62</sup> [https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/190/attachments/original/1544560063/ETE\\_Census\\_Report-FINAL.pdf?1544560063](https://d3n8a8pro7vhmx.cloudfront.net/naleo/pages/190/attachments/original/1544560063/ETE_Census_Report-FINAL.pdf?1544560063)