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2020 CENSUS

Progress Report on Using Administrative Records to Control Enumeration Costs

Statement of Robert Goldenkoff, Director,
Strategic Issues

Accessible Version

GAO Highlights

Highlights of [GAO-16-206T](#), a testimony before the Subcommittees on Government Operations and Information Technology, Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

With a life-cycle cost of about \$13 billion, the 2010 Census was the most expensive U.S. census in history and was 56 percent more costly than the \$8.1 billion 2000 Census (in constant 2010 dollars). The Bureau estimates that its use of administrative records in the 2020 Census will reduce the cost compared to traditional census methods by \$1.4 billion.

Given the potential cost savings associated with the use of administrative records, this testimony, which is based on a report GAO released last month, focuses on (1) the Bureau's plans for using administrative records, and the opportunities and challenges the Bureau faces going forward; and (2) the key assumptions supporting estimates of expected cost savings. To meet these objectives, GAO reviewed Bureau planning documents and test plans, and interviewed Bureau officials. GAO also relied on its Schedule Assessment Guide.

What GAO Recommends

In its report issued last month GAO recommended that the Census Director set deadlines for making final decisions about which records to use, and for what purpose. This will help ensure the Bureau's resources focus on those activities that show the most promise for reducing enumeration costs. The Department of Commerce—the Bureau's parent agency—concurred with GAO's findings and recommendation.

View [GAO-16-206T](#). For more information, contact Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov.

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2020 CENSUS

Progress Report on Using Administrative Records to Control Enumeration Costs

What GAO Found

The U.S. Census Bureau (Bureau) estimates that it can save around \$1.4 billion using administrative records, compared to relying solely on traditional enumeration methods. While the Bureau has made some limited use of administrative records during past decennials, it plans to use them much more extensively in 2020 to achieve these savings.

For example, the Bureau plans to use administrative records to reduce the field work required for its most expensive census operation—nonresponse follow-up—when temporary Bureau employees knock on doors across the country to obtain information from people who did not respond to the census, or who were missed by census mailings. According to the Bureau, using administrative records to (1) identify vacant housing units; (2) identify and enumerate occupied nonresponding housing units when the records meet a certain quality threshold; and (3) predict the best times to visit a household can generate substantial cost savings. The Bureau is also exploring the feasibility of nine additional uses of administrative records that could reduce costs and improve the quality of the census still further. The Bureau already has access to nearly all of the data sources it needs to achieve the desired cost savings. It is also working to gain access to additional databases that could help improve its ability to find historically hard-to-count populations, such as certain minority groups and young children. While the Bureau is to be commended for its efforts to expand its use of administrative records, going forward, it will be important to set deadlines to help ensure it makes timely decisions on these other databases and uses of administrative records. According to Bureau officials, final decisions on the use of administrative records are needed by the end of fiscal year 2017 so the records can be adequately tested in the Bureau's full end-to-end test in 2018. However, these deadlines do not appear in schedule documents.

It will also be important for the Bureau to address key challenges to using administrative records, including (1) ensuring the quality of the records it receives from other government agencies; (2) protecting confidential data; and (3) ensuring congressional and public acceptance of the Bureau's plan to share personal data across government agencies. The Bureau's ongoing research and testing efforts can help with the first challenge. Fully implementing our prior recommendations to strengthen the security of its information systems and to develop a congressional outreach strategy could help address the second and third challenges.

Key assumptions the Bureau used in estimating potential cost savings from administrative records are logical, and the Bureau plans to provide additional support for them. For example, the Bureau's assumption that it could reduce its follow-up workload follows clearly from the Bureau's use of administrative records to remove vacant units from among those housing units needing follow-up because people did not respond to the census, reducing that workload by 11.6 percent. The Bureau released an updated life-cycle cost estimate in October 2015, and GAO anticipates reviewing its reliability after the Bureau makes support for the estimate available.

Chairmen Meadows and Hurd, Ranking Members Connolly and Kelly, and Members of the Subcommittees:

I am pleased to be here today to discuss the U.S. Census Bureau's (Bureau) efforts to control the cost of the 2020 Census by making greater use of information already provided to federal and state governments as they administer other programs—what is referred to as “administrative records.” With a life-cycle cost of about \$13 billion, the 2010 Census was the most expensive U.S. census in history and was 56 percent more costly than the \$8.1 billion 2000 Census (in constant 2010 dollars). Given budgetary realities, that cost growth is simply unsustainable. Beginning in 1990, we reported that rising costs and difficulties in securing public participation, among other challenges, required a new approach to taking the census.¹ Part of the Bureau's response is its planned use of administrative records. The Bureau estimates their use could generate as much as \$1.4 billion in cost savings compared to traditional census taking methods.

Today's hearing is timely, as our past reviews of prior decennials have underscored the importance of (1) early and ongoing congressional oversight to keep census preparations on track, and (2) congressional acceptance of the Bureau's overall approach. From the very beginning of the 2020 life cycle, we have been reporting on the Bureau's progress in re-engineering the census, including its planned design and operational changes, as well as its Information Technology (IT) management, the latter of which my colleague is addressing in her statement.² In my remarks today, I will describe the opportunities and challenges the Bureau faces in using administrative records as well as the key assumptions supporting the Bureau's related estimated cost savings.

My testimony is based on our review of the Bureau's plans to use administrative records in the 2020 Census that we issued last month, and includes an update to some estimated cost data obtained from the

¹See for example, GAO, *2000 Census: Progress Made on Design, but Risks Remain*, [GAO/GGD-97-142](#) (Washington, D.C.: July 14, 1997), and *Decennial Census: Preliminary 1990 Lessons Learned Indicate Need to Rethink Census Approach*, [GAO/T-GGD-90-18](#) (Washington, D.C.: Aug. 8, 1990).

²GAO, *2020 Census: Key Information Technology Decisions Must be Made Soon*, [GAO-16-205T](#) (Washington, D.C.: Nov. 3, 2015).

Bureau.³ For that work, we reviewed Bureau planning documents and test plans, our prior reporting on decennial census planning, interviewed Bureau officials, and relied on our Schedule Assessment Guide.⁴ We did not assess the reliability of the Bureau's estimated cost-savings discussed in today's statement because the Bureau released an update in early October, which we will be reviewing soon. The work on which this statement is based was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

We, the Bureau, and others have observed that some of the information the Bureau collects during the census has already been gathered by other government agencies in the course of administering their programs. Accessing that information could provide the Bureau with data to help conduct the census and, in some cases, complete census forms that have missing data. Such uses of administrative records have the potential to reduce the cost of the decennial census because, for example, the Bureau would need to hire fewer temporary workers and acquire less office space and equipment to support fieldwork. Moreover, some of the information collected through administrative records could be more accurate than information the Bureau collects through traditional door-to-door follow-up methods, such as when the Bureau's enumerators need to interview neighbors or other "proxy" respondents because they cannot reach a household member to collect needed information.

While the Bureau has made some limited use of administrative records during past decennials, it plans to use them much more extensively in 2020. In its first operational plan for the 2020 Census (released October 6, 2015), the Bureau reported design decisions including the use of administrative records to identify vacant addresses in advance of follow-up field work and to enumerate nonresponding households when possible

³GAO, *2020 Census: Additional Actions Would Help the Bureau Realize Potential Administrative Records Cost Savings*, [GAO-16-48](#) (Washington, D.C.: Oct. 20, 2015).

⁴GAO, *GAO Schedule Assessment Guide: Best Practices for Project Schedules—Exposure Draft*, [GAO-12-120G](#) (Washington, D.C.: May 30, 2012).

in order to reduce the need for repeated contact attempts during its nonresponse follow-up operation (NRFU). The Bureau also updated the life-cycle cost estimate for the 2020 Census to \$12.5 billion (in constant 2020 dollars).⁵ This is slightly lower than the Bureau’s prior life-cycle cost estimate of \$12.7 billion. We plan to assess the reliability of the new cost estimate and examine the practices the Bureau used to produce it after the Bureau makes the model and its supporting documentation available. As part of the operational plan, the Bureau also released an update of how much its fundamental redesign of the census would reduce costs in four major design areas compared to the cost of a 2020 Census conducted using the methods of the 2010 Census. Table 1 below compares the cost reduction in those four areas.

Table 1: The Census Bureau’s Cost Estimates Show Redesign to Cost Less Than Traditional Census

Key design area	August 2014 estimated savings	October 2015 estimated savings
Reengineering address canvassing	\$1 billion	\$900 million
Optimizing self-response	\$548 million	400 million
Using administrative records	\$1.2 billion	1.4 billion
Reengineering field operations	\$2.3 billion	2.5 billion
Total savings compared to Bureau’s projected cost of 2020 Census using traditional approach and methods (in 2020 constant dollars)	\$5.1 billion	\$5.2 billion

Source: GAO analysis of Census Bureau data. | GAO-16-206T

The operational plan describes over 100 other preliminary design decisions related to the Bureau’s efforts to build an address list and collect census responses. Its release marks a critical turning point in the decade-long countdown to the next decennial, as the Bureau completes its early research and testing plan, and pivots toward developing operations and systems and testing them to refine the census design.

⁵In [GAO-16-48](#) we reported a different number because the paper version of the Bureau’s Operational Plan for the 2020 Census originally provided to us, reported a life-cycle cost estimate of \$12.3 billion, which was in current dollars.

Administrative Records Can Reduce 2020 Fieldwork, but the Bureau Will Need to Better Define Milestones and Deadlines to Help Manage Risks

Bureau officials have said they hope to use administrative records to reduce the field work involved in the most expensive census operation—NRFU, when Bureau staff traditionally knock on doors across the country at homes of people who did not respond to the census, or who were missed by census mailings. The Bureau has reported that the following three uses are key to potentially saving up to \$1.4 billion compared to using traditional census methods.

Identify vacant housing units. The Bureau incurs a large part of its census cost while following up at residences that did not return a census questionnaire. However, during the 2010 Census, of the 48 million housing units enumerators visited for follow up, about 14 million were vacant. One of the largest efficiency gains to the census may come simply from using administrative records to remove these vacant units from the follow-up workload. In a test in Arizona earlier this year, this use of administrative records enabled the Bureau to reduce the NRFU workload by 11 percent.⁶ Since we completed our audit work, the Bureau announced that it would still send a reminder post card to units it identified as vacant, which will cost more, but will provide any missed household one more opportunity to respond to the census.

Identify and enumerate occupied nonresponding housing units. During the 2015 Census Test, the Bureau demonstrated it could use administrative records to accurately count some nonresponding occupied households if the household had administrative records meeting a certain quality threshold, without attempting any visits. In the test, the Bureau used this approach to reduce the NRFU workload by about 20 percent. Since we completed our audit work, the Bureau announced that before using administrative records to enumerate such households in 2020, it will still attempt one visit to the household. Attempting a visit will add costs, but will also provide the household one more opportunity to respond to the census.

Predict the best times to complete NRFU. One of the challenges the Bureau faces when knocking on doors is reaching a household when someone is home. In the 2015 Census Test, the Bureau used

⁶Earlier this year in Maricopa County, Arizona, the Bureau conducted its 2015 Census Test to see how well it can use administrative records to reduce fieldwork and increase productivity for NRFU. The test also included a new field management structure and an enhanced Operations Control System supporting daily reassignments of cases.

demographic information, such as age, from administrative records sources in addition to information about how households had responded to other Bureau surveys in order to help determine the contact strategy for deciding if and when to interview a household.

The Bureau tested each of these uses during its 2015 Census Test and plans further testing of them to refine the methods, but the Bureau has already decided to use them.

The Bureau Plans Additional Opportunities for Using Administrative Records in the 2020 Census

In addition to the three uses the Bureau has committed to, the Bureau has identified nine additional uses of administrative records that may help further reduce cost or improve the quality of the census (see figure 1). The Bureau has not separately estimated cost savings for these nine uses, but has begun researching the feasibility of most of them.

Figure 1: The Census Bureau Has Identified Nine Additional Opportunities for Administrative Records in 2020 Census Activities

2020 Census Activity (as of August 2015)	When activity occurs relative to data collection		
	Before	During	After
Validate and update address list	✓		
Identify and target outreach to group quarters ^a	✓	✓	
Quality control		✓	
Non-ID processing – Locate respondents' addresses ^b		✓	
Non-ID processing – Validate responses ^b		✓	
Impute occupancy status for unresolved households			✓
• Impute count of previously unresolved households			✓
• Impute age/sex/race/ethnicity of previously unresolved households			✓
Evaluate Census accuracy			✓

Source: U.S. Census Bureau. | GAO-16-206T

^aGroup quarters consist of college dormitories, prisons, nursing homes, and other facilities typically owned or managed by an entity providing housing, services, or both for the residents.

^bNon-ID processing accommodates certain self-responses the Bureau may receive from households that may have lost or never received mailings or other advance communication with an ID number from the Bureau, determining where to count them (locate them) and attempting to reduce their duplication and falsification (validate the responses).

As shown in the figure, these uses would occur during various points relative to data collection.

Before data collection. The Bureau is already using administrative records to validate and update the address list. The Bureau is drawing on address lists and map information from state, local, and tribal governments, in addition to information obtained from commercial sources, to update its own address list continuously throughout the decade, reducing the need for a more costly door-to-door canvassing during the 2 years prior to the census, as was done for the 2010 Census. In addition, Bureau officials reported research is about to begin on how to better use records to identify group quarters, such as dormitories, prisons, nursing homes, and homeless shelters, and to target outreach, that is, encourage cooperation of staff at these locations with the census. The Bureau historically uses special procedures to enumerate at these places, and administrative records could potentially jump start the time and effort spent getting ready for them.

During data collection. The Bureau is considering using administrative records in lieu of some follow-up visits for the purpose of quality control of field work. In past decennials, the Bureau has called or sent enumerators to re-interview some respondents. Relying on administrative records could reduce fieldwork and respondent burden, or enable the Bureau to better target re-interviews of respondents. The Bureau is also researching how administrative records can be used to help process responses that do not have a census ID number on them (this activity is called non-ID processing). The Bureau may receive such responses from households that lost or never received mailings or other advance communication with an ID number from the Bureau. A test in 2015 in the Savannah, Georgia, media market area demonstrated that a large collation of administrative records from many sources was effective in helping the Bureau correct or fill in missing address information. This enabled the Bureau to better locate where those responses should be counted. The Bureau is also researching how other records may help it validate responses or the identities of those who submit responses as part of this processing.

After data collection. When the Bureau still does not have information on a housing unit after collecting data during field operations, it will attempt to impute the data—as it has done since 1970. According to Bureau officials, in 2020 the Bureau will use administrative records to help improve how it imputes three related types of data: (1) whether or not a unit is occupied, (2) how many people live in the unit, and (3) the residents' demographic characteristics, such as sex, race, and ethnicity. Finally, the Bureau is considering how administrative records might help it evaluate census accuracy.

The Bureau Has Identified Potential Sources for Most of the Administrative Records It Hopes to Use for the 2020 Census

The Bureau has identified and obtained access to nearly all of the sources that it believes it needs in order to leverage all of the opportunities it has identified (see figure 2).

Figure 2: The Census Bureau Obtained Access to and Tested Sources of Administrative Records

Sources	Access obtained and fitness screened	Testing ongoing
United States Postal Service – Delivery Sequence File, Undeliverable As Addressed (UAAs)	✓	✓
Centers for Medicare & Medicaid Services – Medicare enrollment	✓	✓
Indian Health Service – Patient registration	✓	✓
Internal Revenue Service – Individual 1040s and informational returns 1099s	✓	✓
Social Security Administration – Number identification file	✓	✓
Housing and Urban Development – Public and Indian Housing Center data; Tenant Rental Assistance Certification System; Computerized Homes Underwriting Management System	✓	✓
Selective Service System – Registration file	✓	✓
Health and Human Services – National Directory of New Hires		
Social Security Administration – KidLink		
States – Temporary Assistance for Needy Families (TANF); Supplemental Nutrition Assistance Program (SNAP); Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	(9 states)	✓
State, local and tribal governments – Addresses and maps	(1,000 localities)	✓
Commercial sources	✓	✓

Shaded areas indicate desired sources without access negotiated

Source: GAO analysis of Census Bureau information. | GAO-16-206T

In addition to the records already obtained, the Bureau is working to gain access to the **National Directory of New Hires (NDNH)**, a national database of wage and employment information used for child support enforcement, and **KidLink**, a database from the Social Security Administration that links parent and child Social Security numbers for children born after 1998 in U.S. hospitals. Both of these databases would help the Bureau improve its ability to find historically “hard-to-count” groups, such as certain minority groups or young children.

Bureau officials stated that they are examining ways to quantify the potential effect that their access to these additional sources could have

on the 2020 Census. But they point out that there is value in accessing these records for the Bureau's other statistical surveys as well, and that even if they are unable to obtain the additional records in time for the 2020 Census, they would continue pursuing them for these other purposes, as well as for use in future censuses.

Setting Deadlines Would Help the Bureau Ensure It Makes Timely Decisions on Administrative Records

While the Bureau is to be commended for its efforts to expand its use of administrative records to control costs and increase accuracy, we identified actions the Bureau could take to increase its chances of success.⁷ First, as of August 2015, the Bureau had not set deadlines to determine which of its identified uses of administrative records it will or will not implement for the 2020 Census, nor had it set deadlines for determining exactly which records from which sources it will tap in support of each use it implements. Moreover, the Bureau had no deadlines against which to measure progress for obtaining access to additional sources or scheduled milestones for when key steps may need to be taken in order to integrate them within 2020 preparations. For example, the Bureau will need time to review files in order to ensure their fitness for use before the Bureau can integrate them into the census design. Earlier in October the Bureau announced time frames for several decisions related to uses of administrative records and explained that the decisions are not yet included in its integrated schedule of activities. According to our scheduling guide, assurance of program success can be increased when management relies on credible schedules containing the complete scope of activities necessary to achieve established program objectives.⁸

Bureau officials have stated that final decisions on the use of administrative records are needed by the end of fiscal year 2017 in order to be included in the Bureau's 2018 full end-to-end test. However, these deadlines do not appear in schedule documents. We recommended that the Census Director ensure that resources focus on activities with promise to reduce cost by documenting milestones related to deciding which records to use, particularly for purposes not yet demonstrated as

⁷GAO, *Information Security: Actions Needed by Census Bureau to Address Weaknesses*, GAO-13-63 (Washington, D.C.: Jan. 22, 2013). Another version of this report was issued for limited distribution.

⁸GAO-12-120G.

feasible or involving records it does not already have access to, such as NDNH and KidLink. The Department of Commerce—the Bureau’s parent agency—concurred with our recommendation. Deadlines for deciding on all potential uses—either committing to move forward with them or abandoning them as possibilities for 2020—and for deciding how all other records will be used would help to ensure the Bureau is using its resources cost-effectively.

The Bureau Is Taking Steps to Address Challenges to Using Administrative Records for the 2020 Census; Implementing Our Previous Recommendations Could Help

The Bureau is taking steps to address challenges it faces in using administrative records to control costs and improve the quality of the 2020 Census.

One challenge facing the Bureau is ensuring the quality of the records it receives from other agencies and levels of government. To meet this challenge, the Bureau has processes in place and is conducting research and testing to ensure quality of records. For example, to ensure accuracy, the Bureau routinely screens address and map files provided by state, local, and tribal governments to determine if they satisfy preset minimum quality standards for completeness of address information. This helps to improve the master list of addresses. The Bureau plans comprehensive testing of all records during an end-to-end test of its 2020 Census design (to be conducted in 2018). The Bureau plans additional testing of administrative records for the 2016 Census Test in the Los Angeles and Houston metro areas, a large test of address canvassing for 2016, and an additional site test in 2017 at an undetermined location.

The Bureau reported it will review imputation models it used during prior censuses to determine how it can integrate information from administrative records into them in fiscal year 2016. Tests will be included in the 2016 Census Test.

A second challenge involves protecting confidential data. We have previously reported that until the Bureau implements a complete and comprehensive security program, it will have limited assurance that its information and systems are being adequately protected against unauthorized access, use, disclosure, modification, disruption, or loss. In January 2013, we made over 100 recommendations aimed at addressing

weaknesses in that program.⁹ The Bureau agreed and Bureau officials state that the Bureau has taken action on all 115 of our recommendations to improve its security program. In assessing the Bureau's reported actions, we have reviewed documentation pertaining to 97 of the recommendations—66 of which we have confirmed have been addressed and 31 that require additional actions and/or documentation from the Bureau. We are currently analyzing the extent to which the remaining 18 recommendations have been addressed by the Bureau and expect to complete that review by the end of 2015. My colleague is further addressing the security challenge in her statement.¹⁰ Bureau officials pointed out that the Bureau is well positioned to prevent disclosure of administrative records, as it has long-standing experience in collecting data from other agencies and reporting on them. Furthermore, the Bureau and the agency providing the data agree to data safeguards during negotiations for access.

A third challenge concerns public acceptance and attitudes about sharing of personal data across government agencies for the purposes of the census. We have previously reported on the need within the federal statistical system for broader public discussion on balancing trade-offs among competing values, such as quality, cost, timeliness, privacy, and confidentiality.¹¹ The public has related concerns involving trust in the government and perceptions about the burden on respondents as well the social benefits of agencies sharing data. We recommended in 2012 that the Bureau develop and implement an effective congressional outreach strategy, particularly on new design elements the Bureau is researching and considering as well the cost-quality trade-offs of potential design decisions.¹² The Bureau agreed with the recommendation and, in November 2014, it provided us with a congressional engagement plan. The four-page plan brings together in one place a summary of the Bureau's ongoing activity in this area, yet, by itself, lacks goals or

⁹GAO, *Information Security: Actions Needed by Census Bureau to Address Weaknesses*, [GAO-13-63](#) (Washington, D.C.: Jan. 22, 2013).

¹⁰[GAO-16-205T](#).

¹¹GAO, *Federal Statistical System: Agencies Can Make Greater Use of Existing Data, but Continued Progress Is Needed on Access and Quality Issues*, [GAO-12-54](#) (Washington, D.C.: Feb. 24, 2012).

¹²GAO, *2020 Census: Additional Steps Are Needed to Build on Early Planning*, [GAO-12-626](#) (Washington, D.C.: May 17, 2012).

strategies for attaining them, or accountability for who will work to implement them or when. We will continue monitoring the Bureau's efforts to address this recommendation, particularly as these efforts may depend on scheduling of activities the Bureau may yet set related to making final decisions about administrative records.

Key Assumptions for Estimated Cost Savings from Administrative Records Are Logical; the Bureau Will Continue to Validate the Assumptions

As part of our recently released review, we determined that key assumptions in the Bureau's administrative records cost area made sense.¹³ Table 2 shows the results of our analysis.

Table 2: The Census Bureau's Key Assumptions for Estimated Cost Savings from Administrative Records Are Logical and the Bureau Is Taking Steps to Validate Them Further

Key assumption	Support and planned next steps
Removal of vacant and non-residential units will reduce the total Nonresponse Follow-up (NRFU) workload	<p>Percentage reduction based on research examining match rates of records to vacant units in prior census.</p> <p>2015 Census Test successfully demonstrated the ability to remove 11.6 percent of NRFU workload as vacant, corroborating this assumption.</p> <p>Next step: Methods for removing vacant and non-residential units will be tested again in the 2016 Site Test and other tests.</p>
Reduced workload will reduce the total number of field offices needed	<p>Early 2020 planning documents presented a case for reducing the number of field offices.</p> <p>The 2015 Census Test demonstrated reduction in NRFU workload, which drives the number of offices needed.</p> <p>On October 6, 2015, the Bureau announced its decision to replace the 494 field offices in 2010 Census with up to 250 offices in 2020.</p> <p>Next step: The Bureau will test the scale of operations in future tests, including in 2016.</p>
Maximum number of NRFU visits per housing unit will be reduced from 6 to 3 visits	<p>The 2010 Census experiments indicated a reduction in visits might be possible without reducing quality of data.</p> <p>During the test, on multiple occasions, we observed Bureau employees visiting households many more times than the maximum allowed. This calls into question the Bureau's ability to control the number of visits.</p> <p>Next step: Bureau plans to continue testing controls on and impacts of the number of visits during future tests, such as the 2016 Census Test.</p>

¹³GAO-16-48.

Key assumption	Support and planned next steps
Elimination of the Vacant/Delete Check (VDC) operation ^a	The Bureau's 2010 assessment of VDC found the operation had redundancies with NRFU. The 2015 Census Test demonstrated success at identifying vacant and non-residential units, which Bureau officials cite as evidence that this follow-up operation is no longer needed. Next step: Ongoing research to determine the effects of eliminating VDC.
Elimination of the Coverage Follow-up (CFU) operation ^b	Administrative records design for 2020 uses administrative records before and during enumeration, rather than after enumeration, as was done with CFU 2010. Next step: Ongoing research to determine the effects of eliminating the CFU operation.

Source: U.S. Census Bureau documents. | GAO-16-206T

^aIn the 2010 Vacant/Delete Check operation, enumerators verified the Census Day status of vacant and deleted (nonexistent) housing units. VDC also attempted to enumerate late additions to the Bureau's address file.

^bDuring 2010 CFU, a contractor telephoned certain households in an attempt to determine if someone had been miscounted.

While we were reviewing these cost assumptions, the Bureau did not always have documentation readily available, and Bureau reporting on one of the assumptions needed to be corrected. We were able to identify the needed support, and Bureau staff said that they will change the methodology for future reporting on the cost estimate to involve more factors and variables, such as the ratio of field workers to supervisors they would need in 2020 in addition to the NRFU workload assumption. This change will help demonstrate the reliability of the estimates as well as ensure effective communication with others about them.

Since we released our report, the Bureau provided an updated estimate of the total 2020 Census life-cycle cost of \$12.5 billion, as well as updated estimates of how much less in four major cost areas its 2020 plan would cost compared to a cost of the a 2020 Census conducted using the 2010 Census approaches and methods. We expect soon to begin reviewing the Bureau's new cost model and its assumption. Bureau officials have told us that although the model has been updated, the key assumptions within the administrative records cost area are largely the same.

Bureau officials told us that the revised life-cycle cost estimate the Bureau released on October 6, 2015 was developed with leading practices from our cost estimating and assessment guide. After the Bureau releases the underlying model, methodology, and supporting documents for the estimate, we anticipate reviewing them to assess their reliability. Continued oversight efforts, such as this hearing, will be helpful to ensure

that the Bureau's efforts remain on track and focused on those most promising to result in a cost-effective 2020 Census.

GAO Contacts and Staff Acknowledgments

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