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2010 CENSUS

Operational Changes Made
for 2010 Position the U.S.
Census Bureau to More
Accurately Classify and
Identify Group Quarters

Statement of Robert Goldenkoff
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Strategic Issues



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Highlights of [GAO-10-452T](#), a testimony before the Subcommittee on Information Policy, Census, and National Archives, Committee on Oversight and Government Reform, House of Representatives

Why GAO Did This Study

The U.S. Census Bureau (Bureau) is tasked with conducting an accurate count of people living in dwellings known as group quarters as part of the 2010 Census. Group 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. During the 2000 Census, for a variety of reasons, group quarters were sometimes counted more than once, missed, or included in the wrong location.

As requested, this testimony will focus on (1) the extent to which the Bureau has strengthened its procedures for counting group quarters compared to the 2000 Census, and (2) particular challenges and opportunities for an accurate group quarters count in Brooklyn. The testimony is based on previously issued and ongoing GAO work in New York and elsewhere.

What GAO Recommends

GAO is not making new recommendations in this testimony, but a past report recommended that the Bureau revisit its group quarter procedures to ensure that this population was properly located and counted. The Bureau implemented this recommendation and strengthened aspects of its group quarters procedures. In commenting on a draft of this testimony, the Bureau provided some minor clarifying points.

View [GAO-10-452T](#) or [key components](#). For more information, contact Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov.

2010 CENSUS

Operational Changes Made for 2010 Position the U.S. Census Bureau to More Accurately Classify and Identify Group Quarters

What GAO Found

The Bureau developed and tested new procedures to address the difficulties it had in identifying and counting group quarters during the 2000 Census. For example, the Bureau moved from manual to GPS-generated map spots, which should reduce the chance of human error and of group quarters populations being counted in the wrong jurisdiction; moved from a telephone interview to a field verification approach, which should increase accuracy; and combined the conventional housing unit and group quarters address lists into a single address list, which should reduce the chance of double counting.

Moreover, the Bureau implemented a three-pronged approach to locate and count group quarters. The approach consisted of Group Quarters Validation, where temporary census workers visited each group quarter and interviewed its manager or administrator to determine whether the dwelling was a group quarters or some other type of residence. If the dwelling was in fact a group quarters, it was then determined what category it fit under, and its correct geographic location was confirmed. This was followed by the Group Quarters Advance Visit, which is currently under way. Census workers are to verify the location of the group quarters; identify contact officials; and schedule the date, time and other information to help conduct the actual enumeration. The actual count of group quarters residents is conducted during the third phase of the approach, Group Quarter Enumeration from the end of March to mid-May. The effort includes an operation known as Service-Based Enumeration, during which people commonly referred to as homeless are counted. Additional procedures to ensure a complete count of group quarters include a series of quality assurance procedures, such as supervisory review of workers' assignments.

Brooklyn presents challenges as well as opportunities. For example, a planning database the Bureau developed to help it target its resources placed Brooklyn on a list of top 50 U.S. counties with the highest number of people living in hard-to-count areas, based on data from the 2000 Census. Factors that contribute to the hard-to-count designation include poverty levels, high levels of non-English speakers, complex household arrangements, as well as a high percentage of rental and vacant units, multi-unit buildings, and crowded housing.

In light of these demographic and housing challenges, a successful group quarters count will, at a minimum, depend on how well the Bureau executes the following activities: (1) complete remaining group quarters activities on schedule, (2) implement the group quarters quality assurance procedures as planned, and (3) closely monitor key performance metrics to ensure that the group quarters count proceeds on track and quickly address any glitches. It will also be important for the Bureau to ensure that census workers have knowledge of neighborhood culture and living arrangements, and possess the language skills to reach out to residents with limited English proficiency.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today at the Brooklyn Borough Hall to discuss the U.S. Census Bureau's (Bureau) efforts to conduct an accurate count of people living in dwellings known as group quarters as part of the 2010 Census. Group 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. During the 2000 Census, for a variety of reasons, group quarters were sometimes counted more than once, missed, or included in the wrong location.

While a few miscounted households might not seem particularly problematic, especially in a nation of more than 300 million people, an accurate enumeration is in fact critical. Data from the census—a constitutionally mandated effort—are used to apportion seats in the Congress, redraw congressional districts, help allocate more than \$400 billion in federal aid to state and local governments, and redraw local political boundaries. Census data are also used for planning purposes by the public and private sectors. Thus, for Brooklyn, as with all localities, an incomplete count could have implications for political representation and getting its fair share of federal assistance.

Because of Brooklyn's demographic diversity and other socioeconomic factors, the Bureau has identified a number of sections of Brooklyn as particularly hard to count. Brooklyn's range of group quarters—including colleges, hospitals, convents, and correctional facilities—only add to the Bureau's enumeration challenges within the borough.

As requested, my remarks today will focus on (1) the extent to which the Bureau has strengthened its procedures for counting group quarters compared to the 2000 Census and (2) particular challenges and opportunities for an accurate group quarters count in Brooklyn.

My testimony today is based on our completed and ongoing reviews of the Bureau's efforts to build an accurate address list, including address canvassing, where temporary census employees go door-to-door verifying addresses, and an initial group quarters operation called Group Quarters Validation, where the Bureau determines whether an address is either a

group quarters or conventional housing unit.¹ For both reviews, we analyzed key documents, including plans, procedures, and guidance for the selected activities, and interviewed cognizant Bureau officials at headquarters and local census offices. In addition, for address canvassing, we made on-site observations at 38 locations across the country, including Brooklyn, the Bronx, Manhattan, and Queens. Moreover, to examine the Bureau's group quarters activities, we observed the Group Quarters Validation operations at Atlanta, Georgia; Fresno, Los Angeles, and San Bernardino, California; Philadelphia, Pennsylvania; and Washington, D.C.. We selected these locations because of their geographic diversity, variety of group quarters, and hard-to-count populations. We also interviewed officials from the New York City Mayor's Office and the New York City Department of City Planning to obtain their perspectives on the factors that might affect an accurate count in New York City.

On February 16, 2010, we provided the Bureau with a statement of facts for our audit work, and on February 17, 2010, the Bureau provided written comments. The Bureau made some minor clarifying points, where appropriate, we made those changes. We conducted our work in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audits 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.

In summary, the operational changes the Bureau has made since the 2000 Census position it to more accurately classify and identify group quarters in the correct geographic location for the 2010 Census. An accurate group quarters count, particularly in an area as diverse as Brooklyn, is a particularly challenging task. Moving forward, it will be important for the Bureau to complete remaining group quarters operations on schedule. Because of tight deadlines, as the enumeration progresses, the tolerance for any operational delays or changes becomes increasingly small. Further, the Bureau needs to implement its group quarters quality assurance

¹See for example, GAO, *2010 Census: Census Bureau Continues to Make Progress in Mitigating Risks to a Successful Enumeration, but Still Faces Various Challenges*, [GAO-10-132T](#) (Washington, D.C.: Oct. 7, 2009), and *2010 Census: Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges*, [GAO-10-140T](#) (Washington, D.C.: Oct. 21, 2009). Also see the Related GAO Products section at the end of this statement.

procedures as planned, closely monitor key performance metrics to ensure that the group quarters count proceeds on track and quickly address any glitches, as well as ensure that census workers have knowledge of neighborhood culture and living arrangements, and possess the language skills to reach out to residents with limited English proficiency.

Importantly, the Bureau cannot conduct a successful enumeration on its own. Indeed, the decennial census is a shared national undertaking, and with census forms about to be mailed to millions of households across the country, it will soon be up to the public to fulfill its civic responsibility to return the questionnaires in a timely fashion. According to the Bureau, each percentage point increase in the mail response rate saves taxpayers around \$85 million and yields more accurate data compared to information collected by enumerators from nonrespondents. The bottom line, Mr. Chairman, is that Census Day, April 1, 2010, is right around the corner. A few weeks from now, the success of the 2010 Census will be, both literally and figuratively, in the hands of Brooklynites and the nation's residents across the country.

Background

A complete and accurate address list, along with precise maps, form the foundation of a successful census. An accurate address list is critical because, among other reasons, it identifies households that are to receive a census questionnaire. Precise maps are critical for counting the population in their proper locations—the basis of congressional apportionment and redistricting. The Bureau's database of the nation's approximately 134 million addresses is called the Master Address File. It consists of two types of dwellings: housing units such as single-family homes, apartments, and mobile homes, and what the Bureau refers to as group quarters. According to Bureau data nationwide, more than 7.7 million people, or approximately 3 percent of the population, lived in group quarter facilities during the 2000 Census. Of Brooklyn's population of approximately 2.5 million residents at that time, around 39,300 (1.6 percent) lived in group quarters.

In concept, it would appear that an accurate enumeration of group quarters residents would be a relatively straightforward task—after all, dormitories, nursing homes, and prisons tend to be obvious, have fixed addresses, and do not move. Nevertheless, for a variety of reasons, counting the group quarters population can be difficult.

For example, group quarters are sometimes hard to distinguish from conventional housing units (see fig. 1), or the address of an administrative building might be in a separate geographic location than where the residents actually live, as was sometimes the case with prison complexes. In prior work, we found that the population count of Cameron, Missouri, was off by nearly 1,500 people because the population of the state's Crossroads Correctional Center was inadvertently omitted from the town's headcount.² Similarly, North Carolina's population count was reduced by 2,828 people, largely because the Bureau had to delete duplicate data on almost 2,700 students in 26 dormitories (see fig. 2) at the University of North Carolina at Chapel Hill (UNC).³ Precision is critical because, in some cases, small differences in population totals could potentially impact apportionment, redistricting decisions, or both.

²GAO, *Data Quality: Improvements to Count Correction Efforts Could Produce More Accurate Census Data*, [GAO-05-463](#) (Washington, D.C.: June 20, 2005).

³The students were counted twice because, during the 2000 Census, the Bureau inadvertently included the UNC dormitories on both the group quarters and conventional housing unit address lists (they should have only been on the group quarters list). As a result, two questionnaires were delivered to the dormitories—one distributed by the university, and one sent to them through the mail.

Figure 1: Group Homes Can Resemble Conventional Housing



Source: GAO.

Figure 2: Students in 26 UNC Dormitories Were Counted Twice in the Census



Source: GAO.

Operational Changes Made for 2010 Position the Bureau to More Accurately Classify and Identify Group Quarters

The Bureau developed and tested new procedures to address the difficulties it had in identifying and counting this population during the 2000 Census. For example, the Bureau moved from manual to GPS-generated map spots, which should reduce the chance of human error and of group quarters populations being counted in the wrong jurisdiction; moved from a telephone interview to a field verification approach, which should increase accuracy; and combined the housing unit and group quarters address lists into a single address list, which should reduce the chance of double counting. In addition, following a test of certain census-taking procedures in 2004 that was conducted in Queens, New York, among other locations, we recommended that the Bureau revisit group quarters procedures to ensure that this population was properly located and counted.⁴ The Bureau implemented our recommendation and revised its group quarters procedures to clearly instruct census workers to

⁴GAO, *2010 Census: Basic Design Has Potential, but Remaining Challenges Need Prompt Resolution*, [GAO-05-9](#) (Washington, D.C.: Jan. 12, 2005).

properly correct and delete addresses. Further, to better ensure a more accurate group quarters count, the Bureau employed a three-pronged effort consisting of those operations shown in table 1.

Table 1: Group Quarters Validation is the First Operation in a Three-Pronged Effort to Accurately Enumerate Group Quarters

Operation name	Dates	Purpose
Group Quarters Validation	9/28/09 to 10/23/09	<ul style="list-style-type: none"> • Determine the status of the address as either a group quarters, housing unit, transitory location, nonresidential, nonexistent, duplicate, or vacant. • Determine the type of facility (i.e., correctional facility, health care facility, military quarters, dormitory, etc.) and confirm group quarters' geographic location. • Verify the name, address, contact name and phone number for group quarters.
Group Quarters Advance Visit	2/1/10 to 3/19/10	Confirm locations of group quarters and identify contact officials to facilitate actual enumeration.
Group Quarters Enumeration	3/30/10 to 5/14/10	Visit each group quarters to obtain a complete list of the names of the people living or staying at the group quarters and enumerate all people living or staying there.

Source: GAO analysis of U.S. Census Bureau information.

The Bureau's three-pronged approach had temporary census workers visit each group quarters and interview its manager or administrator using a short questionnaire during Group Quarters Validation. As stated above, the goal was to determine whether the dwelling was a group quarters or some other type of residence. If the dwelling was in fact a group quarters, it was then determined what category it fit under (e.g., boarding school, correctional facility, health care facility, military quarters, residence hall or dormitory, etc.), and its correct geographic location was confirmed. Accurate classification of group quarters is important to ensure that the correct enumeration methodology is used and the data are tabulated correctly.

This is followed by the Group Quarters Advance Visit operation, which is currently underway. During the advance visit, census workers verify the location of the group quarters and identify contact officials, schedule the date and time of the actual enumeration, and collect other information to help conduct the actual enumeration.

The actual count of group quarters residents is conducted during Group Quarter Enumeration. The effort includes an operation known as Service-Based Enumeration, during which people commonly referred to as homeless are counted.⁵ While this count is always important, the large number of home foreclosures the nation has experienced adds to the operation's significance in 2010. Military bases and military/maritime vessels are also enumerated as part of group quarters.

For the 2010 group quarters operations, the Bureau drew from a number of sources to build its list of potential group quarters addresses including data from the 2000 Census, address submissions provided by state and local governments, Internet-based research, and group quarters located during door-to-door address canvassing. During the first of the three group quarters operations (Group Quarters Validation), approximately 25,000 temporary workers identified over 240,000 group quarters facilities from a workload of over 2 million potential group quarters in both the United States and Puerto Rico. The remaining approximately 1.76 million addresses were identified during Group Quarters Validation as conventional housing units, transitory locations, nonresidential, nonexistent, or duplicates. All addresses that were verified as housing units or transitory locations were added to the appropriate address extracts for subsequent enumeration operations. In addition, over 7,000 addresses from the Group Quarters Validation workload could not be properly processed in the Bureau's database because they were returned with insufficient information. However, a contingency plan was implemented to ensure that these locations were included in the census.

To further ensure an accurate group quarters count, the Bureau employs a number of quality assurance procedures. For example, key quality assurance procedures for the completed Group Quarters Validation operation included field observations of workers' performance by supervisors known as crew leaders. Crew leaders also reviewed workers' completed assignments each day, while Quality Control Clerks conducted

⁵Service Based Enumeration is a method of data collection designed to count people at facilities that primarily serve people without conventional housing in the United States and Puerto Rico. These facilities include emergency or transitional shelters, soup kitchens, and regularly scheduled mobile food van stops. In addition, Service Based Enumeration counts people at targeted nonsheltered outdoor locations where people might have been living in March (before Census Day, April 1) without paying to stay there and who did not usually receive services at soup kitchens, shelters, or mobile food vans.

additional reviews. Similar quality assurance procedures are planned for the actual enumeration of group quarters.

The changes made to group quarters operations appear promising, and the Bureau plans to evaluate coverage of the group quarters population. However, the Bureau will not individually evaluate each of the three group quarters operations' effectiveness, cost, or value added. Such evaluations could be useful in improving the operations, identifying possibly duplicative operations, and identifying potential cost savings for 2020. For example, given the large number of nongroup quarters included in the workload for Group Quarters Validation (about 88 percent), the Bureau may want to consider ways to begin the operation with a more concise initial workload. Additionally, in both Group Quarters Validation and Group Quarters Advance Visit operations, census workers personally visit group quarters, verify the facility contact information, provide confidentiality information, and collect occupancy numbers. Because these activities appear to be duplicative, the Bureau may want to reexamine the need to conduct both operations.

Challenges and Opportunities for Counting Group Quarters Residents in Brooklyn

Nationally, the enumeration of group quarters is a difficult task for the Bureau, and Brooklyn presents its own challenges as well as opportunities. For example, a planning database the Bureau developed to help it target its resources placed Brooklyn third on a list of top 50 U.S. counties with the highest number of people living in hard-to-count areas, based on data from the 2000 Census. Specifically, around two-thirds of Brooklyn's (Kings County) total population of 2.5 million people were found to be living in hard-to-count areas. Demographic factors that contribute to the hard-to-count designations include poverty levels, low educational attainment, unemployment, and complex household arrangements, as well as housing indicators such as a high percentage of renters and vacant units, multi-unit buildings, and crowded housing.

Moreover, according to the 2000 Census, 37.8 percent of the borough's approximately 2.5 million residents were foreign born and about 46.7 percent spoke a language other than English at home. Overcoming language barriers and other obstacles that have historically come with enumerating ethnically diverse populations will be important for the Bureau.

Recognizing that New York City would present challenges for the 2010 Census, the Bureau selected Queens, New York, as one of two sites to test its Group Quarters Validation operation in 2004. The test was designed,

among other things, to address the difficulties the Bureau had in trying to identify and count this population during the 2000 Census, and to refine its definitions of the various types of group quarters to make it easier to accurately categorize them. The Bureau determined that the test was a success based on follow-up interviews. Out of the 38 follow-up addresses in Queens, 34 were classified correctly (89.5 percent).

Nevertheless, the counting of group quarters is still a challenging task. In addition to some of the demographic challenges noted above, our observations of the Group Quarters Validation operation highlighted other potential trouble spots. For example, we observed that while the effort generally proceeded as planned, some temporary census workers were concerned that working with paper maps and time cards was time consuming and inefficient, and some had difficulties identifying a manager or administrator from whom to obtain necessary information about the facility. Importantly, our observations were limited and we do not know how pervasive these and other issues might have been, if at all.

More recently, a senior New York City official told us about some of the local challenges in counting group quarters, including complex housing arrangements. He noted that the city has buildings with a large number of apartments, where part of the building consists of conventional housing units and the other part is group quarters. Such situations occur, for example, in housing people with special needs or buildings with assisted-living occupants. When this occurred, during door-to-door address canvassing, the temporary census workers removed the building from the list of conventional housing units and added it to dwellings to be visited during the Group Quarters Validation operation.

In addition to these mixed-use building situations, the New York City official told us that in cases where buildings have a large number of occupants and have been subdivided into various configurations, it can be very difficult to determine whether the building is a housing unit or group quarters dwelling. While this is an issue for all of New York City, it is particularly problematic in Queens and Brooklyn. The official told us that with some buildings, it is extremely difficult to draw a line as to where the occupation of apartments in a building by an extended family ends and a group home situation begins. This is especially true where language barriers and fear of government may be commonplace.

In hiring census workers, the Bureau attempts to employ people familiar with local living conditions and who possess the language skills needed for particular communities. Further, the Bureau has translated questionnaires

into 5 different languages and has language assistance guides available in 59 different languages to help people complete their questionnaires. Other tools to help those with limited English proficiency, such as telephone questionnaire assistance, are available as well.

In light of these demographic and housing challenges, a successful group quarters count will, at a minimum, depend on how well the Bureau executes the following activities:

- Complete remaining group quarters activities on schedule. Indeed, the entire census is run on an extremely tight timeline, and as the enumeration proceeds, there is little room for operational delays.
- Implement the group quarters quality assurance procedures as planned, and closely monitor key performance metrics to ensure that the group quarters count proceeds on track and quickly address any glitches.
- Ensure that census workers have knowledge of neighborhood culture and living arrangements and possess the language skills to reach out to residents with limited English proficiency.

Concluding Observations

Mr. Chairman, with little more than a month remaining until Census Day, the Bureau's efforts to enumerate group quarters generally appear to be on track and more robust compared to similar efforts for the 2000 Census, better positioning the Bureau for a complete and accurate headcount. In the coming weeks and months ahead, we will continue to monitor the Bureau's progress in counting group quarters, as well as the implementation of the census as a whole, on behalf of the Subcommittee.

Mr. Chairman and members of this Subcommittee, this concludes my statement. I would be happy to respond to any questions that you might have at this time.

GAO Contacts and Acknowledgments

If you have any questions on matters discussed in this statement, please contact Robert N. Goldenkoff at (202) 512-2757 or by e-mail at goldenkoffr@gao.gov. Other key contributors to this testimony include Peter Beck; Dewi Djunaidy; Richard Hung; Kirsten Lauber; Andrea Levine; Signora May; Catherine Myrick; Lisa Pearson; and Timothy Wexler.

Related GAO Products

2010 Census: Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges. [GAO-10-140T](#). Washington, D.C.: October 21, 2009.

2010 Census: Census Bureau Continues to Make Progress in Mitigating Risks to a Successful Enumeration, but Still Faces Various Challenges. [GAO-10-132T](#). Washington, D.C.: October 7, 2009.

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2010 Census: Basic Design Has Potential, but Remaining Challenges Need Prompt Resolution. [GAO-05-9](#). Washington, D.C.: January 12, 2005.

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