

STATISTICS FROM GROUP QUARTERS ENUMERATION

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KEY WORDS: Special Places, Group Quarters

1. Introduction

While the vast majority of Americans live in houses, apartments, mobile homes and the like, collectively known as ‘housing units’ (HUs), several million people in the United States live in group situations known as ‘group quarters’ (GQs).

Group quarters are the living quarters at ‘Special Places’ such as:

- Colleges and Universities
- Prisons and Jails
- Nursing Homes
- Juvenile Institutions
- Hospitals (for long-term care)
- Military Bases
- Homeless Shelters
- Group Homes (for the physically and mentally challenged, for alcohol/drug treatment, etc.)
- Other miscellaneous group living situations.

In general, the Special Places are the larger institutions containing GQs; the GQs are the places where people spend their nights. For example, universities and military bases are Special Places; dormitories and barracks are GQs. Many Special Places consist of nothing more than a single GQ, such as a homeless shelter or a group home.

In Census 2000, we enumerated 7,825,407 people at 192,286 GQs in 100,358 Special Places in the United States and Puerto Rico.

2. Summary Statistics

a. Group Quarters

The nation’s 192,286 Group Quarters were broken down by GQ category as follows:

Group Quarters		
GQ Category	Group Quarters	Percent
Correctional Institutions	15,775	8.2
Juvenile Institutions	6,335	3.3
Nursing Homes	29,736	15.5
Hospital Facilities	9,289	4.8
Colleges and Universities	23,842	12.4
Military Bases	6,104	3.2
Group Homes	45,113	23.5
Service-Based and Other GQs	56,092	29.1
Total	192,286	100.0

b. Special Places

The nation’s 100,358 Special Places were broken down by Special Place type as follows:

Special Places, by Category		
Category	Special Places	Percent
Correctional Institutions	5,420	5.4
Juvenile Institutions	2,440	2.4
Nursing Homes	21,051	21.0
Hospital Facilities	3,552	3.5
Colleges and Universities	3,528	3.5
Military Bases	916	0.9
Group Homes	24,668	34.4
Service-Based and Other GQs	38,783	12.1
Total	100,358	100.0

Special Places can contain more than one type of GQ, but are categorized by the predominant type of GQ contained in the Special Place.

c. Population

The following table shows the proportion of the GQ population that was counted in each GQ category:

Population, by GQ Category		
GQ Category	Population	Percent
Correctional Institutions	1,993,302	25.5
Juvenile Institutions	129,132	1.7
Nursing Homes	1,727,811	22.1
Hospital Facilities	237,597	3.0
Colleges and Universities	2,066,302	26.4
Military Bases	356,354	4.6
Group Homes	460,474	5.9
Service-Based and Other GQs	854,435	10.9
Total	7,825,407	100.0

3. **How Different Types of Special Places Vary By Size**

a. As Measured by Number of GQs

We looked at the proportion of GQs of a given category that were in 'large' Special Places - those with 10 or more GQs. The proportion varied dramatically by GQ category, with most military barracks and college dormitories belonging to large Special Places, but very few nursing home GQs or service-based GQs belonging to large Special Places.

GQs in Large Special Places, by Number of GQs	
GQ Category	Percent Belonging to Large Special Places
Correctional Institutions	39.8
Juvenile Institutions	22.0
Nursing Homes	2.8
Hospital Facilities	32.1
Colleges and Universities	69.0
Military Bases	80.8
Group Homes	25.7
Service-Based and Other GQs	7.7
All GQs	25.4

b. As Measured by Population

This table shows the distribution of Special Places by size of population:

Distribution of Special Place, by Population		
Number of Residents	Percentage of Special Places	Percentage of Population
1-9	40.4	2.3
10-24	20.4	4.0
25-49	12.1	5.6
50-99	12.8	11.8
100-249	9.8	18.3
250-499	2.0	8.6
500-999	1.2	10.5
1000 or more	1.3	38.9

Most of the Special Places have very few residents. The bulk of the GQ population is in Special Places that have large numbers of residents.

Colleges, prisons, and military bases made up nearly 98% of the Special Places with 1000 or more residents. These Special Places made up:

- 61% of the prison population
- 72% of the college GQ population
- 78% of the military GQ population residing in Special Places of that size.

4. **How GQ Questionnaires Were Completed**

Enumerators were instructed to fill out a box on each GQ questionnaire to indicate how the data were supplied. The results follow:

How GQ Questionnaires Were Completed	
Method	Percent
Respondent filled out form	24.8
Enumerator interviewed respondent	9.7
Administrative records used	48.9
Unknown	16.6

The GQ categories with the highest proportions of questionnaires filled out from administrative records were nursing homes (73%), hospitals (66%), group homes (60%), and correctional institutions (56%). The only GQ category for which respondents filled out

most of their own forms was colleges (58%).

5. GQ Questionnaires Claiming Usual Homes Elsewhere

Respondents enumerated at several kinds of GQs (military bases and ships, soup kitchens, group homes, maritime ships, workers' dormitories, religious GQs, hostels, and other miscellaneous GQs) were entitled to claim a "usual home elsewhere" (UHE), in effect stating that the GQ was not their usual home. If the respondent enumerated at such a GQ checked a box indicating that they lived in a housing unit elsewhere, and provided an address that the Census could locate, then the respondent was to be enumerated at the address provided.

Some residents provided an alternate Census Day address but indicated that the GQ, not the alternate address, was their usual residence. (This was done by checking a box on the GQ questionnaire.) These cases were inadvertently treated as if the respondent had claimed a usual home elsewhere. As a result, 37.2% of the UHE cases were ineligible to be counted at any location other than the GQ.

Questionnaires Claiming a Usual Home Elsewhere: Legitimate or Not?		
Correct box checked for UHE?	Number	Percent
Yes: UHE-eligible	659,566	62.8
No: should stay in GQ	388,970	37.2
Total	1,048,536	100.0

Over 61% of the questionnaires that were incorrectly treated as UHE cases were ultimately returned to the GQ universe. The effect of the incorrect treatment of these questionnaires as UHE cases was that approximately 120,000 persons that should have been counted in the GQ universe were counted in housing units, and over 30,000 residents of military GQs were inadvertently dropped from the Census.¹

¹Members of the armed forces who lived in a housing unit were enumerated both at home and at their unit. Those providing a valid UHE address were tabulated at their home. If an armed forces member claimed a UHE but the UHE address could not be

6. Household Questionnaires and Duplicate Person Records

a. Household Questionnaires

Some addresses had been in both the Housing Unit universe and the GQ universe in early versions of the Decennial Master Address File. These duplications were identified after the Census mailout list was compiled. Thus, these units were mailed a Census household questionnaire. If the household questionnaire was returned, the persons listed on them were included in the count for the GQ at that address. This led to duplicate enumerations whenever the same persons were listed on both the GQ questionnaires and the household questionnaire for that address.

There were 50,460 persons tabulated at GQs who had filled out household questionnaires. Of these persons, 79% were tabulated at group homes and religious GQs, two categories of GQs that often look no different from single-family housing units.

b. Duplicate Person Records

Early non-systematic observations of Census data suggested that there were a significant number of duplicate person records within GQs, particularly group homes and other small GQs, especially religious GQs, which had an average population of less than 7. A stratified sample of 400 GQs in five strata was selected to estimate the magnitude of duplication within the GQ population. It excluded correctional institutions, military bases, and service-based facilities, but included the rest of the GQ universe. The portion of the GQ universe from which the sample was drawn included 154,042 GQs containing 5,156,168 person records, or 66% of the GQ population. The 400 GQs in the sample contained 18,650 person records.

The person records in each GQ were clerically examined to identify within-GQ duplicates. Records with the same name, sex, and age/date of birth were considered duplicates. The clerical review identified 549 person records

found, that person was still not tabulated in the GQ, in order to avoid potentially counting that person at both locations. This is what happened to the 30,000 persons discussed here.

that fit the definition of duplicate records.

The best point estimate for the percentage of duplicate records in the sample strata is 1.1%, with a 95% confidence interval of $1.1\% \pm 0.7\%$. The best point estimate for the number of duplicate person records in the sample strata is 56,416, and the 95% confidence interval is $56,416 \pm 34,409$.

Group homes and religious GQs were found to be by far the largest single source of duplication, apparently because many such facilities returned household questionnaires in addition to being counted by GQ enumerators. There were 57,348 group homes and religious GQs in Census 2000, with 539,938 person records. The sampling strata representing group homes and religious GQs had 163 GQs with 2,290 person records, of which 191 were found to be duplicates. The best point estimate for the percentage of duplicate records in the sub-universe of group homes and religious GQs is 4.4%, with a 95% confidence interval of $4.4\% \pm 0.9\%$. The best point estimate for the number of duplicate person records in the sub-universe of group homes and religious GQs is 23,491, and the 95% confidence interval is $23,491 \pm 4,750$.

7. Imputation of GQ Person Records

Just over 200,000 GQ person records were imputed in Census 2000, or about 2.6% of the GQ population count. The distribution by GQ category is shown in the following table.

Imputed Person Records, by GQ Category		
GQ Category	Imputed Person Records	Percent of GQ Category
Correctional Institutions	44,019	2.2
Juvenile Institutions	3,544	2.7
Nursing Homes	35,935	2.1
Hospital Facilities	13,400	5.6
Colleges and Universities	39,577	1.9
Military Bases	16,637	4.7
Group Homes	16,168	3.5
Service-Based and Other GQs	37,391	4.4
Total	206,671	2.6

The need to impute person records arose from two sources. One was a post-enumeration telephone operation to obtain more accurate counts from GQs that had refused to allow access to GQ enumerators. The second source was the inability to associate GQ questionnaires with a specific GQ, along with the inability to ascertain whether all GQ questionnaires for a GQ were correctly accounted for. Some GQs had counts far below what had been expected in advance of the Census. (Two pre-enumeration operations recorded an expected population count for each GQ.) For other GQs there was a need to reconcile the data capture counts for each GQ with the hand counts of GQ questionnaires recorded at each local Census office immediately after each GQ was enumerated. Collectively these operations evidenced the existence of just over 200,000 persons in GQs at the time of the Census for which no known questionnaire was data captured.

Imputed records composed 5.6% of the hospital count, and over 4% of the counts of military bases, service-based facilities, and other GQs.

8. T-Night and Embedded Housing Units

Embedded housing units are housing units physically within GQs. Such housing units are believed to mostly be occupied by persons administering the GQ and their families. Free-standing housing units were sometimes part of a Special Place. The reliability of the distinctions on the Census files between the two kinds of housing units at Special Places and GQs is less than certain. For purposes of this paper, both kinds of units have been treated as embedded housing units.

T-Night households are the households of persons who are not homeless, but who don't live or stay in a single place most of the time. T-Night enumerators canvassed Recreational Vehicle (RV) parks, campgrounds, marinas, racetracks, fairs, and carnivals to locate such households. T-Night households might include retired couples permanently touring the country in their RVs, families that work in traveling carnivals, racetrack workers who move from one racetrack to the next with the racing season, and the like.

Both types of housing units (embedded and

T-Night) were enumerated by GQ enumerators, and tabulated as housing units rather than as GQs. The Census' count of T-Night and embedded housing units is summarized in the following table.

T-Night and Embedded Housing Units		
	Households	Population
Embedded HU records	59,076	139,875
T-Night Records	87,338	127,766
Total	146,414	267,641

T-Night enumeration took place on March 31, 2000, which likely affected the geographic distribution of T-Night residents. The following table shows which states had the highest proportions of T-Night residents.

T-Night Residents Per 1000 Residents, by State			
State	T-Night Households	T-Night Population	T-Night Pop. per 1000 Residents
Nevada	5,021	7,996	3.99
Arizona	18,113	20,315	3.95
Oregon	4,754	8,529	2.49
New Mexico	3,084	4,337	2.38
Alaska	564	873	1.39
Idaho	1,059	1,784	1.38
Washington	3,709	6,513	1.10
Florida	13,286	15,430	0.96
Virginia	2,951	6,513	0.92
Montana	377	646	0.71
Texas	8,070	14,081	0.67
California	14,925	22,592	0.67
Hawaii	369	769	0.63
Arkansas	995	1,497	0.56
Mississippi	708	1,279	0.45
Wyoming	176	202	0.41
All Other States	9,177	14,410	0.08
Total	87,338	127,766	0.45

Over 63% of the T-Night population was enumerated in the five Sun Belt states of California, Nevada, Arizona, Texas, and Florida. The Northwest (both Pacific and Rocky Mountain Northwest, including Alaska)

also had a high proportion of persons counted at T-Night locations: 15% of the T-Night population was counted in this group of states.

9. Recommendations for the 2010 Census

a. Track Individual Questionnaires

In Census 2000, individual GQ questionnaires were not tracked from enumeration to data capture; only the total count for each GQ was recorded before each questionnaire was captured. Tracking of individual forms would make the reconciliation discussed in section 7 more precise. Should imputation of GQ person records be necessary in 2010, this would enable the need for it to be demonstrated much more precisely.

b. Use Differences Between GQ Categories to Improve GQ Enumeration

This paper presents a great deal of information delineated by GQ category. Some types of Special Places tend toward having many GQs and/or large populations; other types of Special Places almost always have a single GQ or very few people. Some GQ categories relied heavily on enumeration through administrative records in Census 2000; in others, respondent-filled forms were more common. Certain types of GQs were more likely to have persons from household questionnaires included in their final tabulations, and were more likely to have persons counted twice within a GQ.

This information, along with information from other sources, should be used to evaluate whether there are benefits to be gained in using different procedures for different categories of GQs in 2010, in building the address list, in enumeration itself, and in post-enumeration processing.

c. Make Better Use of Administrative Records

In Census 2000, more GQ questionnaires were filled out from administrative records than by any other means. In addition, the proportion of questionnaires filled out from administrative records varied greatly by type of GQ.

The 2010 Census should treat administrative records as the preferred source of GQ person data for all institutional GQs (prisons, juvenile

institutions, nursing homes, and hospitals), and should encourage the use of administrative records in enumerating many noninstitutional GQs as well.

d. Track T-Night Counts

The population counts of T-Night locations were not tracked in Census 2000, due to their having been enumerated by a GQ operation, but with household questionnaires. It may be possible to identify many T-Night questionnaires with T-Night locations by use of Census 2000 address data, but with what degree of accuracy and completeness is not yet known. Tracking the population counts of T-Night locations in Census 2010 would result in an improved estimate of those persons that do not live or stay in one place most of the time.

This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone a Census Bureau review more limited in scope than that given to official Census Bureau publications. This report is released to inform interested parties of ongoing research and to encourage discussion of work in progress.