

comparison of the
**Classification of Place of
Residence on Death Certificates
and Matching Census Records**
United States - May - August 1960

Comparison of the classification of residence stated on the death certificate with residence as stated on the matching census record for selected geographic areas by age, race, and sex. Based on a sample of death certificates for deaths occurring in the United States during May-August 1960, matched to 1960 census records.

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IN THIS REPORT a comparison of the classification of residence stated on the death certificate with residence as stated on the matching census record for selected geographic regions by demographic variables is presented.

The classification of residence information on the death certificates corresponds closely to the residence on the census records for the decedents whose records were matched. An inverse relationship exists between the size of the geographic area and the degree of difference between census assignments and those by the National Center for Health Statistics (NCHS) with differences approaching zero as the size of the area increases. NCHS somewhat overstates the numbers of deaths for individual urban places and understates those for rural areas. Towns, townships, boroughs in Connecticut, New Jersey, and Pennsylvania, territorial annexations between 1950 and 1960, and urban fringe areas presented problems to NCHS in properly allocating the residence of the decedents. The poorest age agreement between the census records and the death certificates was for the nonwhite group at ages 85-99 years in the geographic divisions comprising the South Region. The average proportion of records unmatched was 50 percent higher for the nonwhite group than for the white. Both the differences by race between census and NCHS records and the match status were most favorable for the white population and the Japanese when compared with other racial and ethnic groups. Differences by sex were negligible.

SYMBOLS

Category not applicable-----	...
Quantity zero-----	}
Net difference rate not computed if census frequency is the same as NCHS frequency-----	
Net difference rate not computed if either census frequency or NCHS frequency or both are zero-----	
Quantity more than 0 but less than 0.05-----	0.0

COMPARISON OF THE CLASSIFICATION OF PLACE OF RESIDENCE ON DEATH CERTIFICATES AND MATCHING CENSUS RECORDS

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INTRODUCTION

The chief purpose of the 1960 Comparison Study is to measure differences for selected characteristics as reported on the death certificates and on the questionnaires for those decedents enumerated in the Eighteenth Decennial Census of the United States. A secondary objective is to assess the accuracy of the annual death rate on the basis of the results of this study.

This comparison study involves a sample of deaths occurring during the 4-month period May-August, 1960. The design of the sample, number of records, procedure for matching, and related information are noted in the Technical Appendix.

The present study is a byproduct of the University of Chicago Mortality Study, Social and Economic Differentials in Mortality: United States, 1960, which is now providing nationwide statistics on mortality differentials collected in the 1960 census by social and economic characteristics.^{1,2}

This report evaluates the comparability of classification of residence as reported on the death certificate and on the 1960 census schedules. The report primarily evaluates coding differences between the Bureau of the Census and the National Center for Health Statistics (NCHS). The standard certificate of death (1956 Revision)

contained the following item for eliciting residence information:

2. USUAL RESIDENCE (Where deceased lived. If institution: Residence before admission)	
a. STATE	b. COUNTY
c. CITY, TOWN, OR LOCATION	
d. STREET ADDRESS	
e. IS RESIDENCE INSIDE CITY LIMITS? YES <input type="checkbox"/> NO <input type="checkbox"/>	f. IS RESIDENCE ON A FARM? YES <input type="checkbox"/> NO <input type="checkbox"/>

In order to develop uniform national statistics, NCHS issues standard certificates which serve as models for the States. With respect to the death certificate, the usual residence is the place where the deceased resided at the time of death. However, in the case of persons residing in long-term institutions, assignment is made to the place where the deceased lived prior to admission, if it is given.

In the 1960 Census of Population each individual enumerated was counted as an inhabitant of his usual place of abode which, for the most part, was the place where the individual lived most of the time. Differences exist between census and vital statistics in determining the usual residence for certain numerically small groups such as inmates of long-term institutions and residents of foreign countries temporarily living in the United States.

The residence data shown in this report were grouped into six major categories:

- (1) Urban places of 25,000 population or more in 1960
- (2) Population-size groups of areas
- (3) Metropolitan and nonmetropolitan counties, urban and rural areas
- (4) Standard metropolitan statistical areas
- (5) Geographic divisions
- (6) Geographic regions

(For definitions of these geographic areas, see the Technical Appendix.)

MAJOR FINDINGS

The classification of residence information on the death certificates corresponds closely to the place of residence as stated on the census records for the decedents whose records were matched. The proportion of unmatched records was high—23 percent.

Considerable improvement in the quality of the residence data has taken place since 1950. This observation is based on a comparison of the results of this study with those for a matched record study involving births for 1950.

An inverse relationship exists between the size of the geographic area and the degree of difference found between census assignments and those by NCHS. Differences diminish as the population size of the area increases. Compared with census assignments, NCHS somewhat overstates the numbers of deaths for individual urban places and understates those for rural areas. A comparison of NCHS annual data with figures tabulated by selected State offices of vital statistics shows the same pattern.

Towns, townships, and boroughs in Connecticut, New Jersey, and Pennsylvania; urban fringe areas; and territorial annexations made between 1950 and 1960 presented the greatest problems to NCHS in properly allocating the residence of decedents.

The poorest age agreement between the census records and the death certificates was for the nonwhite group at ages 85-99 years in the geographic divisions comprising the South Region.

For three-fifths of the 729 urban places of 25,000 population or more in 1960, either no

matched deaths for nonwhite persons were reported or fewer than 10 deaths were reported, thereby obscuring the comparison of differences by color.

The average proportion of records unmatched was 50 percent higher for nonwhite than for white persons. Both the net difference rates by race and the match status were more favorable for the white and Japanese groups than for other racial and ethnic groups. Differences by sex were negligible.

A followback survey involving almost 10,000 decedents showed that the distribution of matched and unmatched records by nine population-size groups of geographic areas was not different. However, this general finding cannot be extended to the more detailed residence data used in this report.

The findings of this study on the annual death rate are limited by the fact that a sample of deaths is taken only for the summer months, and data are for a single year. Other limiting factors are covered in the Technical Appendix. The results of this study generally indicate that the annual death rate for an individual urban place is slightly overstated.

URBAN PLACES

A frequency distribution of net difference rates for 729 urban areas with a population of 25,000 or more in 1960 is shown in table 1. Net difference rates were computed by subtracting the number of deaths matched at the usual place of residence according to census assignments from those by NCHS assignments, dividing by the census figure, and multiplying by 100. A negative rate indicates more assignments by census than by NCHS. The group "matched at usual residence" represents those decedents who died at the place where they had usually resided and had been enumerated in the 1960 Census of Population. Net difference rates based on 100 frequencies or more (according to census designations) are shown separately from those based on fewer than 100 deaths. The reason for this separation is that the variance would be greater for rates based on small frequencies. This latter group has a wider range of rates—from 0 to 94.9—compared with

the range of 0 to 49.9 for the group in which the rates are based on 100 deaths or more.

The median net difference rate for the 729 areas falls at 3.0 percent. Based on 100 deaths or more, the median is 2.9, and for small frequencies, 3.2. The size of the difference varies inversely with the size of the urban area. For areas of under 100,000 population, differences of understatement by NCHS exceed those of overstatement.

As indicated in table 1, most of the differences are positive. This finding is consistent with that of other independent sources used for comparison. In a previous matched-record study involving births for 1950, the results were the same as those of this study—an overstatement of events in the urban areas by NCHS compared with census records.³

Net difference rates for deaths in 1960 and births in 1950 for 221 selected urban areas were reviewed. The basis for the selection of the 221 areas was the number of births included in the 1950 study, namely, 100 events according to either the census record or the birth record. For 66.5 percent of the areas the difference was positive for births and deaths (more assignments by NCHS than by census). The direction of the differences for births and deaths for the balance of the areas was as follows:

<i>Direction of difference</i>	<i>Percent of total</i>
Both negative -----	7.2
One positive and one negative-----	16.3
Zero net difference for either births or deaths -----	10.0

The negative differences were not concentrated in any one State but were scattered among 32 of the 42 States and the District of Columbia, shown in table 2. This pattern was also typical of the other types of differences shown above.

The magnitude of the difference was substantially less for deaths than it was for births (table 2). Two factors contributed to this difference. First, the addition of the residence checkbox item on whether the place of residence was inside or outside the city limits on the standard certificates in 1956 aided in properly allocating the

residence of persons living near cities, but outside the corporate limits. Certificates of births and deaths for the majority of States contain this checkbox item. The second factor involves the mobility of persons using hospitals. There is more likelihood of movement for the utilization of hospitals for births than for deaths.

A comparison was made between the annual number of deaths by place of residence as tabulated by NCHS and those tabulated by the various State offices of vital statistics. For most registration areas, NCHS figures were larger than the State tabulated data.

Three-fifths of the States or registration areas had State assigned residence codes on the microfilm copies of the death certificates received by NCHS for 1960. It is not known if these codes were assigned on the basis of census tracts, street maps, or if the codes were assigned only on the basis of the information entered in the residence section of the certificate. NCHS used the State codes in determining its own geographic codes for only four States and for selected local areas and counties in 11 other States.

The findings of the 1960 Comparison Study show the same pattern of difference when comparing NCHS figures with either those of the State or the Bureau of the Census.

The primary reasons for the differences between census and NCHS figures are to be found in the enumeration process and vital registration—the former giving greater support to the accuracy of the census figures. In the 1960 Census of Population, geographic locations can be fixed with a high degree of precision by the use of street maps and similar aids. The situation is very different with respect to the vital record, however. In assigning residence codes, NCHS is, for the most part, dependent on the information entered in the section of the vital record pertaining to usual residence. Due to the great number of vital records which NCHS must code, it is not feasible to verify all addresses by means of a census tract or street guide.

Few extreme differences between census and NCHS assignments were observed. Only 14 of the 729 areas had net difference rates of 50 percent or more. With the exception of Boise City, Idaho, the remaining 13 areas had fewer than 100 deaths matched at the usual place of residence as re-

ported by either census or NCHS designations. The average number of such records for the combined 14 areas was below 50.

Not all of the excess differences can be explained. Generally, the areas with these extreme differences in code assignments between census and NCHS fell into three groups. First, towns, townships, and boroughs were difficult to identify and code for vital statistics purposes. Almost three-fourths of the areas with large net difference rates were towns or townships in Connecticut, New Jersey, and Pennsylvania. In each of these areas, the numbers of assignments were understated by NCHS when compared with census numbers. For example, the first area listed in Pennsylvania was Bristol Township--an area of 59,298 population which was classified as urban by special rule. In the same county--Bucks County--there was also the incorporated area of Bristol borough (population of 12,364) which NCHS also classified as urban. Duplication of place names within a county and double entries of place names on certificates resulted in problems in correctly classifying geographic areas.

The second factor relating to extreme differences may be the number of annexations between the two decennial census periods. For example, Hayward, California, had over a 400-percent increase in population, primarily due to annexations between 1950 and 1960. Frequently, the place names of the annexed areas are reported as the decedent's residence and thus may be improperly classified. Several of the areas with substantial net differences had large annexations between 1950 and 1960.

Finally, unincorporated areas which have mailing addresses and/or place names similar to that of an adjacent urban place present a coding problem. One such example is Boise City, Idaho, which is surrounded by unincorporated areas with place names similar to Boise City such as South Boise.

The numbers of deaths matched at the usual place of residence were tabulated by color for the 729 urban places having 25,000 population or more in 1960. Comparisons of net difference rates for the white and nonwhite decedents were limited by the small frequencies for the nonwhite group. Almost one-third of the 729 areas had no matched deaths assigned according to either the

census record or death record for the nonwhite group (table 3). Another 4 percent of the areas had no frequency according to either census assignments or those by NCHS and with only one or two deaths in the alternative cell. Consequently, no net difference rate could be computed. An additional one-third of the areas had frequencies of fewer than 10. Net difference rates for white individuals were lower than those for the nonwhite group for most areas. As the number of matched deaths increased, the net difference rates for the nonwhite group approached those for the white.

The urban places with at least 50 nonwhite deaths or more assigned by both census and NCHS were concentrated in the South Region (table 4). In this region the match status for both color groups was least favorable. About one-fourth of the records in the South were not matched and thus obscured the analysis of white-nonwhite differences.

The proportions of records which were unmatched for the nonwhite group were higher than those for the white in 324 of the 729 areas. However, for three-fourths of the 324 areas there were fewer than 20 unmatched deaths. The unmatched proportion was higher for white than nonwhite persons in only 92 of the 729 areas. The balance (43 percent) had no matched and/or unmatched deaths.

It can be concluded that no judgment can be made about the white-nonwhite differences for the unmatched group for urban areas of 25,000 population or more throughout the country because of the small frequencies for nonwhite deaths except in the South Region.

POPULATION-SIZE GROUPS

Table 5 shows the numbers of deaths matched at the usual place of residence for urban places grouped by population size as of 1960. As indicated previously, for the less definitive population-size groups in table 1, the magnitude of the net difference rates varies inversely with the size of the area. This inverse relationship is more evident from data shown in table 1, than from data shown in table 5. For all urban areas of 100,000 population or over and for rural areas, the net difference rates are positive, indicating more assignments according to the death record

than by the census record. For all other urban places, the direction of the difference is negative.

The group, urban areas of 2,500-10,000 population, had the largest net difference rate (-9.0) compared with other population-size groups. There are slightly over 3,000 such areas and the problem of properly identifying the residence of decedents of such areas has increased so extensively since 1960 that starting with data-year 1964 NCHS no longer separately identifies such places. The reason for this change was primarily due to the fact that mailing addresses rather than the actual residence of the decedents were often entered on the death record.

The proportions of records which were not matched at the usual place of residence were similar for the various population-size groups with the exception of that for rural areas. The proportion for this latter group was 26 percent and the range for the other eight groups was from 20 to 22 percent. Lack of a well defined place of residence on the vital record undoubtedly contributed to the high proportion of unmatched records for rural areas.

Data for white and nonwhite individuals are also included in table 5. The net difference rates by population-size groups follow the same pattern for each color group as for the total population. For most of the population-size groups in table 5, the net difference rates for the white group were higher than those for the nonwhite. However, the proportion of the records which were not matched at the usual place of residence was about 50 percent greater for nonwhite than for white persons. For urban places of a combined population of 25,000 or more, the unmatched proportion was 19 percent for the white and 30 for the nonwhite group.

Underenumeration in 1960 Census of Population

There appears to be an association between the net undercount in the 1960 Census of Population for geographic areas grouped by population size and the proportion of records unmatched in the 1960 Comparison Study. Various methods were used in estimating the coverage errors in the 1960 census. One method was an estimate of housing unit coverage errors noted in Waksberg's

paper.⁴ The data relate only to field enumeration errors and not to errors resulting from FOSDIC Processing (Film Optical Sensing Device for Input to Computer). The highest net undercounts were reported for urban places of 500,000 population or more and for areas of under 10,000 population. Likewise the proportion of records unmatched in the 1960 Comparison Study showed somewhat the same distribution—low proportions of unmatched records for groups of urban places of 10,000 to 250,000 population and high proportions for areas above and below these population groups.

Followback Survey

One method of evaluating the character of the unmatched group was to followback by an independent survey on a sample of matched and unmatched decedents. This was done for 9,475 decedents of the 340,033 included in the comparison study. A survey questionnaire was mailed to the 9,475 informants whose names were entered on the death certificates. On the basis of the questionnaires returned and after personal interview followups, there was over 90-percent response.

The only residence data included in both the survey and the 1960 Comparison Study were those for population-size groups of areas. Table 6 shows the number and percent distribution of deaths by population-size groups of areas included in both the survey and the comparison study. The distributions were almost identical, thereby indicating that the survey was representative of the major study. The number of records matched in both the survey and the comparison study are shown in table 7. With the exception of the category 25,000 to 50,000, the distributions of matched events followed closely those of total events shown in table 6. The large difference for this category was the result of processing errors. It is probable that an additional 300 records in the survey in the group "25,000 or more, but not further defined" should be properly classified to the size of areas, 25,000-50,000.

Table 8 shows data for the unmatched group. The number of decedents for which there was a response in the followback survey is shown separately from that for which a response was

not received. Since this latter group included only 221 records, it is not feasible to make a judgment about the differences between this distribution and that representing a response in the survey.

The percentage distribution by population-size group of the unmatched decedents for which there was a response in the survey differed only slightly from the matched groups (table 7). Therefore, it is probable that the matched and unmatched decedents were from the same "population." To be conclusive, it would be necessary to have a distribution of deaths matched in the survey only and coded according to the responses in the survey. This was not done, however.

METROPOLITAN AND NONMETROPOLITAN COUNTIES FOR URBAN AND RURAL AREAS

Net difference rates and the proportion of records unmatched for the combined groups of metropolitan and nonmetropolitan counties are presented in table 9. The two groups of counties are further classified by urban and rural areas for color-sex groups.

Metropolitan counties had smaller net difference rates and lower proportions of unmatched records than nonmetropolitan counties. For the latter group of counties there were more assignments according to the census record, whereas for metropolitan counties there were more assignments according to the death record. Consistent with the findings noted in the previous section, NCHS classified more deaths to urban areas than to rural. The rural areas of both types of counties have higher proportions of unmatched records than urban areas. This may be related to the fact that rural areas generally have less definitive mailing addresses than urban areas. Consequently, matching the census and death records for individuals who had resided in these areas was not as successful as in urban areas.

The difference between census assignments and those by NCHS was greatest for rural areas in metropolitan counties (table 10). Likewise, the proportion of records not matched—27.4—was considerably higher for this geographic component than for the others shown in the table. The rural section of metropolitan counties is unique for several reasons. First, the rural component

of metropolitan counties as defined for vital statistics includes the "urban fringe," that is, places surrounding large metropolitan areas. This definition differs from that used by the Eighteenth Decennial Census insofar as the Bureau of the Census classifies these fringe areas as urban. This difference is necessitated by the fact that census can set up one-time boundaries for unincorporated areas for its decennial enumerations, whereas NCHS must depend upon established political delineations for a 10-year period. A rapid growth of new fringe areas took place between the two census periods—1950 and 1960. Such areas frequently had mailing addresses of the adjacent incorporated urban places, and these addresses were reported as the usual place of residence. Consequently, there were difficulties in matching.

The second factor to adversely affect the match status was migration. As used here, migration pertains to those persons 5 years of age and over who moved from one county to another between April 1, 1955, and April 1, 1960. The proportion of persons who moved to different counties in this quinquennial period was 21.1 percent for the urban fringe of metropolitan areas and only 14.0 percent for the central cities of metropolitan counties.⁵

The social and economic characteristics of the rural parts of metropolitan areas are very different from those for rural areas in nonmetropolitan counties.⁵ From one point of view, the rural section of metropolitan areas is more urban in character than the rural section of nonmetropolitan areas.

In regard to the net difference rates and the proportions unmatched, the differential between the white and the nonwhite groups is pronounced—both measures are higher for nonwhite than for white persons. The contrast between the direction of the net difference rates is noteworthy. These rates for rural areas are negative for the white group and positive for the nonwhite. The individual geographic areas which comprise the rural total are not separately identified in coding geographic information on the death certificates. This detail would be necessary to attempt to explain the differences in the rates for the white and nonwhite groups. Rural data were reviewed for the four geographic regions and the differences observed

in the North Central Region contributed most to the high positive net difference rate for the non-white group.

<i>Region</i>	<i>Nonwhite metropolitan-rural net difference rate</i>
Total-----	10.3
Northeast-----	25.9
North Central-----	57.6
South-----	8.0
West-----	-13.6

(Death record is base of rate and minus sign indicates more assignments by the death record than by the census record.)

STANDARD METROPOLITAN STATISTICAL AREAS

Table 11 shows a comparison of net difference rates for 25 standard metropolitan statistical areas (SMSA's) which were randomly selected, and the urban components of these same SMSA's. Here the urban components are limited to those places of 25,000 population or more in 1960 since deaths for urban places below 25,000 population were not separately tabulated. All subsequent references to these components will be limited to urban areas of 25,000 population or more.

Data presented in this table show that the net difference rates are, for the most part, lower for the SMSA than for selected urban areas which are a part of that SMSA. The SMSA is a county or group of contiguous counties and therefore includes urban and rural areas. As noted in table 9, NCHS data generally show an overstatement of events for urban places and an understatement for rural areas. As a result, the net difference rate is low—the result of compensating differences.

The SMSA's with the highest proportion of unmatched records were located in the South Region with the West having the next highest proportion. This is not only true for the 25 SMSA's in table 11 but for all 201 SMSA's (MSEA's in New England) and for other residence data in this

report. Both the South and the West Regions have a higher proportion of nonwhite persons than either the Northeast or North Central Regions. For this color group the unmatched proportion is less favorable than that for the white group. Another factor is that migration is higher in the West and South; therefore it is likely that the unmatched proportion would be higher in these two regions than in the Northeast or the North Central Regions.

The largest of the SMSA's in table 11—Chicago, Illinois—had 22 urban components of 25,000 population or more. The net difference rates for these areas ranged from 0 for several components to 91.4 for Oak Lawn, Illinois, but the average was only 5.9 percent and the net difference rate for the SMSA, 0.2 percent.

The number of matched deaths for SMSA's was tabulated separately for two groups: Matched at usual place of residence (UPOR) and matched but not at the usual place of residence. This latter group was numerically small and represents those matched at the place of death (POD). The number and percentage breakdown of the number of records by match status are as follows:

	<i>Number</i>	<i>Percent</i>
Total-----	532,948	100.0
Matched-----	420,292	78.9
UPOR-----	388,754	72.9
POD-----	31,538	5.9
Unmatched-----	112,656	21.1

The group matched at the place of death (POD) is different insofar as any comparison of residence coding by census and NCHS is not applicable. One factor which accounts for a match at the place of death rather than at the usual place of residence is the difference between the enumeration process and the vital registration system. Persons residing in long-term institutions were enumerated in the census at these institutions prior to their death, but the death record asks for the usual place of residence prior to admission to the institution. Therefore, the two geographic codes assigned are not the same.

The net difference rate for the total matched group was 0.3 and for the two subgroups, UPOR and POD, the rates were 0.0 and 4.1 (table 12).

The highest rates for the total group were observed for the three SMSA's of Columbia, South Carolina; Pueblo, Colorado; and Tuscaloosa, Alabama. The high difference rates for the total group were the result of matching at the place of death. The distribution of net difference rates by type of match is as follows:

	<i>Total</i>	<i>UPOR</i>	<i>POD</i>
Columbia, S.C -----	-22.3	-1.7	-77.5
Pueblo, Colo-----	-30.3	-2.1	-85.7
Tuscaloosa, Ala-----	-37.4	-	-92.5

In comparing the net difference rates by color only 57 SMSA's were considered. The areas were those to which 100 or more nonwhite deaths were assigned (table 13). Although the net difference rates for the white group were higher for slightly over half of the 57 areas, the proportion unmatched was considerably higher for the nonwhite group (table 14). The frequency distribution of the proportion unmatched (using census as base) for the white and nonwhite groups is presented below:

<i>Proportion unmatched</i>	<i>Number of SMSA's</i>	
	<i>White</i>	<i>Nonwhite</i>
Total-----	57	57
10.0-19.9 -----	20	1
20.0-29.9 -----	28	26
30.0-39.9 -----	9	28
40.0-49.9 -----	-	2

Those areas for which the net difference rates for the nonwhite group did exceed those for the white were located for the most part in the South Region, where the match status was least favorable.

One purpose of the 1960 Comparison Study was to evaluate the effect of the findings of this study on the annual death rate. The annual death rates for SMSA's in 1960 are published in *Vital Statistics of the United States, 1960*, Vol. II, Part B. The method involves the following assumptions. First, the assignment of deaths to any SMSA

made by census is presumably the "correct" figure rather than the NCHS figure for the May-August study period. As indicated previously, the difference between the enumeration process and vital registration gives greater support to the accuracy of the coding of geographic locations by the Bureau of the Census. The second assumption is that the population enumerated as of April 1, 1960, for an SMSA is "correct." Measures of misstatement of residence or underenumeration for individual SMSA's as of April 1 have not been published by the Bureau of the Census.

The annual rate could be adjusted on the basis of the findings of this study. An upper and lower range of the annual rate could be computed as indicated below.

The upper range is derived as follows:

- (1) Increase or decrease the annual number of deaths by the percent difference between census and NCHS assignments for the study period for the SMSA. If the census figure is lower than the NCHS figure, the annual number of deaths would be reduced; if the NCHS figure is lower, the annual figure would be increased.
- (2) Compute the upper range of the annual adjusted rate using the frequency derived in step 1.

In computing the upper range of the annual adjusted rate, all unmatched deaths are assumed to be correctly assigned to the SMSA. In computing the lower range of the annual adjusted rate, all unmatched deaths are assumed to be incorrectly assigned to the SMSA. Therefore, the range of the annual adjusted rate is determined by the unmatched deaths.

The lower range of the annual adjusted rate is computed as follows:

- (1) Follow step 1 for the upper range.
- (2) Reduce the annual number of deaths by the proportion that unmatched deaths are of total deaths for the study period. The figure for total deaths is the sum of the matched and unmatched deaths.
- (3) Compute the lower range of the annual adjusted rate using the frequency derived in step 2.

It is probable that the true adjusted rate is closer to the upper range since it is most likely that the majority of unmatched deaths are correctly assigned.

The formulas for computing the adjusted rates and their application for one SMSA are shown in the Technical Appendix.

AGE BY GEOGRAPHIC DIVISION

Net difference rates vary slightly among the nine geographic divisions for the total population. In five of the divisions, the highest net difference rates—all negative—were reported for the age group 25-34 years. (Negative indicates more assignments by census than by NCHS to an age group.) For the three divisions comprising the South Region, maximum positive net differences were observed for the interval 55-64 years. The highest net difference rate (-5.5) in the Middle Atlantic division was reported at ages 35-44 years (table 15). Division data discussed here and region data discussed in the following section are according to census designations. These sections differ from those appearing previously insofar as they are a comparison of age and race, respectively, rather than a comparison of residence. A detailed analysis of age for the United States has been covered in a report in *Vital and Health Statistics*, Series 2, No. 29.⁶

There was only a slight difference by sex, but a pronounced difference by color when data were compared by age for the divisions. Net difference rates for nonwhite males and females were considerably higher than those for white males and females. The highest rates were reported for nonwhite individuals below 25 years of age. However, the rates are based on extremely small frequencies—generally about 10 deaths—for all divisions except those in the South Region.

In addition to net difference rates, the percent agreement between census and NCHS assignments was also computed. This measure was derived by dividing the number of matched records classified by a given age group by both census and NCHS (the common cell) by the number of matched records classified to that same age group by census. As was noted for net difference rates, extensive variability was observed for the percent agreements for the nine divisions by 10-year age

groups. Generally, the poorest agreement occurred at 85-99 years—the age group for which the annual age-specific death rate is maximal. The New England Division was an exception to the pattern; the percent agreement was poorest at the younger ages rather than the older ages. The observations made for the net difference rates by color and sex are applicable to the percent agreements. Nonwhite differences between census and NCHS assignments were more extreme than those for white decedents and these differences were greatest in the divisions comprising the South Region.

With few exceptions, the proportions of records unmatched for males and females and for white and nonwhite persons were highest for the age groups 15-24 and 25-34 years in the nine geographic divisions. For the most part, the exceptions to this pattern were for the interval 1-4 years of age and the proportions were based on small frequencies.

With respect to the characteristics of age and race, there were two phases in the 1960 Comparison Study. The difference between the two phases of the study relates to the two-stage enumeration in the 1960 Census of Population. All matched records in stage I represent decedents who were in the 100-percent enumeration. Stage II includes those decedents who were matched in stage I and who also were included in the 25-percent sample of households. With respect to this study and the impact on vital rates, the important distinction is that in stage II, not stated and not valid codes for the majority of items were allocated. The method of allocation is described in the various publications relating to the 1960 Census of Population found in the bibliography. It is data from stage II which are used in computing selected vital rates.

All data by age previously discussed have been derived from stage I. Table 16 shows four series of net difference rates for white males for the South Atlantic Division—stage I with and without the "not stated and not valid" codes and stage II with and without the allocations of the "not stated and not valid" codes. Stage I illustrates better than stage II the "true" comparison between data derived from the census record and those from the death record. The fact that the effect of the allocations on most age groups was

to increase the disparity between age reporting on the census record and the death record has an impact on the analysis of mortality data.

RACE BY GEOGRAPHIC REGION

Detailed data for race for the United States and four regions are presented in tables 17 and 18. The net difference rates for each of the regions were less than 1 percent for the white group. The direction of the difference was always positive, that is, more assignments were made to the white group by NCHS than by census (census record used as base). Two factors may contribute slightly to the direction of these differences. First, the number of "race not stated and not valid" assignments according to census tabulations was 3,214, compared with 22 "race not valid" assignments according to NCHS tabulations. Therefore, the figures for the white and for the nonwhite category by census designations are below those by NCHS designations for the United States and each region. Second, the death records for which the race was not stated were assigned to "white" in the initial coding operation in NCHS. The number of "not stated" entries is not known, but presumably the figure is small.

Not only are the net difference rates generally lowest for the white group but the proportions of unmatched deaths are lowest. The latter factor gives greater validity to the net difference rates for the white population.

The net difference rates for the Negro race were higher than those for the white and were generally positive; the rates were less than 2 percent for the United States and each region. However, the proportion of records unmatched was approximately 30 percent for the Negro race—almost 50 percent above that for the white.

The net difference rates for the Indian group were negative for each region and lowest in the West where the majority of the Indian reservations are located. Self-enumeration of race, which was introduced in the 1960 Census of Population, may contribute to the excess of census records over death records which were coded as Indian. The annual death rate for the Indian group was 8.6 per 1,000 population in the United States for 1960 compared with 13.0 in 1950. The self-enumeration procedure in the 1960 census and

changes in classification by census of persons of mixed stock of Indian and other races contributed to a sharp increase in the Indian population between the two census years. This artifact observed in the annual death rates is consistent with the findings of this study.

With the exception of those for the West, the regional net difference rates for Chinese, Japanese, and Filipino are based on such small frequencies as to render the rates statistically unreliable. The net difference rate for the Japanese in the West was -0.6 which was the lowest of any net difference rate for any racial category for the United States or any of the four regions. The match status for this racial group—18 percent—is superior to that of the other racial categories in the West Region or in the United States as a whole. The net difference rate for the Chinese is 0.9—the same as that for the white group in this region. The proportion unmatched is about the same for the two categories—22 for the white group and 23 for the Chinese. The net difference rates for the "other nonwhite" group showed the greatest divergence between census assignments and those by NCHS. Likewise the proportion unmatched is highest—approximately 50 percent (census record used as a base). If the death record is used as a base, the equivalent proportion is below 30 percent because the denominator of the proportion would be substantially larger. It is difficult to explain the large difference between census assignments and those by NCHS for this group because it is an "all other" category. Differences may exist in interpretation between census and NCHS as to what should be included in this "all other" group.

Regional differences for each sex group were examined only for the white and nonwhite categories since the frequencies for the racial groups were very small. Net difference rates for females were lower than those for males for each region except the West.

In stage II of the 1960 Comparison Study there were 87,905 matched records. Of this number 1,145 or 1.3 percent had no entry for race ("not valid" included). After the 1,145 records were assigned a code for race, the assignments were compared with the codes for race on the death records for those 1,145 decedents. There was only 20 percent agreement. The effect on the

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comparison study was to bring into closer agreement the assignments of codes by census and NCHS to the white category. The reverse effect occurred with respect to most of the nonwhite racial groups. A comparison of the net difference rates for stages I and II by race for the United States is shown below. (Census record is used as base and minus sign indicates more assignments by census than by NCHS.)

Race	Net difference rates for stages:	
	I	II
White-----	0.8	-0.4
Nonwhite-----	1.1	-1.2
Negro-----	1.1	0.2
Indian-----	-9.4	-11.2
Japanese ---	-0.9	7.5
Chinese ----	-4.6	-25.0
Filipino ----	-23.2	-33.3
Other -----	-125.4	21.9
Not stated and not valid----	-99.3	...

If the annual death rates for the two groups, white and nonwhite, are evaluated in terms of the findings noted above, the effects are negligible. However, rates for specified nonwhite racial groups would be affected. For example, the net difference rate for the Japanese according to stage I is -0.9 and according to stage II, +7.5. The latter net difference rate (+7.5) represents fewer allocations of "not stated" to the Japanese than the findings of this study would warrant. The effect would be to overstate the published annual death rate for the Japanese from 5.1 per 1,000 population to 5.5.

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Table 1. Frequency distribution of size of net difference rates based on deaths matched at usual place of residence, for urban areas of 25,000 population or more: United States, May-August 1960

[Census record used as a base. Negative indicates more assignments by census than by NCHS]

Net difference rate	Positive difference				Negative difference			
	Total	Areas of:			Total	Areas of:		
		100,000 or more	50,000 to 100,000	25,000 to 50,000		100,000 or more	50,000 to 100,000	25,000 to 50,000
Based on 100 deaths or more								
Total-----	289	110	110	69	83	21	45	17
0-0.04-----	47	5	22	20	..	..	..	..
0.1-4.9-----	172	91	55	26	68	18	38	12
5.0-9.9-----	50	12	23	15	10	2	5	3
10.0-14.9-----	14	2	6	6	1	1	-	-
15.0-19.9-----	3	-	1	2	1	-	1	-
20.0-24.9-----	2	-	2	-	-	-	-	-
25.0-29.9-----	-	-	-	-	1	-	1	-
30.0-34.9-----	-	-	-	-	-	-	-	-
35.0-39.9-----	1	-	1	-	1	-	-	1
40.0-44.9-----	-	-	-	-	-	-	-	-
45.0-49.9-----	-	-	-	-	1	-	-	1
All other-----	-	-	-	-	-	-	-	-
Based on less than 100 deaths								
Total-----	243	-	21	222	114	-	16	98
0-0.04-----	84	-	7	77	..	..	..	..
0.1-4.9-----	89	-	8	81	61	-	10	51
5.0-9.9-----	32	-	3	29	21	-	1	20
10.0-14.9-----	12	-	1	11	12	-	3	9
15.0-19.9-----	3	-	-	3	3	-	-	3
20.0-24.9-----	12	-	1	11	3	-	-	3
25.0-29.9-----	4	-	-	4	3	-	-	3
30.0-34.9-----	2	-	-	2	1	-	-	1
35.0-39.9-----	-	-	-	-	-	-	-	-
40.0-44.9-----	-	-	-	-	-	-	-	-
45.0-49.9-----	1	-	-	1	-	-	-	-
50.0-54.9-----	-	-	-	-	2	-	-	2
55.0-59.9-----	1	-	1	-	-	-	-	-
60.0-64.9-----	1	-	-	1	2	-	-	2
65.0-69.9-----	1	-	-	1	1	-	-	1
70.0-74.9-----	-	-	-	-	-	-	-	-
75.0-79.9-----	-	-	-	-	1	-	-	1
80.0-84.9-----	-	-	-	-	3	-	2	1
85.0-89.9-----	-	-	-	-	1	-	-	1
90.0-94.9-----	1	-	-	1	-	-	-	-
95.0-99.9-----	-	-	-	-	-	-	-	-
100.0 or more-----	-	-	-	-	-	-	-	-

Table 2. Net difference rates based on events matched at usual place of residence for 221 selected urban areas of 25,000 population or more: United States, selected months, 1950 and 1960

[Census record used as base. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 100 births or more were assigned according to either the census record or the birth record in 1950]

Area	Net difference rate		Area	Net difference rate	
	Deaths, 1960	Births, 1950		Deaths, 1960	Births, 1950
Alabama:			Georgia:		
Birmingham-----	2.1	5.0	Atlanta-----	2.7	4.0
Gadsden-----	-2.7	-11.7	Augusta-----	8.2	34.7
Mobile-----	-0.6	-4.9	Columbus-----	-	34.5
Montgomery-----	4.2	-7.4	Macon-----	17.5	53.3
			Savannah-----	0.9	9.1
Arizona:			Illinois:		
Phoenix-----	-5.5	22.9	Chicago-----	0.5	0.8
Tucson-----	4.6	271.0	Decatur-----	9.3	4.3
			East St. Louis-----	5.6	8.1
Arkansas:			Joliet-----	4.4	71.1
Little Rock-----	8.1	10.3	Peoria-----	0.7	1.8
			Rockford-----	2.5	2.3
California:			Springfield-----	8.0	-
Alameda-----	0.7	1.2			
Bakersfield-----	14.4	41.1	Indiana:		
Berkeley-----	1.4	3.2	East Chicago-----	-	-
Burbank-----	0.6	0.8	Evansville-----	-0.3	10.6
Compton-----	12.9	15.1	Fort Wayne-----	1.5	9.6
Fresno-----	4.1	18.9	Gary-----	4.3	20.2
Glendale-----	-	-1.7	Hammond-----	-1.1	-15.0
Long Beach-----	0.5	1.6	Indianapolis-----	2.7	9.0
Los Angeles-----	-0.1	3.1	Muncie-----	13.3	15.9
Oakland-----	0.9	3.7	South Bend-----	4.9	12.1
Pasadena-----	1.1	-1.4	Terre Haute-----	1.6	25.7
Richmond-----	-	9.1			
Riverside-----	11.0	13.3	Iowa:		
Sacramento-----	8.4	3.9	Cedar Rapids-----	1.1	4.1
San Bernardino-----	1.6	38.8	Davenport-----	-3.2	-4.9
San Diego-----	-1.2	2.5	Des Moines-----	2.2	17.4
San Francisco-----	-	1.8	Dubuque-----	-	4.4
San Jose-----	6.8	35.7	Sioux City-----	-0.5	-5.9
Santa Monica-----	2.6	0.9	Waterloo-----	3.4	6.6
Stockton-----	5.3	11.4			
			Kansas:		
Colorado:			Kansas City-----	11.5	10.3
Colorado Springs-----	7.6	28.2	Topeka-----	2.8	17.1
Denver-----	-0.2	0.7	Wichita-----	6.8	23.3
Pueblo-----	2.0	7.9			
			Kentucky:		
Connecticut:			Covington-----	-1.0	6.1
Bridgeport-----	-1.0	1.6	Louisville-----	12.1	12.7
Hartford-----	-5.9	1.4			
New Britain-----	1.4	0.9	Louisiana:		
New Haven-----	-0.5	-0.5	Baton Rouge-----	4.0	0.4
Stamford-----	-1.0	-6.8	New Orleans-----	0.7	1.9
Waterbury-----	0.3	4.1	Shreveport-----	0.7	11.2
Delaware:			Maine:		
Wilmington-----	3.3	7.4	Portland-----	-0.4	-3.9
District of Columbia:			Maryland:		
Washington-----	-0.7	7.4	Baltimore-----	0.6	1.1
Florida:			Massachusetts:		
Jacksonville-----	7.4	25.7	Boston-----	0.1	1.1
Miami-----	6.0	15.2	Brockton-----	-1.7	-5.7
Pensacola-----	-3.5	41.1	Cambridge-----	0.7	1.1
Tampa-----	3.4	63.1			

Table 2. Net difference rates based on events matched at usual place of residence for 221 selected urban areas of 25,000 population or more: United States, selected months, 1950 and 1960—Con.

[Census record used as base. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 100 births or more were assigned according to either the census record or the birth record in 1950]

Area	Net difference rate		Area	Net difference rate	
	Deaths, 1960	Births, 1950		Deaths, 1960	Births, 1950
Massachusetts—Con.			New Mexico:		
Fall River-----	-	3.6	Albuquerque-----	6.0	19.0
Lawrence-----	-0.5	2.3	New York:		
Lowell-----	-	3.0	Albany-----	1.9	6.9
Lynn-----	-0.7	-0.5	Binghamton-----	1.2	-3.6
Malden-----	0.6	2.0	Buffalo-----	0.5	-0.2
New Bedford-----	1.3	2.5	Mount Vernon-----	-1.1	-2.0
Newton-----	-6.5	4.9	New York City-----	0.2	0.5
Quincy-----	-0.9	2.1	Niagara Falls-----	1.2	3.0
Somerville-----	-0.5	-2.2	Rochester-----	1.4	2.4
Springfield-----	-	4.4	Schenectady-----	5.8	10.8
Worcester-----	0.2	2.2	Syracuse-----	1.1	0.3
Michigan:			Troy-----	1.0	14.8
Bay City-----	3.6	44.2	Utica-----	-2.4	-
Dearborn-----	9.4	24.0	Yonkers-----	-2.6	-5.2
Detroit-----	0.4	1.5	North Carolina:		
Flint-----	0.9	6.1	Charlotte-----	-0.6	6.5
Grand Rapids-----	3.0	11.4	Durham-----	0.6	21.7
Jackson-----	7.5	35.4	Fayetteville-----	20.9	9.6
Kalamazoo-----	3.5	13.7	Greensboro-----	1.1	32.7
Lansing-----	2.0	8.0	Raleigh-----	-	21.2
Muskegon-----	3.3	26.9	Winston-Salem-----	3.4	15.5
Pontiac-----	0.6	6.9	Ohio:		
Royal Oak-----	-	22.2	Akron-----	1.7	3.5
Saginaw-----	1.9	1.0	Canton-----	3.5	25.7
Minnesota:			Cincinnati-----	0.4	0.4
Duluth-----	2.1	-	Cleveland-----	1.7	1.1
Minneapolis-----	1.1	2.2	Columbus-----	-0.1	-2.5
St. Paul-----	0.2	3.6	Dayton-----	2.1	46.1
Mississippi:			Lakewood-----	-0.6	-3.9
Jackson-----	2.5	-	Lima-----	3.3	32.0
Missouri:			Lorain-----	-0.8	3.0
Kansas City-----	0.2	-1.7	Springfield-----	5.1	14.1
Springfield-----	1.3	2.9	Toledo-----	0.3	16.2
St. Joseph-----	-0.5	3.1	Warren-----	5.1	13.8
St. Louis-----	0.6	1.5	Youngstown-----	0.2	15.0
Nebraska:			Oklahoma:		
Lincoln-----	3.0	5.6	Oklahoma City-----	5.2	3.8
Omaha-----	4.1	5.1	Tulsa-----	8.7	7.3
New Hampshire:			Oregon:		
Manchester-----	-	3.0	Eugene-----	-8.6	62.7
New Jersey:			Portland-----	5.0	30.5
Bayonne-----	-	0.8	Pennsylvania:		
Camden-----	1.6	-	Allentown-----	1.5	1.9
Clifton-----	0.6	-4.8	Altoona-----	2.4	5.5
East Orange-----	-1.3	-0.9	Bethlehem-----	4.0	6.7
Elizabeth-----	1.1	2.4	Chester-----	5.1	17.2
Jersey City-----	-0.8	2.6	Erie-----	1.0	8.7
Newark-----	0.9	-0.2	Harrisburg-----	12.0	13.0
Paterson-----	0.8	-0.5	Johnstown-----	36.9	42.6
Trenton-----	3.3	4.3	Lancaster-----	21.0	13.2
			Philadelphia-----	0.3	1.8

Table 2. Net difference rates based on events matched at usual place of residence for 221 selected urban areas of 25,000 population or more: United States, selected months, 1950 and 1960--Con.

[Census record used as base. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 100 births or more were assigned according to either the census record or the birth record in 1950]

Area	Net difference rate		Area	Net difference rate	
	Deaths, 1960	Births, 1950		Deaths, 1960	Births, 1950
Pennsylvania--Con.			Texas--Con.		
Pittsburgh-----	5.0	30.5	Houston-----	-12.3	14.2
Reading-----	1.0	10.3	Laredo-----	-	3.9
Scranton-----	1.9	1.6	Lubbock-----	4.7	0.6
Upper Darby-----	-3.4	-16.9	Port Arthur-----	0.7	9.7
Wilkes-Barre-----	-	23.7	San Antonio-----	1.2	8.7
York-----	4.0	26.7	San Angelo-----	2.0	1.8
Rhode Island:			Waco-----	-1.7	2.5
Pawtucket-----	-0.8	7.3	Wichita Falls-----	2.7	10.5
Providence-----	-0.7	1.1	Utah:		
South Carolina:			Ogden-----	5.5	5.5
Charleston-----	2.0	11.9	Salt Lake City-----	3.7	6.6
Columbia-----	-1.0	45.2	Virginia:		
Greenville-----	4.2	7.7	Alexandria-----	1.5	13.2
South Dakota:			Arlington County-----	-	0.3
Sioux Falls-----	6.7	6.9	Norfolk-----	1.6	5.1
Tennessee:			Portsmouth-----	0.5	2.0
Chattanooga-----	3.2	27.7	Richmond-----	0.3	6.9
Knoxville-----	0.4	5.0	Roanoke-----	3.9	0.6
Memphis-----	1.8	-7.9	Washington:		
Nashville-----	3.0	58.1	Seattle-----	3.7	43.9
Texas:			Spokane-----	1.6	9.7
Amarillo-----	-0.5	7.4	Tacoma-----	1.2	10.3
Austin-----	-1.4	7.8	Yakima-----	17.6	33.0
Beaumont-----	1.6	1.9	West Virginia:		
Corpus Christi-----	0.4	1.4	Charleston-----	2.6	38.0
Dallas-----	0.8	5.2	Huntington-----	3.5	9.7
El Paso-----	1.7	6.0	Wheeling-----	3.6	4.9
Fort Worth-----	3.4	14.6	Wisconsin:		
Galveston-----	0.5	23.2	Green Bay-----	6.8	-
			Madison-----	3.1	-0.5
			Milwaukee-----	0.5	1.1
			Racine-----	0.5	11.5

NOTE: May-August 1960 used for deaths and January-March 1950 used for births.

Source for births: National Vital Statistics Division: Matched record comparison of birth certificate and census information: United States, 1950. Vital Statistics--Special Reports, Vol. 47, No. 12. Public Health Service. Washington, D.C., Mar. 1962.

Table 3. Distribution of nonwhite deaths matched at usual place of residence for 729 urban areas of 25,000 population or more, by frequency groupings and type of difference: United States, May-August 1960

Direction of difference	Number of urban areas
All areas-----	729
No deaths assigned according to census record or death record-----	201
Frequency of 1 or 2 according to either census record or death record and zero frequency in other-----	26
Frequency of less than 10 deaths according to census record-----	239
Net difference rate is zero-----	150
Net difference rate for white is higher than for nonwhite-----	5
Net difference rate for white is lower than for nonwhite-----	84
Frequency of 10 deaths or more according to census records-----	¹ 263
Net difference rate is zero-----	58
Net difference rate for white is higher than for nonwhite-----	79
Net difference rate for white is lower than for nonwhite-----	125

¹Includes one area for which the net difference rate was the same for white and nonwhite.

Table 4. Number of deaths matched at usual place of residence and net difference rates, deaths unmatched, and proportion unmatched for 89 selected urban areas of 25,000 population or more, by color: United States, May-August 1960

[Census record used as a base for net difference rate and proportion unmatched. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 50 nonwhite deaths were assigned according to either the census record or death record]

Area	Deaths matched at usual residence according to:				Net difference rate		Unmatched deaths		Proportion unmatched	
	Census record		Death record		White	Nonwhite	White	Nonwhite	White	Nonwhite
	White	Nonwhite	White	Nonwhite						
Alabama:										
Bessemer-----	23	42	29	51	26.1	21.4	12	26	34.3	38.2
Birmingham-----	450	370	466	380	3.6	2.7	169	136	27.3	26.9
Mobile-----	222	120	227	117	2.3	-2.5	72	45	24.5	27.3
Montgomery-----	110	127	123	127	11.8	-	63	55	36.4	30.2
Arkansas:										
Little Rock-----	171	74	189	77	10.5	4.1	51	37	23.0	33.3
California:										
Los Angeles-----	4,975	627	5,021	618	0.9	-1.4	1,362	305	21.5	32.7
Oakland-----	858	150	877	146	2.2	-2.7	257	65	23.0	30.2
San Diego-----	884	56	886	54	0.2	-3.6	323	24	26.8	30.0
San Francisco-----	2,012	172	2,035	169	1.1	-1.7	514	69	20.3	28.6
Colorado:										
Denver-----	1,183	56	1,193	53	0.2	-0.8	230	24	16.3	30.0
Delaware:										
Wilmington-----	254	51	262	54	3.1	5.9	51	33	16.7	39.3
District of Columbia:										
Washington-----	1,070	854	1,064	863	-0.6	1.1	260	358	19.5	29.5
Florida:										
Jacksonville-----	251	205	278	214	10.8	4.4	100	83	28.5	28.8
Miami-----	639	103	687	108	7.5	4.9	293	64	31.4	38.3
St. Petersburg-----	720	66	751	65	4.3	-1.5	135	25	15.8	27.5
Tampa-----	584	138	614	140	5.1	1.4	152	56	20.7	28.9
Georgia:										
Albany-----	56	50	58	54	3.6	8.0	16	22	22.2	30.6
Atlanta-----	691	428	724	438	4.8	2.3	227	174	24.7	28.9
Augusta-----	67	84	81	90	20.9	7.1	41	34	38.0	28.8
Columbus-----	147	59	146	60	-0.7	1.7	73	26	33.2	30.6
Macon-----	111	88	132	103	18.9	17.0	26	33	19.0	27.3
Savannah-----	169	152	163	163	-3.6	7.2	47	41	21.8	21.2
Hawaii:										
Hilo-----	17	43	19	56	11.8	30.2	3	29	15.0	40.3
Honolulu-----	103	231	106	294	2.9	27.3	44	72	29.9	23.8
Illinois:										
Chicago-----	8,081	1,643	8,199	1,682	1.5	2.4	2,061	849	20.3	34.1
East St. Louis-----	133	92	149	95	12.0	3.3	41	36	23.6	28.1
Indiana:										
Gary-----	262	132	276	137	5.3	3.8	46	56	14.9	29.8
Indianapolis-----	970	239	1,017	235	4.8	-1.7	259	98	21.1	29.1
Kansas:										
Kansas City-----	237	78	272	86	14.8	10.3	67	22	22.0	22.0
Kentucky:										
Lexington-----	142	54	182	61	28.2	13.0	36	24	20.2	30.8
Louisville-----	806	225	933	237	15.8	5.3	281	111	25.9	33.0
Louisiana:										
Alexandria-----	46	52	51	51	10.9	-1.9	31	25	40.3	32.5
Baton Rouge-----	169	108	177	111	4.7	2.8	45	38	21.0	26.0
Monroe-----	46	69	48	75	4.3	8.7	16	28	25.8	28.9
New Orleans-----	1,111	609	1,128	618	1.5	1.5	231	213	17.2	25.9
Shreveport-----	234	171	231	179	-1.3	4.7	83	72	26.2	29.6
Maryland:										
Baltimore-----	1,744	679	1,773	687	1.7	1.2	469	329	21.2	32.6

Table 4. Number of deaths matched at usual place of residence and net difference rates, deaths unmatched, and proportion unmatched for 89 selected urban areas of 25,000 population or more by color: United States, May-August 1960—Con.

[Census record used as a base for net difference rate and proportion unmatched. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 50 nonwhite deaths were assigned according to either the census record or death record.]

Area	Deaths matched at usual residence according to:				Net difference rate		Unmatched deaths		Proportion unmatched	
	Census record		Death record							
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
Massachusetts:										
Boston-----	1,927	134	1,946	129	1.0	-3.7	457	71	19.2	34.6
Michigan:										
Detroit-----	3,344	885	3,383	898	1.2	1.5	663	341	16.5	27.8
Flint-----	380	73	387	71	1.8	-2.7	68	16	15.2	18.0
Mississippi:										
Greenville-----	32	62	34	60	6.3	-3.2	12	13	27.3	17.3
Jackson-----	134	105	139	106	3.7	1.0	54	32	28.7	23.4
Vicksburg-----	31	67	31	69	-	3.0	12	14	27.9	17.3
Missouri:										
Kansas City-----	1,139	213	1,146	216	0.6	1.4	242	85	17.5	28.5
St. Louis-----	1,742	514	1,771	513	1.7	-0.2	471	242	21.3	32.0
Nebraska:										
Omaha-----	584	65	613	66	5.0	1.5	151	33	20.5	33.7
New Jersey:										
Atlantic City-----	165	53	160	58	-3.0	9.4	51	24	23.6	31.2
Jersey City-----	767	69	761	74	-0.8	7.2	153	44	16.6	38.9
Newark-----	740	266	761	264	2.8	-0.8	239	160	24.4	37.6
New York:										
New York City-----	18,703	2,074	18,813	2,132	0.6	2.8	4,350	1,252	18.9	37.6
Buffalo-----	1,520	129	1,559	116	2.6	-10.1	225	36	12.9	21.8
North Carolina:										
Charlotte-----	208	139	206	139	-1.0	-	73	40	26.0	22.3
Durham-----	120	55	123	54	2.5	-1.8	28	31	18.9	36.0
Greensboro-----	114	63	117	62	2.6	-1.6	45	24	28.3	27.6
Raleigh-----	93	60	94	59	1.1	-1.7	29	11	23.8	15.5
Wilmington-----	71	60	73	65	2.8	8.3	12	13	14.5	17.8
Winston-Salem-----	122	112	128	115	4.9	2.7	25	46	17.0	29.1
Ohio:										
Akron-----	602	58	616	56	2.3	-3.4	127	29	17.4	33.3
Cincinnati-----	1,082	247	1,091	254	0.8	2.8	232	101	17.7	29.0
Cleveland-----	1,934	492	1,995	489	3.2	-0.6	339	184	14.9	27.2
Columbus-----	836	167	835	173	-0.1	3.6	179	46	17.6	21.6
Dayton-----	529	127	549	126	3.8	-0.8	133	44	20.1	25.7
Toledo-----	783	81	791	83	1.0	2.5	186	22	19.2	21.4
Youngstown-----	416	53	418	52	0.5	-1.9	55	18	11.7	25.4
Oklahoma:										
Oklahoma City-----	546	81	581	83	6.4	2.5	201	44	26.9	35.2
Tulsa-----	447	65	493	70	10.3	7.7	131	31	22.7	32.3
Pennsylvania:										
Philadelphia-----	4,464	1,174	4,529	1,162	1.5	-1.0	235	518	21.7	30.6
Pittsburgh-----	1,551	264	1,639	281	5.7	6.4	410	88	20.9	25.0
South Carolina:										
Charleston-----	79	71	84	70	6.3	-1.4	26	20	24.8	22.0
Columbia-----	132	59	132	62	-	5.1	20	40	13.2	40.4
Greenville-----	65	52	74	50	13.8	-3.8	36	26	35.6	33.3
Tennessee:										
Chattanooga-----	200	114	212	113	6.0	-0.9	85	65	29.8	36.3
Knoxville-----	215	57	221	53	2.8	-7.0	95	22	30.6	27.8
Memphis-----	594	437	617	443	3.9	1.4	135	173	18.5	28.4
Nashville-----	279	190	294	191	5.4	0.5	78	65	21.8	25.5
Texas:										
Beaumont-----	163	75	172	76	5.5	1.3	45	21	21.6	21.9
Dallas-----	928	251	945	247	1.8	-1.6	321	137	25.7	35.3
Fort Worth-----	569	130	598	131	5.1	0.8	211	58	27.1	30.9
Galveston-----	144	55	147	56	2.1	1.8	34	20	19.1	26.7
Houston-----	1,152	374	1,017	334	-11.7	-10.7	348	161	23.2	30.1
San Antonio-----	925	98	940	99	1.6	1.0	286	42	23.6	30.0
Waco-----	170	59	177	54	4.1	-8.5	62	18	26.7	23.4

Table 4. Number of deaths matched at usual place of residence and net difference rates, deaths unmatched, and proportion unmatched for 89 selected urban areas of 25,000 population or more by color: United States, May-August 1960--Con.

[Census record used as a base for net difference rate and proportion unmatched. Minus (-) sign indicates more assignments by census than by NCHS. Includes only those areas for which at least 50 nonwhite deaths were assigned according to either the census record or death record]

Area	Deaths matched at usual residence according to:				Net difference rate		Unmatched deaths		Proportion unmatched	
	Census record		Death record							
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
Virginia:										
Newport News-----	108	71	109	72	0.9	1.4	31	31	22.3	30.4
Norfolk-----	377	190	383	195	1.6	2.6	107	81	22.1	29.9
Petersburg-----	56	49	56	51	-	4.1	13	14	18.8	22.2
Portsmouth-----	140	78	143	79	2.1	1.3	40	36	22.2	31.6
Richmond-----	432	185	440	185	1.9	-	85	92	16.4	33.2
Washington:										
Seattle-----	1,205	59	1,260	60	4.6	1.7	468	25	28.0	29.8
Wisconsin:										
Milwaukee-----	1,750	92	1,766	91	0.9	-1.1	326	34	15.7	27.0

Table 5. Number of deaths matched at usual place of residence and net difference rates, by population-size group of area: United States, May-August 1960

[Census record used as base. Minus (-) sign indicates more assignments by census than by NCHS]

Population-size group of area	Deaths matched at usual residence according to:		Net difference rate
	Census record	Death record	
<u>Total</u>			
All areas-----	388,754	388,754	...
Total areas of 25,000 or more-----	189,363	189,307	-0.0
1,000,000 or more-----	46,317	46,452	0.3
500,000 to 1,000,000-----	27,760	27,924	0.6
250,000 to 500,000-----	25,671	26,259	2.3
100,000 to 250,000-----	27,203	27,530	1.2
50,000 to 100,000-----	30,768	30,543	-0.7
25,000 to 50,000-----	31,644	30,599	-3.3
10,000 to 25,000-----	36,159	34,464	-4.7
2,500 to 10,000-----	41,510	37,786	-9.0
Rural-----	121,722	127,197	4.5
<u>White</u>			
All areas-----	344,495	347,247	0.8
Total areas of 25,000 or more-----	163,749	164,963	0.7
1,000,000 or more-----	39,567	39,957	1.0
500,000 to 1,000,000-----	22,529	22,899	1.6
250,000 to 500,000-----	21,255	22,025	3.6
100,000 to 250,000-----	23,423	23,899	2.0
50,000 to 100,000-----	28,003	27,982	-0.1
25,000 to 50,000-----	28,972	28,201	-2.7
10,000 to 25,000-----	33,294	31,854	-4.3
2,500 to 10,000-----	38,142	34,879	-8.6
Rural-----	109,310	115,551	5.7
<u>Nonwhite</u>			
All areas-----	41,111	41,486	0.9
Total areas of 25,000 or more-----	24,084	24,335	1.0
1,000,000 or more-----	6,401	6,492	1.4
500,000 to 1,000,000-----	5,026	5,024	-0.0
250,000 to 500,000-----	4,140	4,233	2.2
100,000 to 250,000-----	3,593	3,628	1.0
50,000 to 100,000-----	2,509	2,561	2.1
25,000 to 50,000-----	2,415	2,397	-0.7
10,000 to 25,000-----	2,645	2,607	-1.4
2,500 to 10,000-----	2,995	2,903	-3.1
Rural-----	11,387	11,641	2.2

NOTE: For explanation of why white and nonwhite do not add to the total, see Technical Appendix.

Table 6. Number and percent distribution of deaths in the 1960 Comparison Study and the follow-back survey, by population-size group of area according to death record designations: United States, May-August 1960

Population-size group of area	1960 Comparison Study		Followback survey	
	Number	Percent distribution	Number	Percent distribution
Total-----	501,410	100.0	9,475	100.0
1,000,000 or more-----	59,390	11.8	1,134	12.0
500,000 to 1,000,000-----	35,800	7.1	717	7.6
250,000 to 500,000-----	33,830	6.7	651	6.9
100,000 to 250,000-----	34,600	6.9	653	6.9
50,000 to 100,000-----	37,991	7.6	708	7.5
25,000 to 50,000-----	38,000	7.6	718	7.6
10,000 to 25,000-----	43,425	8.7	825	8.7
2,500 to 10,000-----	47,434	9.5	843	8.9
All other-----	170,940	34.1	3,226	34.0

Table 7. Number and percent distribution of deaths matched in the 1960 Comparison Study and the followback survey, by population-size group of area according to census record designations: United States, May-August 1960

Population-size group of area	1960 Comparison Study		Followback survey	
	Number	Percent distribution	Number	Percent distribution
Total-----	388,754	100.0	7,393	100.0
1,000,000 or more-----	46,317	11.9	889	12.0
500,000 to 1,000,000-----	27,760	7.1	539	7.3
250,000 to 500,000-----	25,671	6.6	495	6.7
100,000 to 250,000-----	27,203	7.0	474	6.4
50,000 to 100,000-----	30,768	7.9	564	7.6
25,000 to 50,000-----	31,644	8.1	292	3.9
10,000 to 25,000-----	36,159	9.3	700	9.5
2,500 to 10,000-----	41,510	10.7	761	10.3
25,000 or more ¹-----	...	...	302	4.1
All other-----	121,722	31.3	2,377	32.2

¹Processing errors by census category represents areas of 25,000 population or more, but size of area could not be further defined.

Table 8. Number and percent distribution of unmatched deaths, for which there were response and no response in the followback survey, and unmatched deaths in the 1960 Comparison Study, by population-size group of area according to death record designations: United States, May-August 1960

Population-size group of area	Followback survey				Unmatched deaths in 1960 Comparison Study	
	Response		No response		Number	Percent distribution
	Number	Percent distribution	Number	Percent distribution		
Total-----	1,861	100.0	221	100.0	112,656	100.0
1,000,000 or more-----	189	10.2	30	13.6	12,938	11.5
500,000 to 1,000,000-----	127	6.8	34	15.4	7,876	7.0
250,000 to 500,000-----	121	6.5	16	7.2	7,571	6.7
100,000 to 250,000-----	140	7.5	11	5.0	7,070	6.3
50,000 to 100,000-----	126	6.8	24	10.9	7,448	6.6
25,000 to 50,000-----	127	6.8	17	7.7	7,401	6.6
10,000 to 25,000-----	155	8.3	18	8.1	8,961	8.0
2,500 to 10,000-----	164	8.8	5	2.3	9,648	8.6
All other-----	712	38.3	66	29.9	43,743	38.8

Table 9. Net difference rates and proportion of death records unmatched for urban and rural areas in metropolitan and nonmetropolitan counties, by color and sex: United States, May-August 1960

[Death record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix.]

Area, color, and sex	Net difference rate	Proportion of deaths unmatched	Area, color, and sex	Net difference rate	Proportion of deaths unmatched
Total-----	...	21.1	White female--Con.		
Metropolitan counties-----	-0.3	20.8	Nonmetropolitan counties-----	0.5	21.5
Urban-----	0.3	19.4	Urban-----	2.4	19.7
Rural-----	-3.6	27.4	Rural-----	-0.9	22.9
Nonmetropolitan counties-----	0.5	21.6	Nonwhite male-----	...	34.6
Urban-----	2.0	20.0	Metropolitan counties-----	-0.7	35.4
Rural-----	-0.5	22.7	Urban-----	-2.2	33.8
White male-----	...	21.0	Rural-----	15.0	48.1
Metropolitan counties-----	-0.3	20.8	Nonmetropolitan counties-----	1.1	33.2
Urban-----	0.3	19.2	Urban-----	0.3	31.8
Rural-----	-3.4	27.4	Rural-----	2.0	34.1
Nonmetropolitan counties-----	0.5	21.2	Nonwhite female-----	...	31.5
Urban-----	2.5	19.8	Metropolitan counties-----	-0.3	31.0
Rural-----	-0.7	22.0	Urban-----	-1.2	29.4
White female-----	...	20.4	Rural-----	10.0	45.1
Metropolitan counties-----	-0.3	19.8	Nonmetropolitan counties-----	0.4	32.4
Urban-----	0.6	18.0	Urban-----	-0.2	28.8
Rural-----	-5.0	27.8	Rural-----	1.0	34.9

NOTE: Figures with color and/or sex not stated are included in the total, but are not shown separately.

Table 10. Number of deaths matched at usual place of residence and not at usual place of residence, according to census record and death record for urban and rural areas in metropolitan and nonmetropolitan counties, by color and sex: United States, May-August 1960

[For definition of areas, see Technical Appendix]

Area according to census record	Total	Area according to death record					
		Metropolitan county			Nonmetropolitan county		
		Total	Urban	Rural	Total	Urban	Rural
USUAL PLACE OF RESIDENCE							
<u>Total</u>							
All counties-----	388,754	241,075	201,366	39,709	147,679	60,191	87,488
All metropolitan counties----	241,030	240,717	201,154	39,563	313	118	195
Urban-----	205,660	205,469	197,373	8,096	191	100	91
Rural-----	35,370	35,248	3,781	31,467	122	18	104
All nonmetropolitan counties-	147,724	358	212	146	147,366	60,073	87,293
Urban-----	61,372	120	86	34	61,252	57,565	3,687
Rural-----	86,352	238	126	112	86,114	2,508	83,606
<u>White</u>							
Male-----	190,119	115,442	94,749	20,693	74,677	29,139	45,538
All metropolitan counties----	115,438	115,263	94,624	20,639	175	60	115
Urban-----	96,833	96,733	92,632	4,101	100	56	44
Rural-----	18,605	18,530	1,992	16,538	75	4	71
All nonmetropolitan counties-	74,681	179	125	54	74,502	29,079	45,423
Urban-----	29,867	57	47	10	29,810	27,870	1,940
Rural-----	44,814	122	78	44	44,692	1,209	43,483
Female-----	138,013	87,880	73,672	14,208	50,133	21,899	28,234
All metropolitan counties----	87,854	87,761	73,614	14,147	93	41	52
Urban-----	75,443	75,381	72,430	2,951	62	30	32
Rural-----	12,411	12,380	1,184	11,196	31	11	20
All nonmetropolitan counties-	50,159	119	58	61	50,040	21,858	28,182
Urban-----	22,380	44	28	16	22,336	21,071	1,265
Rural-----	27,779	75	30	45	27,704	787	26,917
<u>Nonwhite</u>							
Male-----	19,886	12,113	11,076	1,037	7,773	2,998	4,775
All metropolitan counties----	12,108	12,089	11,061	1,028	19	6	13
Urban-----	11,141	11,129	10,924	205	12	5	7
Rural-----	967	960	137	823	7	1	6
All nonmetropolitan counties-	7,778	24	15	9	7,754	2,992	4,762
Urban-----	2,996	9	7	2	2,987	2,851	136
Rural-----	4,782	15	8	7	4,767	141	4,626

Table 10. Number of deaths matched at usual place of residence and not at usual place of residence, according to census record and death record for urban and rural areas in metropolitan and nonmetropolitan counties, by color and sex: United States, May-August 1960--Con.

[For definition of areas, see Technical Appendix]

Area according to census record	Total	Area according to death record					
		Metropolitan county			Nonmetropolitan county		
		Total	Urban	Rural	Total	Urban	Rural
USUAL PLACE OF RESIDENCE--Con.							
 <u>Nonwhite--Con.</u>							
Female-----	16,814	10,520	9,666	854	6,294	2,703	3,591
All metropolitan counties----	10,523	10,507	9,660	847	16	6	10
Urban-----	9,732	9,722	9,566	156	10	4	6
Rural-----	791	785	94	691	6	2	4
All nonmetropolitan counties--	6,291	13	6	7	6,278	2,697	3,581
Urban-----	2,703	4	1	3	2,699	2,591	108
Rural-----	3,588	9	5	4	3,579	106	3,473
NOT AT USUAL PLACE OF RESIDENCE							
 <u>Total</u>							
All counties-----	31,538	19,992	16,936	3,056	11,546	5,038	6,508
All metropolitan counties----	19,210	17,041	14,445	2,596	2,169	932	1,237
Urban-----	13,368	11,886	10,581	1,305	1,482	632	850
Rural-----	5,842	5,155	3,864	1,291	687	300	387
All nonmetropolitan counties--	12,328	2,951	2,491	460	9,377	4,106	5,271
Urban-----	5,165	1,075	890	185	4,090	2,170	1,920
Rural-----	7,163	1,876	1,601	275	5,287	1,936	3,351
 <u>White</u>							
Male-----	13,450	8,325	7,030	1,295	5,125	2,183	2,942
All metropolitan counties----	7,920	6,891	5,807	1,084	1,029	424	605
Urban-----	5,274	4,550	4,049	501	724	309	415
Rural-----	2,646	2,341	1,758	583	305	115	190
All nonmetropolitan counties--	5,530	1,434	1,223	211	4,096	1,759	2,337
Urban-----	2,223	543	437	106	1,680	849	831
Rural-----	3,307	891	786	105	2,416	910	1,506
Female-----	15,493	9,902	8,322	1,580	5,591	2,552	3,039
All metropolitan counties----	9,634	8,689	7,323	1,366	945	430	515
Urban-----	7,049	6,372	5,632	740	677	291	386
Rural-----	2,585	2,317	1,691	626	268	139	129
All nonmetropolitan counties--	5,859	1,213	999	214	4,646	2,122	2,524
Urban-----	2,662	439	373	66	2,223	1,221	1,002
Rural-----	3,197	774	626	148	2,423	901	1,522

Table 10. Number of deaths matched at usual place of residence and not at usual place of residence, according to census record and death record for urban and rural areas in metropolitan and nonmetropolitan counties, by color and sex: United States, May-August 1960—Con.

[For definition of areas, see Technical Appendix]

Area according to census record	Total	Area according to death record					
		Metropolitan county			Nonmetropolitan county		
		Total	Urban	Rural	Total	Urban	Rural
NOT AT USUAL PLACE OF RESIDENCE—Con.							
 <u>Nonwhite</u>							
Male-----	1,273	886	793	93	387	148	239
All metropolitan counties----	800	696	625	71	104	39	65
Urban-----	467	428	405	23	39	15	24
Rural-----	333	268	220	48	65	24	41
All nonmetropolitan counties-	473	190	168	22	283	109	174
Urban-----	139	61	52	9	78	42	36
Rural-----	334	129	116	13	205	67	138
Female-----	903	617	565	52	286	115	171
All metropolitan counties----	585	518	476	42	67	26	41
Urban-----	379	350	330	20	29	12	17
Rural-----	206	168	146	22	38	14	24
All nonmetropolitan counties-	318	99	89	10	219	89	130
Urban-----	108	27	25	2	81	48	33
Rural-----	210	72	64	8	138	41	97

NOTE: Figures with color and/or sex not stated are included in the total but are not shown separately.

Table 11. Comparison of net difference rates and proportion unmatched, based on deaths matched at usual place of residence for 25 selected standard metropolitan statistical areas (SMSA's) and urban area components of those SMSA's: United States, May-August 1960

[Urban area components are only those of 25,000 population or more. For further definition of areas, see Technical Appendix]

Area	Net difference rate ¹	Proportion unmatched	
		Census record base	Death record base
Albuquerque, N. Mex-----	-0.3	31.4	31.4
Albuquerque, N. Mex-----	6.0	30.6	29.3
Augusta, Ga.-S.C-----	0.3	36.1	36.1
Augusta, Ga-----	8.2	32.2	30.5
Billings, Mont-----	-	31.1	31.1
Billings, Mont-----	8.5	29.3	27.7
Chicago, Ill-----	0.2	21.3	21.3
Arlington Heights, Ill-----	4.2	32.4	31.5
Aurora, Ill-----	8.3	20.0	18.8
Berwyn, Ill-----	1.1	2.6	2.7
Calumet City, Ill-----	4.5	21.4	20.7
Chicago, Ill-----	0.5	22.8	22.8
Chicago Heights, Ill-----	1.2	16.0	15.8
Cicero, Ill-----	-0.9	6.6	6.6
Des Plaines, Ill-----	15.8	33.3	30.2
Elgin, Ill-----	-3.1	17.7	18.2
Elmhurst, Ill-----	4.7	14.7	14.1
Evanston, Ill-----	-0.5	10.9	11.0
Harvey, Ill-----	-	25.6	25.6
Highland Park, Ill-----	-	15.1	15.1
Joliet, Ill-----	4.4	13.2	12.7
Maywood, Ill-----	-8.5	13.7	14.8
Oak Lawn, Ill-----	91.4	18.6	10.7
Oak Park, Ill-----	0.6	20.4	20.3
Park Forest, Ill-----	-	8.0	8.0
Park Ridge, Ill-----	2.1	9.4	9.3
Skokie, Ill-----	-1.1	10.7	10.8
Waukegan, Ill-----	5.6	19.1	18.3
Wilmette, Ill-----	-	4.3	4.3
Davenport-Rock Island-Moline, Iowa-Ill-----	-1.4	19.1	19.4
Davenport, Iowa-----	-3.2	20.3	20.8
Moline, Ill-----	6.5	23.9	22.8
Rock Island, Ill-----	-1.5	9.6	9.7
El Paso, Tex-----	3.3	28.9	28.2
El Paso, Tex-----	1.7	28.7	28.3
Fort Wayne, Ind-----	0.2	12.5	12.5
Fort Wayne, Ind-----	1.5	12.5	12.3
Jersey City, N.J-----	0.2	17.9	17.9
Bayonne, N.J-----	-	20.0	20.0
Hoboken, N.J-----	-0.8	25.6	25.7
Jersey City, N.J-----	-0.8	18.9	19.1
Kearny, N.J-----	-0.9	11.9	12.0
North Bergen, N.J-----	-	12.3	12.3
Union City, N.J-----	0.6	9.9	9.8
West New York, N.J-----	-1.1	20.7	20.9
Laredo, Tex-----	0.8	25.3	25.2
Laredo, Tex-----	-	25.7	25.7
Lorain-Elyria, Ohio-----	-0.3	25.0	25.1
Elyria, Ohio-----	-3.0	17.3	17.7
Lorain, Ohio-----	-0.8	19.6	19.7

Table 11. Comparison of net difference rates and proportion unmatched, based on deaths matched at usual place of residence for 25 selected standard metropolitan statistical areas (SMSA's) and urban area components of those SMSA's: United States, May-August 1960—Con.

[Urban area components are only those of 25,000 population or more. For further definition of areas, see Technical Appendix]

Area	Net difference rate ¹	Proportion unmatched	
		Census record base	Death record base
Milwaukee, Wis-----	0.1	16.6	16.6
Milwaukee, Wis-----	0.5	16.3	16.2
Waukesha, Wis-----	-7.0	26.0	24.7
Wawatosa, Wis-----	6.3	13.0	13.8
West Allis, Wis-----	5.7	7.6	7.3
Muncie, Ind-----	-	25.2	25.2
Muncie, Ind-----	13.3	19.5	17.6
Nashville, Tenn-----	-0.3	25.5	25.5
Nashville, Tenn-----	3.0	23.3	22.8
Odessa, Tex-----	-	29.9	29.9
Odessa, Tex-----	1.2	33.1	32.8
Omaha, Nebr.-Iowa-----	2.1	20.1	19.8
Council Bluffs, Iowa-----	-	3.6	3.6
Omaha, Nebr-----	4.1	22.0	21.3
Racine, Wis-----	-	15.4	15.4
Racine, Wis-----	0.5	12.0	12.0
Rockford, Ill-----	-0.2	18.3	18.3
Rockford, Ill-----	2.5	14.2	13.9
Salt Lake City, Utah-----	-	23.7	23.7
Salt Lake City, Utah-----	3.7	20.9	20.3
Shreveport, La-----	-0.4	31.1	31.2
Bossier City, La-----	-	28.9	28.9
Shreveport, La-----	0.7	27.6	27.4
Steubenville-Weirton, Ohio-W.Va-----	0.8	24.8	24.7
Steubenville, Ohio-----	-	19.9	19.9
Weirton, W.Va-----	2.9	32.0	31.4
Tacoma, Wash-----	-0.3	28.4	28.5
Tacoma, Wash-----	1.2	17.9	17.7
Tuscaloosa, Ala-----	-	48.1	48.1
Tuscaloosa, Ala-----	13.3	46.5	43.4
Wichita Falls, Tex-----	1.9	24.0	23.6
Wichita Falls, Tex-----	2.7	20.0	19.6
Wilkes-Barre--Hazleton, Pa-----	-	15.1	15.1
Hazleton, Pa-----	-	13.7	13.7
Wilkes-Barre, Pa-----	-	21.3	21.3
Youngstown-Warren, Ohio-----	-0.1	19.9	19.9
Warren, Ohio-----	5.1	18.0	17.2
Youngstown, Ohio-----	0.2	13.5	13.4

¹Census record used as base. Minus (-) sign indicates more assignments by census than by NCHS.

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
<u>Total</u>				
All areas-----	412,197	8,095	8,095	...
Total SMSA's-----	255,454	4,786	5,613	0.3
Abilene, Tex-----	179	4	9	2.7
Akron, Ohio-----	1,042	24	46	2.1
Albany, Ga-----	126	-	1	0.8
Albany-Schenectady-Troy, N.Y-----	1,833	19	76	3.1
Albuquerque, N.Mex-----	364	3	3	-
Allentown-Bethlehem-Easton, Pa.-N.J-----	1,398	14	16	0.1
Altoona, Pa-----	404	21	4	-4.0
Amarillo, Tex-----	210	15	7	-3.6
Ann Arbor, Mich-----	288	70	9	-17.0
Asheville, N.C-----	264	22	6	-5.6
Atlanta, Ga-----	1,869	24	62	2.0
Atlantic City, N.J-----	517	6	17	2.1
Augusta, Ga.-S.C-----	350	14	12	0.5
Austin, Tex-----	329	55	6	-12.8
Bakersfield, Calif-----	467	-	16	3.4
Baltimore, Md-----	3,855	64	55	-0.2
Baton Rouge, La-----	356	7	12	1.4
Bay City, Mich-----	224	1	8	3.1
Beaumont-Port Arthur, Tex-----	546	8	18	1.8
Billings, Mont-----	134	-	1	0.7
Binghamton, N.Y-----	522	33	14	-3.4
Birmingham, Ala-----	1,200	8	37	2.4
Boston-Lowell-Lawrence, Mass ¹ -----	8,713	71	129	0.7
Bridgeport-Stamford-Norwalk, Conn ¹ -----	1,532	28	34	0.4
Brockton, Mass ¹ -----	692	20	28	1.1
Brownsville-Harlingen-San Benito, Tex-----	223	5	7	0.9
Buffalo, N.Y-----	3,468	57	53	-0.1
Canton, Ohio-----	764	42	9	-4.1
Cedar Rapids, Iowa-----	241	-	3	1.2
Champaign-Urbana, Ill-----	192	2	13	5.7
Charleston, S.C-----	295	6	12	2.0
Charleston, W.Va-----	436	3	9	1.4
Charlotte, N.C-----	405	4	2	-0.5
Chattanooga, Tenn.-Ga-----	512	6	10	0.8
Chicago, Ill-----	15,504	91	377	1.8
Cincinnati, Ohio-Ky-----	2,694	32	29	-0.1
Cleveland, Ohio-----	4,406	12	94	1.9
Colorado Springs, Colo-----	245	13	19	2.3
Columbia, S.C-----	432	124	-	-22.3
Columbus, Ga.-Ala-----	309	6	19	4.1
Columbus, Ohio-----	1,490	35	24	-0.7
Corpus Christi, Tex-----	312	7	11	1.3
Dallas, Tex-----	1,880	43	54	0.6
Davenport-Rock Island-Moline, Iowa-Ill-----	633	32	10	-3.3
Dayton, Ohio-----	1,458	37	10	-1.8

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Decatur, Ill-----	237	5	5	-
Denver, Colo-----	1,942	22	66	2.2
Des Moines, Iowa-----	622	3	19	2.6
Detroit, Mich-----	7,848	26	141	1.5
Dubuque, Iowa-----	186	23	4	-9.1
Duluth-Superior, Minn.-Wis-----	741	16	37	2.8
Durham, N.C-----	222	1	11	4.5
El Paso, Tex-----	439	7	22	3.4
Erie, Pa-----	649	3	21	2.8
Eugene, Oreg-----	238	-	9	3.8
Evansville, Ind.-Ky-----	440	19	2	-3.7
Fall River-New Bedford, Mass ¹ -----	998	13	16	0.3
Fargo-Moorhead, N.Dak.-Minn-----	170	7	14	4.0
Flint, Mich-----	720	9	14	0.7
Fort Lauderdale-Hollywood, Fla-----	702	26	5	-2.9
Fort Smith, Ark-----	127	5	3	-1.5
Fort Wayne, Ind-----	521	25	27	0.4
Fort Worth, Tex-----	1,025	14	28	1.3
Fresno, Calif-----	715	6	13	1.0
Gadsden, Ala-----	150	10	3	-4.4
Galveston-Texas City, Tex-----	278	3	14	3.9
Gary-Hammond-East Chicago, Ind-----	1,166	1	35	2.9
Grand Rapids, Mich-----	808	34	20	-1.7
Great Falls, Mont-----	180	6	3	-1.6
Green Bay, Wis-----	253	8	12	1.5
Greensboro-High Point, N.C-----	392	11	9	-0.5
Greenville, S.C-----	269	-	12	4.5
Hamilton-Middletown, Ohio-----	400	-	7	1.8
Harrisburg, Pa-----	885	39	29	-1.1
Hartford-New Britain-Bristol, Conn ¹ -----	1,551	16	41	1.6
Honolulu, Hawaii-----	602	6	2	-0.7
Houston, Tex-----	1,934	18	31	0.7
Huntington-Ashland, W.Va.-Ky.-Ohio-----	529	23	15	-1.4
Huntsville, Ala-----	144	6	4	-1.3
Indianapolis, Ind-----	1,673	19	49	1.8
Jackson, Mich-----	345	5	15	2.9
Jackson, Miss-----	346	22	17	-1.4
Jacksonville, Fla-----	839	13	22	1.1
Jersey City, N.J-----	1,865	9	60	2.7
Johnstown, Pa-----	813	21	20	-0.1
Kalamazoo, Mich-----	322	29	2	-7.7
Kansas City, Mo.-Kans-----	2,330	26	94	2.9
Kenosha, Wis-----	192	5	10	2.5
Knoxville, Tenn-----	622	36	8	-4.3
Lake Charles, La-----	185	-	7	3.8
Lancaster, Pa-----	656	64	24	-5.6
Lansing, Mich-----	568	12	16	0.7
Laredo, Tex-----	118	-	8	6.8
Las Vegas, Nev-----	199	-	9	4.5
Lawton, Okla-----	99	1	6	5.0

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Lexington, Ky-----	292	40	6	-10.2
Lima, Ohio-----	228	14	21	2.9
Lincoln, Nebr-----	355	21	3	-4.8
Little Rock-North Little Rock, Ark-----	410	32	4	-6.3
Lorain-Elyria, Ohio-----	394	17	7	-2.4
Los Angeles-Long Beach, Calif-----	14,583	90	203	0.8
Louisville, Ky.-Ind-----	1,643	37	16	-1.3
Lubbock, Tex-----	179	-	24	13.4
Lynchburg, Va-----	215	22	12	-4.2
Macon, Ga-----	336	16	11	-1.4
Madison, Wis-----	426	23	14	-2.0
Manchester, N.H ¹ -----	450	2	10	1.8
Memphis, Tenn-----	1,297	22	18	-0.3
Miami, Fla-----	1,984	3	16	0.7
Midland, Tex-----	61	-	6	9.8
Milwaukee, Wis-----	2,762	23	33	0.4
Minneapolis-St. Paul, Minn-----	3,207	65	90	0.8
Mobile, Ala-----	520	35	21	-2.5
Monroe, La-----	195	3	9	3.0
Montgomery, Ala-----	280	16	10	-2.0
Muncie, Ind-----	242	-	6	2.5
Muskegon-Muskegon Heights, Mich-----	328	5	10	1.5
Nashville, Tenn-----	819	49	4	-5.2
Newark, N.J-----	4,163	116	115	-0.0
New Haven-Waterbury, Conn ¹ -----	1,672	18	60	2.5
New Orleans, La-----	2,169	24	56	1.5
Newport News-Hampton, Va-----	366	34	8	-6.5
New York, N.Y-----	28,001	93	333	0.9
Norfolk-Portsmouth, Va-----	974	3	34	3.2
Odessa, Tex-----	101	-	2	2.0
Ogden, Utah-----	179	1	4	1.7
Oklahoma City, Okla-----	915	55	15	-4.1
Omaha, Nebr.-Iowa-----	968	29	48	1.9
Orlando, Fla-----	555	5	8	0.5
Paterson-Clifton-Passaic, N.J-----	2,619	42	100	2.2
Pensacola, Fla-----	306	4	10	1.9
Peoria, Ill-----	644	52	8	-6.3
Philadelphia, Pa.-N.J-----	10,931	94	134	0.4
Phoenix, Ariz-----	994	42	22	-1.9
Pittsburgh, Pa-----	6,061	57	54	-0.0
Pittsfield, Mass ¹ -----	418	6	10	0.9
Portland, Maine ¹ -----	465	11	23	2.5
Portland, Oreg.-Wash-----	2,130	29	67	1.8
Providence, R.I ¹ -----	2,012	21	28	0.3
Provo-Orem, Utah-----	180	31	-	-14.7
Pueblo, Colo-----	245	108	1	-30.3
Racine, Wis-----	320	12	7	-1.5
Raleigh, N.C-----	267	40	13	-8.8
Reading, Pa-----	852	29	5	-2.7
Reno, Nev-----	158	21	1	-11.2

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August, 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Richmond, Va-----	830	24	34	1.2
Roanoke, Va-----	316	41	17	-6.7
Rochester, N.Y-----	1,631	33	33	-
Rockford, Ill-----	467	4	12	1.7
Sacramento, Calif-----	918	7	56	5.3
Saginaw, Mich-----	436	3	11	1.8
St. Joseph, Mo-----	263	39	2	-12.3
St. Louis, Mo.-Ill-----	4,881	42	47	0.1
Salt Lake City, Utah-----	652	15	20	0.7
San Angelo, Tex-----	114	10	13	2.4
San Antonio, Tex-----	1,153	64	12	-4.3
San Bernardino-Riverside-Ontario, Calif-----	1,570	58	37	-1.3
San Diego, Calif-----	1,694	26	33	0.4
San Francisco-Oakland, Calif-----	6,234	65	276	3.3
San Jose, Calif-----	1,080	83	7	-6.5
Santa Barbara, Calif-----	331	1	10	2.7
Savannah, Ga-----	399	1	13	3.0
Scranton, Pa-----	835	11	22	1.3
Seattle, Wash-----	2,384	19	88	2.9
Shreveport, La-----	562	8	3	-0.9
Sioux City, Iowa-----	299	5	13	2.6
Sioux Falls, S.Dak-----	174	-	3	1.7
South Bend, Ind-----	537	3	11	1.5
Spokane, Wash-----	701	42	15	-3.6
Springfield, Ill-----	440	9	24	3.3
Springfield, Mo-----	290	7	6	-0.3
Springfield, Ohio-----	322	18	7	-3.2
Springfield-Holyoke, Mass ¹ -----	1,357	33	22	-0.8
Steubenville-Weirton, Ohio-W.Va-----	391	7	19	3.0
Stockton, Calif-----	528	33	13	-3.6
Syracuse, N.Y-----	1,450	20	63	2.9
Tacoma, Wash-----	658	80	7	-9.9
Tampa-St. Petersburg, Fla-----	2,440	40	37	-0.1
Terre Haute, Ind-----	329	2	8	1.8
Texarkana, Tex.-Ark-----	161	3	14	6.7
Toledo, Ohio-----	1,141	23	24	0.1
Topeka, Kans-----	300	29	7	-6.7
Trenton, N.J-----	664	27	15	-1.7
Tucson, Ariz-----	445	12	4	-1.8
Tulsa, Okla-----	840	10	37	3.2
Tuscaloosa, Ala-----	143	87	1	-37.4
Tyler, Tex-----	143	23	1	-13.3
Utica-Rome, N.Y-----	872	122	8	-11.5
Waco, Tex-----	322	22	10	-3.5
Washington, D.C.-Md.-Va-----	3,612	65	86	0.6
Waterloo, Iowa-----	264	8	5	-1.1
West Palm Beach, Fla-----	563	8	11	0.5
Wheeling, W.Va.-Ohio-----	500	4	57	10.5
Wichita, Kans-----	602	7	16	1.5
Wichita Falls, Tex-----	215	55	7	-17.8

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Wilkes-Barre—Hazleton, Pa-----	1,168	18	19	0.1
Wilmington, Del.-N.J-----	756	25	32	0.9
Winston-Salem, N.C-----	325	5	5	-
Worcester, Mass ¹ -----	1,652	92	24	-3.9
York, Pa-----	545	8	33	4.5
Youngstown-Warren, Ohio-----	1,116	7	31	2.1
All other areas-----	156,743	3,309	2,482	-0.5
<u>Usual place of residence</u>				
All areas-----	387,763	991	991	...
Total SMSA's-----	240,397	633	678	0.0
Abilene, Tex-----	167	-	-	-
Akron, Ohio-----	1,010	3	-	-0.3
Albany, Ga-----	124	-	1	0.8
Albany-Schenectady-Troy, N.Y-----	1,731	-	12	0.7
Albuquerque, N.Mex-----	360	1	-	-0.3
Allentown-Bethlehem-Easton, Pa.-N.J-----	1,330	6	-	-0.4
Altoona, Pa-----	378	2	2	-
Amarillo, Tex-----	208	1	2	0.5
Ann Arbor, Mich-----	273	8	3	-1.8
Asheville, N.C-----	257	1	1	-
Atlanta, Ga-----	1,802	6	3	-0.2
Atlantic City, N.J-----	462	1	-	-0.2
Augusta, Ga.-S.C-----	327	-	1	0.3
Austin, Tex-----	301	4	-	-1.3
Bakersfield, Calif-----	460	-	2	0.4
Baltimore, Md-----	3,581	2	-	-0.1
Baton Rouge, La-----	350	-	1	0.3
Bay City, Mich-----	209	1	-	-0.5
Beaumont-Port Arthur, Tex-----	538	6	12	1.1
Billings, Mont-----	133	-	-	-
Binghamton, N.Y-----	494	3	-	-0.6
Birmingham, Ala-----	1,175	6	1	-0.4
Boston-Lowell-Lawrence, Mass ¹ -----	7,844	26	29	0.0
Bridgeport-Stamford-Norwalk, Conn ¹ -----	1,456	2	2	-
Brockton, Mass ¹ -----	619	7	8	0.2
Brownsville-Harlingen-San Benito, Tex-----	215	-	-	-
Buffalo, N.Y-----	3,230	14	6	-0.2
Canton, Ohio-----	714	2	5	0.4
Cedar Rapids, Iowa-----	227	-	1	0.4
Champaign-Urbana, Ill-----	180	1	1	-
Charleston, S.C-----	289	6	1	-1.7
Charleston, W.Va-----	422	1	1	-
Charlotte, N.C-----	394	2	-	-0.5
Chattanooga, Tenn.-Ga-----	501	1	2	0.2
Chicago, Ill-----	14,683	18	46	0.2

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960—Con.

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Cincinnati, Ohio-Ky-----	2,438	9	3	-0.2
Cleveland, Ohio-----	4,241	3	12	0.2
Colorado Springs, Colo-----	245	-	-	-
Columbia, S.C-----	398	7	-	-1.7
Columbus, Ga.-Ala-----	305	1	3	0.7
Columbus, Ohio-----	1,377	5	1	-0.3
Corpus Christi, Tex-----	312	2	-	-0.6
Dallas, Tex-----	1,822	19	3	-0.9
Davenport-Rock Island-Moline, Iowa-Ill-----	612	9	-	-1.4
Dayton, Ohio-----	1,351	1	1	-
Decatur, Ill-----	229	-	1	0.4
Denver, Colo-----	1,863	2	-	-0.1
Des Moines, Iowa-----	577	2	1	-0.2
Detroit, Mich-----	7,451	3	11	0.1
Dubuque, Iowa-----	171	-	2	1.2
Duluth-Superior, Minn.-Wis-----	718	8	3	-0.7
Durham, N.C-----	222	-	-	-
El Paso, Tex-----	427	2	16	3.3
Erie, Pa-----	624	-	-	-
Eugene, Oreg-----	231	-	2	0.9
Evansville, Ind.-Ky-----	429	-	-	-
Fall River-New Bedford, Mass ¹ -----	896	1	6	0.6
Fargo-Moorhead, N.Dak.-Minn-----	165	1	1	-
Flint, Mich-----	711	2	-	-0.3
Fort Lauderdale-Hollywood, Fla-----	668	4	1	-0.4
Fort Smith, Ark-----	127	-	1	0.8
Fort Wayne, Ind-----	508	2	3	0.2
Fort Worth, Tex-----	1,000	-	2	0.2
Fresno, Calif-----	697	5	3	-0.3
Gadsden, Ala-----	148	3	-	-2.0
Galveston-Texas City, Tex-----	277	-	2	0.7
Gary-Hammond-East Chicago, Ind-----	1,133	1	10	0.8
Grand Rapids, Mich-----	749	-	3	0.4
Great Falls, Mont-----	159	1	-	-0.6
Green Bay, Wis-----	253	3	1	-0.8
Greensboro-High Point, N.C-----	371	-	1	0.3
Greenville, S.C-----	250	-	5	2.0
Hamilton-Middletown, Ohio-----	366	-	-	-
Harrisburg, Pa-----	848	1	11	1.2
Hartford-New Britain-Bristol, Conn ¹ -----	1,487	5	2	-0.2
Honolulu, Hawaii-----	577	1	2	0.2
Houston, Tex-----	1,896	5	2	-0.2
Huntington-Ashland, W.Va.-Ky.-Ohio-----	515	2	5	0.6
Huntsville, Ala-----	144	1	-	-0.7
Indianapolis, Ind-----	1,539	1	22	1.4
Jackson, Mich-----	331	-	2	0.6
Jackson, Miss-----	335	-	1	0.3
Jacksonville, Fla-----	784	1	2	0.1
Jersey City, N.J-----	1,769	4	7	0.2
Johnstown, Pa-----	773	1	2	0.1

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Kalamazoo, Mich-----	310	1	1	-
Kansas City, Mo.-Kans-----	2,238	4	7	0.1
Kenosha, Wis-----	192	5	5	-
Knoxville, Tenn-----	573	1	1	-
Lake Charles, La-----	185	-	-	-
Lancaster, Pa-----	606	11	3	-1.3
Lansing, Mich-----	523	-	-	-
Laredo, Tex-----	118	-	1	0.8
Las Vegas, Nev-----	198	-	-	-
Lawton, Okla-----	99	1	5	4.0
Lexington, Ky-----	279	4	-	-1.4
Lima, Ohio-----	215	-	1	0.5
Lincoln, Nebr-----	340	13	2	-3.1
Little Rock-North Little Rock, Ark-----	391	3	2	-0.3
Lorain-Elyria, Ohio-----	378	2	1	-0.3
Los Angeles-Long Beach, Calif-----	13,321	10	16	0.0
Louisville, Ky.-Ind-----	1,554	-	4	0.3
Lubbock, Tex-----	179	-	7	3.9
Lynchburg, Va-----	202	3	-	-1.5
Macon, Ga-----	332	1	3	0.6
Madison, Wis-----	391	1	5	1.0
Manchester, N.H. ¹ -----	443	-	1	0.2
Memphis, Tenn-----	1,232	-	3	0.2
Miami, Fla-----	1,916	2	1	-0.1
Midland, Tex-----	61	-	-	-
Milwaukee, Wis-----	2,635	4	6	0.1
Minneapolis-St. Paul, Minn-----	2,998	5	3	-0.1
Mobile, Ala-----	509	1	2	0.2
Monroe, La-----	194	3	2	-0.5
Montgomery, Ala-----	274	1	3	0.7
Muncie, Ind-----	238	-	-	-
Muskegon-Muskegon Heights, Mich-----	320	-	-	-
Nashville, Tenn-----	736	4	2	-0.3
Newark, N.J-----	3,920	9	13	0.1
New Haven-Waterbury, Conn ¹ -----	1,610	3	11	0.5
New Orleans, La-----	2,104	4	2	-0.1
Newport News-Hampton, Va-----	335	-	1	0.3
New York, N.Y-----	26,017	20	17	-0.0
Norfolk-Portsmouth, Va-----	949	-	-	-
Odesa, Tex-----	101	-	-	-
Ogden, Utah-----	169	-	-	-
Oklahoma City, Okla-----	871	7	7	-
Omaha, Nebr.-Iowa-----	922	2	21	2.1
Orlando, Fla-----	523	2	3	0.2
Paterson-Clifton-Passaic, N.J-----	2,529	13	5	-0.3
Pensacola, Fla-----	306	3	2	-0.3
Peoria, Ill-----	599	1	-	-0.2
Philadelphia, Pa.-N.J-----	10,302	25	23	-0.0
Phoenix, Ariz-----	955	7	7	-
Pittsburgh, Pa-----	5,645	13	9	-0.1

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Pittsfield, Mass ¹ -----	403	-	-	-
Portland, Maine ¹ -----	459	2	-	-0.4
Portland, Oreg.-Wash-----	1,968	-	-	-
Providence, R.I. ¹ -----	1,809	6	1	-0.3
Provo-Orem, Utah-----	168	1	-	-0.6
Pueblo, Colo-----	228	6	1	-2.1
Racine, Wis-----	283	2	2	-
Raleigh, N.C-----	266	-	-	-
Reading, Pa-----	804	1	-	-0.1
Reno, Nev-----	150	-	-	-
Richmond, Va-----	814	5	3	-0.2
Roanoke, Va-----	309	-	2	0.6
Rochester, N.Y-----	1,447	8	1	-0.5
Rockford, Ill-----	442	1	-	-0.2
Sacramento, Calif-----	879	1	11	1.1
Saginaw, Mich-----	422	-	1	0.2
St. Joseph, Mo-----	233	-	-	-
St. Louis, Mo.-Ill-----	4,579	11	3	-0.2
Salt Lake City, Utah-----	613	2	2	-
San Angelo, Tex-----	109	-	1	0.9
San Antonio, Tex-----	1,097	1	-	-0.1
San Bernardino-Riverside-Ontario, Calif-----	1,495	10	4	-0.4
San Diego, Calif-----	1,571	10	1	-0.6
San Francisco-Oakland, Calif-----	5,892	10	14	0.1
San Jose, Calif-----	1,015	7	3	-0.4
Santa Barbara, Calif-----	323	1	2	0.3
Savannah, Ga-----	390	1	-	-0.3
Scranton, Pa-----	756	2	5	0.4
Seattle, Wash-----	2,160	10	3	-0.3
Shreveport, La-----	544	3	1	-0.4
Sioux City, Iowa-----	269	-	2	0.7
Sioux Falls, S.Dak-----	167	-	-	-
South Bend, Ind-----	508	3	3	-
Spokane, Wash-----	612	4	5	0.2
Springfield, Ill-----	434	-	9	2.1
Springfield, Mo-----	270	-	1	0.4
Springfield, Ohio-----	298	-	2	0.7
Springfield-Holyoke, Mass ¹ -----	1,300	3	5	0.2
Steubenville-Weirton, Ohio-W.Va-----	383	2	5	0.8
Stockton, Calif-----	496	1	2	0.2
Syracuse, N.Y-----	1,333	3	3	-
Tacoma, Wash-----	594	3	1	-0.3
Tampa-St. Petersburg, Fla-----	2,303	7	12	0.2
Terre Haute, Ind-----	328	-	-	-
Texarkana, Tex.-Ark-----	154	3	-	-1.9
Toledo, Ohio-----	1,074	-	5	0.5
Topeka, Kans-----	274	-	-	-
Trenton, N.J-----	627	-	1	0.2
Tucson, Ariz-----	433	1	3	0.5
Tulsa, Okla-----	823	3	4	0.1

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Tuscaloosa, Ala-----	137	-	-	-
Tyler, Tex-----	131	-	-	-
Utica-Rome, N.Y-----	778	5	3	-0.3
Waco, Tex-----	303	5	-	-1.6
Washington, D.C.-Md.-Va-----	3,397	16	3	-0.4
Waterloo, Iowa-----	259	2	5	1.1
West Palm Beach, Fla-----	542	2	-	-0.4
Wheeling, W.Va.-Ohio-----	470	2	14	2.5
Wichita, Kans-----	601	5	2	-0.5
Wichita Falls, Tex-----	204	2	6	1.9
Wilkes-Barre--Hazleton, Pa-----	1,137	7	7	-
Wilmington, Del.-N.J-----	718	-	1	0.1
Winston-Salem, N.C-----	324	-	-	-
Worcester, Mass ¹ -----	1,485	9	5	-0.3
York, Pa-----	520	4	-	-0.8
Youngstown-Warren, Ohio-----	1,083	2	1	-0.1
All other areas-----	147,366	358	313	-0.0
<u>Not at usual place of residence</u>				
All areas-----	24,434	7,104	7,104	...
Total SMSA's-----	15,057	4,153	4,935	4.1
Abilene, Tex-----	12	4	9	31.3
Akron, Ohio-----	32	21	46	47.2
Albany, Ga-----	2	-	-	-
Albany-Schenectady-Troy, N.Y-----	102	19	64	37.2
Albuquerque, N.Mex-----	4	2	3	16.7
Allentown-Bethlehem-Easton, Pa.-N.J-----	68	8	16	10.5
Altoona, Pa-----	26	19	2	-37.8
Amarillo, Tex-----	2	14	5	-56.3
Ann Arbor, Mich-----	15	62	6	-72.7
Asheville, N.C-----	7	21	5	-57.1
Atlanta, Ga-----	67	18	59	48.2
Atlantic City, N.J-----	55	5	17	20.0
Augusta, Ga.-S.C-----	23	14	11	-8.1
Austin, Tex-----	28	51	6	-57.0
Bakersfield, Calif-----	7	-	14	200.0
Baltimore, Md-----	274	62	55	-2.1
Baton Rouge, La-----	6	7	11	30.8
Bay City, Mich-----	15	-	8	53.3
Beaumont-Port Arthur, Tex-----	8	2	6	40.0
Billings, Mont-----	1	-	1	100.0
Binghamton, N.Y-----	28	30	14	-27.6
Birmingham, Ala-----	25	2	36	125.9
Boston-Lowell-Lawrence, Mass ¹ -----	869	45	100	6.0
Bridgeport-Stamford-Norwalk, Conn ¹ -----	76	26	32	5.9
Brockton, Mass ¹ -----	73	13	20	8.1

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Brownsville-Harlingen-San Benito, Tex-----	8	5	7	15.4
Buffalo, N.Y-----	238	43	47	1.4
Canton, Ohio-----	50	40	4	-40.0
Cedar Rapids, Iowa-----	14	-	2	14.3
Champaign-Urbana, Ill-----	12	1	12	84.6
Charleston, S.C-----	6	-	11	183.3
Charleston, W.Va-----	14	2	8	37.5
Charlotte, N.C-----	11	2	2	-
Chattanooga, Tenn.-Ga-----	11	5	8	18.8
Chicago, Ill-----	821	73	331	28.9
Cincinnati, Ohio-Ky-----	256	23	26	1.1
Cleveland, Ohio-----	165	9	82	42.0
Colorado Springs, Colo-----	-	13	19	46.2
Columbia, S.C-----	34	117	-	-77.5
Columbus, Ga.-Ala-----	4	5	16	122.2
Columbus, Ohio-----	113	30	23	-4.9
Corpus Christi, Tex-----	-	5	11	120.0
Dallas, Tex-----	58	24	51	32.9
Davenport-Rock Island-Moline, Iowa-Ill-----	21	23	10	-29.5
Dayton, Ohio-----	107	36	9	-18.9
Decatur, Ill-----	8	5	4	-7.7
Denver, Colo-----	79	20	66	46.5
Des Moines, Iowa-----	45	1	18	37.0
Detroit, Mich-----	397	23	130	25.5
Dubuque, Iowa-----	15	23	2	-55.3
Duluth-Superior, Minn.-Wis-----	23	8	34	83.9
Durham, N.C-----	-	1	11	1,000.0
El Paso, Tex-----	12	5	6	5.9
Erie, Pa-----	25	3	21	64.3
Eugene, Oreg-----	7	-	7	100.0
Evansville, Ind.-Ky-----	11	19	2	-56.7
Fall River-New Bedford, Mass ¹ -----	102	12	10	-1.8
Fargo-Moorhead, N.Dak.-Minn-----	5	6	13	63.6
Flint, Mich-----	9	7	14	43.8
Fort Lauderdale-Hollywood, Fla-----	34	22	4	-32.1
Fort Smith, Ark-----	-	5	2	-60.0
Fort Wayne, Ind-----	13	23	24	2.8
Fort Worth, Tex-----	25	14	26	30.8
Fresno, Calif-----	18	1	10	47.4
Gadsden, Ala-----	2	7	3	-44.4
Galveston-Texas City, Tex-----	1	3	12	225.0
Gary-Hammond-East Chicago, Ind-----	33	-	25	75.8
Grand Rapids, Mich-----	59	34	17	-18.3
Great Falls, Mont-----	21	5	3	-7.7
Green Bay, Wis-----	-	5	11	120.0
Greensboro-High Point, N.C-----	21	11	8	-9.4
Greenville, S.C-----	19	-	7	36.8
Hamilton-Middletown, Ohio-----	34	-	7	20.6
Harrisburg, Pa-----	37	38	18	-26.7
Hartford-New Britain-Bristol, Conn ¹ -----	64	11	39	37.3

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Honolulu, Hawaii-----	25	5	-	-16.7
Houston, Tex-----	38	13	29	31.4
Huntington-Ashland, W.Va.-Ky.-Ohio-----	14	21	10	-31.4
Huntsville, Ala-----	-	5	4	-20.0
Indianapolis, Ind-----	134	18	27	5.9
Jackson, Mich-----	14	5	13	42.1
Jackson, Miss-----	11	22	16	-18.2
Jacksonville, Fla-----	55	12	20	11.9
Jersey City, N.J-----	96	5	53	47.5
Johnstown, Pa-----	40	20	18	-3.3
Kalamazoo, Mich-----	12	28	1	-67.5
Kansas City, Mo.-Kans-----	92	22	87	57.0
Kenosha, Wis-----	-	-	5	-
Knoxville, Tenn-----	49	35	7	-33.3
Lake Charles, La-----	-	-	7	-
Lancaster, Pa-----	50	53	21	-31.1
Lansing, Mich-----	45	12	16	7.0
Laredo, Tex-----	-	-	7	-
Las Vegas, Nev-----	1	-	9	900.0
Lawton, Okla-----	-	-	1	-
Lexington, Ky-----	13	36	6	-61.2
Lima, Ohio-----	13	14	20	22.2
Lincoln, Nebr-----	15	8	1	-30.4
Little Rock-North Little Rock, Ark-----	19	29	2	-56.3
Lorain-Elyria, Ohio-----	16	15	6	-29.0
Los Angeles-Long Beach, Calif-----	1,262	80	187	8.0
Louisville, Ky.-Ind-----	89	37	12	-19.8
Lubbock, Tex-----	-	-	17	-
Lynchburg, Va-----	13	19	12	-21.9
Macon, Ga-----	4	15	8	-36.8
Madison, Wis-----	35	22	9	-22.8
Manchester, N.H. ¹ -----	7	2	9	77.8
Memphis, Tenn-----	65	22	15	-8.0
Miami, Fla-----	68	1	15	20.3
Midland, Tex-----	-	-	6	-
Milwaukee, Wis-----	127	19	27	5.5
Minneapolis-St. Paul, Minn-----	209	60	87	10.0
Mobile, Ala-----	11	34	19	-33.3
Monroe, La-----	1	-	7	700.0
Montgomery, Ala-----	6	15	7	-38.1
Muncie, Ind-----	4	-	6	150.0
Muskegon-Muskegon Heights, Mich-----	8	5	10	38.5
Nashville, Tenn-----	83	45	2	-33.6
Newark, N.J-----	243	107	102	-1.4
New Haven-Waterbury, Conn. ¹ -----	62	15	49	44.2
New Orleans, La-----	65	20	54	40.0
Newport News-Hampton, Va-----	31	34	7	-41.5
New York, N.Y-----	1,984	73	316	11.8
Norfolk-Portsmouth, Va-----	25	3	34	110.7
Odessa, Tex-----	-	-	2	-

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Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Ogden, Utah-----	10	1	4	27.3
Oklahoma City, Okla-----	44	48	8	-43.5
Omaha, Nebr.-Iowa-----	46	27	27	-
Orlando, Fla-----	32	3	5	5.7
Paterson-Clifton-Passaic, N.J-----	90	29	95	55.5
Pensacola, Fla-----	-	1	8	700.0
Peoria, Ill-----	45	51	8	-44.8
Philadelphia, Pa.-N.J-----	629	69	111	6.0
Phoenix, Ariz-----	39	35	15	-27.0
Pittsburgh, Pa-----	416	44	45	0.2
Pittsfield, Mass ¹ -----	15	6	10	19.0
Portland, Maine ¹ -----	6	9	23	93.3
Portland, Oreg.-Wash-----	162	29	67	19.9
Providence, R.I ¹ -----	203	15	27	5.5
Provo-Orem, Utah-----	12	30	-	-71.4
Pueblo, Colo-----	17	102	-	-85.7
Racine, Wis-----	37	10	5	-10.6
Raleigh, N.C-----	1	40	13	-65.9
Reading, Pa-----	48	28	5	-30.3
Reno, Nev-----	8	21	1	-69.0
Richmond, Va-----	16	19	31	34.3
Roanoke, Va-----	7	41	15	-54.2
Rochester, N.Y-----	184	25	32	3.3
Rockford, Ill-----	25	3	12	32.1
Sacramento, Calif-----	39	6	45	86.7
Saginaw, Mich-----	14	3	10	41.2
St. Joseph, Mo-----	30	39	2	-53.6
St. Louis, Mo.-Ill-----	302	31	44	3.9
Salt Lake City, Utah-----	39	13	18	9.6
San Angelo, Tex-----	5	10	12	13.3
San Antonio, Tex-----	56	63	12	-42.9
San Bernardino-Riverside-Ontario, Calif-----	75	48	33	-12.2
San Diego, Calif-----	123	16	32	11.5
San Francisco-Oakland, Calif-----	342	55	262	52.1
San Jose, Calif-----	65	76	4	-51.1
Santa Barbara, Calif-----	8	-	8	100.0
Savannah, Ga-----	9	-	13	144.4
Scranton, Pa-----	79	9	17	9.1
Seattle, Wash-----	224	9	85	32.6
Shreveport, La-----	18	5	2	-13.0
Sioux City, Iowa-----	30	5	11	17.1
Sioux Falls, S.Dak-----	7	-	3	42.9
South Bend, Ind-----	29	-	8	27.6
Spokane, Wash-----	89	38	10	-22.0
Springfield, Ill-----	6	9	15	40.0
Springfield, Mo-----	20	7	5	-7.4
Springfield, Ohio-----	24	18	5	-31.0
Springfield-Holyoke, Mass ¹ -----	57	30	17	-14.9
Steubenville-Weirton, Ohio-W.Va-----	8	5	14	69.2
Stockton, Calif-----	32	32	11	-32.8

Table 12. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, on census record only, and on death record only; and net difference rates for total matched, matched at usual place of residence, and not at usual place of residence: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	Number reporting			Net difference rate
	Same on both	Census record only	Death record only	
Syracuse, N.Y-----	117	17	60	32.1
Tacoma, Wash-----	64	77	6	-50.4
Tampa-St. Petersburg, Fla-----	137	33	25	-4.7
Terre Haute, Ind-----	1	2	8	200.0
Texarkana, Tex.-Ark-----	7	-	14	200.0
Toledo, Ohio-----	67	23	19	-4.4
Topeka, Kans-----	26	29	7	-40.0
Trenton, N.J-----	37	27	14	-20.3
Tucson, Ariz-----	12	11	1	-43.5
Tulsa, Okla-----	17	7	33	108.3
Tuscaloosa, Ala-----	6	87	1	-92.5
Tyler, Tex-----	12	23	1	-62.9
Utica-Rome, N.Y-----	94	117	5	-53.1
Waco, Tex-----	19	17	10	-19.4
Washington, D.C.-Md.-Va-----	215	49	83	12.9
Waterloo, Iowa-----	5	6	-	-54.5
West Palm Beach, Fla-----	21	6	11	18.5
Wheeling, W.Va.-Ohio-----	30	2	43	128.1
Wichita, Kans-----	1	2	14	400.0
Wichita Falls, Tex-----	11	53	1	-81.3
Wilkes-Barre-Hazleton, Pa-----	31	11	12	2.4
Wilmington, Del.-N.J-----	38	25	31	9.5
Winston-Salem, N.C-----	1	5	5	-
Worcester, Mass ¹ -----	167	83	19	-25.6
York, Pa-----	25	4	33	100.0
Youngstown-Warren, Ohio-----	33	5	30	65.8
All other areas-----	9,377	2,951	2,169	-6.3

¹Metropolitan State economic areas.

Table 13. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, census record only, and death record only; and net difference rates, by color: United States, May-August 1960

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	White				Nonwhite			
	Number reporting			Net difference rate	Number reporting			Net difference rate
	Same on both	Census record only	Death record only		Same on both	Census record only	Death record only	
All areas-----	366,216	7,308	7,308	...	42,579	723	723	...
Total SMSA's-----	226,877	4,341	5,056	0.3	26,521	395	516	0.4
Abilene, Tex-----	168	4	9	2.9	10	-	-	-
Akron, Ohio-----	981	24	45	2.1	60	-	1	1.7
Albany, Ga-----	63	-	1	1.6	62	-	-	-
Albany-Schenectady-Troy, N.Y.-----	1,791	19	75	3.1	37	-	1	2.7
Albuquerque, N. Mex-----	342	3	2	-0.3	20	-	1	5.0
Allentown-Bethlehem-Easton, Pa.-N.J.-----	1,375	13	16	0.2	7	1	-	-12.5
Altoona, Pa-----	400	21	4	-4.0	4	-	-	-
Amarillo, Tex-----	195	14	7	-3.3	14	1	-	-6.7
Ann Arbor, Mich-----	275	63	8	-16.3	13	5	1	-22.2
Asheville, N.C-----	227	16	5	-4.5	37	6	1	-11.6
Atlanta, Ga-----	1,331	21	52	2.3	514	3	10	1.4
Atlantic City, N.J-----	443	5	15	2.2	71	1	2	1.4
Augusta, Ga.-S.C-----	218	12	7	-2.2	124	2	4	1.6
Austin, Tex-----	280	40	5	-10.9	49	15	1	-21.9
Bakersfield, Calif-----	417	-	14	3.4	46	-	2	4.3
Baltimore, Md-----	3,002	38	51	0.4	823	26	4	-2.6
Baton Rouge, La-----	204	2	6	1.9	152	5	6	0.6
Bay City, Mich-----	222	1	8	3.1	1	-	-	-
Beaumont-Port Arthur, Tex-----	403	8	12	1.0	136	-	6	4.4
Billings, Mont-----	132	-	1	0.8	2	-	-	-
Binghamton, N.Y-----	508	33	14	-3.5	13	-	-	-
Birmingham, Ala-----	678	4	25	3.1	510	4	12	1.6
Boston-Lowell-Lawrence, Mass ¹ -----	8,438	70	123	0.6	186	1	6	2.7
Bridgeport-Stamford-Norwalk, Conn ¹ -----	1,462	25	33	0.5	51	2	1	-1.9
Brockton, Mass ¹ -----	674	18	27	1.3	13	2	1	-6.7
Brownsville-Harlingen-San Benito, Tex-----	219	5	7	0.9	3	-	-	-
Buffalo, N.Y-----	3,272	56	51	-0.2	172	1	2	0.6
Canton, Ohio-----	718	34	8	-3.5	36	3	1	-5.1
Cedar Rapids, Iowa-----	240	-	3	1.3	1	-	-	-
Champaign-Urbana, Ill-----	185	2	13	5.9	6	-	-	-
Charleston, S.C-----	176	1	7	3.4	117	4	5	0.8
Charleston, W. Va-----	391	3	8	1.3	40	-	1	2.5
Charlotte, N.C-----	254	4	-	-1.6	151	-	2	1.3
Chattanooga, Tenn.-Ga-----	376	6	10	1.0	132	-	-	-
Chicago, Ill-----	13,489	82	338	1.9	1,853	4	39	1.9
Cincinnati, Ohio-Ky-----	2,338	32	25	-0.3	332	-	4	1.2
Cleveland, Ohio-----	3,854	11	83	1.9	527	1	11	1.9
Colorado Springs, Colo-----	235	12	19	2.8	7	-	-	-
Columbia, S.C-----	304	73	-	-19.4	123	51	-	-29.3
Columbus, Ga.-Ala-----	195	5	13	4.0	114	1	6	4.3
Columbus, Ohio-----	1,287	30	23	-0.5	191	5	1	-2.0
Corpus Christi, Tex-----	288	7	11	1.4	22	-	-	-
Dallas, Tex-----	1,559	38	42	0.3	307	4	12	2.6
Davenport-Rock Island-Moline, Iowa-Ill-----	617	32	9	-3.5	14	-	1	7.1
Dayton, Ohio-----	1,285	34	9	-1.9	165	3	1	-1.2
Decatur, Ill-----	224	5	3	-0.9	13	-	2	15.4
Denver, Colo-----	1,866	21	56	1.9	60	1	6	8.2
Des Moines, Iowa-----	593	3	18	2.5	23	-	1	4.3
Detroit, Mich-----	6,734	24	118	1.4	1,049	2	21	1.8
Dubuque, Iowa-----	185	23	4	-9.1	-	-	-	-
Duluth-Superior, Minn.-Wis-----	735	16	37	2.8	4	-	-	-

See footnote at end of table.

Table 13. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, census record only, and death record only; and net difference rates, by color: United States, May-August 1960--Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	White				Nonwhite			
	Number reporting			Net difference rate	Number reporting			Net difference rate
	Same on both	Census record only	Death record only		Same on both	Census record only	Death record only	
Durham, N.C-----	159	-	10	6.3	62	1	1	-
El Paso, Tex-----	425	7	22	3.5	11	-	-	-
Eric, Pa-----	630	3	20	2.7	18	-	1	5.6
Eugene, Oreg-----	235	-	9	3.8	2	-	-	-
Evansville, Ind.-Ky-----	398	19	2	-4.1	36	-	-	-
Fall River-New Bedford, Mass ¹ -----	968	13	16	0.3	22	-	-	-
Fargo-Moorhead, N. Dak.-Minn-----	169	7	14	4.0	-	-	-	-
Flint, Mich-----	641	8	12	0.6	75	1	2	1.3
Fort Lauderdale-Hollywood, Fla-----	614	23	2	-3.3	84	3	3	-
Fort Smith, Ark-----	113	5	2	-2.5	13	-	1	7.7
Fort Wayne, Ind-----	501	25	27	0.4	14	-	-	-
Fort Worth, Tex-----	875	13	23	1.1	141	1	5	2.8
Fresno, Calif-----	665	5	11	0.9	47	1	-	-2.1
Gadsden, Ala-----	126	9	-	-6.7	22	1	3	8.7
Galveston-Texas City, Tex-----	207	3	11	3.8	68	-	3	4.4
Gary-Hammond-East Chicago, Ind-----	983	1	32	3.2	175	-	2	1.1
Grand Rapids, Mich-----	769	33	20	-1.6	31	1	-	-3.1
Great Falls, Mont-----	176	6	3	-1.6	3	-	-	-
Green Bay, Wis-----	251	7	10	1.2	2	1	-	-33.3
Greensboro-High Point, N.C-----	291	11	6	-1.7	100	-	3	3.0
Greenville, S.C-----	194	-	7	3.6	73	-	5	6.8
Hamilton-Middletown, Ohio-----	376	-	7	1.9	19	-	-	-
Harrisburg, Pa-----	825	39	28	-1.3	55	-	1	1.8
Hartford-New Britain-Bristol, Conn ¹ -----	1,483	15	39	1.6	53	1	2	1.9
Honolulu, Hawaii-----	159	2	-	-1.2	342	2	2	-
Houston, Tex-----	1,495	13	28	1.0	424	5	3	-0.5
Huntington-Ashland, W. Va.-Ky.-Ohio-----	486	22	15	-1.4	34	1	-	-2.9
Huntsville, Ala-----	116	6	2	-3.3	27	-	2	7.4
Indianapolis, Ind-----	1,400	19	48	2.0	263	-	1	0.4
Jackson, Mich-----	333	3	15	3.6	11	2	-	-15.4
Jackson, Miss-----	184	18	15	-1.5	157	4	2	-1.2
Jacksonville, Fla-----	584	12	16	0.7	252	1	6	2.0
Jersey City, N.J-----	1,771	8	58	2.8	78	-	2	2.6
Johnstown, Pa-----	801	19	19	-	9	2	1	-9.1
Kalamazoo, Mich-----	309	28	2	-7.7	7	1	-	-12.5
Kansas City, Mo.-Kans-----	1,991	18	89	3.5	314	3	3	-
Kenosha, Wis-----	185	5	10	2.6	6	-	-	-
Knoxville, Tenn-----	539	36	5	-5.4	80	-	2	2.5
Lake Charles, La-----	130	-	5	3.8	55	-	2	3.6
Lancaster, Pa-----	646	64	24	-5.6	7	-	-	-
Lansing, Mich-----	555	12	16	0.7	13	-	-	-
Laredo, Tex-----	113	-	8	7.1	-	-	-	-
Las Vegas, Nev-----	181	-	8	4.4	18	-	1	5.6
Lawton, Okla-----	90	1	6	5.5	9	-	-	-
Lexington, Ky-----	225	35	6	-11.2	67	5	-	-6.9
Lima, Ohio-----	217	13	21	3.5	10	1	-	-9.1
Lincoln, Nebr-----	343	19	3	-4.4	12	2	-	-14.3
Little Rock-North Little Rock, Ark-----	282	26	1	-8.1	125	6	3	-2.3
Lorain-Elyria, Ohio-----	369	15	6	-2.3	22	2	1	-4.2
Los Angeles-Long Beach, Calif-----	13,584	84	187	0.8	872	6	8	0.2
Louisville, Ky.-Ind-----	1,366	37	13	-1.7	263	-	3	1.1
Lubbock, Tex-----	164	-	22	13.4	15	-	2	13.3
Lynchburg, Va-----	165	21	10	-5.9	50	1	2	2.0
Macon, Ga-----	201	15	5	-4.6	134	1	6	3.7
Madison, Wis-----	414	21	14	-1.6	5	2	-	-28.6

See footnote at end of table.

Table 13. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, census record only, and death record only; and net difference rates, by color: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	White				Nonwhite			
	Number reporting			Net difference rate	Number reporting			Net difference rate
	Same on both	Census record only	Death record only		Same on both	Census record only	Death record only	
Manchester, N.H-----	450	1	10	2.0	-	1	-	-100.0
Memphis, Tenn-----	762	19	15	-0.5	523	3	1	-0.4
Miami, Fla-----	1,751	2	10	0.5	207	1	6	2.4
Midland, Tex-----	57	-	6	10.5	4	-	-	-
Milwaukee, Wis-----	2,659	22	33	0.4	96	1	-	-1.0
Minneapolis-St. Paul, Minn-----	3,113	65	90	0.8	78	-	-	-
Mobile, Ala-----	327	1	18	5.2	187	34	3	-14.0
Monroe, La-----	96	3	4	1.0	93	-	5	5.4
Montgomery, Ala-----	127	11	4	-5.1	150	5	6	0.6
Muncie, Ind-----	223	-	6	2.7	17	-	-	-
Muskegon-Muskegon Heights, Mich-----	293	5	9	1.3	32	-	1	3.1
Nashville, Tenn-----	589	39	2	-5.9	216	10	2	-3.5
Newark, N.J-----	3,674	109	107	-0.1	462	7	8	0.2
New Haven-Waterbury, Conn ¹ -----	1,604	18	58	2.5	53	-	1	1.9
New Orleans, La-----	1,468	13	34	1.4	685	11	22	1.6
Newport News-Hampton, Va-----	244	25	3	-8.2	119	9	5	-3.1
New York, N.Y-----	25,332	90	307	0.9	2,461	2	26	1.0
Norfolk-Portsmouth, Va-----	658	3	19	2.4	310	-	15	4.8
Odessa, Tex-----	93	-	2	2.2	8	-	-	-
Ogden, Utah-----	170	1	4	1.8	7	-	-	-
Oklahoma City, Okla-----	809	54	12	-4.9	101	-	3	3.0
Omaha, Nebr.-Iowa-----	893	24	45	2.3	72	-	3	4.2
Orlando, Fla-----	463	5	6	0.2	89	-	2	2.2
Paterson-Clifton-Passaic, N.J-----	2,516	42	95	2.1	78	-	4	5.1
Pensacola, Fla-----	229	3	8	2.2	76	1	2	1.3
Peoria, Ill-----	612	51	8	-6.5	14	1	-	-6.7
Philadelphia, Pa.-N.J-----	9,336	88	117	0.3	1,512	6	15	0.6
Phoenix, Ariz-----	924	40	19	-2.2	67	2	2	-
Pittsburgh, Pa-----	5,571	53	53	-	453	4	1	-0.7
Pittsfield, Mass ¹ -----	409	6	10	1.0	6	-	-	-
Portland, Maine ¹ -----	457	11	23	2.6	-	-	-	-
Portland, Oreg.-Wash-----	2,063	28	67	1.9	47	1	-	-2.1
Providence, R.I ¹ -----	1,969	20	28	0.4	21	-	-	-
Provo-Orem, Utah-----	179	30	-	-14.4	-	1	-	-100.0
Pueblo, Colo-----	239	100	1	-29.2	6	5	-	-45.5
Racine, Wis-----	312	11	7	-1.2	8	1	-	-11.1
Raleigh, N.C-----	165	39	9	-14.7	97	1	4	3.1
Reading, Pa-----	835	29	5	-2.8	14	-	-	-
Reno, Nev-----	148	21	1	-11.8	8	-	-	-
Richmond, Va-----	624	19	20	0.2	199	5	14	4.4
Roanoke, Va-----	265	36	15	-7.0	50	5	2	-5.5
Rochester, N.Y-----	1,588	33	32	-0.1	36	-	1	2.8
Rockford, Ill-----	451	3	10	1.5	15	1	-	-6.3
Sacramento, Calif-----	848	4	53	5.8	52	1	2	1.9
Saginaw, Mich-----	406	3	11	2.0	30	-	-	-
St. Joseph, Mo-----	249	38	2	-12.5	13	1	-	-7.1
St. Louis, Mo.-Ill-----	4,125	39	41	0.0	724	3	6	0.4
Salt Lake City, Utah-----	640	15	20	0.8	11	-	-	-
San Angelo, Tex-----	104	10	12	1.8	10	-	1	10.0
San Antonio, Tex-----	1,050	62	7	-4.9	99	2	5	3.0
San Bernardino-Riverside-Ontario, Calif--	1,509	50	37	-0.8	56	3	-	-5.1
San Diego, Calif-----	1,601	26	32	0.4	79	-	1	1.3
San Francisco-Oakland, Calif-----	5,703	64	266	3.5	477	1	10	1.9
San Jose, Calif-----	1,052	81	7	-6.5	24	1	-	-4.0
Santa Barbara, Calif-----	326	1	10	2.8	5	-	-	-

See footnote at end of table.

Table 13. Number of matched deaths reporting same standard metropolitan statistical area (SMSA) on both census and death records, census record only, and death record only; and net difference rates, by color: United States, May-August 1960—Con.

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS. For definition of areas, see Technical Appendix]

Area	White				Nonwhite			
	Number reporting			Net difference rate	Number reporting			Net difference rate
	Same on both	Census record only	Death record only		Same on both	Census record only	Death record only	
Savannah, Ga-----	216	-	7	3.2	182	-	6	3.3
Scranton, Pa-----	827	11	22	1.3	5	-	-	-
Seattle, Wash-----	2,296	19	85	2.9	77	-	3	3.9
Shreveport, La-----	320	6	-	-1.8	237	2	3	0.4
Sioux City, Iowa-----	292	5	13	2.7	3	-	-	-
Sioux Falls, S. Dak-----	174	-	3	1.7	-	-	-	-
South Bend, Ind-----	507	3	10	1.4	24	-	1	4.2
Spokane, Wash-----	683	39	15	-3.3	14	3	-	-17.6
Springfield, Ill-----	426	9	24	3.4	12	-	-	-
Springfield, Mo-----	278	5	6	0.4	12	2	-	-14.3
Springfield, Ohio-----	272	16	4	-4.2	43	-	3	7.0
Springfield-Holyoke, Mass ¹ -----	1,316	33	17	-1.2	33	-	-	-
Steubenville-Weirton, Ohio-W. Va-----	368	7	18	2.9	20	-	1	5.0
Stockton, Calif-----	484	27	10	-3.3	40	4	3	-2.3
Syracuse, N.Y-----	1,421	20	60	2.8	21	-	1	4.8
Tacoma, Wash-----	637	78	7	-9.9	19	2	-	-9.5
Tampa-St. Petersburg, Fla-----	2,190	39	32	-0.3	233	1	5	1.7
Terre Haute, Ind-----	312	2	8	1.9	17	-	-	-
Texarkana, Tex-Ark-----	117	2	9	5.9	44	1	5	8.9
Toledo, Ohio-----	1,049	23	24	0.1	84	-	-	-
Topeka, Kans-----	270	28	6	-7.4	29	1	-	-3.3
Trenton, N.J-----	594	21	13	-1.3	68	6	2	-5.4
Tucson, Ariz-----	417	11	3	-1.9	27	1	1	-
Tulsa, Okla-----	733	9	34	3.4	93	1	3	2.1
Tuscaloosa, Ala-----	84	82	-	-49.4	59	3	1	-3.2
Tyler, Tex-----	107	18	-	-14.4	36	5	1	-9.8
Utica-Rome, N.Y-----	855	122	8	-11.7	11	-	-	-
Waco, Tex-----	247	18	6	-4.5	69	4	4	-
Washington, D.C.-Md.-Va-----	2,531	63	67	0.2	1,039	2	19	1.6
Waterloo, Iowa-----	255	8	5	-1.1	9	-	-	-
West Palm Beach, Fla-----	467	4	10	1.3	91	4	1	-3.2
Wheeling, W. Va.-Ohio-----	488	4	55	10.4	10	-	2	20.0
Wichita, Kans-----	562	7	14	1.2	32	-	2	6.3
Wichita Falls, Tex-----	195	54	7	-18.9	19	1	-	-5.0
Wilkes-Barre-Hazleton, Pa-----	1,160	18	19	0.1	2	-	-	-
Wilmington, Del.-N.J-----	649	19	26	1.0	104	6	6	-
Winston-Salem, N.C-----	205	5	5	-	119	-	-	-
Worcester, Mass ¹ -----	1,636	88	24	-3.7	6	4	-	-40.0
York, Pa-----	533	8	33	4.6	10	-	-	-
Youngstown-Warren, Ohio-----	1,024	7	27	1.9	87	-	4	4.6
All other areas-----	139,339	2,967	2,252	-0.5	16,058	328	207	-0.7

¹Metropolitan State economic areas.

Table 14. Number of unmatched deaths for standard metropolitan statistical areas (SMSA's), by color: United States, May-August 1960

[For definition of areas, see Technical Appendix]

Area	Total	White	Nonwhite
All areas-----	¹ 112,656	93,319	19,336
Total SMSA's-----	68,731	56,613	12,117
Abilene, Tex-----	60	57	3
Akron, Ohio-----	268	236	32
Albany, Ga-----	48	23	25
Albany-Schenectady-Troy, N.Y-----	381	367	14
Albuquerque, N.Mex-----	165	158	7
Allentown-Bethlehem-Easton, Pa.-N.J-----	214	207	7
Altoona, Pa-----	93	92	1
Amarillo, Tex-----	70	64	6
Ann Arbor, Mich-----	66	57	9
Asheville, N.C-----	183	158	25
Atlanta, Ga-----	677	458	219
Atlantic City, N.J-----	132	94	38
Augusta, Ga.-S.C-----	185	106	79
Austin, Tex-----	137	115	22
Bakersfield, Calif-----	174	154	20
Baltimore, Md-----	1,274	876	398
Baton Rouge, La-----	131	69	62
Bay City, Mich-----	57	57	-
Beaumont-Port Arthur, Tex-----	177	133	44
Billings, Mont-----	60	60	-
Binghamton, N.Y-----	114	113	1
Birmingham, Ala-----	622	351	271
Boston-Lowell-Lawrence, Mass ² -----	1,724	1,642	82
Bridgeport-Stamford-Norwalk, Conn ² -----	344	308	36
Brockton, Mass ² -----	158	151	7
Brownsville-Harlingen-San Benito, Tex-----	116	114	2
Buffalo, N.Y-----	620	567	53
Canton, Ohio-----	217	193	24
Cedar Rapids, Iowa-----	92	92	-
Champaign-Urbana, Ill-----	55	53	2
Charleston, S.C-----	205	89	116
Charleston, W.Va-----	146	130	16
Charlotte, N.C-----	201	133	68
Chattanooga, Tenn.-Ga-----	281	204	77
Chicago, Ill-----	3,979	3,077	902
Cincinnati, Ohio-Ky-----	635	516	119
Cleveland, Ohio-----	869	681	188
Colorado Springs, Colo-----	75	74	1
Columbia, S.C-----	146	71	75
Columbus, Ga.-Ala-----	169	113	56
Columbus, Ohio-----	321	273	48
Corpus Christi, Tex-----	113	105	8
Dallas, Tex-----	663	488	175
Davenport-Rock Island-Moline, Iowa-Ill-----	147	145	2
Dayton, Ohio-----	349	298	51
Decatur, Ill-----	75	73	2
Denver, Colo-----	425	400	25
Des Moines, Iowa-----	125	115	10
Detroit, Mich-----	1,545	1,163	382
Dubuque, Iowa-----	16	16	-

See footnotes at end of table.

Table 14. Number of unmatched deaths for standard metropolitan statistical areas (SMSA's), by color: United States, May-August 1960—Con.

[For definition of areas, see Technical Appendix]

Area	Total	White	Nonwhite
Duluth-Superior, Minn.-Wis-----	167	165	2
Durham, N.C-----	96	55	41
El Paso, Tex-----	174	171	3
Erie, Pa-----	159	156	3
Eugene, Oreg-----	117	116	1
Evansville, Ind.-Ky-----	115	97	18
Fall River-New Bedford, Mass ² -----	120	117	3
Fargo-Moorhead, N.Dak.-Minn-----	64	64	-
Flint, Mich-----	152	135	17
Fort Lauderdale-Hollywood, Fla-----	226	156	70
Fort Smith, Ark-----	67	61	6
Fort Wayne, Ind-----	73	68	5
Fort Worth, Tex-----	400	337	63
Fresno, Calif-----	228	205	23
Gadsden, Ala-----	109	95	14
Galveston-Texas City, Tex-----	133	96	37
Gary-Hammond-East Chicago, Ind-----	262	197	65
Grand Rapids, Mich-----	155	149	6
Great Falls, Mont-----	49	45	4
Green Bay, Wis-----	69	67	2
Greensboro-High Point, N.C-----	143	102	41
Greenville, S.C-----	185	140	45
Hamilton-Middletown, Ohio-----	78	74	4
Harrisburg, Pa-----	178	157	21
Hartford-New Britain-Bristol, Conn ² -----	369	345	24
Honolulu, Hawaii-----	211	78	133
Houston, Tex-----	810	594	216
Huntington-Ashland, W.Va.-Ky.-Ohio-----	173	167	6
Huntsville, Ala-----	106	71	35
Indianapolis, Ind-----	433	334	99
Jackson, Mich-----	43	39	4
Jackson, Miss-----	125	70	55
Jacksonville, Fla-----	307	194	113
Jersey City, N.J-----	386	336	50
Johnstown, Pa-----	122	115	7
Kalamazoo, Mich-----	76	76	-
Kansas City, Mo.-Kans-----	656	544	112
Kenosha, Wis-----	71	71	-
Knoxville, Tenn-----	319	284	35
Lake Charles, La-----	94	74	20
Lancaster, Pa-----	135	134	1
Lansing, Mich-----	159	153	6
Laredo, Tex-----	40	40	-
Las Vegas, Nev-----	116	100	16
Lawton, Okla-----	41	34	7
Lexington, Ky-----	78	52	26
Lima, Ohio-----	30	26	4
Lincoln, Nebr-----	89	89	-
Little Rock-North Little Rock, Ark-----	226	130	96
Lorain-Elyria, Ohio-----	127	119	8
Los Angeles-Long Beach, Calif-----	3,559	3,189	370
Louisville, Ky.-Ind-----	517	401	116
Lubbock, Tex-----	70	65	5
Lynchburg, Va-----	88	62	26
Macon, Ga-----	128	74	54

See footnotes at end of table.

Table 14. Number of unmatched deaths for standard metropolitan statistical areas (SMSA's), by color: United States, May-August 1960—Con.

[For definition of areas, see Technical Appendix]

Area	Total	White	Nonwhite
Madison, Wis-----	71	71	-
Manchester, N.H. ² -----	132	132	-
Memphis, Tenn-----	387	170	217
Miami, Fla-----	724	601	123
Midland, Tex-----	38	32	6
Milwaukee, Wis-----	526	490	36
Minneapolis-St. Paul, Minn-----	796	777	19
Mobile, Ala-----	223	134	89
Monroe, La-----	109	61	48
Montgomery, Ala-----	155	79	76
Muncie, Ind-----	80	78	2
Muskegon-Muskegon Heights, Mich-----	35	29	6
Nashville, Tenn-----	253	173	80
Newark, N.J-----	987	773	214
New Haven-Waterbury, Conn. ² -----	336	311	25
New Orleans, La-----	557	315	242
Newport News-Hampton, Va-----	123	62	61
New York, N.Y-----	¹ 7,119	5,746	1,372
Norfolk-Portsmouth, Va-----	389	220	169
Odessa, Tex-----	43	40	3
Ogden, Utah-----	44	43	1
Oklahoma City, Okla-----	339	280	59
Omaha, Nebr.-Iowa-----	233	199	34
Orlando, Fla-----	209	161	48
Paterson-Clifton-Passaic, N.J-----	513	483	30
Pensacola, Fla-----	140	94	46
Peoria, Ill-----	175	169	6
Philadelphia, Pa.-N.J-----	2,946	2,301	645
Phoenix, Ariz-----	545	493	52
Pittsburgh, Pa-----	1,554	1,414	140
Pittsfield, Mass. ² -----	68	68	-
Portland, Maine. ² -----	143	141	2
Portland, Oreg.-Wash-----	582	565	17
Providence, R.I. ² -----	391	380	11
Provo-Orem, Utah-----	30	30	-
Pueblo, Colo-----	82	78	4
Racine, Wis-----	52	51	1
Raleigh, N.C-----	107	66	41
Reading, Pa-----	110	105	5
Reno, Nev-----	96	93	3
Richmond, Va-----	325	210	115
Roanoke, Va-----	101	84	17
Rochester, N.Y-----	224	208	16
Rockford, Ill-----	99	95	4
Sacramento, Calif-----	350	320	30
Saginaw, Mich-----	81	68	13
St. Joseph, Mo-----	59	56	3
St. Louis, Mo.-Ill-----	1,432	1,109	323
Salt Lake City, Utah-----	191	185	6
San Angelo, Tex-----	60	56	4
San Antonio, Tex-----	389	346	43
San Bernardino-Riverside-Ontario, Calif-----	557	522	35
San Diego, Calif-----	620	589	31
San Francisco-Oakland, Calif-----	1,561	1,379	182
San Jose, Calif-----	314	308	6

See footnotes at end of table.

Table 14. Number of unmatched deaths for standard metropolitan statistical areas (SMSA's), by color: United States, May-August 1960--Con.

[For definition of areas, see Technical Appendix]

Area	Total	White	Nonwhite
Santa Barbara, Calif-----	117	114	3
Savannah, Ga-----	121	70	51
Scranton, Pa-----	119	115	4
Seattle, Wash-----	803	764	39
Shreveport, La-----	247	126	121
Sioux City, Iowa-----	82	82	-
Sioux Falls, S.Dak-----	38	37	1
South Bend, Ind-----	118	102	16
Spokane, Wash-----	177	166	11
Springfield, Ill-----	113	107	6
Springfield, Mo-----	116	114	2
Springfield, Ohio-----	82	73	9
Springfield-Holyoke, Mass ² -----	187	177	10
Steubenville-Weirton, Ohio-W.Va-----	127	116	11
Stockton, Calif-----	225	196	29
Syracuse, N.Y-----	233	221	12
Tacoma, Wash-----	237	225	12
Tampa-St. Petersburg, Fla-----	598	501	97
Terre Haute, Ind-----	98	93	5
Texarkana, Tex.-Ark-----	81	59	22
Toledo, Ohio-----	303	277	26
Topeka, Kans-----	91	85	6
Trenton, N.J-----	173	141	32
Tucson, Ariz-----	202	187	15
Tulsa, Okla-----	251	207	44
Tuscaloosa, Ala-----	127	69	58
Tyler, Tex-----	94	57	37
Utica-Rome, N.Y-----	223	219	4
Waco, Tex-----	118	95	23
Washington, D.C.-Md.-Va-----	1,180	728	452
Waterloo, Iowa-----	62	60	2
West Palm Beach, Fla-----	198	121	77
Wheeling, W.Va.-Ohio-----	164	158	6
Wichita, Kans-----	164	151	13
Wichita Falls, Tex-----	65	56	9
Wilkes-Barre--Hazleton, Pa-----	203	201	2
Wilmington, Del.-N.J-----	232	179	53
Winston-Salem, N.C-----	146	94	52
Worcester, Mass ² -----	280	280	-
York, Pa-----	139	133	6
Youngstown-Warren, Ohio-----	270	240	30
All other areas-----	43,925	36,706	7,219

¹Includes one machine error.

²Metropolitan State economic areas.

NOTE: For explanation of why white and nonwhite do not add to the total, see Technical Appendix.

Table 15. Net difference rates, by color, sex, and age: United States and each geographic division, May-August 1960

[Census record used as a base. Minus (-) sign indicates more assignments by census than by NCHS]

Color, sex, and age	Total	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
Total										
1-4 years-----	-2.1	0.6	-0.4	-2.3	-3.4	-2.9	-2.5	-3.4	-1.5	-2.0
5-14 years-----	-0.3	-2.6	-0.6	0.6	-	-0.1	-1.3	-0.2	1.3	-0.9
15-24 years-----	-0.8	0.7	-1.0	-1.1	1.8	-2.1	-0.6	0.8	-0.3	-2.9
25-34 years-----	-3.9	-12.4	-4.3	-3.5	-4.5	-1.1	-5.6	-2.6	-4.4	-3.9
35-44 years-----	-3.6	-5.5	-5.5	-3.4	-4.3	-2.0	-2.1	-2.2	-3.5	-3.3
45-54 years-----	0.3	-0.8	-0.9	-0.3	-0.3	3.5	1.0	1.6	0.1	-1.2
55-64 years-----	1.8	-0.5	0.7	1.0	-0.6	6.6	5.8	4.4	-0.2	-0.3
65-74 years-----	-1.3	-1.0	-0.7	-1.4	-2.6	-1.6	-1.4	-0.6	-0.8	-1.4
75-84 years-----	0.7	2.4	1.9	0.9	1.8	-3.3	-0.3	-1.3	1.1	2.3
85-99 years-----	1.0	1.6	0.3	2.4	3.5	-1.6	-2.5	-2.2	3.1	2.6
White male										
1-4 years-----	-0.6	4.3	0.3	-1.3	-3.1	0.6	-	-2.9	-	-0.9
5-14 years-----	0.2	2.9	1.7	0.9	0.4	-0.6	-2.9	-1.6	-	-1.0
15-24 years-----	0.2	1.1	-0.9	-	-0.3	-0.2	2.4	2.2	-0.4	-
25-34 years-----	-4.0	-16.0	-5.0	-3.1	-3.0	-2.2	-2.9	-3.3	-2.9	-3.0
35-44 years-----	-4.1	-5.3	-5.2	-4.5	-3.6	-2.6	-3.1	-4.6	-3.0	-3.1
45-54 years-----	-1.2	-1.8	-1.2	-1.5	-0.9	-0.6	0.3	-1.6	-0.4	-1.5
55-64 years-----	0.1	-0.0	0.1	0.7	-0.5	-0.1	1.0	0.1	-0.3	-0.3
65-74 years-----	-0.3	1.8	-0.1	-0.9	-1.0	-0.1	-1.1	-0.4	-1.0	0.0
75-84 years-----	1.2	0.9	1.6	0.9	0.8	0.6	1.2	1.7	2.1	1.7
85-99 years-----	2.0	-2.1	1.0	3.9	4.1	2.2	-0.2	2.4	2.1	0.7
White female										
1-4 years-----	-1.2	3.6	0.5	-2.7	-3.1	-0.8	4.0	-1.5	-	-4.0
5-14 years-----	-1.5	-12.8	-6.0	1.7	-	-0.6	-2.0	0.8	2.6	-0.6
15-24 years-----	-1.8	2.4	-1.5	-3.6	5.8	-1.3	-2.1	-1.6	-3.4	-5.6
25-34 years-----	-4.9	-9.4	-2.1	-4.9	-7.6	-4.2	-9.0	-4.0	-8.4	-3.8
35-44 years-----	-4.0	-5.7	-6.9	-1.6	-6.0	-2.2	-1.9	-2.4	-2.3	-4.0
45-54 years-----	-1.3	0.1	-2.4	-0.5	-	-1.9	-4.3	0.5	-1.0	-1.2
55-64 years-----	-0.6	-1.4	0.2	-1.2	-2.3	0.3	0.1	-0.1	-0.3	-0.7
65-74 years-----	-2.8	-4.4	-1.3	-1.9	-5.2	-3.3	-4.8	-3.9	-0.5	-3.6
75-84 years-----	2.4	3.7	2.6	1.6	3.4	-1.2	4.2	2.8	-0.5	2.8
85-99 years-----	2.8	3.2	0.8	2.4	3.8	-5.9	3.1	1.4	5.2	4.1
Nonwhite male										
1-4 years-----	-1.5	-20.0	7.6	2.9	-	-4.1	-8.2	-4.8	6.7	-
5-14 years-----	0.4	33.3	2.9	-5.2	6.3	0.6	-	1.3	-	-2.8
15-24 years-----	-2.9	-12.5	-3.2	3.2	6.3	-3.5	-2.9	-	4.5	-18.0
25-34 years-----	-3.2	12.5	-7.8	-6.1	3.2	-0.4	-3.9	1.9	-12.5	-7.4
35-44 years-----	-1.9	-7.7	-2.9	-3.5	-8.3	2.9	-4.3	-3.2	-5.6	-4.3
45-54 years-----	6.2	3.3	4.3	5.2	5.6	9.0	5.3	7.2	16.7	-1.0
55-64 years-----	13.6	-	4.3	10.0	9.6	23.8	12.0	17.9	-2.8	4.0
65-74 years-----	2.1	3.6	0.8	-1.8	2.6	-0.1	5.6	6.5	2.1	2.3
75-84 years-----	-15.2	-	-6.6	-10.3	-6.3	-28.1	-11.7	-19.6	7.3	0.4
85-99 years-----	-22.6	-4.8	-20.5	-15.0	-22.2	-35.2	-15.7	-29.1	-20.8	2.4
Nonwhite female										
1-4 years-----	-2.2	-	-5.0	-3.3	12.5	-	-2.3	-1.9	-16.7	-2.9
5-14 years-----	-2.3	-	-2.4	-4.9	-28.6	-3.4	1.9	-2.7	-	3.7
15-24 years-----	-4.8	-33.3	2.3	2.5	40.0	-11.2	-8.1	-3.6	-	-4.2
25-34 years-----	-2.4	7.1	-5.3	-1.5	-20.0	4.3	-9.0	-5.6	22.2	-15.0
35-44 years-----	-1.1	-7.7	-2.1	-5.0	7.7	-4.0	2.2	10.4	-17.4	1.9
45-54 years-----	13.3	-	9.6	9.4	2.4	22.2	6.8	18.0	21.4	4.3
55-64 years-----	23.6	-	11.1	19.1	12.1	32.5	32.5	27.7	10.3	6.8
65-74 years-----	-4.5	-10.0	-7.1	-7.1	-6.0	-5.9	-3.5	2.6	-5.1	-6.6
75-84 years-----	-17.2	13.9	-5.4	-13.2	-2.6	-27.8	-15.6	-25.7	4.5	3.8
85-99 years-----	-20.8	6.7	-13.8	-13.9	-7.2	-32.0	-18.0	-25.7	-13.3	-4.6

NOTE: Figures with color and/or sex not stated are included in the total, but are not shown separately.

Table 16. Net difference rates for white males for stage I and stage II, by age: South Atlantic Division, May-August 1960

[Census record used as base. Minus (-) sign indicates more assignments by census than NCHS. For explanation of stage I and stage II, see Technical Appendix]

Age	Stage I		Stage II	
	Age not stated and not valid included	Age not stated and not valid excluded	Age not stated and not valid allocated	Age not stated and not valid unallocated
1-4 years-----	1.1	0.6	-6.3	-6.3
5-14 years-----	-	-0.6	1.3	-
15-24 years-----	0.5	-0.2	-3.8	-2.9
25-34 years-----	-1.0	-2.2	0.8	2.3
35-44 years-----	-1.7	-2.6	-5.7	-4.5
45-54 years-----	0.2	-0.6	-3.8	-2.7
55-64 years-----	0.9	-0.1	-0.5	-0.8
65-74 years-----	0.6	-0.1	0.9	0.7
75-84 years-----	1.4	-0.6	1.8	1.1
85-99 years-----	3.1	2.2	...	...
85 years and over-----	...	...	5.2	5.5
Not stated-----	-100.0	...	...	...
Not valid-----	-42.9	...	...	...

NOTE: Stage I, but not stage II, excludes decedents whose age was stated to be 100 years or over on the census record.

Table 17. Number of matched deaths reporting same race on both census and death records, census record only, and death record only; and net and gross difference rates: United States and each region, May-August 1960

Region and race	Number reporting			Census record as base				Death record as base			
	Same on both	Census record only	Death record only	Net difference ¹		Gross difference		Net difference ²		Gross difference	
				Number	Rate	Number	Rate	Number	Rate	Number	Rate
All regions											
White-----	353,612	847	3,621	2,774	0.8	4,468	1.3	-2,774	-0.8	4,468	1.3
Nonwhite-----	37,110	881	1,299	418	1.1	2,180	5.7	-418	-1.1	2,180	5.7
Negro-----	35,309	685	1,092	407	1.1	1,777	4.9	-407	-1.1	1,777	4.9
Indian-----	602	154	83	-71	-9.4	237	31.3	71	10.4	237	34.6
Japanese-----	562	19	14	-5	-0.9	33	5.7	5	0.9	33	5.7
Chinese-----	315	33	17	-16	-4.6	50	14.4	16	4.8	50	15.1
Filipino-----	138	56	11	-45	23.2	67	34.5	45	30.2	67	45.0
Other non-white-----	69	49	197	148	125.4	246	208.5	-148	-55.6	246	92.5
Not stated and not valid-----	...	3,214	22	-3,192	-99.3	3,236	100.7	3,192	14,509.1	3,236	14,709.1
Northeast											
White-----	107,551	275	1,007	732	0.7	1,282	1.2	-732	-0.7	1,282	1.2
Nonwhite-----	5,467	245	332	87	1.5	577	10.1	-87	-1.5	577	9.9
Negro-----	5,313	229	335	106	1.9	564	10.2	-106	-1.9	564	10.0
Indian-----	24	21	10	-11	-24.4	31	68.9	11	32.4	31	91.2
Japanese-----	8	-	1	1	12.5	1	12.5	-1	-11.1	1	11.1
Chinese-----	74	13	3	-10	-11.5	16	18.4	10	13.0	16	20.8
Filipino-----	3	15	1	-14	-77.8	16	88.9	14	350.0	16	400.0
Other non-white-----	1	11	26	15	125.0	37	308.3	-15	-55.6	37	137.0
Not stated and not valid-----	...	824	5	-819	-99.4	829	100.6	819	16,380.0	829	16,580.0
North Central											
White-----	113,116	196	1,117	921	0.8	1,313	1.2	-921	-0.8	1,313	1.1
Nonwhite-----	6,587	204	263	59	0.9	467	6.9	-59	-0.9	467	6.8
Negro-----	6,401	153	257	104	1.6	410	6.3	-104	-1.6	410	6.2
Indian-----	110	51	14	-37	-23.0	65	40.4	37	29.8	65	52.4
Japanese-----	28	3	1	-2	-6.5	4	12.9	2	6.9	4	13.8
Chinese-----	21	8	2	-6	-20.7	10	34.5	6	26.1	10	43.5
Filipino-----	5	3	2	-1	-12.5	5	62.5	1	14.3	5	71.4
Other non-white-----	-	8	9	1	12.5	17	212.5	-1	-11.7	17	188.9
Not stated and not valid-----	...	989	9	-980	-99.1	998	100.9	980	10,888.9	998	11,088.9
South											
White-----	81,809	274	926	652	0.8	1,200	1.5	-652	-0.8	1,200	1.5
Nonwhite-----	22,369	262	448	186	0.8	710	3.1	-186	-0.8	710	3.1
Negro-----	22,188	220	433	213	1.0	653	2.9	-213	-0.9	653	2.9
Indian-----	146	38	20	-18	-9.8	58	31.5	18	10.8	58	34.9
Japanese-----	5	3	2	-1	-12.5	5	62.5	1	14.3	5	71.4
Chinese-----	15	3	1	-2	-11.1	4	22.2	2	12.5	4	25.0
Filipino-----	-	7	2	-5	-71.4	9	128.6	5	250.0	9	450.0
Other non-white-----	-	6	5	-1	-16.7	11	183.3	1	20.0	11	220.0
Not stated and not valid-----	...	842	4	-838	-99.5	846	100.5	838	20,950.0	846	21,150.0
West											
White-----	51,136	102	571	469	0.9	673	1.3	-469	-0.9	673	1.3
Nonwhite-----	2,687	170	256	86	3.0	426	14.9	-86	-2.9	426	14.5
Negro-----	1,407	83	67	-16	-1.1	150	10.1	16	1.1	150	10.2
Indian-----	322	44	39	-5	-1.4	83	22.7	5	1.4	83	23.0
Japanese-----	521	13	10	-3	-0.6	23	4.3	3	0.6	23	4.3
Chinese-----	205	9	11	2	0.9	20	9.3	-2	-0.9	20	9.3
Filipino-----	130	31	6	-25	-15.5	37	23.0	25	18.4	37	27.2
Other non-white-----	68	24	157	133	144.6	181	196.7	-133	-59.1	181	80.4
Not stated and not valid-----	...	559	4	-555	-99.3	563	100.7	555	13,875.0	563	14,075.0

¹Minus sign indicates more assignments by census than by NCHS.

²Minus sign indicates more assignments by NCHS than by census.

NOTE: For explanation of why white and nonwhite do not add to the total, see Technical Appendix.

Table 18. Number of matched and unmatched deaths and proportion unmatched, by race: United States and each region, May-August 1960

Region and race	Matched deaths according to:		Unmatched deaths	Proportion unmatched	
	Census record	Death record		Census record	Death record
<u>All regions</u>					
All races-----	395,664	395,664	100,412	20.2	20.2
White-----	354,459	357,233	84,560	19.3	19.1
Nonwhite-----	37,991	38,409	15,851	29.4	29.2
Negro-----	35,994	36,401	14,913	29.3	29.1
Indian-----	756	685	432	36.4	38.7
Japanese-----	581	576	131	18.4	18.5
Chinese-----	348	332	153	30.5	31.5
Filipino-----	194	149	112	36.6	42.9
Other nonwhite-----	118	266	110	48.2	29.3
Not stated and not valid-----	3,214	22	1	0.0	4.3
<u>Northeast</u>					
All races-----	114,362	114,362	24,321	17.5	17.5
White-----	107,826	108,558	21,821	16.8	16.7
Nonwhite-----	5,712	5,799	2,499	30.4	30.1
Negro-----	5,542	5,648	2,410	30.3	29.9
Indian-----	45	34	16	26.2	32.0
Japanese-----	8	9	4	33.3	30.8
Chinese-----	87	77	58	40.0	43.0
Filipino-----	18	4	2	10.0	33.3
Other nonwhite-----	12	27	9	42.9	25.0
Not stated and not valid-----	824	5	1	0.1	16.7
<u>North Central</u>					
All races-----	121,092	121,092	26,318	17.9	17.9
White-----	113,312	114,233	23,792	17.4	17.2
Nonwhite-----	6,791	6,850	2,526	27.1	26.9
Negro-----	6,554	6,658	2,386	26.7	26.4
Indian-----	161	124	105	39.5	45.9
Japanese-----	31	29	7	18.4	19.4
Chinese-----	29	23	15	34.1	39.5
Filipino-----	8	7	3	27.3	30.0
Other nonwhite-----	8	9	10	55.6	52.6
Not stated and not valid-----	989	9	-	-	-
<u>South</u>					
All races-----	105,556	105,556	34,279	24.5	24.5
White-----	82,083	82,735	24,681	23.1	23.0
Nonwhite-----	22,631	22,817	9,598	29.8	29.6
Negro-----	22,408	22,621	9,487	29.7	29.5
Indian-----	184	166	83	31.1	33.3
Japanese-----	8	7	3	27.3	30.0
Chinese-----	18	16	15	45.5	48.4
Filipino-----	7	2	4	36.4	66.7
Other nonwhite-----	6	5	6	50.0	54.5
Not stated and not valid-----	842	4	-	-	-
<u>West</u>					
All races-----	54,654	54,654	15,494	22.1	22.1
White-----	51,238	51,707	14,266	21.8	21.6
Nonwhite-----	2,857	2,943	1,228	30.1	29.4
Negro-----	1,490	1,474	630	29.7	29.9
Indian-----	366	361	228	38.4	38.7
Japanese-----	534	531	117	18.0	18.1
Chinese-----	214	216	65	23.3	23.1
Filipino-----	161	136	103	39.0	43.1
Other nonwhite-----	92	225	85	48.0	27.4
Not stated and not valid-----	559	4	-	-	-

TECHNICAL APPENDIX

Design of Study

The study includes a sample of registered deaths which occurred during the 4-month period, May-August, 1960. The following age-color groups were included:

1. All nonwhite decedents
2. All white decedents under 65 years of age
3. One-half of white decedents 65-74 years of age
4. One-fifth of white decedents 75 years and over

The records for white decedents were systematically selected from the regular mortality punched-card file using the randomly assigned terminal

digits of the certificate numbers. Sample groups three and four of both the matched and unmatched records were inflated by two and five, respectively, during the processing operation.

As indicated in table I, the actual count of death certificates included in the match operation was 340,033. Of this number, 495 records were excluded because of "impossible" codes—483 matched and 12 records unmatched.

Also included in table I are the inflated counts of records by match status.

A seasonal bias may be introduced since the deaths were limited to May-August. But an examination of "nonmatch" rates by month, particularly April and September, for a previous study involving the occupation item on the census and death records,⁷ resulted in a decision to limit this study to the 4-month period.

Table I. Number and percent distribution of records included in the 1960 Comparison Study: United States, May-August 1960

Result of match operation	Actual count of records		Inflated count of records	
	Number	Percent distribution	Number	Percent distribution
Total-----	340,033	100.0	533,747	100.0
Matched-----	262,483	77.2	420,292	78.7
Unmatched-----	77,055	22.7	112,656	21.1
Rejects ¹ -----	495	0.1	3799	0.1

¹Includes impossible codes not included in the study.

²Includes 483 matched records and 12 unmatched.

³Includes 782 matched records and 17 unmatched.

Criteria for Matching

Copies of the 340,033 death certificates included in this study were coded for the stage I Census Enumeration District (ED). A record was considered matched if the exact street address of residence and the name of the decedent were located in the ED book. Other information such as date of birth and marital status were used if the above criteria did not result in a match.

If infants under 1 year of age were not located in the ED book, an attempt was made to match via the mother. The infants represented a high nonmatch risk group since many of them were born after the 1960 Census of Population and therefore were not enumerated.

Almost 6 percent of the records were matched at the place of death, rather than the usual place of residence. Those persons matched at the place of death were for the most part those who died in institutions.

Decedents matched in stage I and included in the 25-percent sample of the 1960 Census of Population, referred to as stage II, were then searched in the stage II books. There were 64,675 such decedents and all but 2,188 were located in the stage II census records. The names of these 2,188 decedents could not be located on the appropriate pages of the stage II schedules.

A host of reasons exists for failure to match the death certificate to the census record:

- (1) The decedent may have moved after the date of enumeration on April 1.
- (2) The decedent may not have been enumerated.
- (3) Clerical and machine errors occurred at all stages of the study.
- (4) Misstatements of information were entered on the census record and/or the death certificate.

Variances

The sample design has been discussed in a previous section, "Design of Study." To obtain the sampling error of an estimate of the net

difference rate for a given geographic area, it would be necessary to know the number of death records for white decedents 65-74 years of age and 75 years and over during May-August 1960 for geographic areas both before and after sampling. The death records were sampled but the color designations for most geographic areas were based on the color on the census record. Although all nonwhite decedents were included in the study period, a decedent stated to be white on the death record may be nonwhite on the census record and vice versa. Therefore, it is not possible to state that the sampling error is zero for the nonwhite group shown in the tables.

Age

The age reported on the death record is generally the age of the decedent at his last birthday. If the reported age did not agree with the computed age (the difference between the date of death and the date of birth on the certificate), the stated age was accepted unless the difference was 5 years or more. If the difference was 5 years or more, entries for other items on the vital record such as cause of death, occupation, marital status, and social security number were considered in determining the age. Most of the differences involved infants. Therefore, the aforementioned characteristics would give some indication of the "correct" age. If a discrepancy occurred such as 25 years for the computed age and 35 for the stated age, the stated age was accepted.

The age classification used in the 1960 Census of Population is based on the quarter of the year of birth as of April 1, 1960. For this study, the age was updated to adjust for a birthday that might have occurred between the date of the census and the time of death.

As indicated in the tables showing data by age, the number of matched records for decedents under 1 year of age and 100 years and over, according to the census record, are excluded. The number of records with negative ages are also excluded. Infants were excluded because many were born after the date of enumeration on April 1, 1960. There were 23,176 records

for infants. Decedents 100 years and over and those with negative ages were omitted because there was an excessive number of errors in the century-of-birth codes on the census record. For example, if the year of birth was actually 1861 and the century code for 1900 was assigned, the result was a negative age. There were 1,452 such records, that is, for persons 100 years and over and for negative ages. Such exclusions were made to maintain comparability in order to better assess differences in age reported on the two records.

Additional technical problems relating to age reported on the vital record are covered in another report.⁶

Race and Color

Deaths in the United States in 1960 are classified for vital statistics purposes into white, Negro, American and Alaskan Indian, Chinese, Japanese, Aleut, Eskimo, Filipino, Hawaiian, part-Hawaiian, and other nonwhite. The U.S. Bureau of the Census uses the same classification.

Tabulations in this study by race were grouped as follows:

- White
- Nonwhite:
 - Negro
 - Indian (American and Alaskan)
 - Japanese
 - Chinese
 - Filipino
 - Other nonwhite (Aleut, Eskimo, Hawaiian, part-Hawaiian, and racial mixtures except as noted below)
- Not stated and not valid

The category "white" includes, in addition to persons reported as "white," those reported as Mexican or Puerto Rican. If race is given as a mixture of Negro with any other race except Hawaiian, the race is classified as Negro. Mixtures of Hawaiian and any other race are classified as "other nonwhite."

In stage I the number of census records for which the race item was not stated is combined with "not valid" codes (processing errors) and shown as a single group in the race tables. The

relative number of such records is small—less than 1 percent of the matched records. If the race was not entered on the death record, the code for "white" was assigned in the initial code-punch operation in NCHS. Consequently, the category "not stated and not valid" according to death certificate designations includes only invalid codes. The number of such records is small. This factor is noted, not because it seriously invalidates the net difference rates, but because the category "not stated and not valid" was excluded from most of the residence tables. Therefore, figures by white and nonwhite do not add to the total.

With the exception of table 18 which shows a comparison of detailed groupings of race, the tables show the color item according to census designations. The purpose was to compare a single characteristic such as data for an SMSA according to census and to death record assignments. Therefore, all other characteristics such as age, sex, and color in that table were by census designations so as not to distort the comparison of the variable being compared.

Sex

In a table showing a characteristic such as age or race classified by sex, the sex of the matched decedent is that stated on the census records in order not to invalidate the characteristic being compared.

The small number of deaths for which the sex was not stated—0.5 percent of the total matched records—is included in the total in those tables containing sex, but the category is not shown separately.

Urban and Rural Areas

The urban-rural definitions used by NCHS differ from those used for data published by the U.S. Bureau of the Census. For this study, the Bureau of the Census assigned the residence codes on the census records of the decedents included in this study according to the rules used for vital statistics. Therefore, the figures for urban and rural are comparable with respect to the application of rules, and the differences

between the NCHS figures and those tabulated by census result from the entries on the two records or processing errors. As noted earlier, differences in the enumeration process and the registration system give greater weight to the accuracy of the census figures. For the decennial census, geographic locations can be fixed with a high degree of accuracy by the Bureau of the Census through the use of street maps, census tracts, and the like. NCHS is dependent almost entirely on the information entered in the residence item on the vital record.

For the definitions of urban and rural as used for vital statistics purposes, see *Vital Statistics of the United States, 1960*, Volume II, Part A.

Standard Metropolitan Statistical Areas

The standard metropolitan statistical areas (SMSA's) used in this report are the same as those established by the U.S. Bureau of the Budget as of 1960 (except in the New England States) and used by the U.S. Bureau of the Census.

Except in the New England States, an SMSA is a county or a group of contiguous counties which contains at least one city of 50,000 inhabitants or more or "twin cities" with a combined population of at least 50,000 in the 1960 census. Contiguous counties are included in an SMSA if, according to specified criteria, they are (1) essentially metropolitan in character and (2) socially and economically intergrated with the central city or cities.

In New England the Bureau of the Budget uses towns and cities rather than counties as geographic components of SMSA's. NCHS cannot use the SMSA classification in New England because its data are not coded to identify all towns. Instead the metropolitan State economic area (MSEA) established by the Bureau of the Census, which is made up of county units, is used. (For a more complete discussion of SMSA's and MSEA's, see references 8-10.)

Metropolitan and Nonmetropolitan Counties

Counties which are included in SMSA's, or in New England MSEA's, are called metropolitan counties; all other counties are classified as nonmetropolitan.

Geographic Divisions and Regions

The nine divisions and four regions referred to in this report correspond to those used by the U.S. Bureau of the Census. For States included in each division and region, see reference 8.

Formula for Adjusting Annual Death Rate

$$\frac{D - D \left(\frac{dm_d - dm_c}{dm_c} \right)}{P} = R_1 = \text{Upper range of rate}$$

$$\frac{D - D \left(\frac{dm_d - dm_c}{dm_c} \right) - D \left(\frac{du}{dm_c + du} \right)}{P}$$

$$= R_2 = \text{Lower range of rate}$$

Symbols

D = annual number of deaths, 1960

P = population enumerated as of April 1, 1960

dm_c = matched deaths in study period according to census record

dm_d = matched deaths in study period according to death record

du = unmatched deaths in study period

R = annual death rate per 1,000 population

R_1 = upper range of adjusted annual death rate per 1,000 population

R_2 = lower range of adjusted annual death rate per 1,000 population

Deaths, 1960, by residence—SMSA of Abilene, Texas—White

Formula A—upper range

$$\frac{794 - 794 \left(\frac{177 - 172}{172} \right)}{114,508} = R_1$$

$$\frac{771}{114,508} \times 1,000 = 6.7 = R_1 = \text{upper range}$$

Formula B—lower range

$$\frac{794 - \left[794 \left(\frac{177 - 172}{172} \right) \right] - 794 \left(\frac{57}{172 + 57} \right)}{114,508} = R_2$$

$$\frac{573}{114,508} \times 1,000 = R_2 = 5.0 = \text{lower range}$$

Rates

$R = 6.9$ published annual rate

$$\left. \begin{array}{l} R_1 = 6.7 \\ R_2 = 5.0 \end{array} \right\} \text{adjusted rates}$$

Net and Gross Difference Rates

Net difference rates for matched deaths were computed as follows:

- (1) Subtract the number of records according to census assignments only from those according to NCHS assignments only
- (2) Divide the number obtained in step 1 by the number of records for which there is agreement between census and NCHS plus census assignments only
- (3) Multiply by 100

Most tables contain net difference rates with the census record as base; thus a negative rate indicates more assignments by census than by NCHS. If the death record is the base, a negative rate signifies more assignments by NCHS. In most instances the base is inconsequential. If the differences are relatively large, the rate may vary greatly depending on the base.

Gross difference rates were computed by summing the differences rather than subtracting the differences as for net difference rates. Otherwise the computation was the same.

Due to a programming error the first digit of the gross difference rates was not printed out on the tabulations in many instances. Rather than manually correct all of these errors, only a few were recomputed for inclusion in this report.

Symbols

s_i = Number of assignments are the *same* according to both the census record and the death record

c_i = Number of assignments according to the *census record only*

d_i = Number of assignments according to the *death record only*

ndr_i = Net difference rate

gdr_i = Gross difference rate

Formulas

Net difference rate:

Census record is base.

$$\frac{d_i - c_i}{s_i + c_i} \times 100 = ndr_i$$

Death record is base.

$$\frac{c_i - d_i}{s_i + d_i} \times 100 = ndr_i$$

Gross difference rate:

Census record is base.

$$\frac{d_i + c_i}{s_i + c_i} \times 100 = gdr_i$$

Death record is base.

$$\frac{c_i + d_i}{s_i + d_i} \times 100 = gdr_i$$



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