Vital and Health Statistics

Common Beliefs About the Rural Elderly: What Do National Data Tell Us?

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National data from various sources are presented to support or debunk 10 commonly held beliefs about the elderly living in rural America. Topics include: health, income, housing, social networks, population size and distribution, and access to care. Most comparisons are between nonmetropolitan and metropolitan data.

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Common Beliefs About the Rural Elderly: What Do National Data Tell Us?

by Joan F. Van Nostrand, M.P.A., National Center for Health Statistics, Editor

Introduction

This report about the rural elderly is intended as a mechanism to translate technical data from existing national surveys into knowledge to inform public policymaking. The report focuses on 10 commonly held beliefs about the rural elderly in such areas as health, income, and housing. This translation of data into knowledge can provide tools for public policy purposes. Just as one can use a hammer and saw to build a mansion or a cabin in the woods, one can use these data as tools to address a variety of issues across the public policy agenda.

The impetus for this report was a challenge from a policy analyst to a group of experts on data on aging. The policy analyst was the majority Staff Director of the U.S. Senate Special Committee on Aging, Portia Mittleman. The group of experts were members of the Federal Interagency Forum on Aging-Related Statistics. The Forum is an ad hoc committee of policy and technical experts on aging. Its purpose is to coordinate the activities associated with collecting and analyzing data on aging across Federal agencies (1). The challenge to the Forum was to translate detailed, sometimes contradictory, national data into focused knowledge relevant for public policymaking.

To meet the challenge, the Forum convened a work group of experts (see appendix I for membership). The approach undertaken by this group was to analyze data from existing national surveys and to focus on data that dealt with commonly held beliefs about the rural elderly (i.e., persons 65 years of age and over). This focus on common beliefs allows one to determine whether preconceived notions about the rural elderly are supported by national data, and whether one's knowledge is up to date. The common beliefs were identified by staff of the U.S. Senate Special Committee on Aging (see appendix I for staff). These common beliefs and a summary of the conclusions based on national data are presented by topic in individual chapters of this report. Some data presented here were the basis of an informal briefing of congressional staff (2).

Most data presented are from existing national surveys of a general-purpose nature and not from special studies of the rural population. Because most data are from surveys rather than a complete census of the population, the data are subject to sampling variability. This is the result of sampling only some, rather than all, of the population. Although surveying just some of the population is a more economical way to collect data, such sampling creates situations in which apparent differences between nonmetropolitan and metropolitan areas are not statistically significant. Situations in which the differences

NOTE: Support for preparation of this report was provided by the Federal Interagency Forum on Aging-Related Statistics, sponsored by the National Institute on Aging. The chapters on social networks and on health were prepared in conjunction with the School of Public Health at the University of Illinois at Chicago under a Cooperative Agreemen with the Association of Schools of Public Health.

are statistically significant as well as those in which true differences do not exist are noted in the text. Sometimes persistent patterns exist in the data year after year. Although the data presented here are "snapshots" of the situation when the surveys were conducted, patterns over time also may be described. Because patterns persist, they can identify factors important to a policy perspective.

Probably the most prominent characteristic of rural America is its social and economic diversity. Yet, because of the nature of the data available, information presented here reveals differences in a summary fashion by using the nonmetropolitan-metropolitan dichotomy. It is important to remember the diversity of rural America that exists behind these summary figures.

Highlights

Concepts of rural

Belief—It is easy to measure the elderly population living in small towns and rural areas outside large cities.

What do the data show?—Different concepts are used to describe the population living in small towns and rural areas outside large cities. These concepts are "rural" and "nonmetropolitan." They are not synonymous.

- "Rural" is defined as territory outside places of 2,500 or more inhabitants or outside an urbanized area. An urbanized area comprises one or more places and the adjacent densely settled surrounding territory that together have a minimum of 50,000 persons.
- "Nonmetropolitan" refers to counties outside a metropolitan area. A metropolitan area is a county (or counties) containing a place or urbanized area of 50,000 people or more and a total population of 100,000 or more, including adjacent counties that have a high degree of economic and social integration with the central county.

The nonmetropolitan-metropolitan designation is used in most of this report for pragmatic reasons. Most data presented are from existing national surveys that classify data by county, and county data permit such a designation to be made. Use of this concept does not imply that it is the best, only that it is more widely available.

Population

Belief—The elderly and children comprise higher proportions of the population in nonmetropolitan areas than in metropolitan areas, and the proportion of the population that is elderly is higher in the nonmetropolitan South than in other regions.

What do the data show?—According to data from the 1990 census, the elderly comprised about 15 percent of the nonmetropolitan population but only 12 percent of the metropolitan population. Throughout the United States, older persons (65 years of age and over) and children (under age 18) were more concentrated in nonmetropolitan areas than in metropolitan areas. The proportion of elderly persons in the nonmetropolitan South was not greater than in other regions.

Minority population

Belief—A smaller proportion of minority elderly live in nonmetropolitan than metropolitan areas. Minority populations in nonmetropolitan areas are more impoverished than other elderly.

What do the data show?—The distribution of individual race and ethnic groups varied widely throughout the United States. About one-fourth of the total elderly population lived in nonmetropolitan areas, although a smaller proportion of older Hispanic persons (11 percent), black persons (21 percent), and Asian and Pacific Islanders (7 percent) lived in nonmetropolitan areas. Overall, 92 percent of nonmetropolitan elderly and 88 percent of metropolitan elderly were white persons. Elderly black persons in nonmetropolitan areas were more likely to be poor than those in metropolitan areas. Nearly

one-half of elderly black men and women in nonmetropolitan areas were poor.

Income, poverty, and education

Belief—Nonmetropolitan elderly are more impoverished and less educated than their metropolitan counterparts.

What do the data show?—Only 18 percent of nonmetropolitan elderly were in high-income families, compared with 27 percent of the metropolitan elderly. Monthly Social Security benefits averaged $60 less for elderly in nonmetropolitan areas than for those in metropolitan areas. Compared with metropolitan elderly, a higher percent of the nonmetropolitan elderly are impoverished; one-half of nonmetropolitan elderly are in poor, near-poor, or low-income families. For about one-third of older persons in both metropolitan and nonmetropolitan areas, a high school diploma represented the highest level of educational attainment. Nonmetropolitan areas had a higher proportion of persons who completed less than 9 years of school; metropolitan areas had a higher proportion of older persons with a college education.

Housing

Belief—Housing for nonmetropolitan elderly is of lower value and in poorer condition than that for the metropolitan elderly.

What do the data show?—Nonmetropolitan elderly were more likely to own their own homes and to own them without a mortgage than were their metropolitan counterparts. Nonmetropolitan homes were of lower value and in poorer physical condition than metropolitan homes owned by older persons.

Social networks

Belief—Nonmetropolitan elderly benefit from a closely knit community, have a better social support network, and are more involved in religious activities.

What do the data show?—Available data indicate that the social networks of metropolitan and nonmetropolitan elderly were roughly comparable, although a higher percent of nonmetropolitan older persons reported having more than three friends whom they could call for help if needed. More than 85 percent of both nonmetropolitan and metropolitan elderly had one or more relatives whom they could call for help.

Access

Belief—Nonmetropolitan elderly have limited access to doctors, hospitals, or advanced medical services.

What do the data show?—The considerable variation in access to health care in different regions of the country was masked by national averages. Nonmetropolitan elderly were twice as likely as metropolitan elderly to have to travel more than 30 minutes to reach their usual source of care. Twenty-one percent of nonmetropolitan elderly had at least a 30-minute wait once they arrived at the site of care versus 17 percent of metropolitan older persons.

Health

Belief—Nonmetropolitan elderly are healthier and have a more active lifestyle but tend not to take preventive health care measures. However, minority elderly in nonmetropolitan areas are sicker than their metropolitan counterparts.

What do the data show?—Nonmetropolitan elderly were not healthier nor more active than their metropolitan counterparts. A greater percent of elderly in nonmetropolitan areas assessed their health as fair or poor, a telling measure associated with higher mortality and lower life satisfaction. Nonmetropolitan elderly showed little difference from their metropolitan counterparts in health behaviors; there was no difference in the percent who smoked heavily, drank heavily, ate healthful diets, or were overweight. In contrast, elderly women in nonmetro-

politan areas were more vulnerable to dying from breast cancer because a significantly lower percent had a clinical screening or a mammogram in the past year. A higher percent of elderly black persons in nonmetropolitan areas rated their health as fair or poor when compared with their metropolitan counterparts. Furthermore, the black elderly in nonmetropolitan areas were most likely to rate their health as fair or poor.

Long-term care

Belief—Nonmetropolitan elderly have a greater need for long-term care but more limited use of services, compared with metropolitan elderly.

What do the data show?—Available data show the proportion of older persons experiencing difficulty with activities of daily living (ADL's), such as eating, bathing, or transferring from bed to chair, was about the same for metropolitan and nonmetropolitan older persons. Among older persons reporting at least one limitation in ADL's or instrumental activities of daily living (IADL's) (tasks for living independently, such as shopping and preparing meals), a lower proportion of nonmetropolitan persons reported using home health services.

Health insurance, expenditures, and benefit use

Belief—The nonmetropolitan elderly have lower health care expenses and adequate health insurance coverage.

What do the data show?—The nonmetropolitan elderly had lower average annual medical expenses. The use of health insurance and other benefits was comparable between nonmetropolitan and metropolitan older persons with no limitations in ADL's. However, when such limitations were present, the average percent of the health expenses paid for by Medicaid was higher for nonmetropolitan elderly.

Chapter 1
Concepts of rural

By Carolyn C. Rogers, Economic Research Service of the U.S. Department of Agriculture; Jill Braden, Agency for Health Care Policy and Research; and Joan F. Van Nostrand, M.P.A., National Center for Health Statistics

Belief—It is easy to measure the elderly population living in small towns and rural areas outside large cities.

Summary

Each of us has an intuitive concept of a rural area. To some, it is a small town; to others, it is farm country; to still others, it is the sparsely settled sections of the Midwest. There is some debate over the appropriate way to measure the population living in small towns and the countryside.

According to the Bureau of the Census, "rural" is defined as territory outside places of 2,500 or more inhabitants, or outside an urbanized area. An urbanized area comprises one or more places and the adjacent densely settled surrounding territory that together have a minimum of 50,000 persons.

The Office of Management and Budget's definition of "nonmetropolitan" refers to counties outside a metropolitan area. A metropolitan area is a county (or counties) containing a place or urbanized area of 50,000 or more and a total population of 100,000 or more, including adjacent counties that have a high degree of economic and social integration with the central county. (In New England, the town, as opposed to the county, is the basic building block.) (See appendix II for full definitions.)

The essential difference between the two concepts is that "rural" refers to low residential density and size, and "nonmetropolitan" refers to counties lying outside metropolitan areas. The overlap of concepts of rural and nonmetropolitan is less than one might expect. Just over one-half of the rural population lives in nonmetropolitan areas. About two-thirds of the nonmetropolitan population is rural. In contrast, only 16 percent of the metropolitan population is rural (see figure 1).

Some examples of nonmetropolitan areas near Washington, DC, are Winchester, Virginia, Cumberland and Salisbury in Maryland, and Martinsburg, West Virginia. Some metropolitan areas include a mix of densely and sparsely settled places. San Bernardino, California, for example, is a large metropolitan area that is densely settled in the west and sparsely settled in the east.

The nonmetropolitan-metropolitan designation is mainly used in this report for pragmatic reasons. Most data presented are from existing national surveys of a general-purpose nature and not from special studies of the rural population. These existing national surveys generally collect data at the county level, allowing a nonmetropolitan-metropolitan designation to be made. Hence, use of this designation does not imply it is the "best," only that it is more widely available.

Discussion

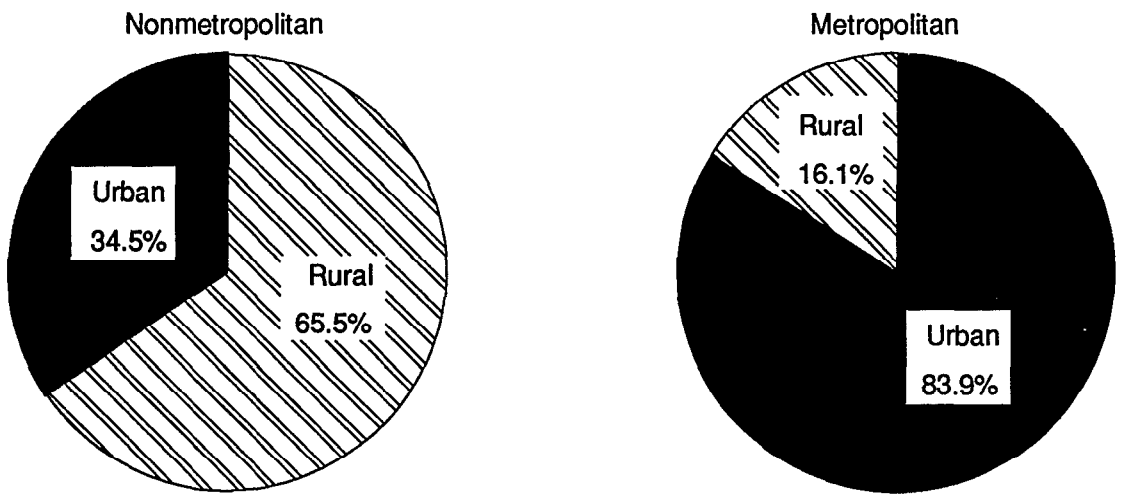
In 1989, 22 percent (54.6 million) of the U.S. population was nonmetropolitan and 27 percent (66.2 million) was rural. Although the percentages do not differ greatly, the overlap of rural and nonmetropolitan population is less than

might be expected. Just over one-half (54 percent) of the rural population live in nonmetropolitan areas, while the rest live within metropolitan boundaries. Persons living in the rural fringes within metropolitan areas have a different level of access to the metropolitan economy and services than do those living in rural territory outside metropolitan areas.

Figure 2 is a map of the nonmetropolitan counties in the United States. Persons 65 years of age and over living in these counties are represented by the data labeled "nonmetropolitan." The South contains the largest share of both nonmetropolitan counties (1,061 counties or 44 percent of the total) and nonmetropolitan population (23.5 million or 44 percent). However, the greatest share of nonmetropolitan territory is in the Midwest and Western regions. About two-thirds (66 percent) of the nonmetropolitan population is rural; whereas, only 16 percent of the metropolitan population is rural (see figure 3).

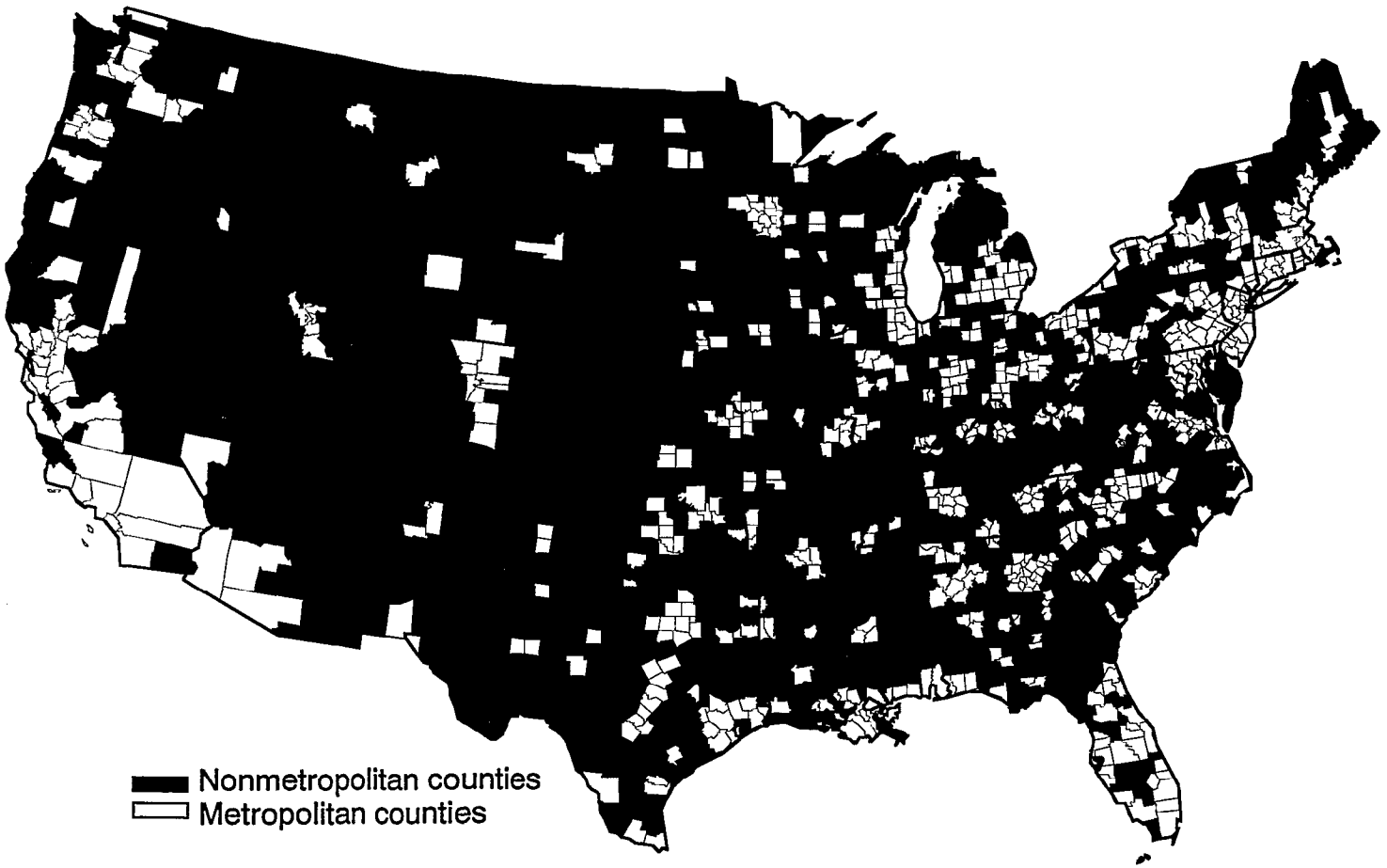
As noted previously, the most prominent single characteristic of rural America is its social and economic diversity. The Economic Research Service of the U.S. Department of Agriculture has identified seven types of rural counties according to their major economic base, presence of federally-owned land, or population characteristics. Some examples are:

- nonmetropolitan counties depending heavily on farming as shown in figure 4,
- nonmetropolitan counties with people who have persistent low incomes or who live in poverty as shown in figure 5, and
- nonmetropolitan counties to which the elderly migrate after retirement as shown in figure 6.



NOTE: Civilian noninstitutional population data are from the Current Population Survey 1989.
SOURCE: U.S. Department of Agriculture, Economic Research Service, public use data from the Current Population Survey.

Figure 1. Percent distribution of rural and urban population, by metropolitan area: United States, 1989



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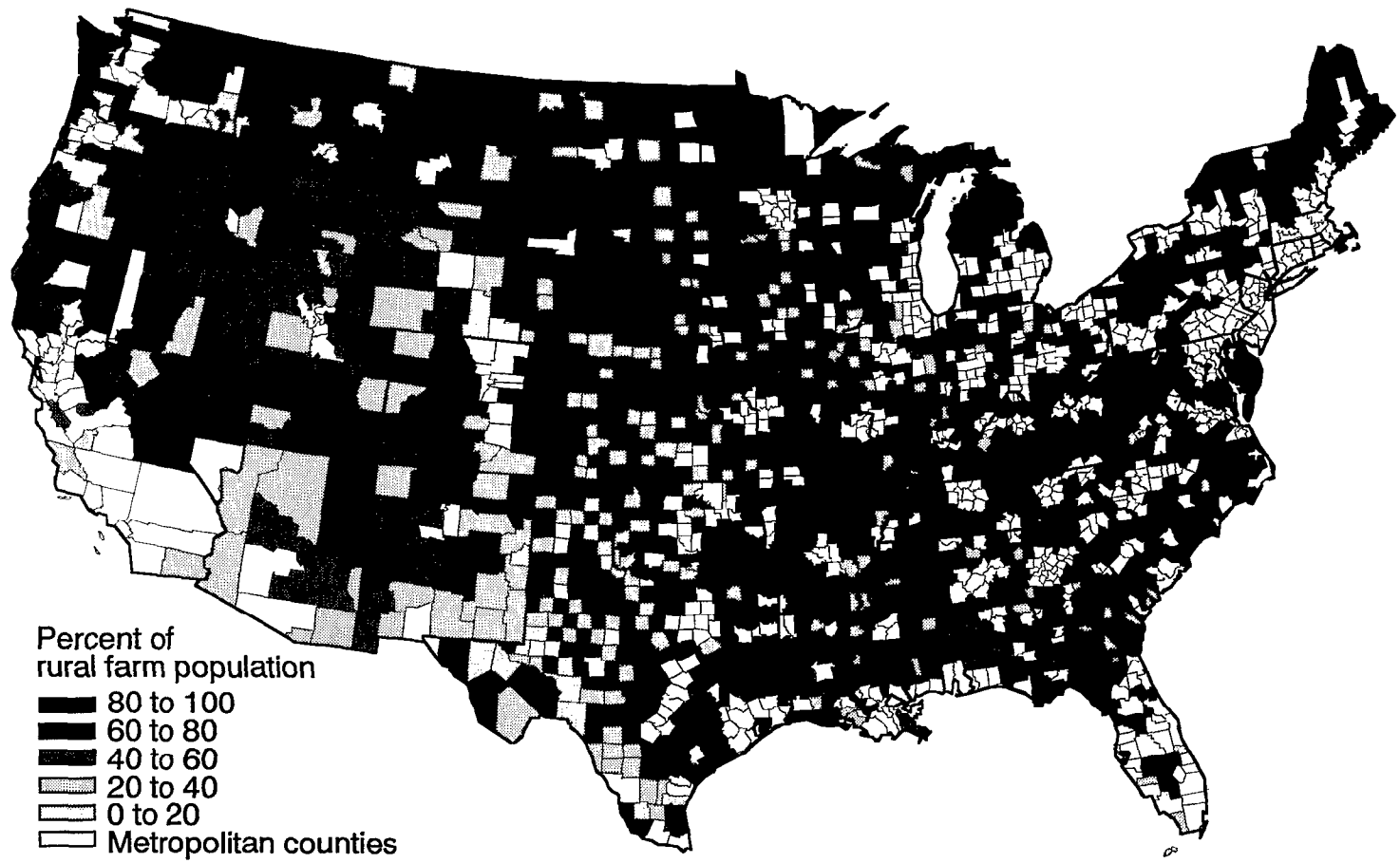
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 2. Nonmetropolitan and metropolitan counties: United States, 1990



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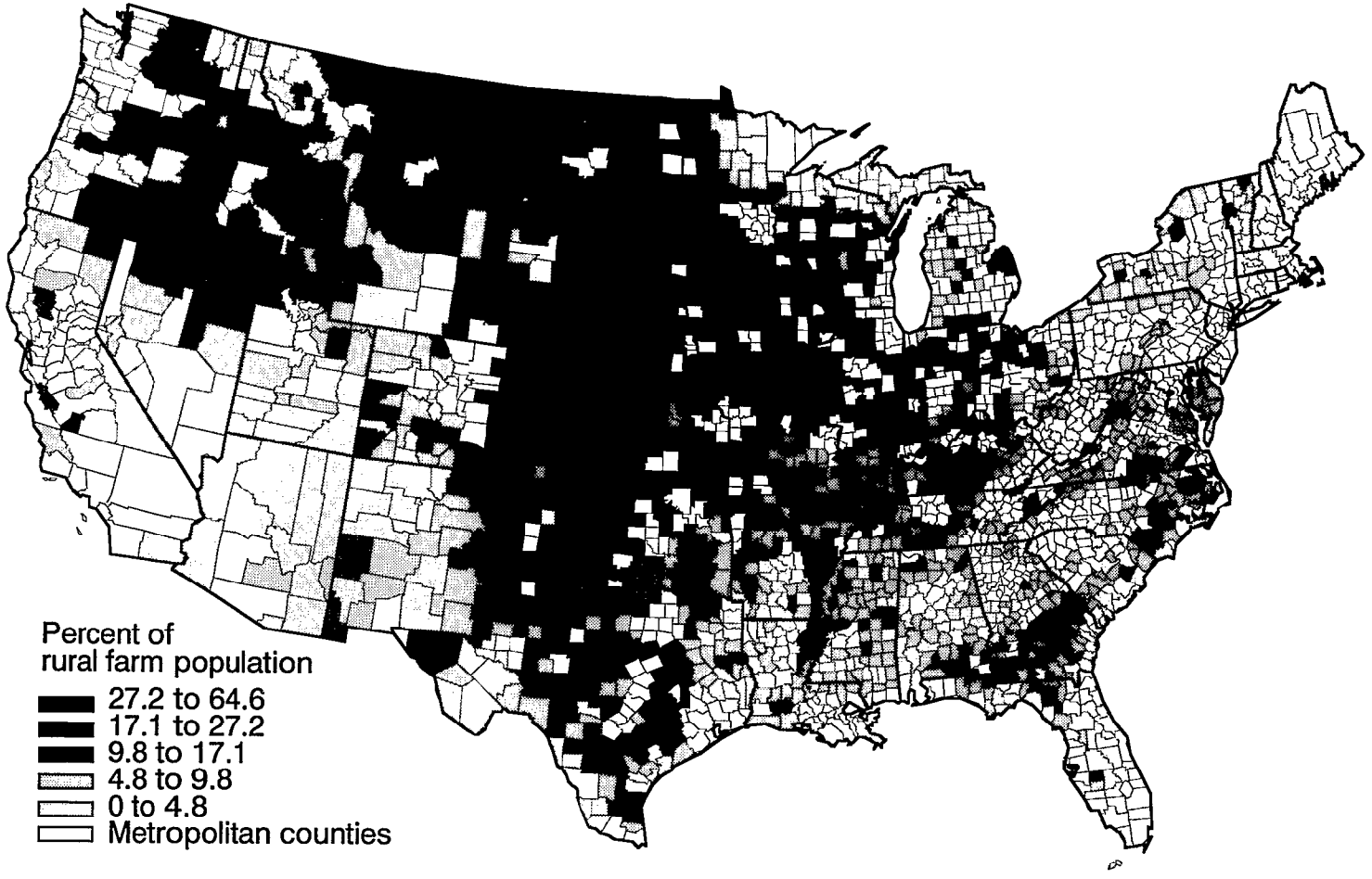
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 3. Percent of nonmetropolitan population in counties classified as rural, by area: United States, 1980



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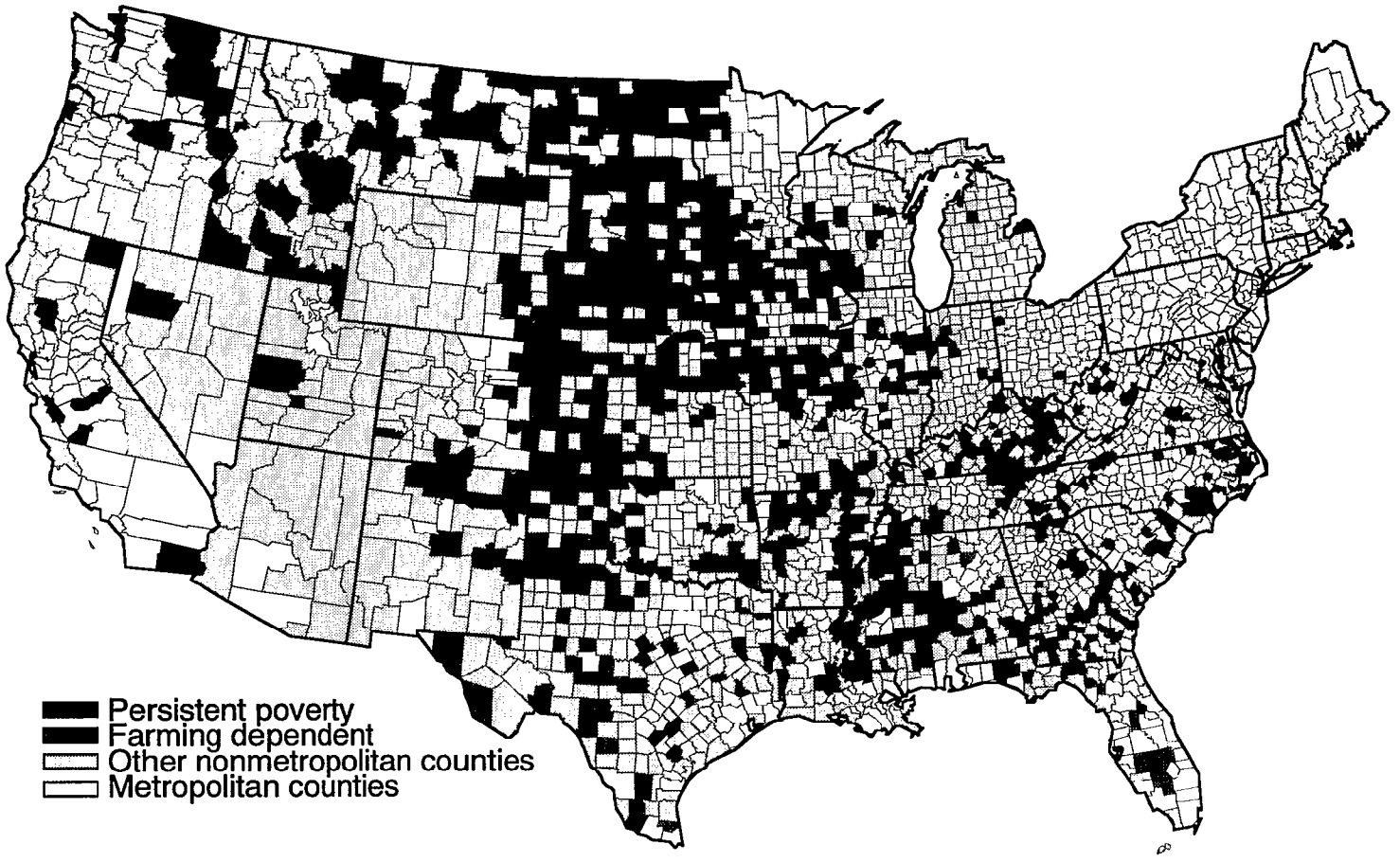
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 4. Percent of nonmetropolitan population in counties classified as rural farm, by area: United States, 1980



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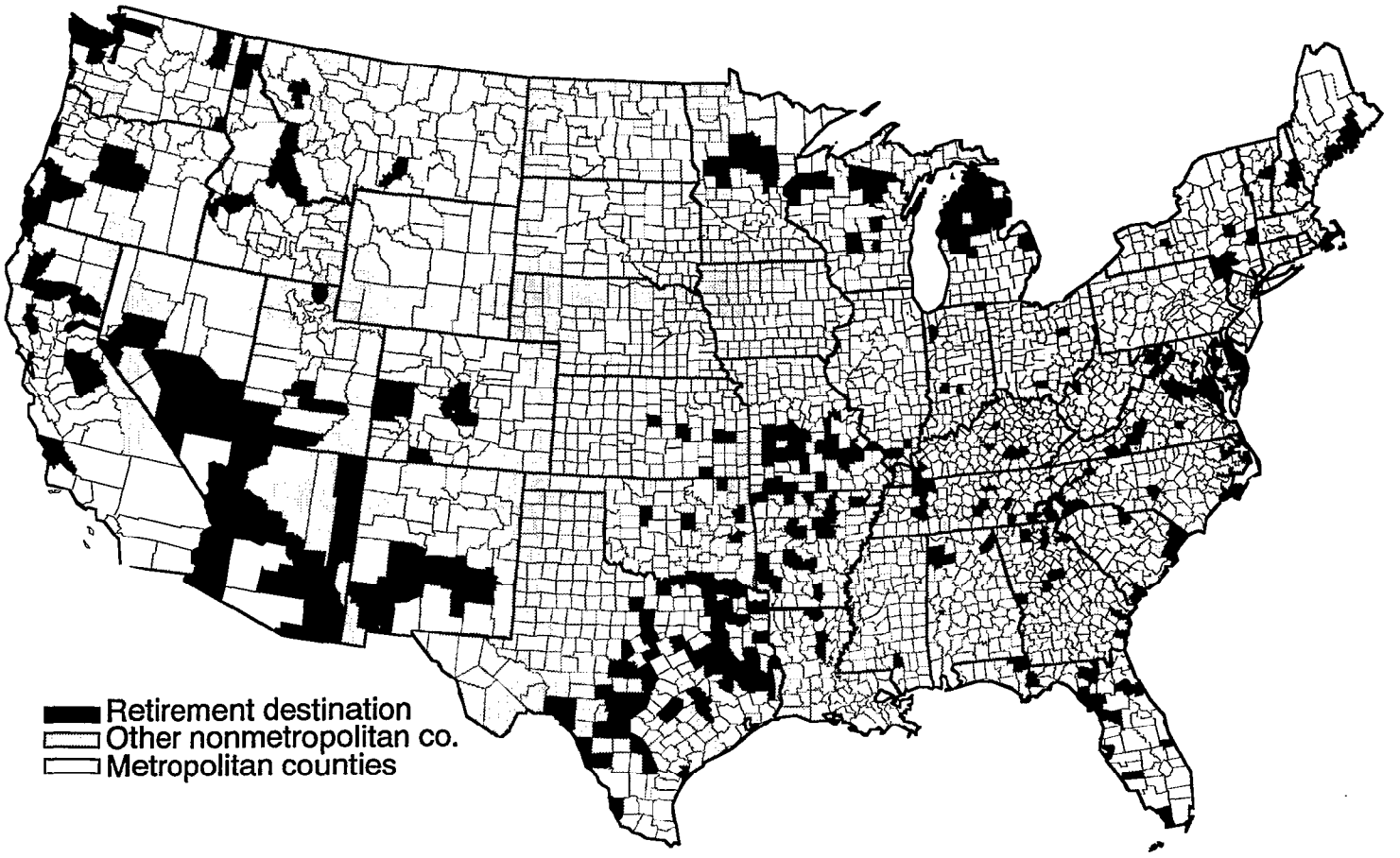
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 5. Nonmetropolitan counties classified as either persistent poverty or farm dependent: United States, 1986



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SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 6. Nonmetropolitan counties classified as retirement destination: United States, 1986

Chapter 2
Population

By Carolyn C. Rogers, Economic Research Service of the U.S. Department of Agriculture; Arnold A. Goldstein, Ph.D., Bureau of the Census; and Susan G. Cooley, Ph.D., U.S. Department of Veterans Affairs

Belief—The elderly and children comprise higher proportions of the population in nonmetropolitan areas than in metropolitan areas, and the proportion of the population that is elderly is higher in the nonmetropolitan South than in other regions.

Summary

The data support the belief that elderly persons and children were more concentrated in nonmetropolitan areas than in metropolitan areas. According to the 1990 census, the elderly were about 15 percent of the nonmetropolitan population but only 12 percent of the metropolitan population. However, the second part of the belief is not supported; the proportion of elderly persons in the nonmetropolitan South was not greater than in other regions.

The 1990 census identified 8.2 million elderly persons living in nonmetropolitan areas (or 26 percent) and 23.0 million elderly in metropolitan areas. Slightly greater proportions of nonmetropolitan than metropolitan elders were in the age group 75 years of age and over. Of males 65–74 years of age in 1987, about 60 percent were veterans in both rural and urban areas. Of males 75 years of age and over, about 20 percent were veterans in both rural and urban areas.

Discussion

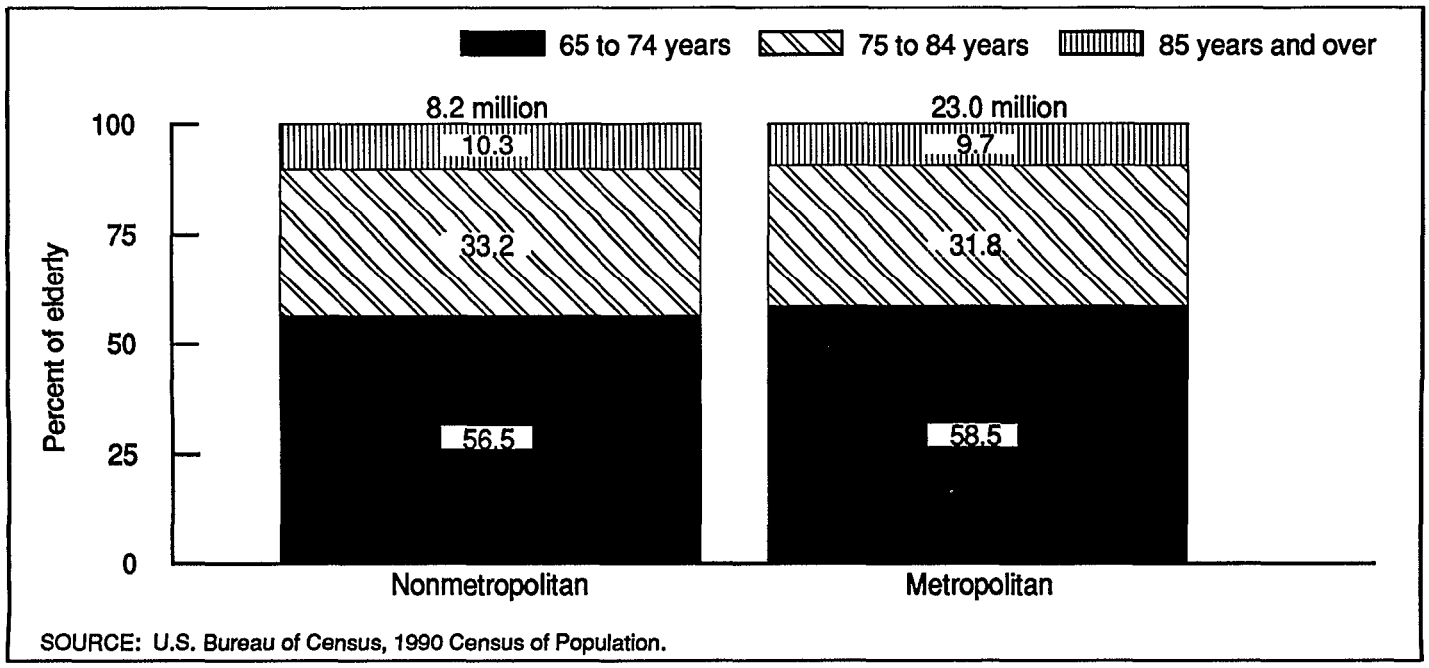
The Nation's 8.2 million elderly persons living in nonmetropolitan areas were about one-fourth of all elderly persons in the United States. More than one-half (57 percent) of the elderly population in nonmetropolitan areas were 65–74 years of age, about one-third were 75–84 years of age, and about one-tenth were 85 years of age and over. Somewhat greater proportions of the nonmetropolitan than metropolitan elderly population were 75 years of age and over (see figure 7).

Greater concentrations of the elderly and children resided in nonmetropolitan areas. The proportion of elderly persons increased between 1980 and 1990. The nonmetropolitan increase was slightly higher than in metropolitan areas. The proportion of the elderly in nonmetropolitan areas increased from 13 percent in 1980 to 15 percent in 1990; comparable figures for metropolitan areas are 11 percent in 1980 and 12 percent in 1990. The increase in the elderly in nonmetropolitan areas reflects retirement in-migration as well as the out-migration of young adults from nonmetropolitan areas. The U.S. elderly population is projected to continue to increase, especially beginning in 2011, when the first members of the baby-boom generation reach age 65. In contrast to the increase in the elderly population, the proportion of children under age 18 declined for both metropolitan and nonmetropolitan areas by about 2 percentage points between 1980 and 1990, reflecting recent declines in fertility. A slightly higher percent of children was found in nonmetropolitan areas; in 1990, 27 percent of the nonmetropolitan population were children, compared with 26 percent of the metropolitan population. Children under age

18 today constitute a smaller share of the population than in the recent past. A lower proportion of youth is usually viewed as positive for society because it means that there are more adults available to support, supervise, and socialize young people (see figure 8).

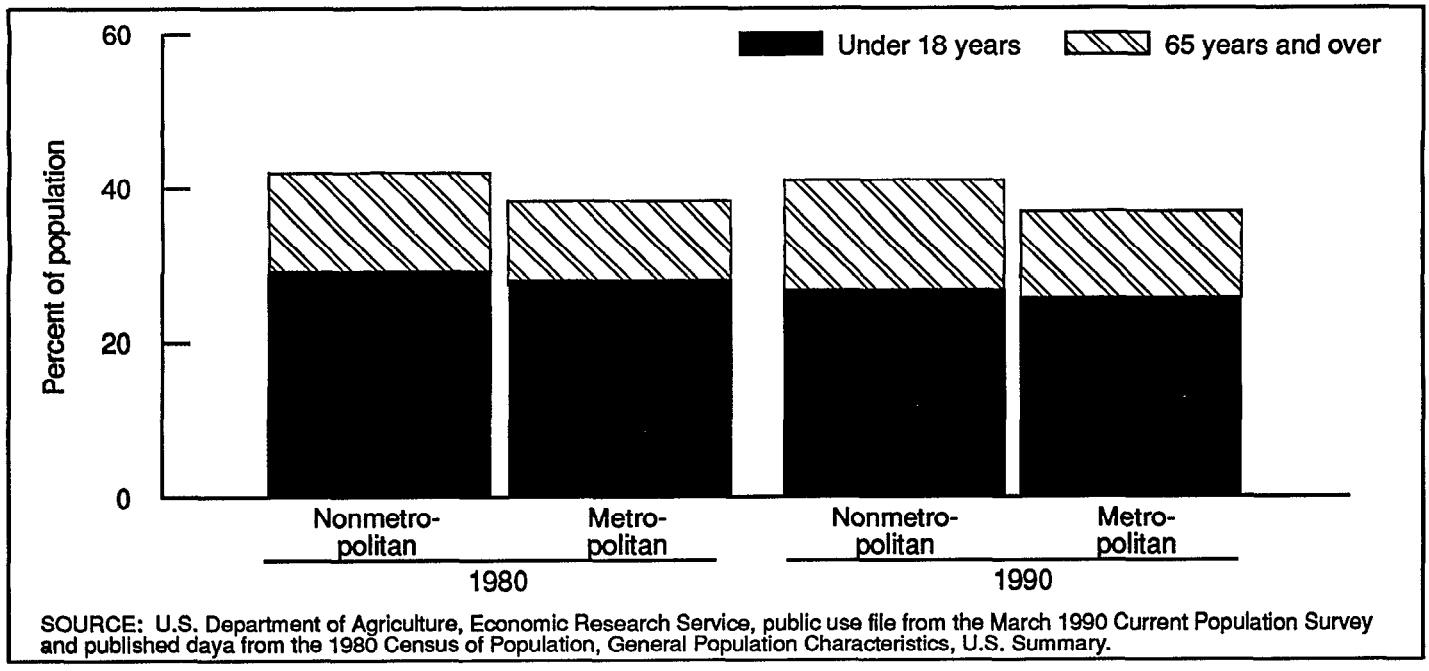
In the Northeast and the West, children made up a higher proportion of the nonmetropolitan population than the metropolitan population. For example, 29 percent of the nonmetropolitan population in the West were children, compared with 27 percent of the metropolitan West. Alternatively, the Midwest and the South both had similar proportions of children in metropolitan and nonmetropolitan areas. The somewhat younger age structure in the West may partially reflect the region's ethnic composition, which includes a larger share of the Hispanic population. Regardless of region, the elderly were a higher proportion of the population in nonmetropolitan areas than in metropolitan areas. For example, 15 percent of the nonmetropolitan population in the Midwest were elderly, compared with 11 percent of the metropolitan Midwest. Although the percentages of elderly persons are similar by region, the implications of regional and local concentrations of the elderly vary widely. Many nonmetropolitan counties in the Midwest—as seen throughout much of the Plains and western Corn Belt—have "aged in place"; that is, the elderly have become concentrated in these areas because they have remained while younger residents moved out. On the other hand, rural amenities and low living costs may attract elderly migrants to other regions, such as the South and West. The nature of the concentration of elderly persons in an area has very different implications for the demand for social and health services (see figure 9).

In 1987, the percent of all elderly who were veterans was similar for rural and urban areas—about 20 percent (see figure 10). When only male veterans are considered, there were differences by age but not by area. Of males 65–74 years of age, about 60 percent were veterans in both rural and urban areas. Of males 75 years of age and over, about 20 percent were veterans in both rural and urban areas (see figure 11).



SOURCE: U.S. Bureau of Census, 1990 Census of Population.

Figure 7. Percent distribution of the elderly, by age group and area: United States, 1990



SOURCE: U.S. Department of Agriculture, Economic Research Service, public use file from the March 1990 Current Population Survey and published daya from the 1980 Census of Population, General Population Characteristics, U.S. Summary.

Figure 8. Percent of the population 65 years of age and over or under 18 years of age, by area: United States, 1980 and 1990

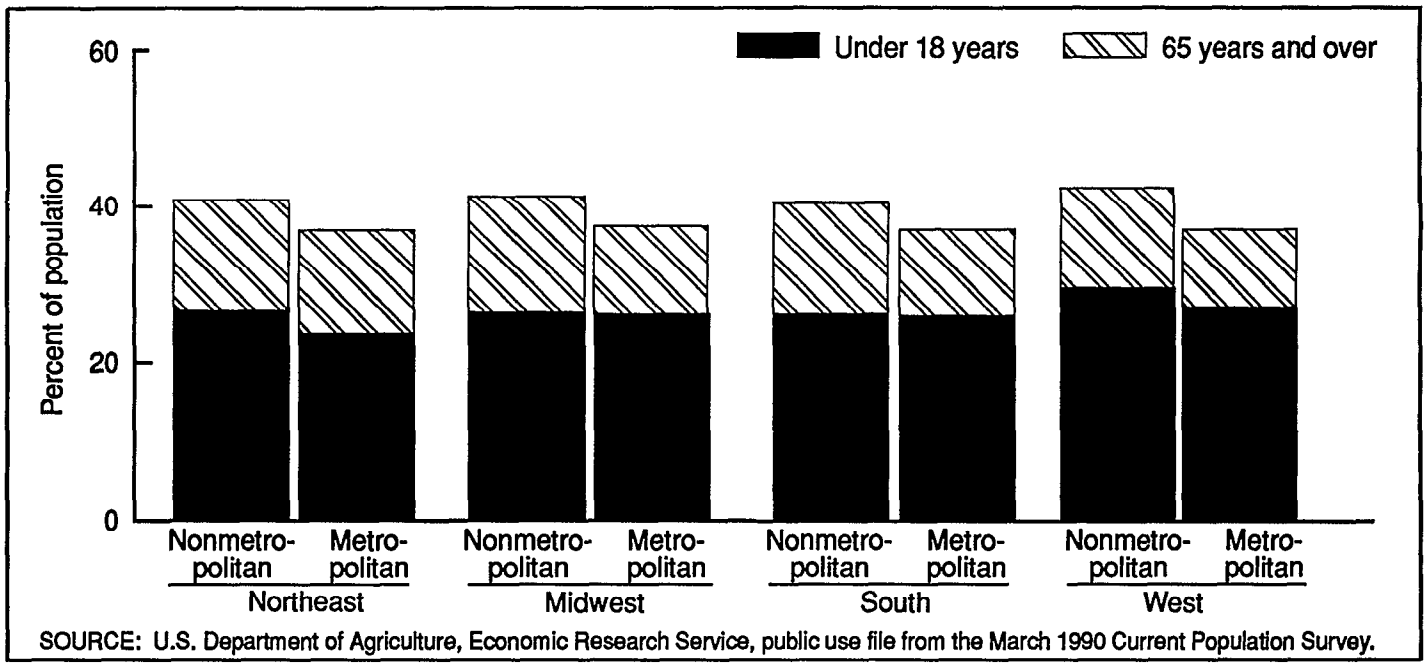


Figure 9. Percent of the population 65 years of age and over or under 18 years of age, by area and region: United States, 1990

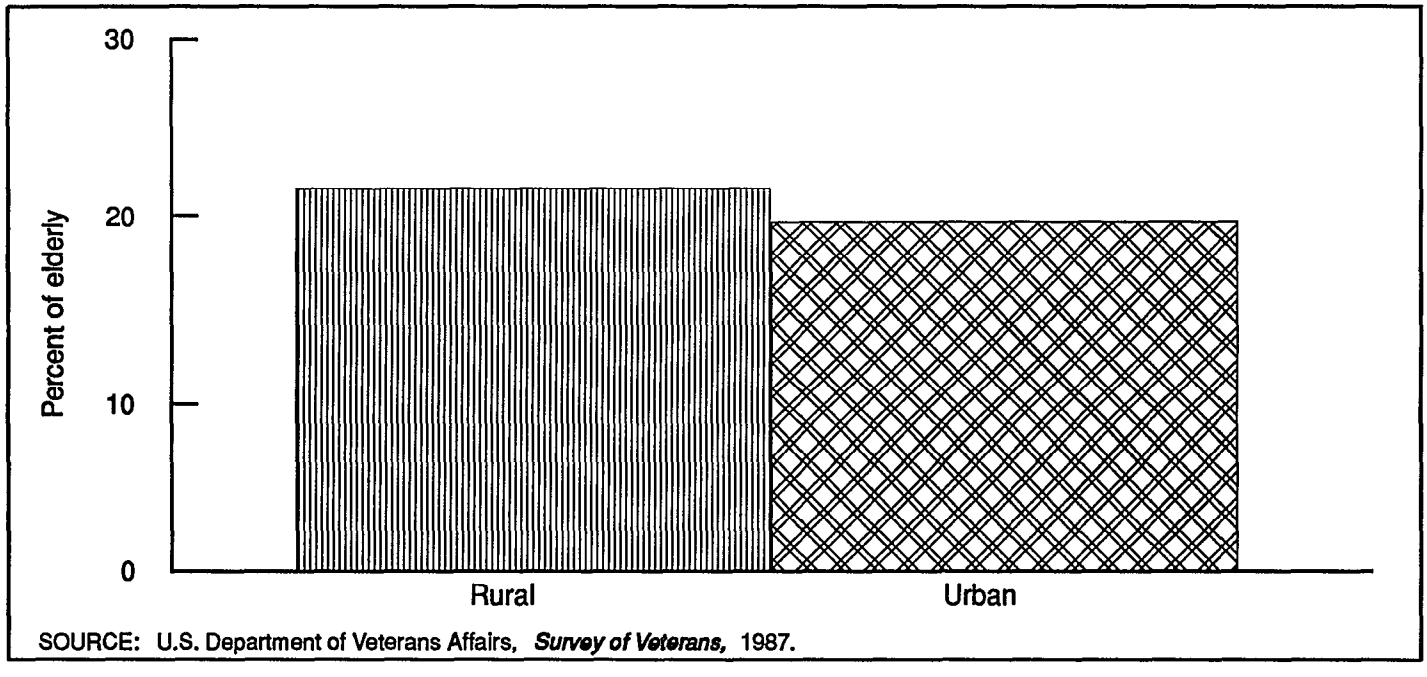
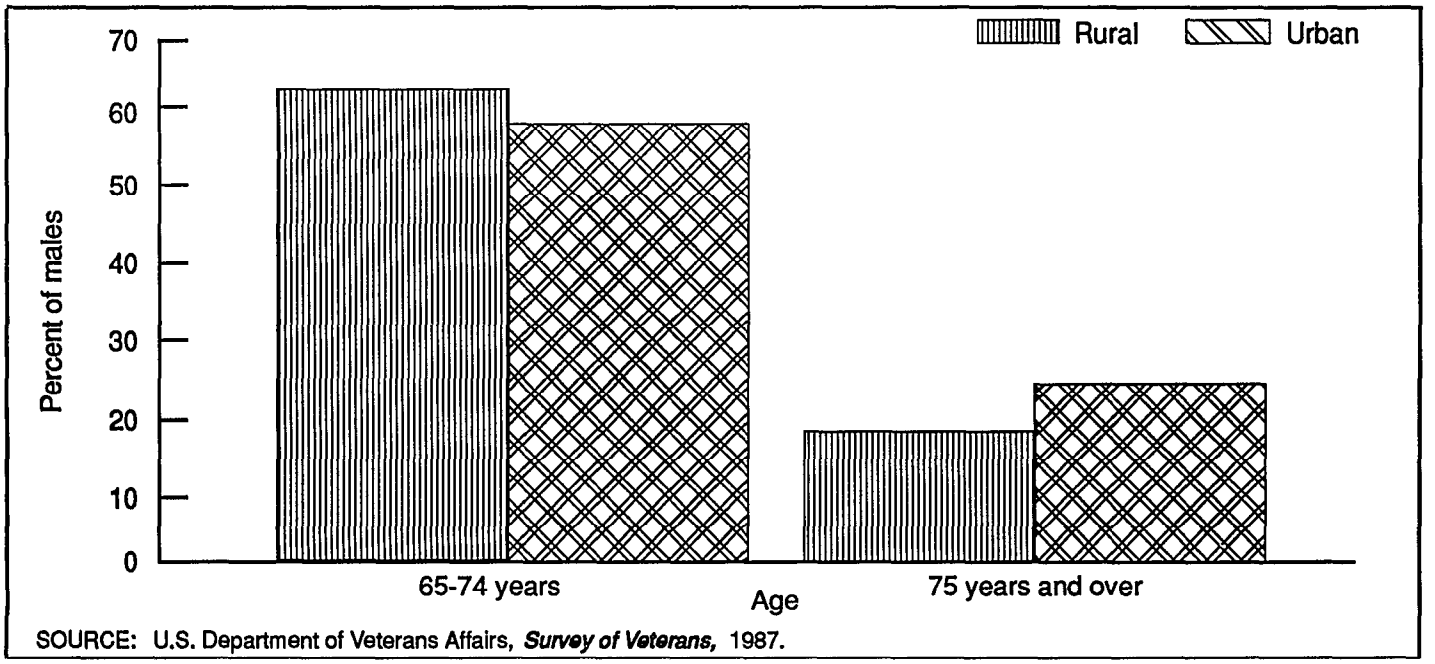


Figure 10. Percent of the elderly who are veterans, by area: United States, 1987



SOURCE: U.S. Department of Veterans Affairs, ***Survey of Veterans,*** 1987.

Figure 11. Percent of males who are veterans, by age and area: United States, 1987

Chapter 3
Minority population

By Arnold A. Goldstein, Ph.D., Bureau of the Census; and Carolyn C. Rogers, Economic Research Service of the U.S. Department of Agriculture

Belief—A lower proportion of minority elderly live in nonmetropolitan than metropolitan areas. Minorities in nonmetropolitan areas are more impoverished than other elderly.

Summary

The figures presented in this chapter support the common beliefs that:

- a lower proportion of minority elderly live in nonmetropolitan than in metropolitan areas, and
- minority elderly in nonmetropolitan areas tend to be poorer than those in metropolitan areas.

About one-fourth of the elderly population as a whole lived in nonmetropolitan areas in 1990. The distribution of individual race and ethnic groups, however, varied widely. Asians and Pacific Islanders and persons of Hispanic origin (who may be of any race) were especially likely to live in metropolitan areas, while slightly more than one-half of American Indians, Eskimos, and Aleuts lived in nonmetropolitan areas.

About 656,000 elderly persons of races other than white lived in nonmetropolitan areas in 1990, compared with about 2.7 million in metropolitan areas. Among the elderly in nonmetropolitan areas, there were about 525,000 black persons, about 61,000 American Indians, Eskimos, and Aleuts, about 33,000 Asian and Pacific Islanders, and about 38,000 persons of other races. Approximately 132,000 elderly Hispanic persons (of any race) lived in nonmetropolitan areas as well.

As with the elderly population of all races, elderly black people in nonmetropolitan areas were more likely to be poor than those in metropolitan areas. Nearly one-half of elderly black men (45 percent) and women (48 percent) had incomes below the poverty level in 1990. In metropolitan areas, the poverty rates for elderly black men and women were 22 percent and 35 percent, respectively.

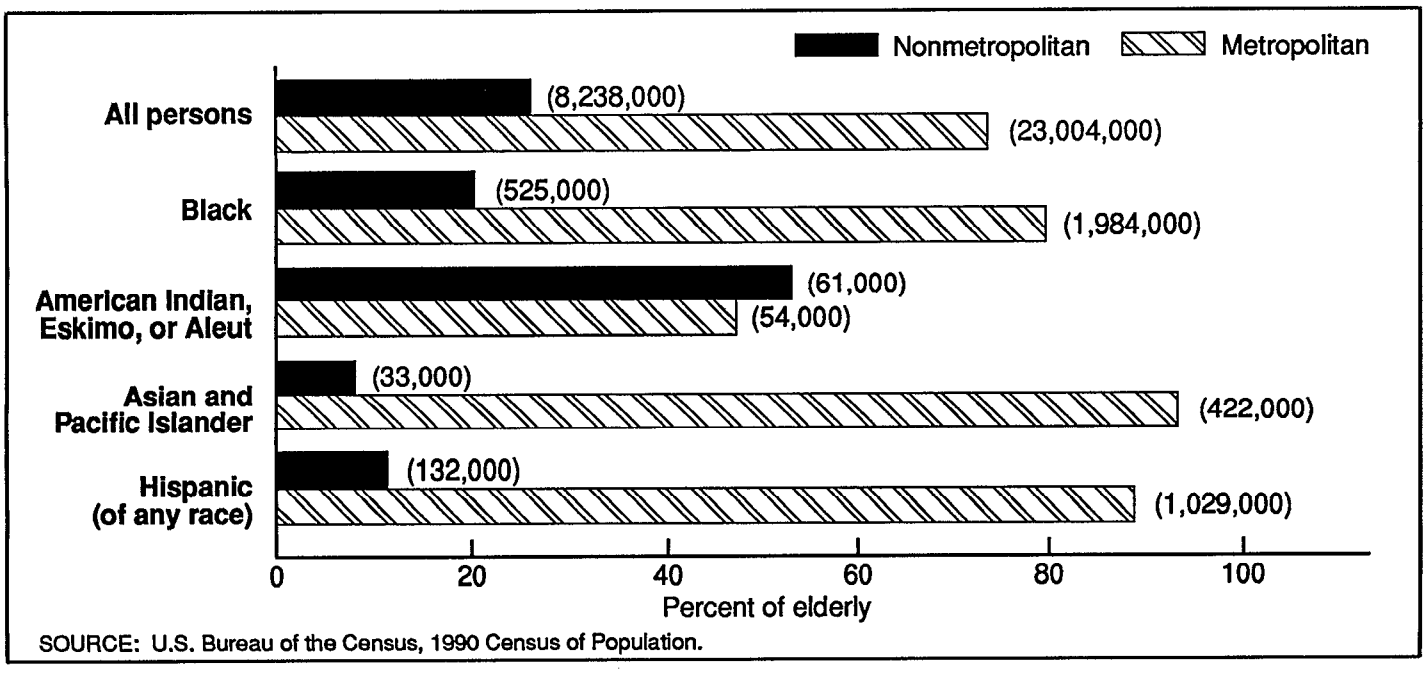
Discussion

Like the elderly population as a whole, elderly persons in most minority groups were less likely to live in nonmetropolitan than metropolitan areas. Elderly Asian and Pacific Islanders and Hispanic people are especially likely to be found in metropolitan areas. More than one-half of elderly American Indians, Eskimos, and Aleuts, however, lived in nonmetropolitan areas (see figure 12).

In nonmetropolitan areas, regardless of race or ethnicity, the elderly were a larger share of the population than in metropolitan areas. Variations in age composition by race and ethnicity, however, reveal subgroup differences. In general, white persons had a higher proportion of elderly than did black or Hispanic persons. A higher proportion of the white population in nonmetropolitan areas was elderly (15 percent), compared with the black population (11 percent) and the Hispanic population (6 percent). The very low proportion of Hispanic elderly persons results from both their higher fertility

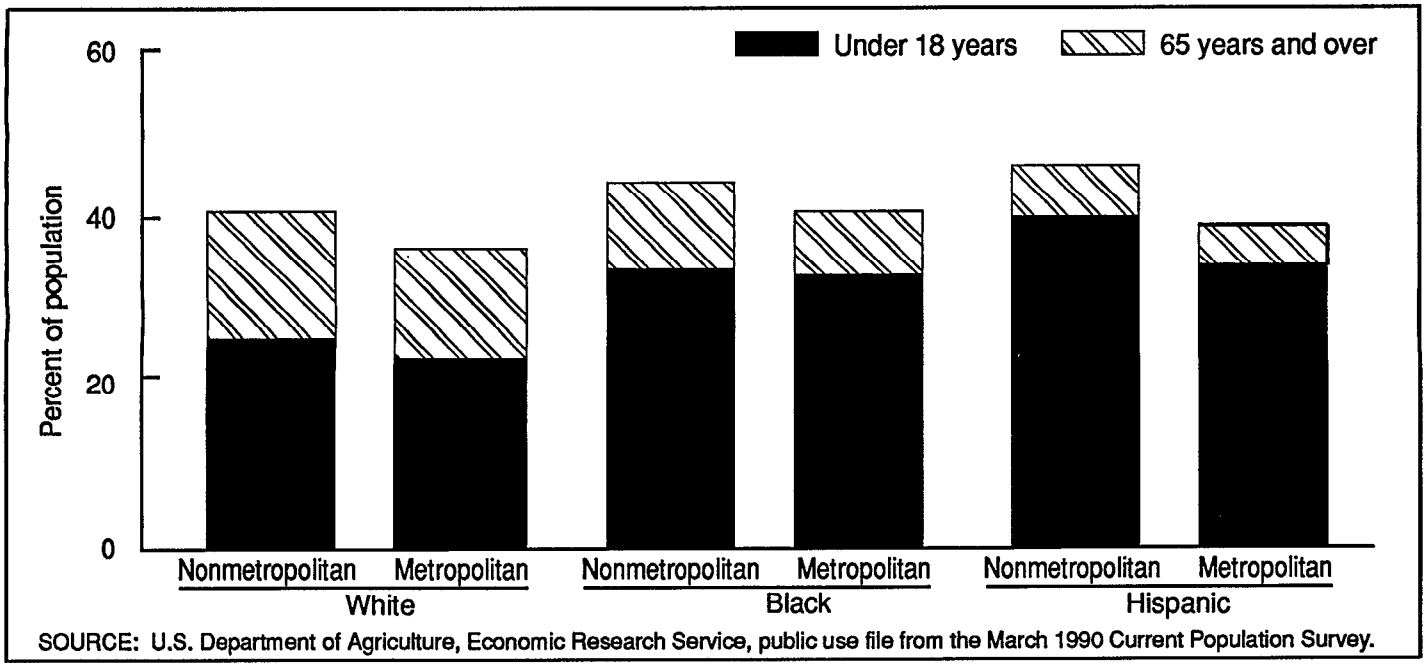
rate and more recent immigration experience (see figure 13).

Poverty rates for the elderly population as a whole were higher in nonmetropolitan areas than in metropolitan areas. Elderly black people in both types of areas experienced higher poverty rates than did the elderly population in general. In nonmetropolitan areas, black persons experienced especially high poverty rates. Nearly one-half of elderly black men (45 percent) and women (48 percent) in nonmetropolitan areas had incomes below the poverty level in 1990. In metropolitan areas, the poverty rates for elderly black men and women were 22 percent and 35 percent, respectively (see figure 14).



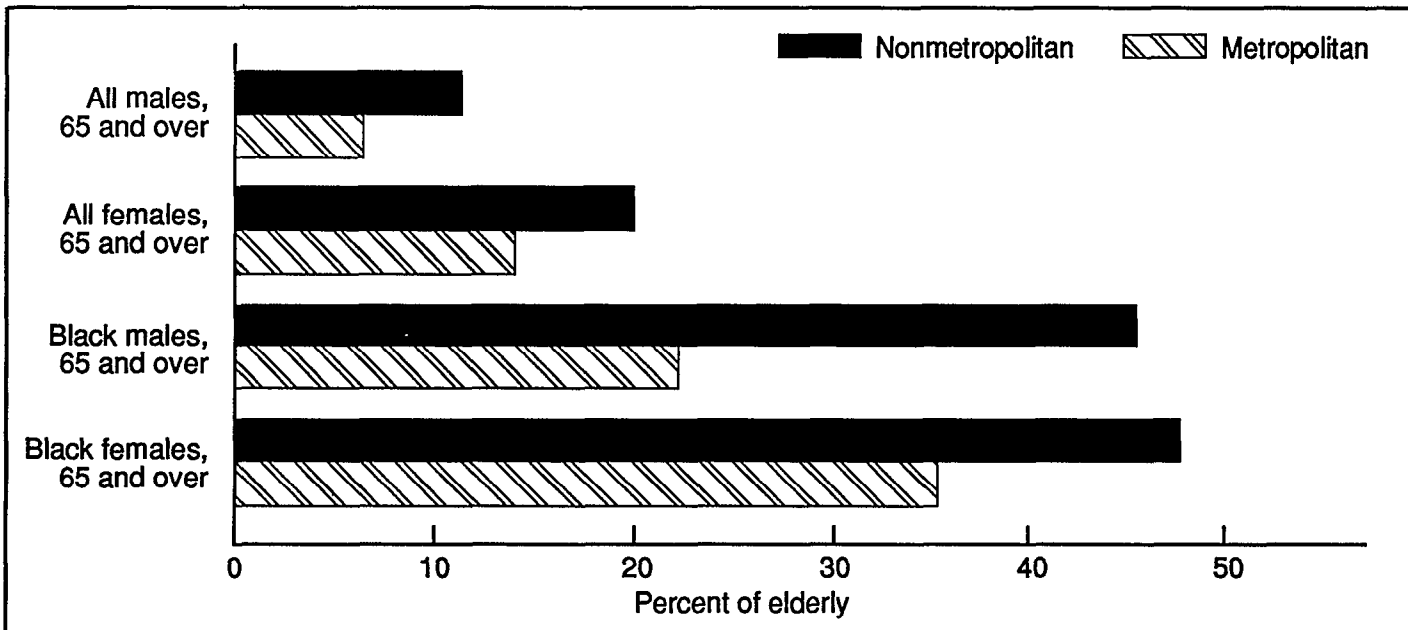
SOURCE: U.S. Bureau of the Census, 1990 Census of Population.

Figure 12. Number and percent of the elderly, by race, Hispanic origin, and area: United States, 1990



SOURCE: U.S. Department of Agriculture, Economic Research Service, public use file from the March 1990 Current Population Survey.

Figure 13. Percent of the population 65 years of age and over or under 18 years of age, by race, Hispanic origin, and area: United States, 1990



SOURCE: U.S. Bureau of the Census, "Poverty in the United States: 1990," *Current Population Reports,* Series P-60, No. 175.

Figure 14. Percent of the elderly with incomes below the poverty level, by race, sex, and area: United States, 1990

Chapter 4
Income, poverty, and education

By Barbara Lingg, Social Security Administration; Jill Braden, Agency for Health Care Policy and Research; Arnold A. Goldstein, Ph.D., Bureau of the Census; and Susan G. Cooley, Ph.D., U.S. Department of Veterans Affairs

Belief—Nonmetropolitan elderly are more impoverished and less educated than their metropolitan counterparts.

Summary

Data from several sources support this belief. In 1987, one-half of the nonmetropolitan elderly were in families that were poor or had an income within 200 percent of the poverty level, compared with 37 percent of the metropolitan elderly (figure 15). Only 18 percent of the nonmetropolitan elderly had high family incomes (more than 400 percent of the poverty level), compared with 27 percent of the metropolitan elderly. Among elderly veterans in 1986 (figure 16), 70 percent of those in rural areas had family incomes of less than $20,000, compared with 59 percent of urban residents.

Monthly Social Security benefits in 1990 averaged $60 less for beneficiaries 65 years of age or over in nonmetropolitan areas ($539) than for those in metropolitan areas ($599). Benefits for men in nonmetropolitan areas averaged $637, compared with $711 for men in metropolitan areas. Average benefits for women were $470 and $526, respectively (see figures 17–20).

Data for 1991 on educational attainment of persons 65 years of age or over (figure 21) show that the percent who completed high school did not differ very much by metropolitan-nonmetropolitan area. However, more than one-third of the nonmetropolitan elderly completed less than 9 years of school, compared with less than one-fourth of those in metropolitan areas. About 13 percent of the metropolitan elderly completed 4 or more years of college, compared with 10 percent of nonmetropolitan residents.

Discussion

"Income level" refers to family income, controlling for family size and for the age of head of the family. It is defined as follows:

- "Poor" indicates an income below the poverty level;
- "near poor" indicates an income between the poverty level and 125 percent of the poverty level;
- "low income" indicates an income 126–200 percent of the poverty level;
- "middle income" indicates an income 201–400 percent of the poverty level; and,
- "high income" indicates an income of more than 400 percent of the poverty level.

In 1987, one-half of the nonmetropolitan elderly were in poor, near-poor, or low-income families, while 37 percent of the metropolitan elderly fell into these categories. Although there was no difference by area in the percent who were middle income, 27 percent of the metropolitan elderly had a high family income, compared with only 18 percent of the nonmetropolitan elderly (see figure 15). Approximately 10 percent more of rural elderly veterans had a low family income (less than $20,000 for calendar year 1986) than did urban elderly veterans

(71 percent of rural versus 59 percent of urban elderly veterans)(see figure 16).

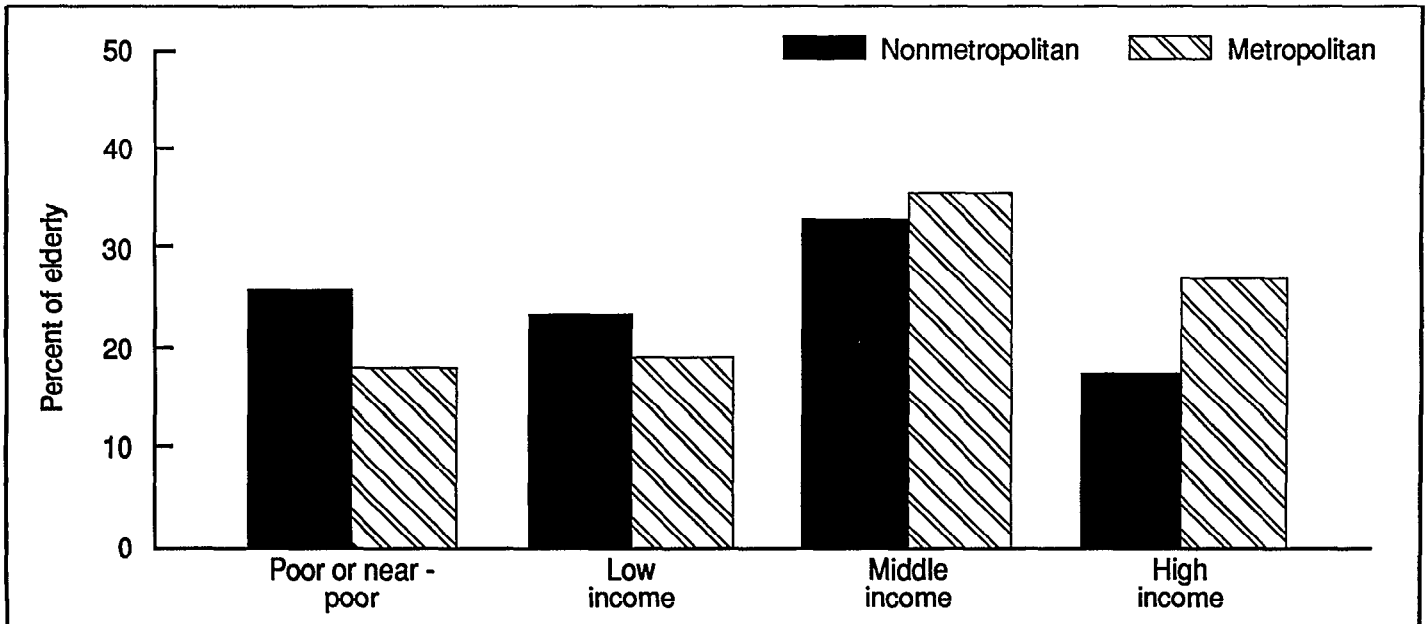
Data about Social Security and Supplemental Security Income are based on compilations from administrative records of the Social Security Administration. Data are for all persons 65 years of age or over receiving Social Security or Supplemental Security Income benefits as of December 1990. About 28.8 million elderly persons received Social Security benefits, 60 percent of them (17.4 million) were women. Benefits averaged $539 for persons in nonmetropolitan areas, compared with $599 for those in metropolitan areas. Among men, benefits for nonmetropolitan residents averaged $637, compared with $711 for metropolitan residents. Average benefits for women were $470 and $526, respectively (see figure 17).

The map in figure 18 shows differences in average monthly benefits for persons in nonmetropolitan and metropolitan areas by State:

- Average benefits for elderly beneficiaries in nonmetropolitan areas were $85–$100 less than for those in metropolitan areas in the States of Kentucky, Louisiana, Minnesota, and Missouri.
- For beneficiaries in the States of Alabama, Georgia, Mississippi, North Carolina, and Tennessee, the nonmetropolitan-metropolitan difference was about $70.

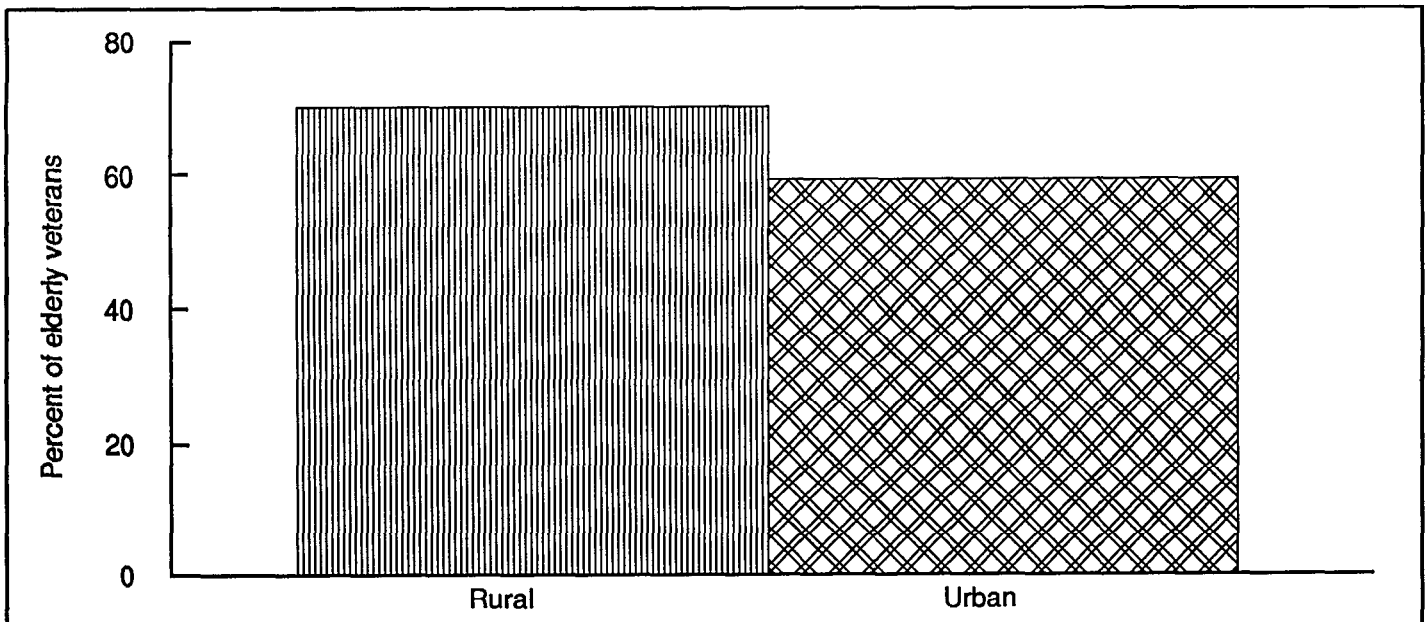
Similar proportions of elderly male (29 percent) and female (28 percent) beneficiaries were nonmetropolitan area residents (see figure 19). Twenty-eight percent of elderly Social Security beneficiaries resided in nonmetropolitan areas. Two million persons 65 years of age or over received Supplemental Security Income benefits. Thirty percent resided in nonmetropolitan areas (see figure 20).

The percent of elderly who had completed high school did not differ very much by nonmetropolitan-metropolitan area. Nevertheless, elderly persons in nonmetropolitan areas were more likely to have dropped out of high school and were less likely to have attended college than those in metropolitan areas. Data for 1991 show that more than one-third of nonmetropolitan elderly completed less than 9 years of school, compared with less than one-fourth of those in metropolitan areas. About 13 percent of elderly persons in metropolitan areas completed 4 or more years of college, but only 10 percent of those in nonmetropolitan areas did (see figure 21).



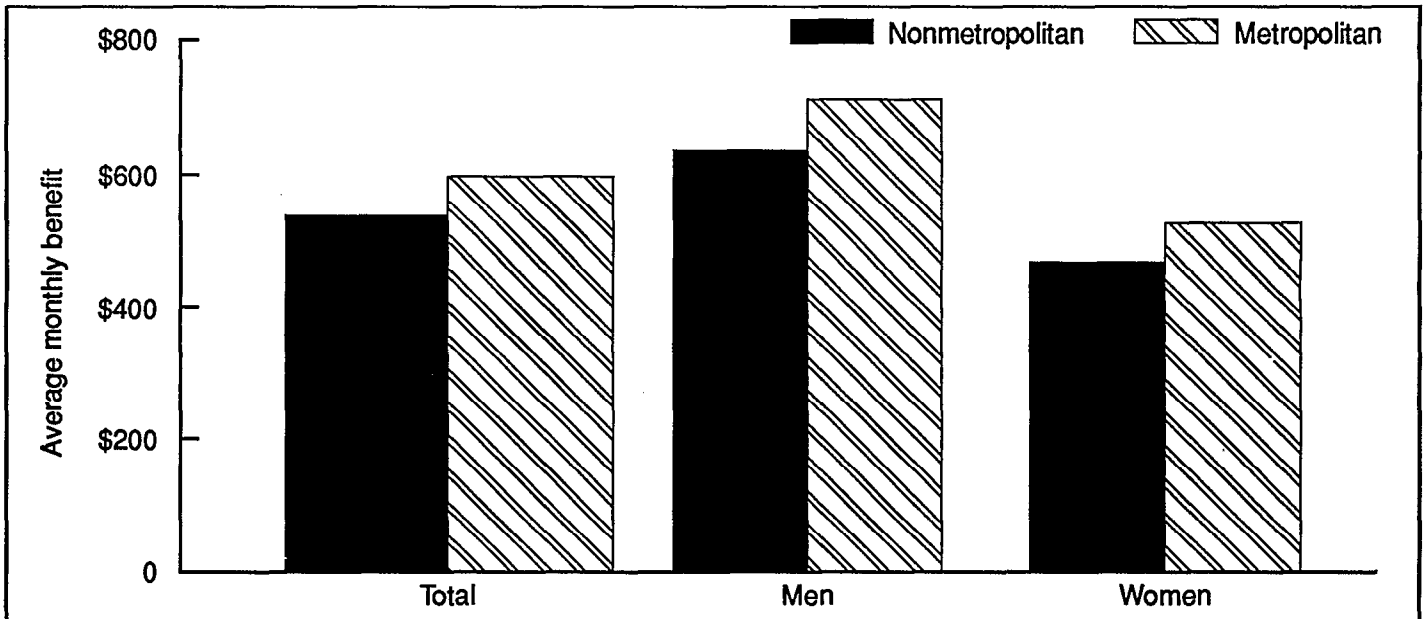
SOURCE: Agency for Health Care Policy and Research. National Medical Expenditure Survey–Household Survey, 1987.

Figure 15. Percent of the elderly in four income groups, by area: United States, 1987



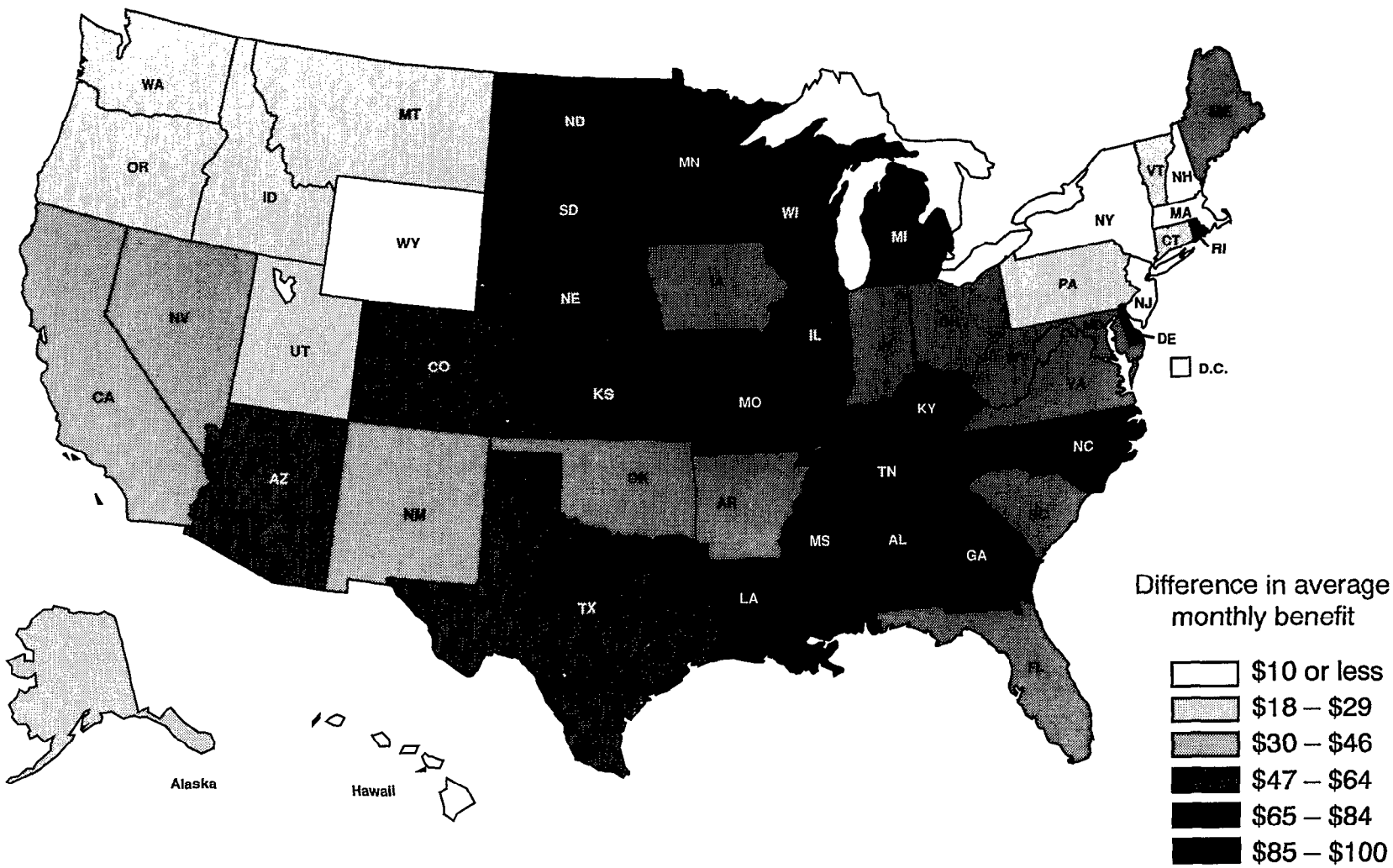
SOURCE: U.S. Department of Veterans Affairs, *Survey of Veterans,* 1987.

Figure 16. Percent of elderly veterans with family incomes less than $20,000, by area: United States, 1986



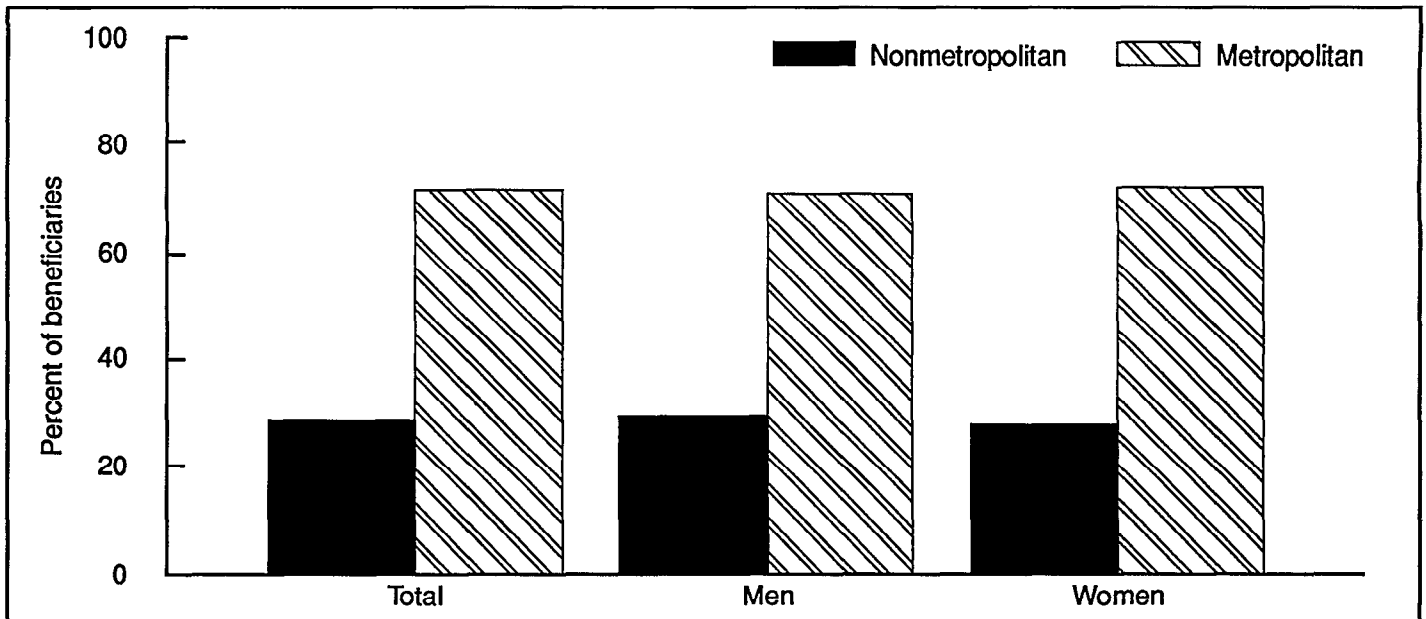
SOURCE: Social Security Administration, Office of Research and Statistics, 100 percent data from administrative records, December 1990.

Figure 17. Average monthly Social Security benefit for elderly beneficiaries, by sex and area: United States, December 1990



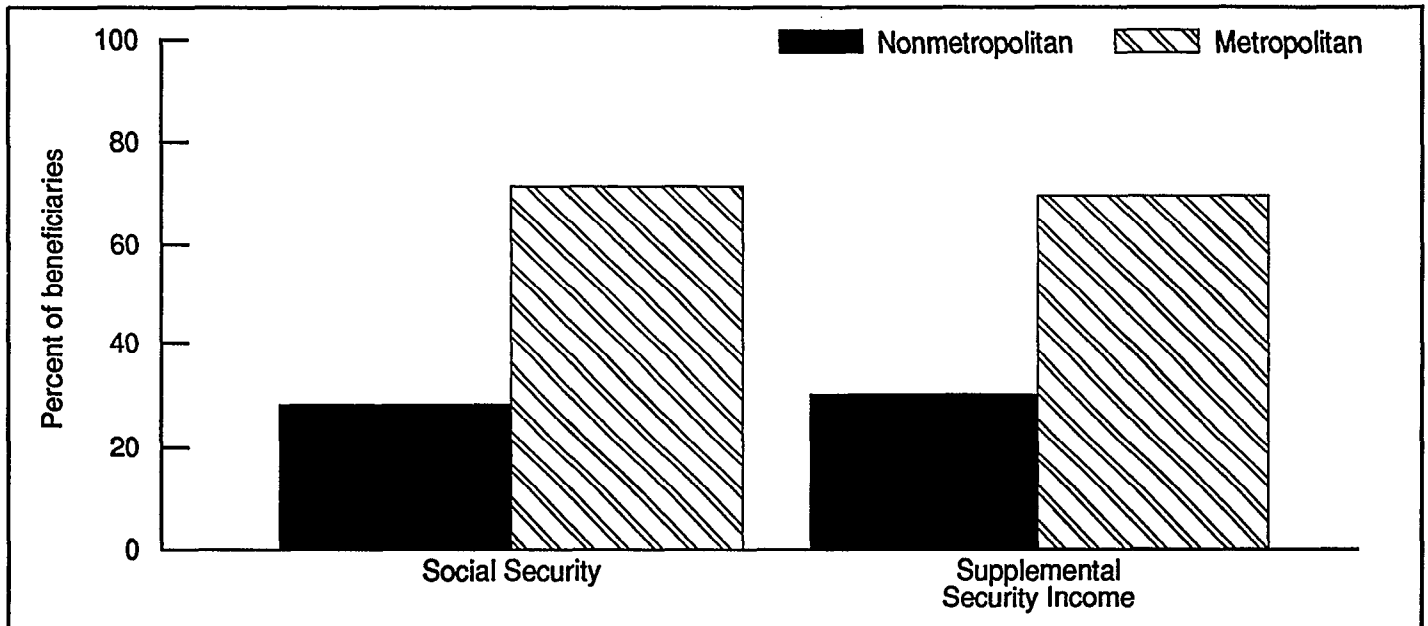
SOURCE: Social Security Administration, Office of Research and Statistics, 100 percent data from administrative records, December 1990.

Figure 18. Difference between average metropolitan and nonmetropolitan monthly Social Security benefits for elderly beneficiaries, by State: United States, December 1990



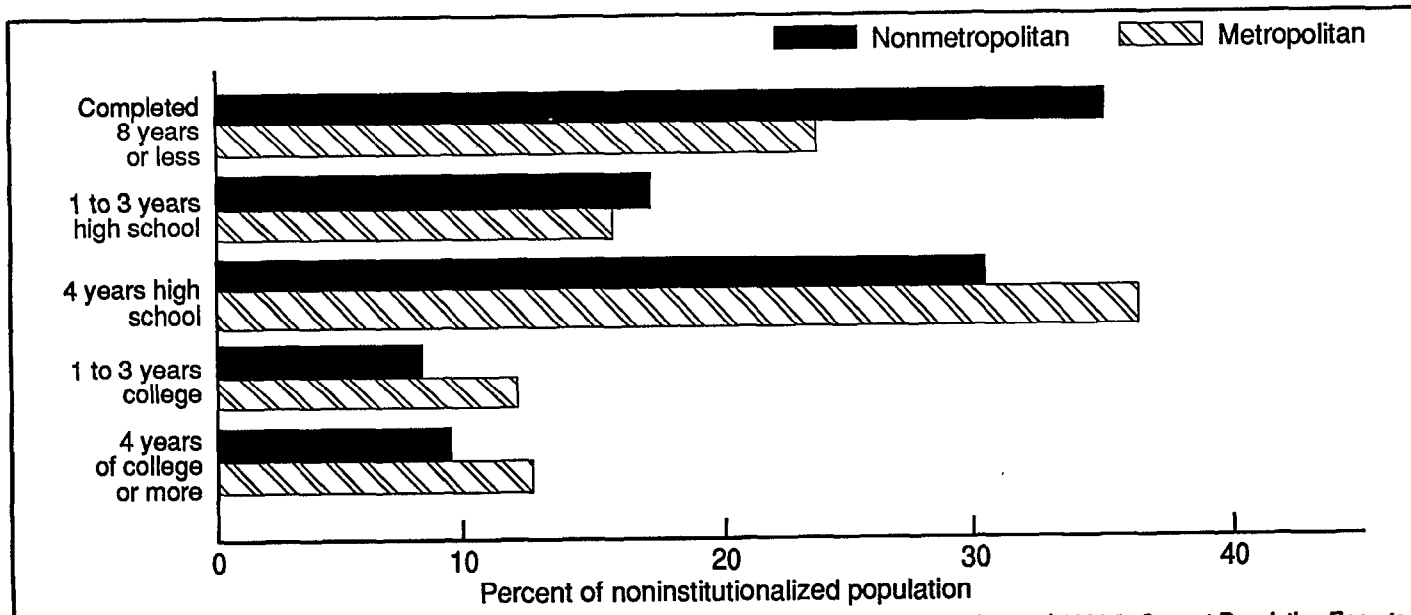
SOURCE: Social Security Administration, Office of Research and Statistics, 100 percent data from administrative records, December 1990.

Figure 19. Percent distribution of elderly Social Security beneficiaries, by sex and area: United States, December 1990



SOURCE: Social Security Administration, Office of Research and Statistics, 100 percent data from administrative records, December 1990.

Figure 20. Percent distribution of elderly Social Security and Supplemental Security Income beneficiaries, by area: United States, December 1990



SOURCE: U.S. Bureau of the Census, "Educational Attainment in the United States: March 1991 and 1990," *Current Population Reports*, Series P-20, No 462.

Figure 21. Educational attainment of noninstitutionalized elderly persons, by area: United States, 1991

Chapter 5
Housing

By Duane McGough, U.S. Department of Housing and Urban Development

Belief—Housing for nonmetropolitan elderly is of lower value and in poorer condition than that for the metropolitan elderly.

Summary

Elderly households in nonmetropolitan areas of the United States were more likely to own their homes than elderly households in metropolitan areas and to own their homes free and clear, without a mortgage. Their homes are also of lower value than the homes of metropolitan elderly persons, and are in somewhat poorer physical condition.

Discussion

Housing units occupied by elderly households in nonmetropolitan areas in 1989 were 70 percent more likely to have moderate to severe problems with maintenance or with missing or nonworking plumbing or kitchen equipment (see figure 22). In part, this is the result of factors such as the age of the structure; 19 percent of nonmetropolitan houses occupied by elderly households were built before 1920, compared with less than 11 percent of metropolitan houses that were occupied by the elderly. Nonmetropolitan elderly households, just like their nonelderly neighbors, were somewhat more likely to be homeowners than were metropolitan elderly households and thus have some home equity (see figure 23).

Housing costs for elderly owners and renters combined in nonmetropolitan areas were lower than for elderly owners and renters in metropolitan areas; this reflects, in part, the higher homeownership rate in nonmetropolitan areas, because elderly owners tend to have small or no mortgages and thus lower housing costs (see figure 24). The median value of elderly-owned houses in nonmetropolitan areas is only 62 percent of the value of elderly-owned houses in metropolitan areas, but the ratio to income is less for nonmetropolitan elderly owners because their incomes are closer (83 percent) to metropolitan elderly owners' incomes (see figure 25). Nonmetropolitan elderly owners were more likely in 1989 to own their houses free and clear than were metropolitan elderly owners, even though on average each group occupied the houses for the same period of time. This is in part because of more cash purchases and less financing in nonmetropolitan areas and because of shorter mortgage terms when financing is used. Thus, although nonmetropolitan owners have lower value houses, as a group, they have fewer liens on their houses and thus more equity than would otherwise be the case (see figure 26).

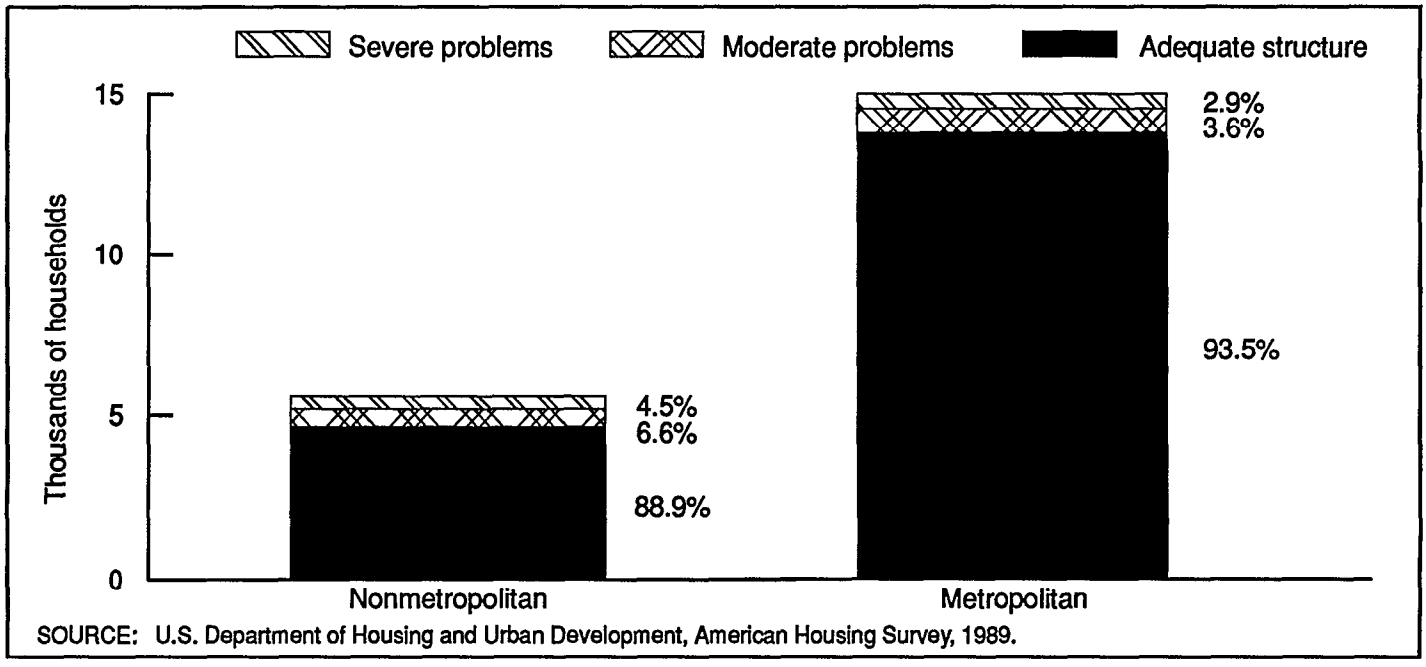


Figure 22. Number and percent of elderly households with physical structure problems, by severity of problem and area: United States, 1989

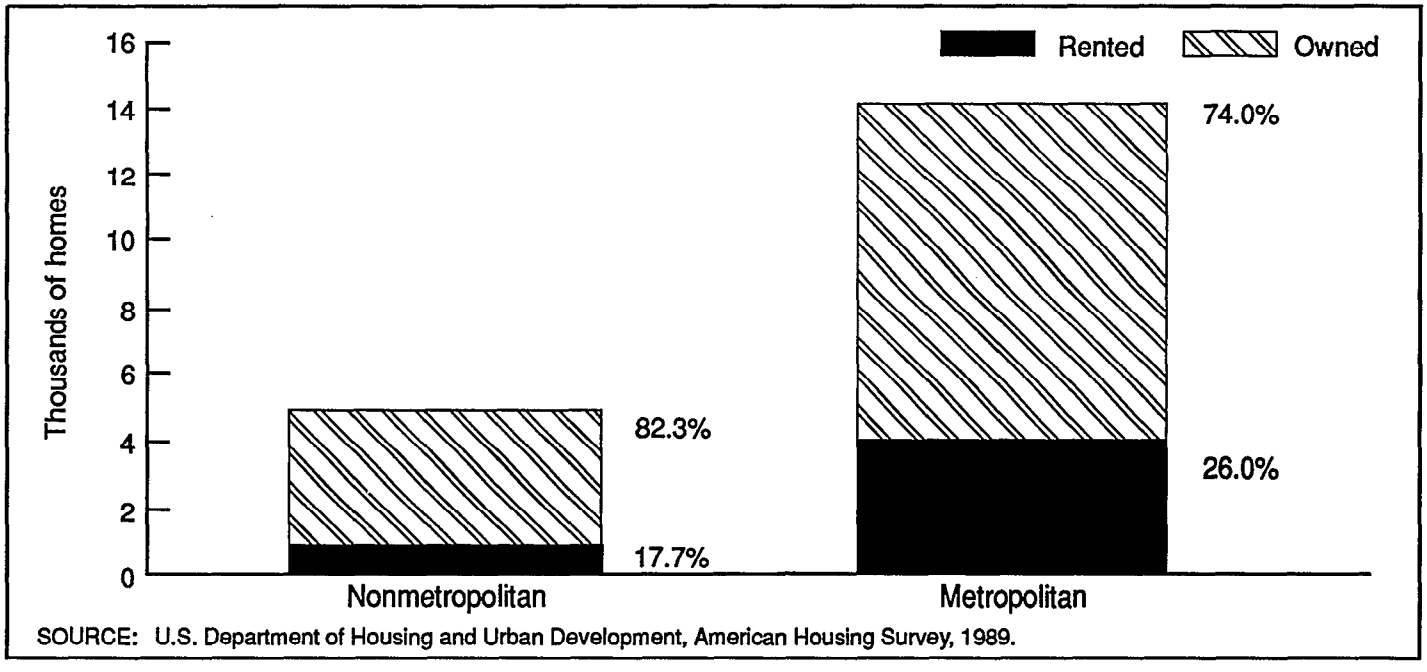
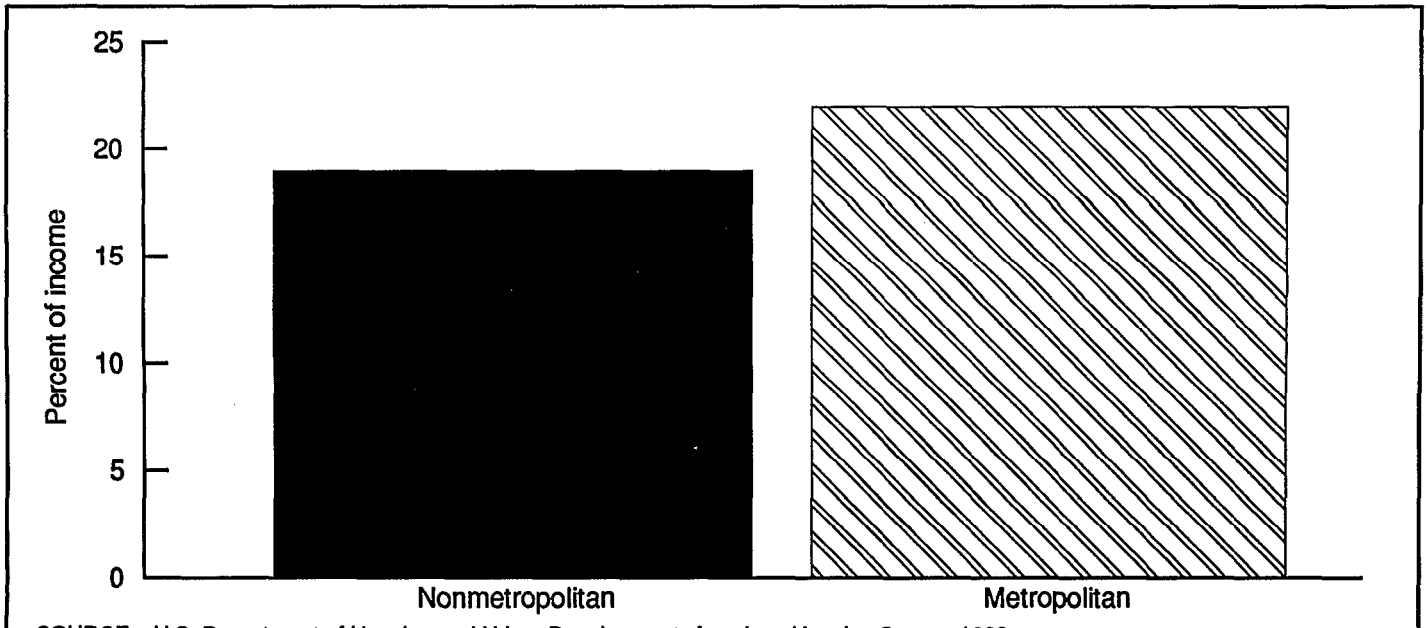
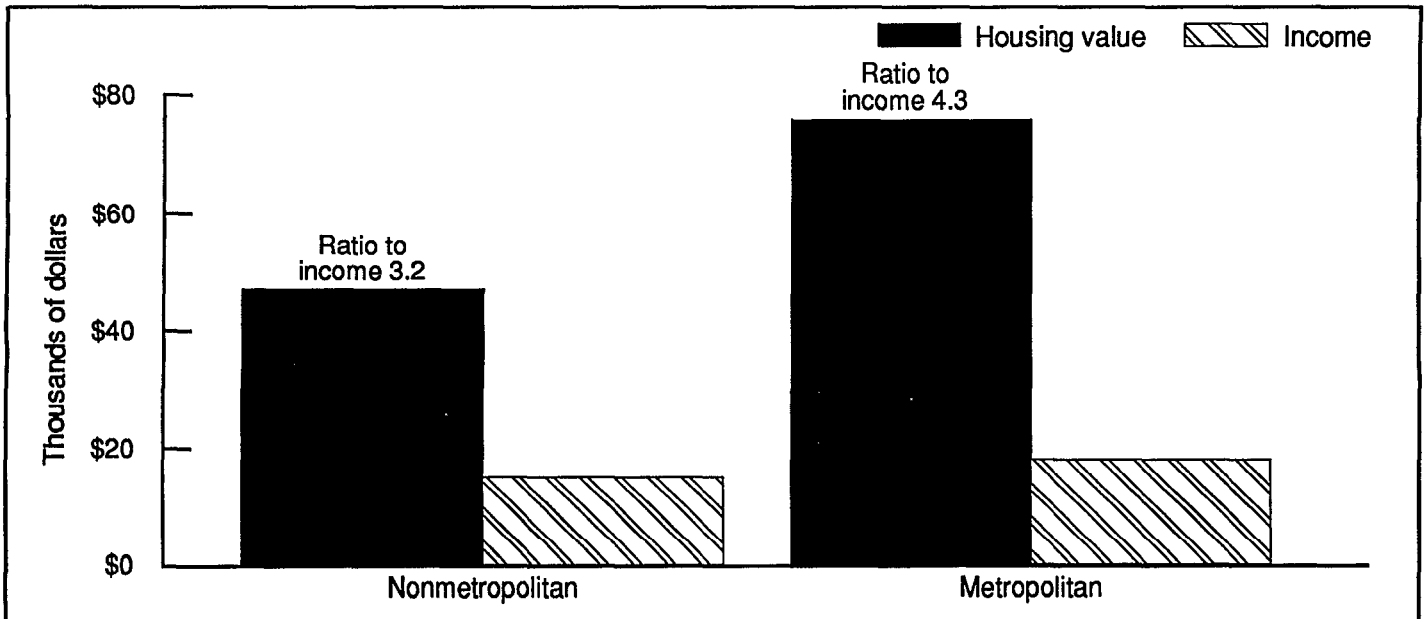


Figure 23. Number and percent of homes that are owned or rented by the elderly, by area: United States, 1989



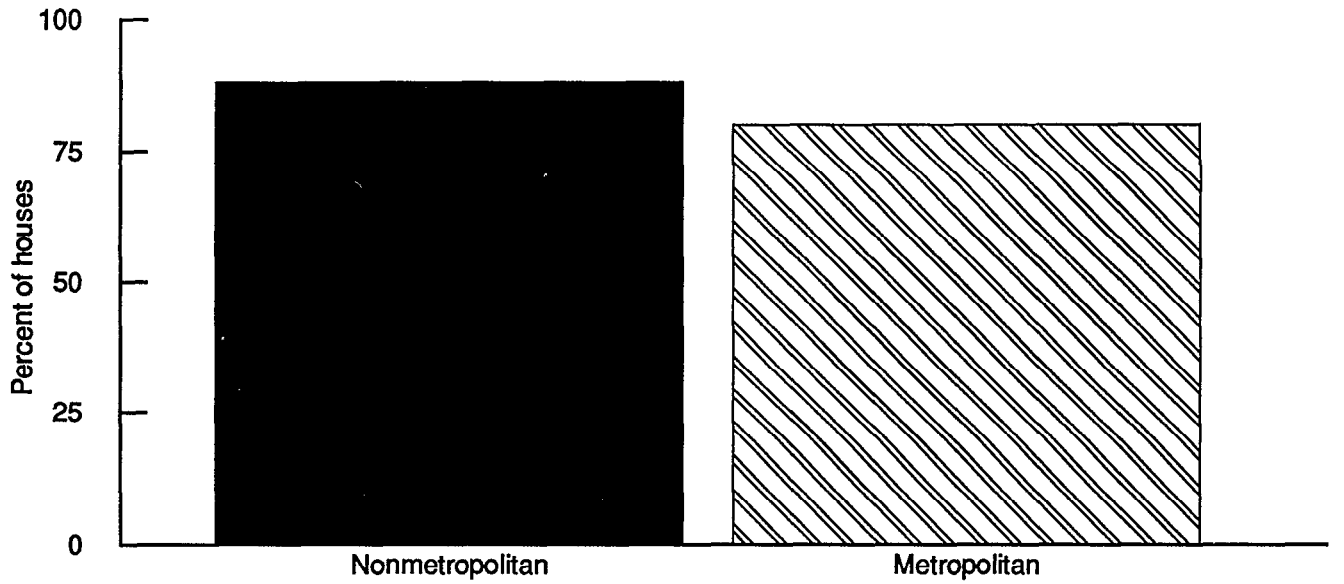
SOURCE: U.S. Department of Housing and Urban Development, American Housing Survey, 1989.

Figure 24. Housing costs as a percent of total income for elderly households, by area: United States, 1989



SOURCE: U.S. Department of Housing and Urban Development, American Housing Survey, 1989.

Figure 25. Median home value and ratio of owned-house value to current income for the elderly, by area: United States, 1989



SOURCE: U.S. Department of Housing and Urban Development, American Housing Survey, 1989.

Figure 26. Percent of elderly-owned houses without mortgages, by area: United States, 1989

Chapter 6
Social networks

By Joan F. Van Nostrand, M.P.A., National Center for Health Statistics; Sylvia E. Furner, Ph.D., University of Illinois at Chicago; Susan G. Cooley, Ph.D., U.S. Department of Veterans Affairs; and Arnold A. Goldstein, Ph.D., Bureau of the Census

Belief—Nonmetropolitan elderly benefit from a closely knit community, have a better social support network, and are more involved in religious activities.

Summary

There is little evidence that nonmetropolitan elderly have a more closely knit community than metropolitan elderly, although their social support network may be a little larger.

About two-thirds of elderly people, both nonmetropolitan and metropolitan, lived in family settings, and one-third lived alone. One-half of both groups participated in outside activities weekly, although more elderly in nonmetropolitan areas attended weekly religious services. Although three-fourths of both groups had a social network of friends and family to talk with or call on for help, the nonmetropolitan elderly's network of friends was larger. Comparable percents of rural and urban elderly veterans received assistance in basic activities of daily living from family and friends, but more urban elderly veterans received such assistance from professional caregivers.

Discussion

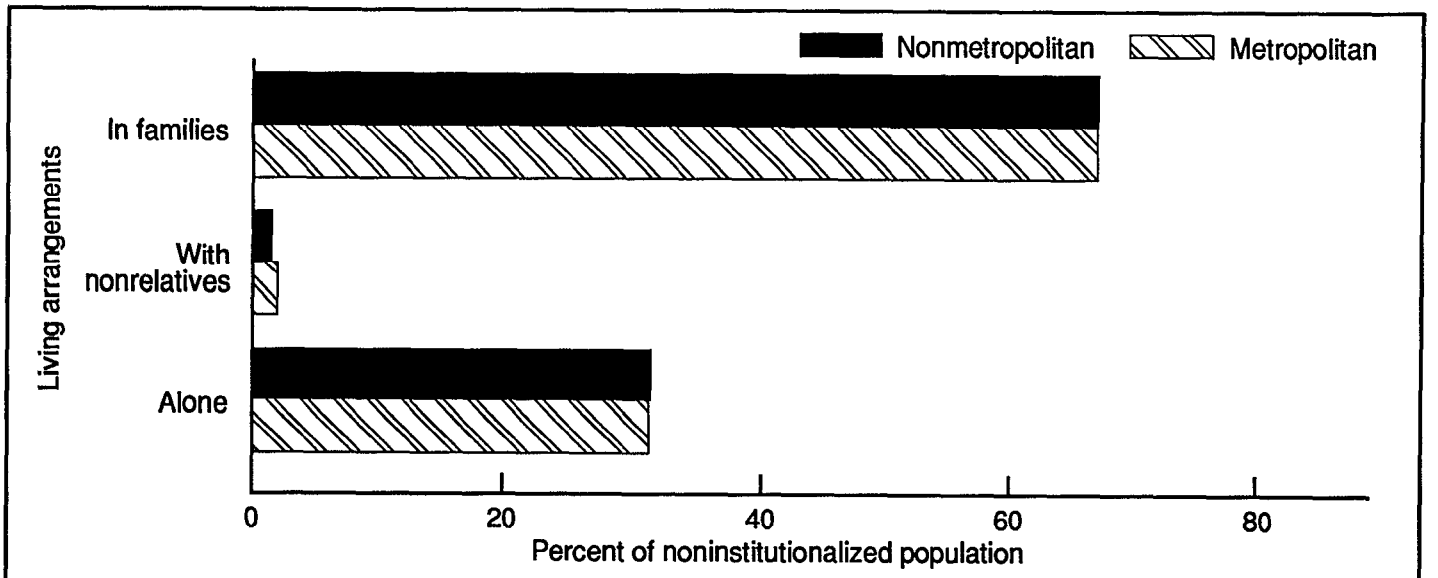
Elderly persons in nonmetropolitan areas were no more likely than their metropolitan counterparts to live in families. They were also about equally likely to live with nonrelatives or to live alone. In 1990, about two-thirds of elderly people lived in a family setting and nearly one-third lived alone in both nonmetropolitan and metropolitan areas (see figure 27).

About one-third of both nonmetropolitan and metropolitan elderly participated in social activities such as social clubs, sports events, and other community groups. However, a greater percent of elderly in nonmetropolitan areas attended weekly religious services than did their urban counterparts; 63 percent of elderly in nonmetropolitan areas attended at least one religious service per week, in contrast with 57 percent of metropolitan elderly (see figure 28).

Both nonmetropolitan and metropolitan elderly had one or more relatives and friends they talked with monthly (see figure 29). More than 85 percent of both nonmetropolitan and metropolitan elderly had one or more relatives they could call on for help (see figure 30). One measure of the strength of a social network is the number of friends a person can call on for help or to talk about private matters. About one-quarter of both nonmetropolitan and metropolitan elderly had no such network. For those elderly with such a network, there were differences in its size. A greater percent of the elderly in nonmetropolitan areas had more than three friends to call on than did their metropolitan counterparts (see figure 31).

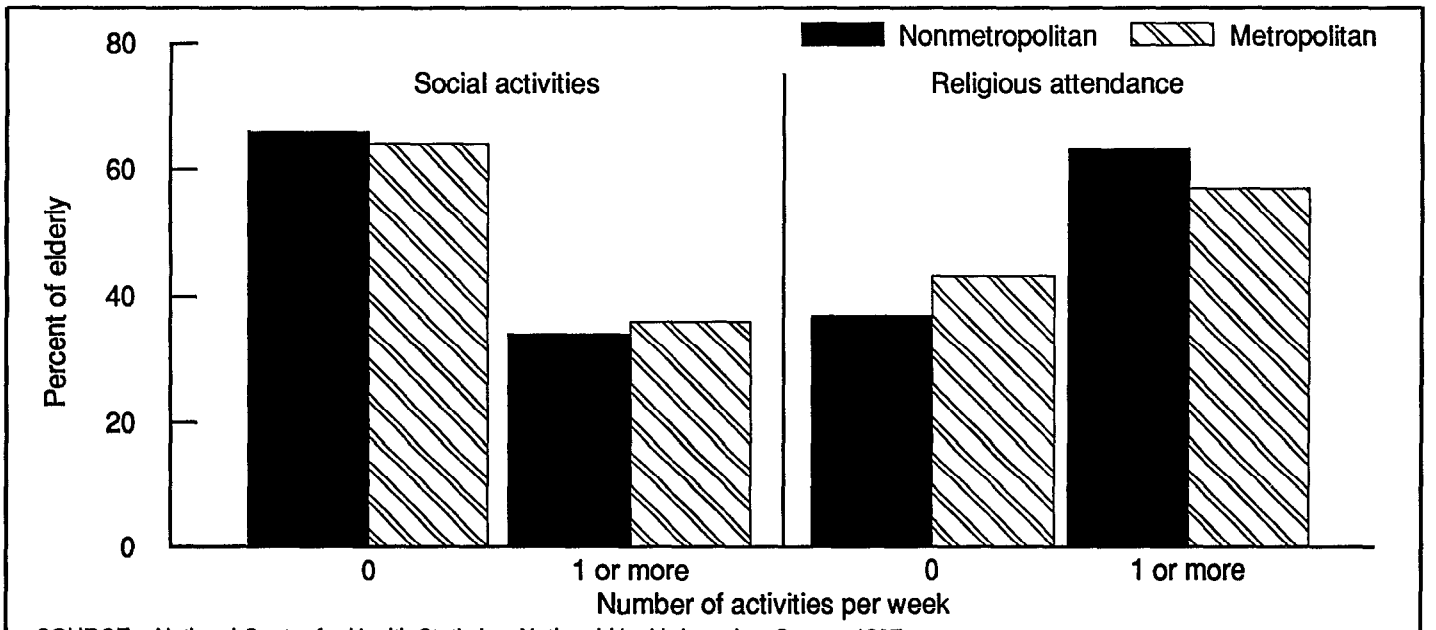
A different measure of the existence and extent of social support is provided by the sources of assistance for basic activities of daily living. Everyday activities are grouped into two categories: (1) ADL's, or activities of daily living, which are personal care tasks, such as walking, bathing,

dressing, toileting, and transferring, and (2) IADL's, or instrumental activities of daily living, which are tasks necessary for independent living in the community, such as heavy and light housework, shopping, preparing meals, and managing money. Of those elderly veterans who received some assistance with ADL's or IADL's in the 12 months prior to a 1987 survey, comparable percents of rural and urban elderly received such assistance from their spouse, from their children, from other family members, or from friends. Observable differences are not statistically significant. In contrast, the percent of rural elderly veterans who received help with ADL's or IADL's from formal, professional caregivers, such as social workers, visiting nurses, or therapists, was significantly smaller than that of urban elderly veterans (7 percent of rural versus 20 percent of urban elderly veterans) (see figure 32).



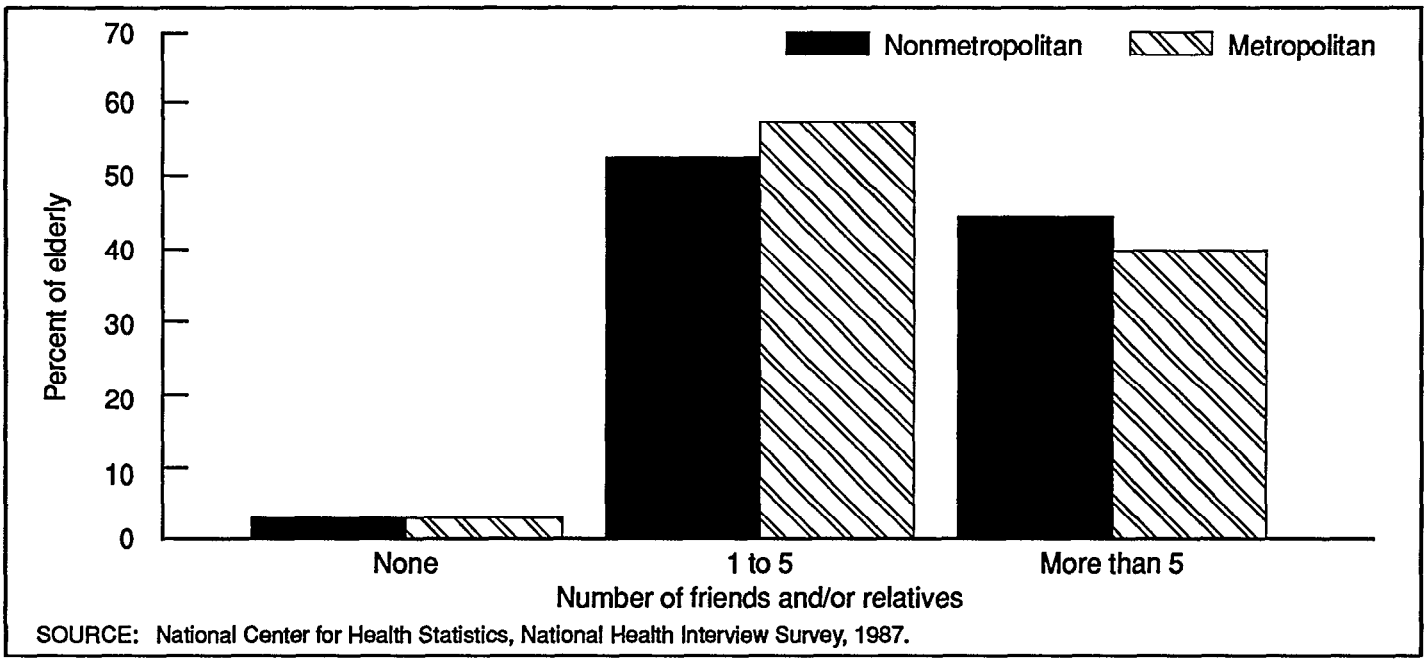
NOTE: For information about sampling error, see "Marital Status and Living Arrangements: March 1990," *Current Population Reports*, Series P-20, No 450, Appendix B.
SOURCE: U.S. Bureau of the Census, 1990 Current Population Survey.

Figure 27. Living arrangements of the noninstitutionalized elderly, by area: United States, 1990



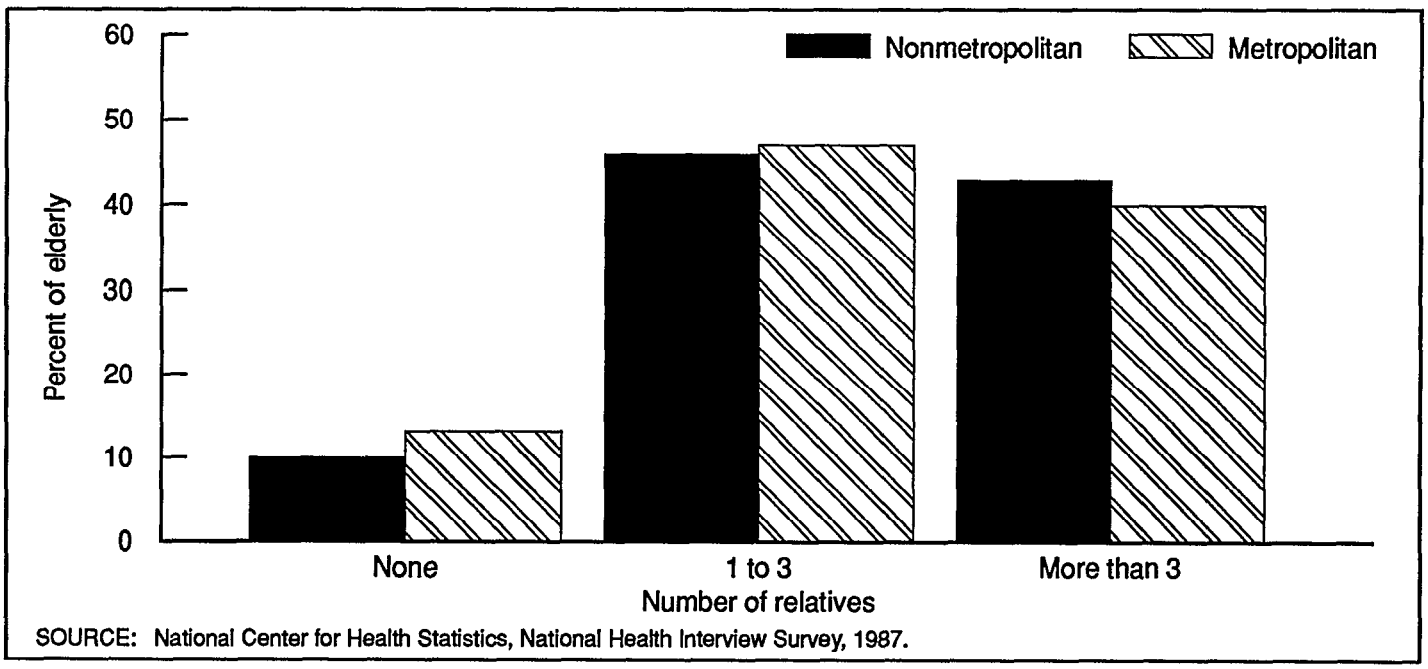
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1987.

Figure 28. Percent of elderly by number of social and religious activities attended weekly, by area: United States, 1987



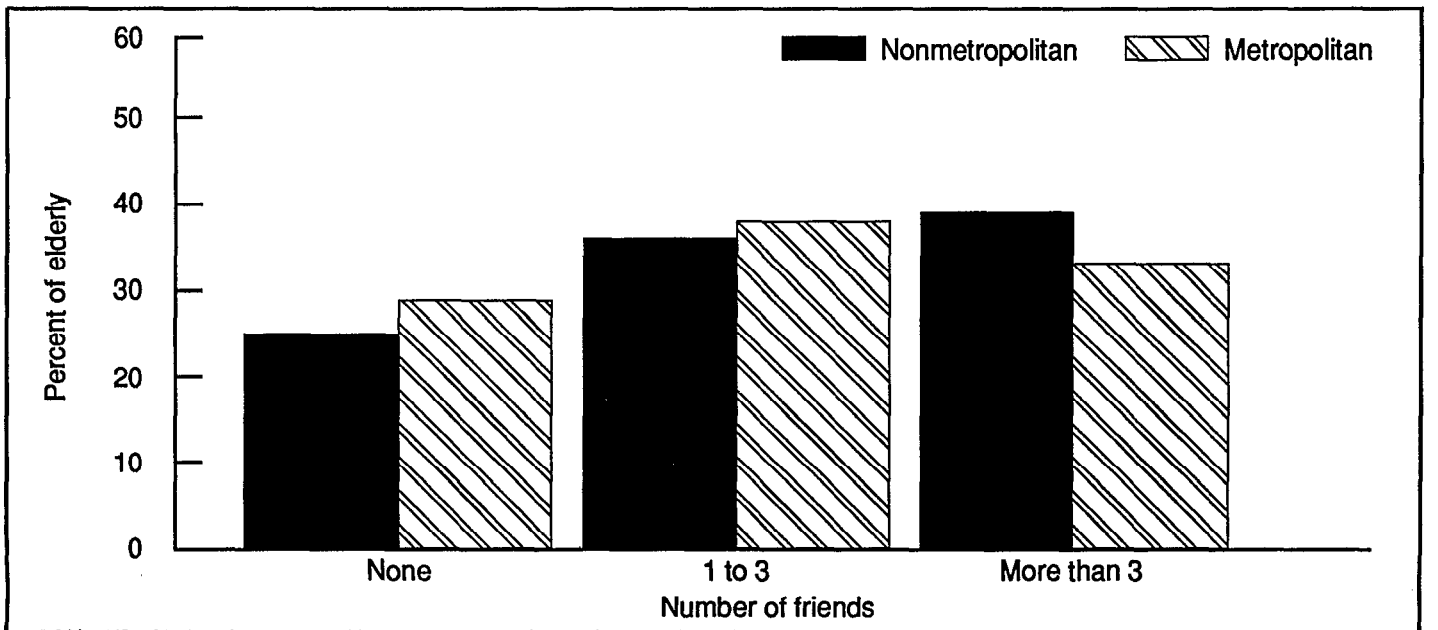
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1987.

Figure 29. Percent of elderly by number of friends or relatives talked with in the past month, by area: United States, 1987



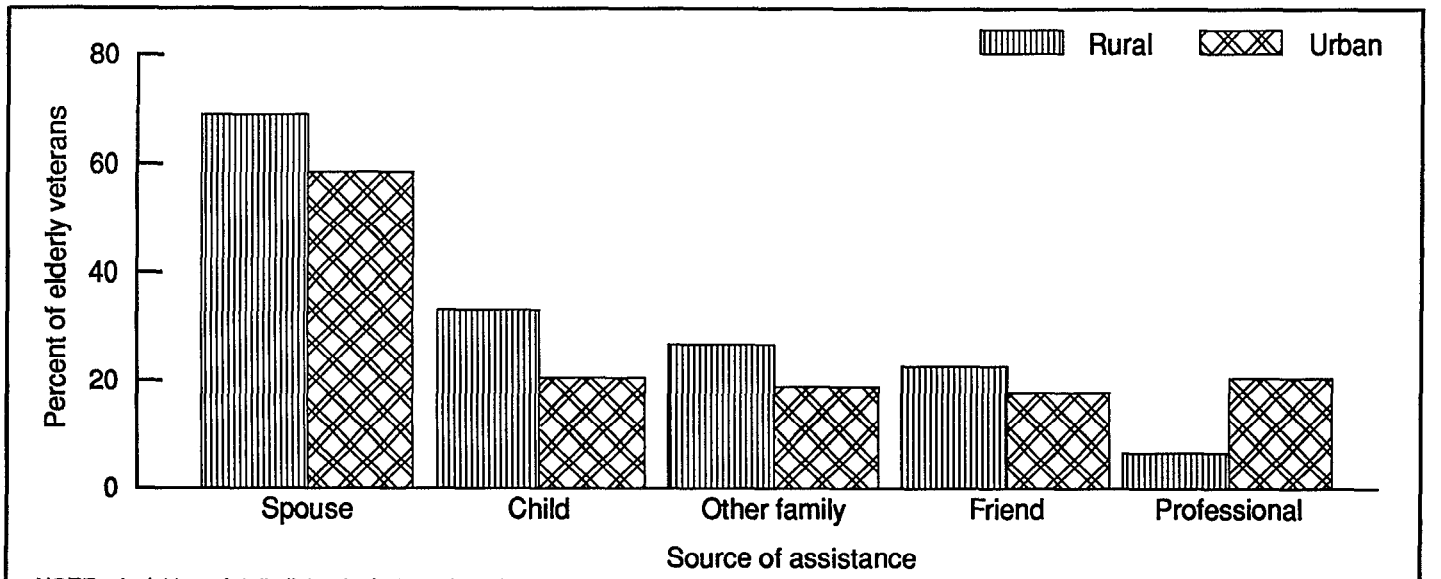
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1987.

Figure 30. Percent of elderly by number of relatives they can call for help, by area: United States, 1987



SOURCE: National Center for Health Statistics, National Health Interview Survey, 1987.

Figure 31. Percent of elderly by number of friends they can call for help, by area: United States, 1987



NOTE: Activities of daily living include eating, dressing, toileting, bathing, and transferring. Instrumental activities of daily living include meal preparation, getting around the community, shopping, managing money, using the telephone, and light housework.
SOURCE: U.S. Department of Veterans Affairs, ***Survey of Veterans,*** 1987.

Figure 32. Sources of assistance for elderly veterans receiving aid with activities of daily living or instrumental activities of daily living, by area: United States, 1987

Chapter 7
Access

By Patricia Taylor, Ph.D., Office of Rural Health Policy of the Health Resources and Services Administration; Dena Puskin, Sc.D., Office of Rural Health Policy of the Health Resources and Services Administration; Susan G. Cooley, Ph.D., U.S. Department of Veterans Affairs; and Jill Braden, Agency for Health Care Policy and Research

Belief—Nonmetropolitan elderly have limited access to doctors, hospitals, or advanced medical services.

Summary

Rural elders may have experienced structural barriers to access, such as lack of specific medical services in the local area or difficulty in reaching facilities that provide needed services. The supply of health care professionals in rural counties varied across States and regions and with such factors as the number of residents per square mile (population density) and proximity to a metropolitan area. In those rural places that have a shortage of physicians and other primary care providers, the elderly may have to travel considerable distances for primary care. On average, the nonmetropolitan elderly encountered longer travel and waiting times at their usual site of outpatient care. Nonmetropolitan elderly Medicare beneficiaries had a higher rate of hospital discharges and a lower rate of days of hospital care. For specialized medical care and for technology-intensive inpatient procedures, they frequently had to travel to urban areas or rural referral centers. However, from a five-State study (5) of rural versus urban hospital access for Medicare beneficiaries, it does not appear that rural residents are hindered from receiving inpatient hospital care. Similar percents of rural and urban elderly veterans used inpatient health services in 1987. This was also the case for outpatient services.

Discussion

Frontier counties, with a population density of six or fewer persons per square mile, were particularly likely to have shortages of health care professionals. In 1988, frontier counties constituted well over one-half of the 176 rural counties in the Nation with no primary care physician (3) (see figure 33).

National figures obscure considerable regional variation in physician supply in both nonmetropolitan and metropolitan areas. In all regions of the country, the per capita supply of primary care physicians in nonmetropolitan areas was considerably lower than in metropolitan areas, with the nonmetropolitan supply ranging from 56 percent of the metropolitan supply in the South to 72 percent in the West (see figure 34). Within nonmetropolitan counties, physician-to-population ratios were related to county size, with the smallest nonmetropolitan counties having only one-quarter as many physicians per capita as the largest counties. This relationship of county size and physician supply is statistically significant, independent of population density and income (see figure 35).

The distribution of dentists across nonmetropolitan and metropolitan areas was very similar to that of physicians. For all dentists and for general practice and pediatric dentists, the dentist-to-population ratio was much lower in nonmetropolitan than in metropolitan counties in 1987. There were 32 percent fewer general

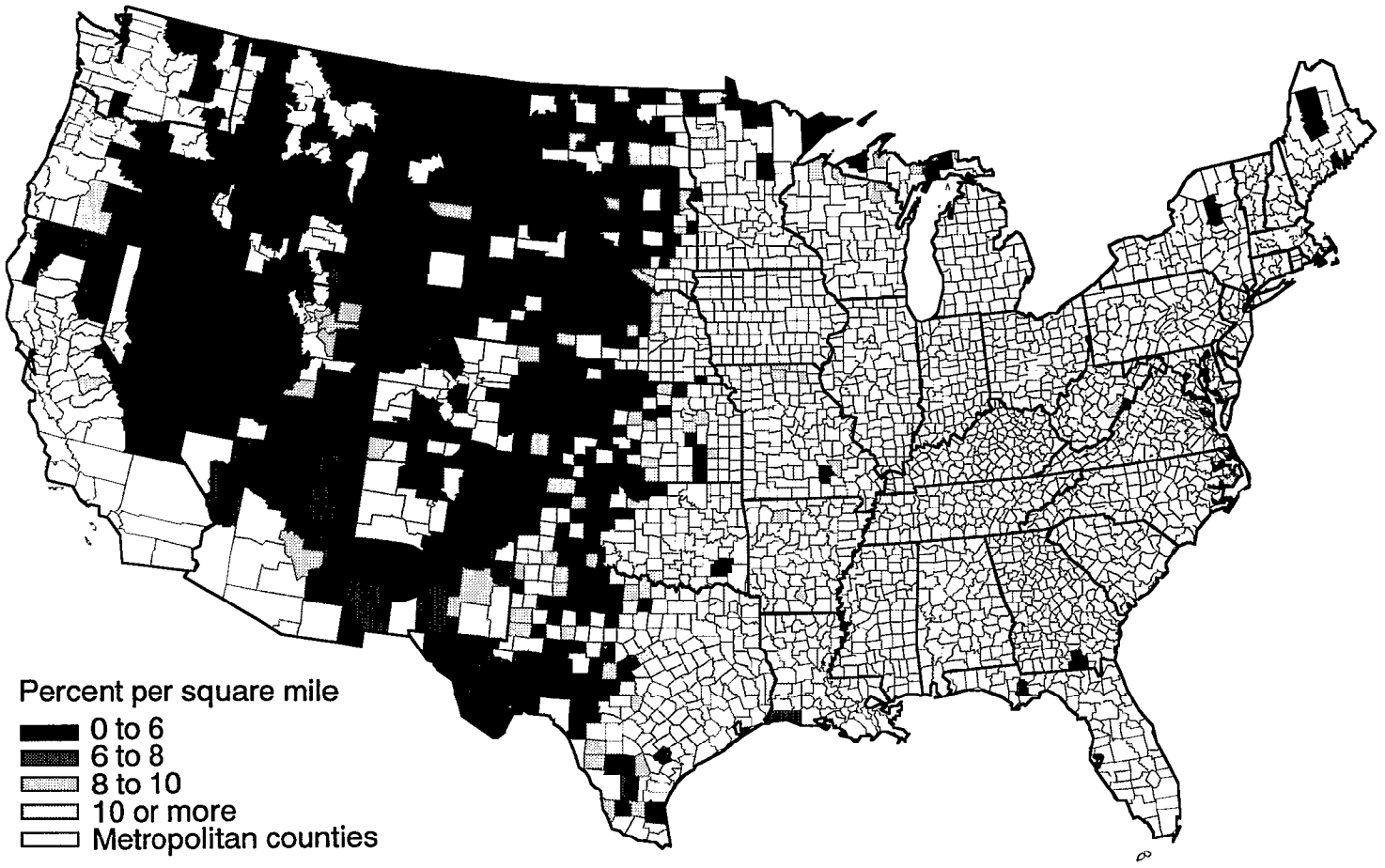
practice and pediatric dentists per capita in nonmetropolitan areas. Within nonmetropolitan counties, the dentist-to-population ratio decreased with county population, with the least populous counties having less than one-half as many dentists per capita. In 1987, there were 183 counties without a general practice or pediatric dentist. Virtually all were nonmetropolitan and had fewer than 25,000 residents. Most had low population density as well (4) (see figure 36).

Access to care in rural areas is seen as an important factor in predicting use of medical services. A physician's office was the most frequent site of care, with the nonmetropolitan elderly being somewhat more likely (86 versus 80 percent) to identify this as the place usually visited when sick or needing health-related advice. However, the nonmetropolitan elderly generally encountered longer travel and waiting times than did the elderly in metropolitan counties. The nonmetropolitan elderly were almost twice as likely to travel more than 30 minutes to reach their usual source of care (13 versus 7 percent). Once the site of care was reached, more than 20 percent of the elderly nonmetropolitan population encountered an office waiting time that exceeded half an hour (see figure 37).

Comparable percents of rural and urban elderly veterans used inpatient health services during a 12-month period prior to a 1987 survey. Approximately 3 percent of rural and 3 percent of urban elderly veterans used Veterans Affairs (VA) inpatient hospitals. About 21 percent of rural and 16 percent of urban elderly veterans used non-VA inpatient hospitals. There are no statistically significant differences between these numbers for rural and urban elderly veterans. Fewer rural than urban elderly veterans used no inpatient health services within the previous year (75 percent of rural and 79 percent of urban elderly) (see figure 38). Comparable percents of rural and urban elderly veterans used outpatient health services; 19 percent of rural and 16 percent of urban elderly veterans used VA outpatient health services. Sixty-two percent of rural and 64 percent of urban elderly veterans used non-VA outpatient health services. There are no statistically significant differences between these numbers for rural and urban elderly veterans. Also, comparable percents of rural and urban elderly veterans used no outpatient health services within the previous year (18 percent of rural and 20 percent of urban). There are no statistically significant differences between these numbers for rural and urban elderly veterans (see figure 39).

The Medicare hospital discharge rate for nonmetropolitan enrollees was 14 percent higher than the rate for metropolitan enrollees in 1989 (see figure 40). Populations served by the smallest hospitals (fewer than 50 beds) generally had the highest admissions rates.

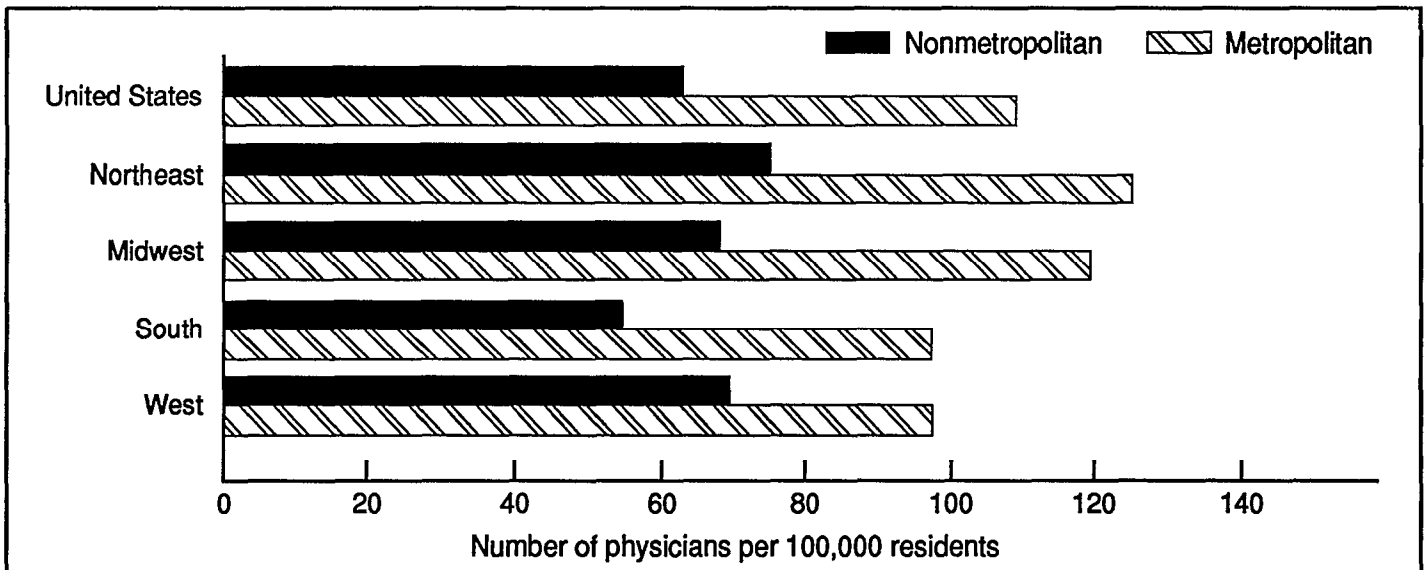
The resources and scope of services in small rural hospitals were often limited. This means that rural Medicare beneficiaries may have to travel to urban areas or rural referral centers for surgery and technology-intensive care. There is a concern that difficulty in travelling may cause particular access problems for rural beneficiaries. However, based on the evidence available, it does not appear that rural beneficiaries were hindered from receiving inpatient care. In a five-State study (5) done to assess relative differences in access, hospital admission rates for Medicare beneficiaries living in rural and urban areas were compared. The overall hospital admission rate for rural beneficiaries was 14 percent higher than the rate for urban beneficiaries in 1988. There was little difference in the admission rates for technology-intensive procedures (see figure 41).



NOTE: Copyright 1991, Rural Health Research Program, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, reprinted with permission.

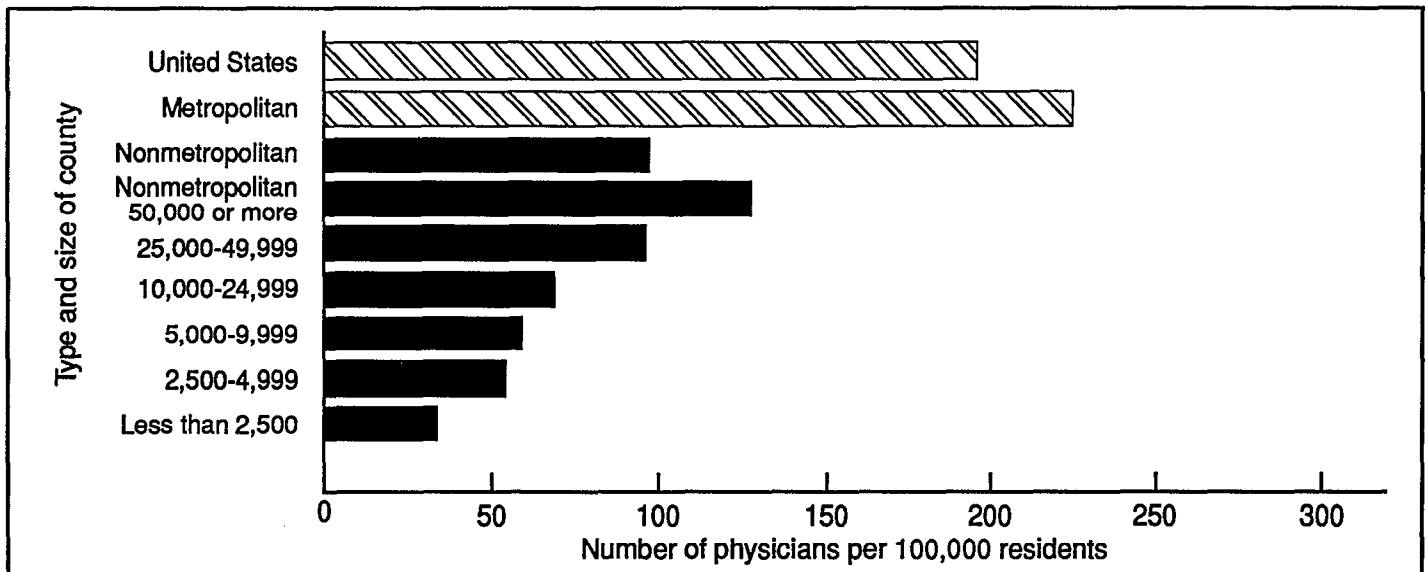
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 33. Frontier and other nonmetropolitan counties, by population density: United States, 1990



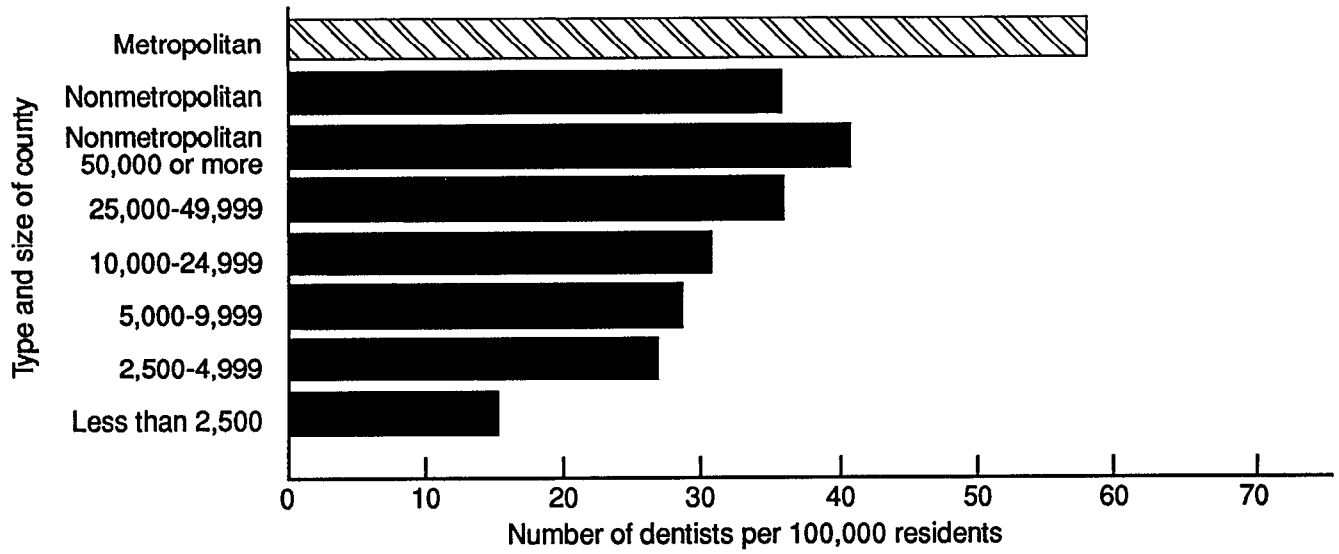
NOTE: Includes allopathic physicians (M.D.) in general or family practice, general internal medicine, general pediatrics, and obstetrics-gynecology, and all osteopathic physicians (D.O.) involved in direct patient care. M.D. data as of Jan. 1, 1988. D.O. data as of 1987.
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 34. Number of primary care physicians per 100,000 residents, by region and area: United States, 1987-88



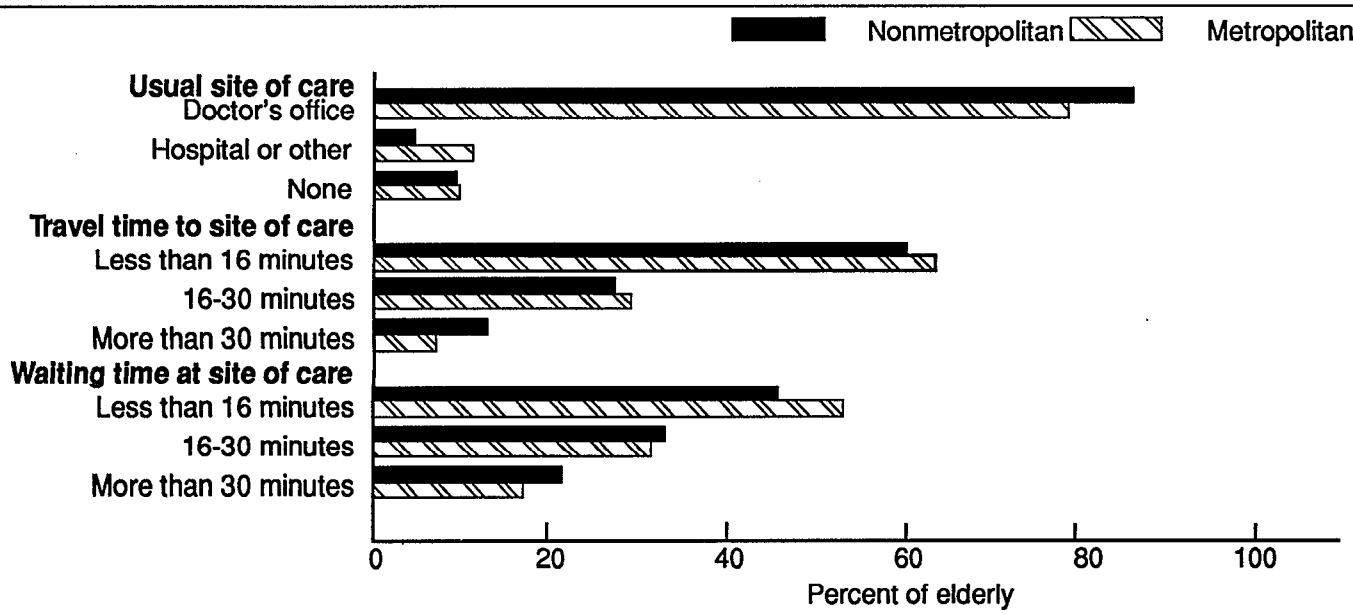
NOTE: Includes allopathic (M.D.) and osteopathic (D.O.) physicians actively involved in patient care, research, administration, or teaching. Includes physicians in Federal servcie. M.D. data as of Jan. 1, 1988. D.O. data as of 1987.
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 35. Number of professionally active physicians per 100,000 residents, by area and nonmetropolitan county size: United States, 1987-88



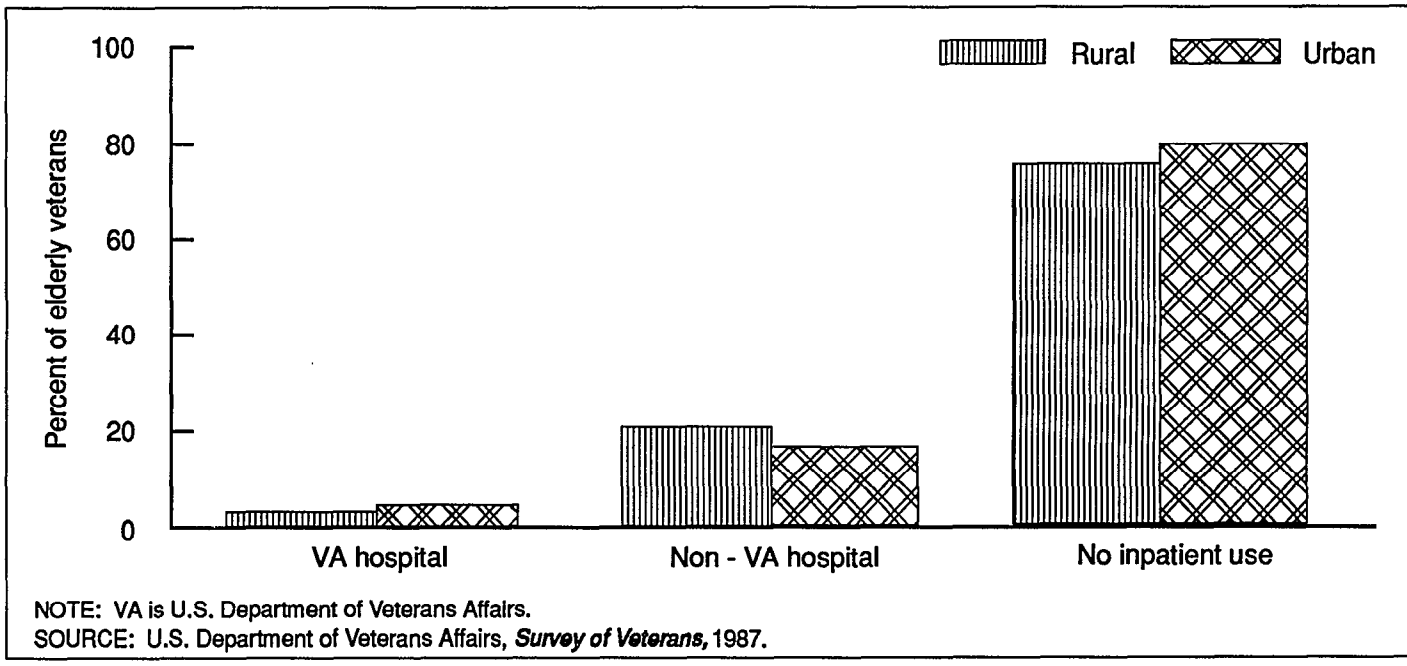
NOTE: Includes both full-time and part-time dentists.
SOURCE: Health Resources and Services Administration, Area Resource File.

Figure 36. Number of dentists per 100,000 residents, by area and nonmetropolitan county size: United States, 1987



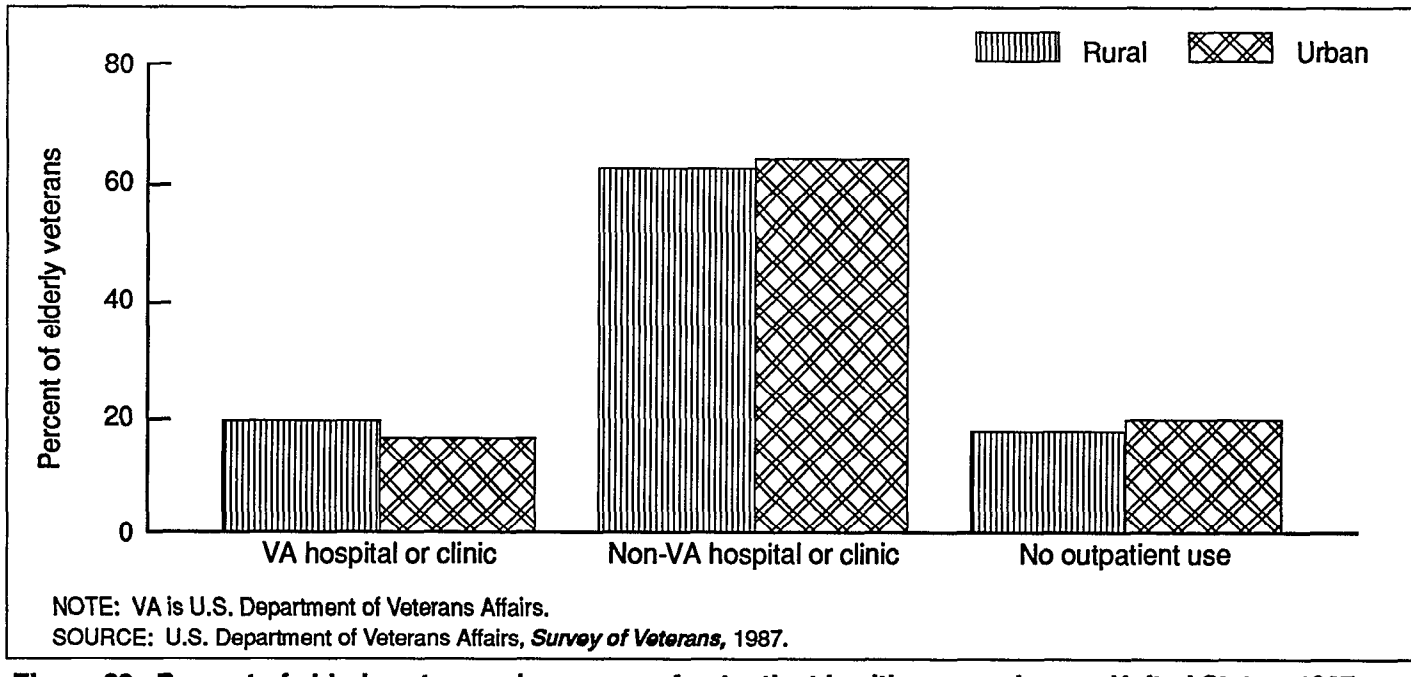
SOURCE: Agency for Health Care Policy and Research, National Medical Expenditure Survey - Household Survey, 1987.

Figure 37. Percent of the elderly, by selected measures of access to outpatient care and area: United States, 1987



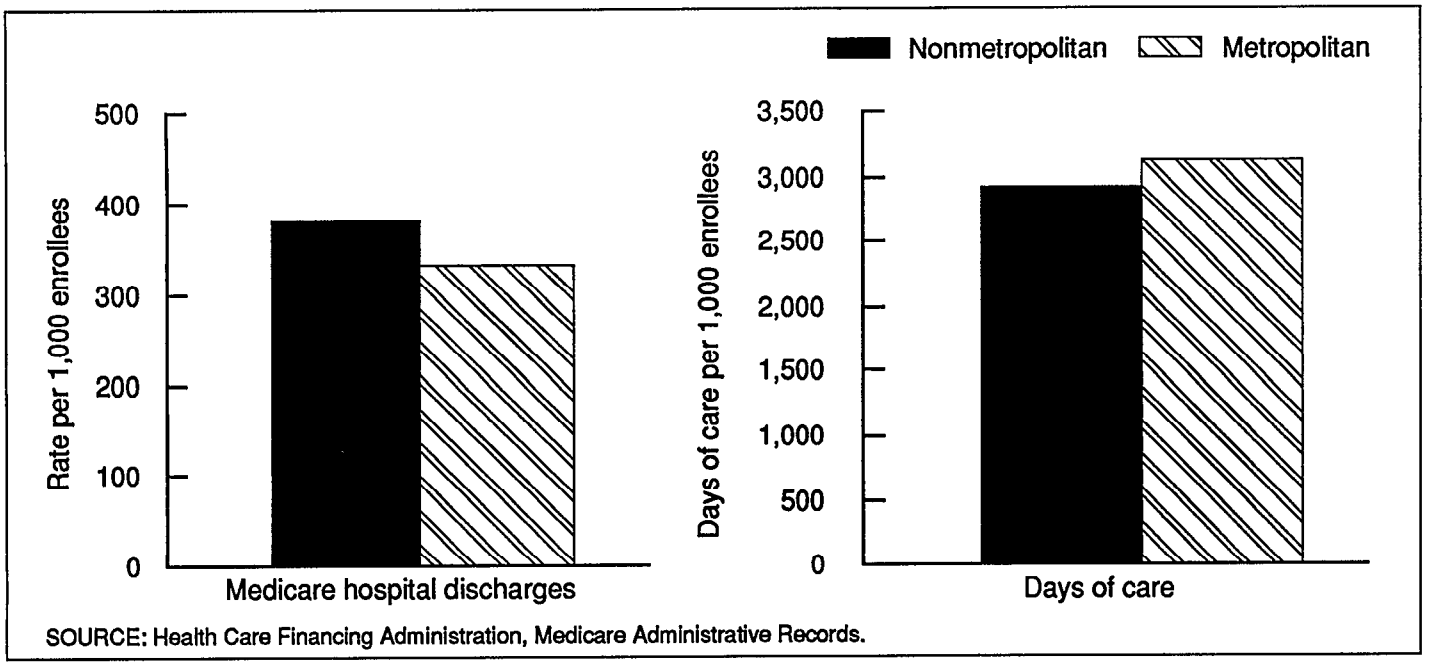
NOTE: VA is U.S. Department of Veterans Affairs.
SOURCE: U.S. Department of Veterans Affairs, ***Survey of Veterans,*** 1987.

Figure 38. Percent of elderly veterans, by source of inpatient health care and area: United States, 1987



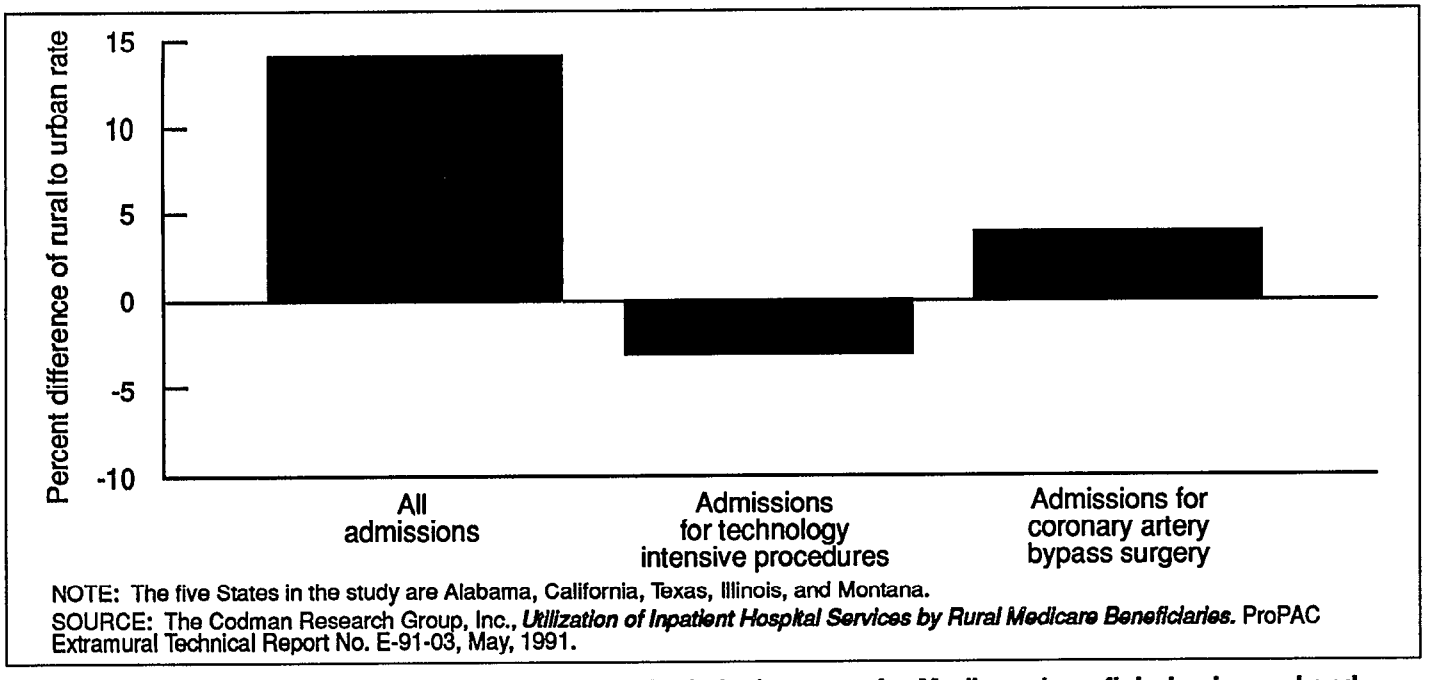
NOTE: VA is U.S. Department of Veterans Affairs.
SOURCE: U.S. Department of Veterans Affairs, ***Survey of Veterans,*** 1987.

Figure 39. Percent of elderly veterans, by source of outpatient health care and area: United States, 1987



SOURCE: Health Care Financing Administration, Medicare Administrative Records.

Figure 40. Rate of Medicare hospital discharges and number of days of care per 1,000 enrollees, by area: United States, 1989



NOTE: The five States in the study are Alabama, California, Texas, Illinois, and Montana.
SOURCE: The Codman Research Group, Inc., ***Utilization of Inpatient Hospital Services by Rural Medicare Beneficiaries.*** ProPAC Extramural Technical Report No. E-91-03, May, 1991.

Figure 41. Percent difference in per capita hospital admission rates for Medicare beneficiaries in rural and urban areas, by type of admission: selected States, 1988

Chapter 8
Health

By Joan F. Van Nostrand, M.P.A., National Center for Health Statistics; Sylvia E. Furner, Ph.D., University of Illinois at Chicago; Janet A. Brunelle, National Institute of Dental Research; and Robin A. Cohen, Ph.D., National Center for Health Statistics

Belief—Nonmetropolitan elderly are healthier and have a more active lifestyle but tend not to take preventive health care measures. However, minority elderly in nonmetropolitan areas are sicker than their metropolitan counterparts.

Summary

Nonmetropolitan elderly were not healthier or more active than their metropolitan counterparts. A greater percent of the elderly in nonmetropolitan areas assessed their health as fair or poor. This is a telling measure of health because it is associated with mortality, life satisfaction, and objective measures of health. There were no nonmetropolitan-versus-metropolitan differences in the percent of elderly who limited their activities because of illness. Nonmetropolitan elderly showed little difference in health behaviors; there was no difference between nonmetropolitan and metropolitan elderly in the percent who smoked heavily, drank heavily, ate healthful diets, or were overweight. In contrast, elderly women in nonmetropolitan areas were more vulnerable to dying from breast cancer because a significantly smaller percent had a clinical screening or a mammogram in the past year. Black elderly persons in nonmetropolitan areas were sicker than their urban counterparts and were the most likely to rate their health as fair or poor.

Discussion

The diversity of health status by county is illustrated by a map of death rates from heart disease for women 65–74 years of age (see figure 42). Heart disease was the leading cause of death for this group. Death rates varied considerably from a low of 258–628 per 100,000 (light areas on the map) to a high of 860–1,820 per 100,000 (dark areas). Other causes of death would have similar variations in rates by county. Although the data presented in this chapter examine health status from a nonmetropolitan-metropolitan dichotomy, it is important to remember the social and economic diversity of rural America that lies behind these summary categories.

Respondent-assessed health is one of the simplest but also one of the most informative measures of health. It is associated with mortality, life satisfaction, and objective health-status measures such as physical exams and physician ratings (6, 7). In 1990, more nonmetropolitan elderly assessed their health as fair or poor than did metropolitan elderly. About 30 percent of nonmetropolitan elderly versus 27 percent of metropolitan elderly assessed their health as fair or poor. These nonmetropolitan elderly were more likely to have a higher risk of mortality and lower life satisfaction than were metropolitan elderly (see figure 43).

Another picture emerges when the health of minority elderly is examined by metropolitan status. Because the size of the sample of minority elderly was limited, data were combined for 3 years, 1985–87, and were analyzed for the largest older minority group, black elderly persons. Figure 44 presents the percent of black and white

elderly persons who rated their health as fair or poor. A higher percent of elderly black persons in nonmetropolitan areas rated their health as fair or poor, compared with black persons in metropolitan areas (56 versus 43 percent). Furthermore, compared with white elderly persons, a greater percent of black elderly rated their health as fair or poor. This was the case in both nonmetropolitan and metropolitan areas. In nonmetropolitan areas, more than one-half of black elderly rated their health as fair or poor, compared with one-third of white elderly. Of all groups, black elderly persons in nonmetropolitan America were most likely to rate their health as fair or poor. The relationship between fair or poor levels of respondent-assessed health and mortality was noted above (6). Given this relationship, black elderly in nonmetropolitan areas were more likely to have a higher risk of mortality than black elderly in metropolitan areas.

Some health problems were similar between elderly in nonmetropolitan and metropolitan areas. There was no difference in the number of days the elderly restricted their usual activities (about 31 days per year) or stayed in bed (about 14 days) because of illness. Still, this amounts to 6 weeks of restricted activity per year (figure 45). Similarly, there was no difference when activity limitations of minority elderly were compared between nonmetropolitan and metropolitan areas (figure 46). The percent of elderly who had high blood pressure was the same for men (33 percent) but was higher for women in nonmetropolitan areas (44 versus 39 percent) (see figure 47). There was no difference in the percent of elderly men or the percent of elderly women who were very overweight (figure 48). Regardless of area, about 15 percent of the elderly had a parent with a history of cancer (figure 49).

Figure 50 presents some measures of dental health by nonmetropolitan-metropolitan status. The percent of elderly who had not visited the dentist in the last 12 months was higher for nonmetropolitan persons (58 versus 52 percent). This may indicate less access to dental care for the rural elderly, possibly because there were fewer dentists per 100,000 population. (See chapter 7 for details on access.) The percent of the elderly who had lost all their permanent teeth was greater for nonmetropolitan elderly (41 versus 33 percent).

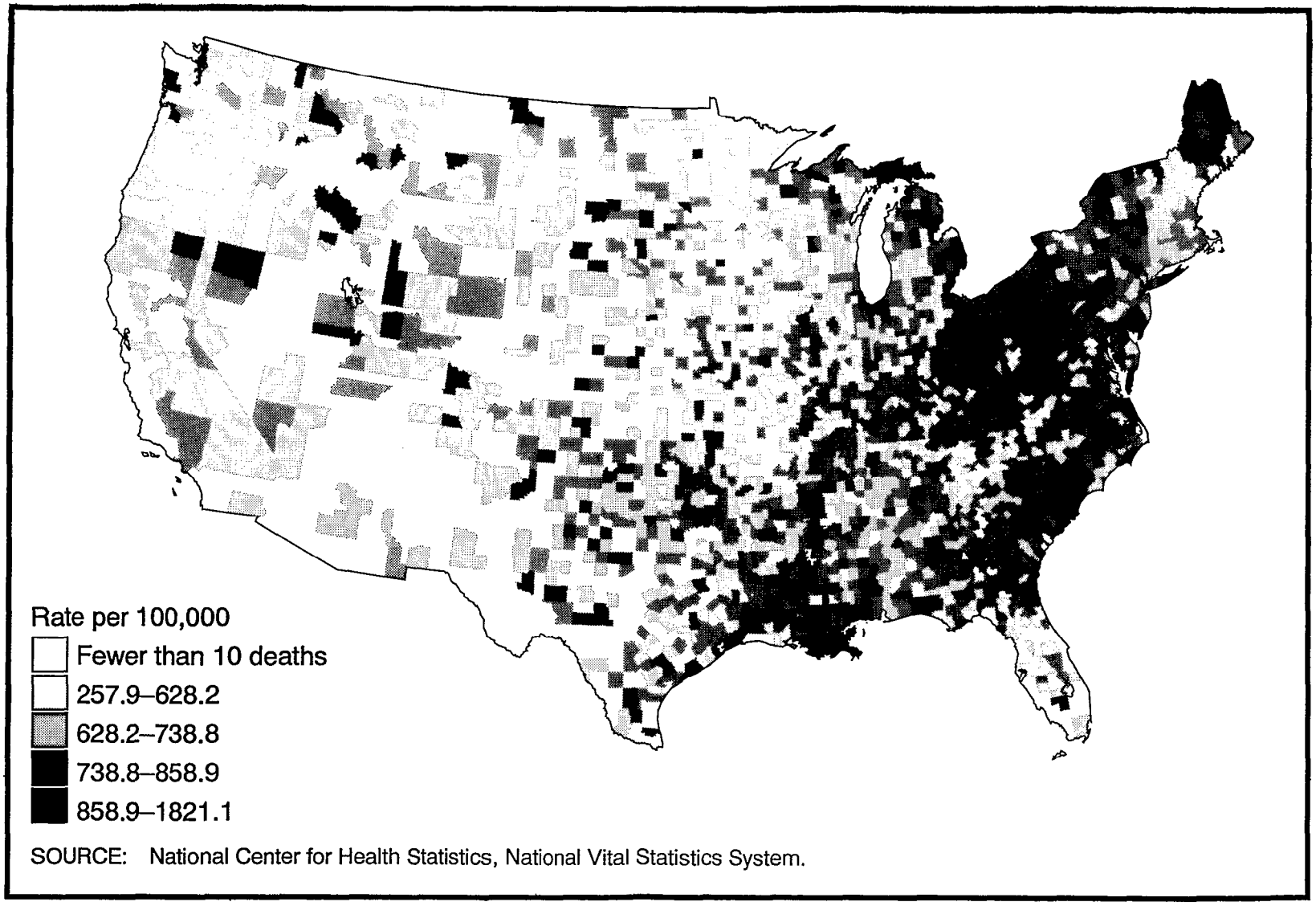
Two useful measures of health behavior are heavy smoking and heavy drinking because they are associated with serious health problems, most notably lung cancer and cirrhosis of the liver, respectively. There was no difference by area in the percent of male smokers who smoked at least 25 cigarettes per day (about 25 percent) or of male drinkers who drank heavily (at least 5 drinks per day at least 5 times in the past year) (see figures 51 and 52). Nor was there a difference in these measures for females by area, although the percents were lower than for males.

There were no differences in some key health-promotion activities. No differences existed between nonmetropolitan and metropolitan areas in the percent of all elderly who had blood pressure checks in the past year (figure 53), or in the percent of elderly women who had a Pap smear in the past year (figure 54) or performed a breast self-exam monthly (figure 55).

Epidemiological studies have shown that persons with diets high in fiber have lower rates of some cancers. This is especially the case for cancer of the colon, the second leading cause of all cancer deaths in the United States (8). There is no nonmetropolitan-metropolitan difference in the percent of elderly who reported eating a diet high in fiber. More than 20 percent of the elderly in both nonmetropolitan and metropolitan locations reported having diets high in fiber. Considerable evidence associates diets high in fat with increased risk of heart disease, some types of cancer, and obesity (8). Regardless of area, about 70 percent of elderly reported that

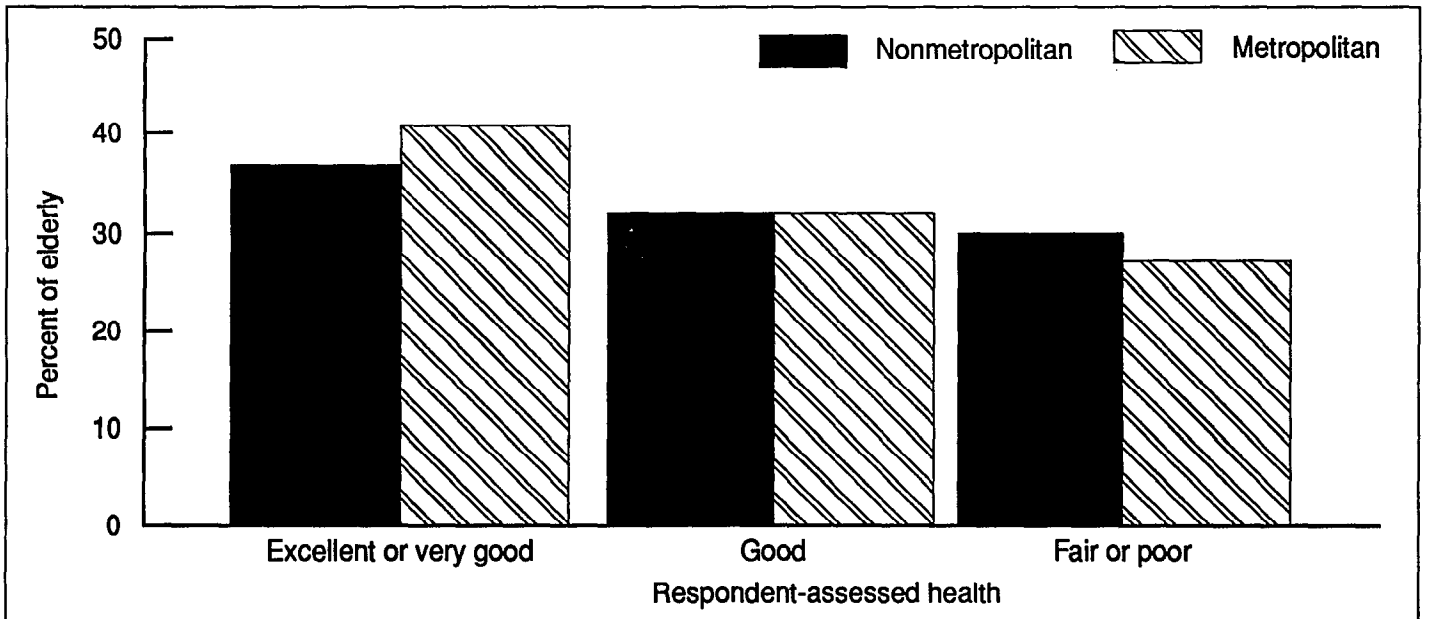
they had diets that were low in fat (see figure 56).

Breast cancer is a leading cause of cancer death among women. Screening by clinical breast exam or by mammography has been shown to reduce cancer mortality among women 50 years of age and over (9–11). Fewer elderly women in nonmetropolitan areas received screening for breast cancer. In 1990, only 39 percent of them had a clinical breast exam in the past year, compared with 43 percent in metropolitan areas (figure 57). The situation was similar for mammography. Only 28 percent of nonmetropolitan elderly women had a mammogram in the past year, compared with 36 percent in metropolitan areas. This difference also existed when receipt of a mammogram over the entire lifetime was examined (figure 58). The national health-promotion and disease-prevention objectives for the year 2000 provide another context for these data. One objective for the year 2000 is to increase the percent of women 50 years of age and over who have received a clinical breast exam and mammogram within the preceding 1–2 years to at least 60 percent (8). Given the more limited access to care in nonmetropolitan areas (see chapter 7), this objective presents a considerable challenge. In conclusion, elderly women in nonmetropolitan areas were more vulnerable to dying from breast cancer because a significantly smaller percent had a clinical screening or mammogram.



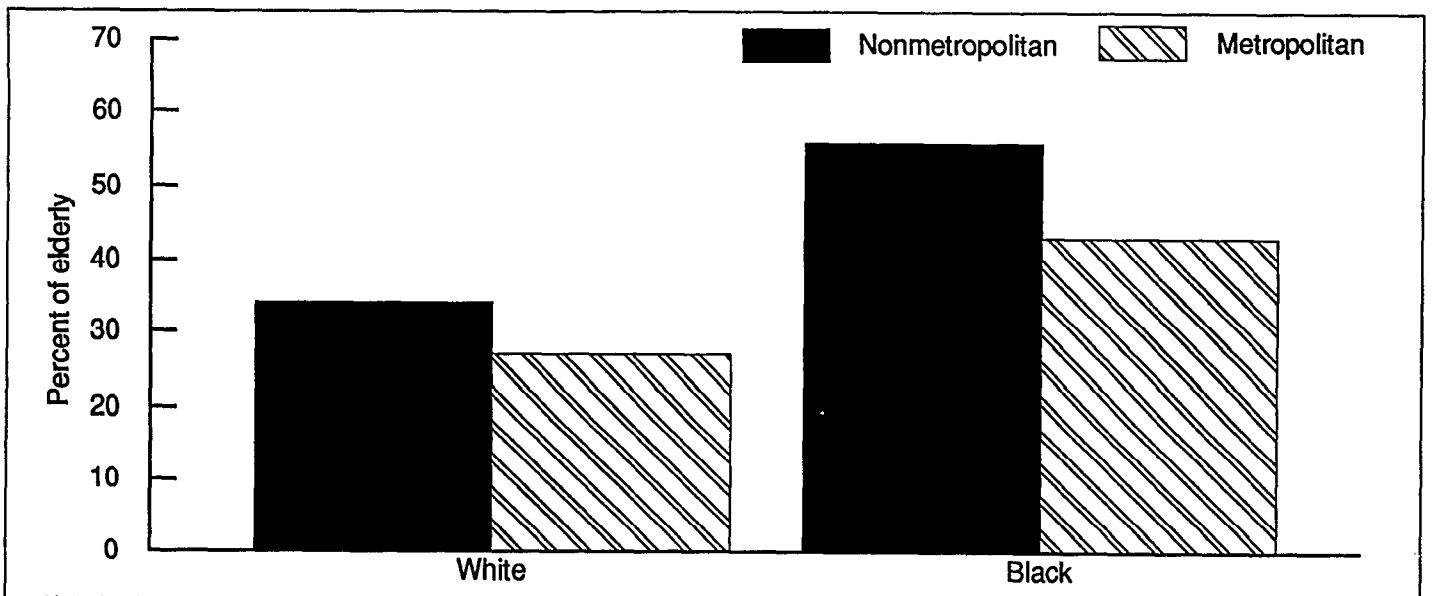
SOURCE: National Center for Health Statistics, National Vital Statistics System.

Figure 42. Death rates from heart disease per 100,000 women 65–74 years of age, by county: United States, 1979–87



SOURCE: National Center for Health Statistics, National Health Interview Survey, 1990.

Figure 43. Respondent-assessed health of the elderly, by area: United States, 1990



NOTE: Health status is respondent-assessed.

SOURCE: National Center for Health Statistics, National Health Interview Surveys, 1985-87.

Figure 44. Percent of the elderly in fair or poor health, by race and area: United States, 1985-87

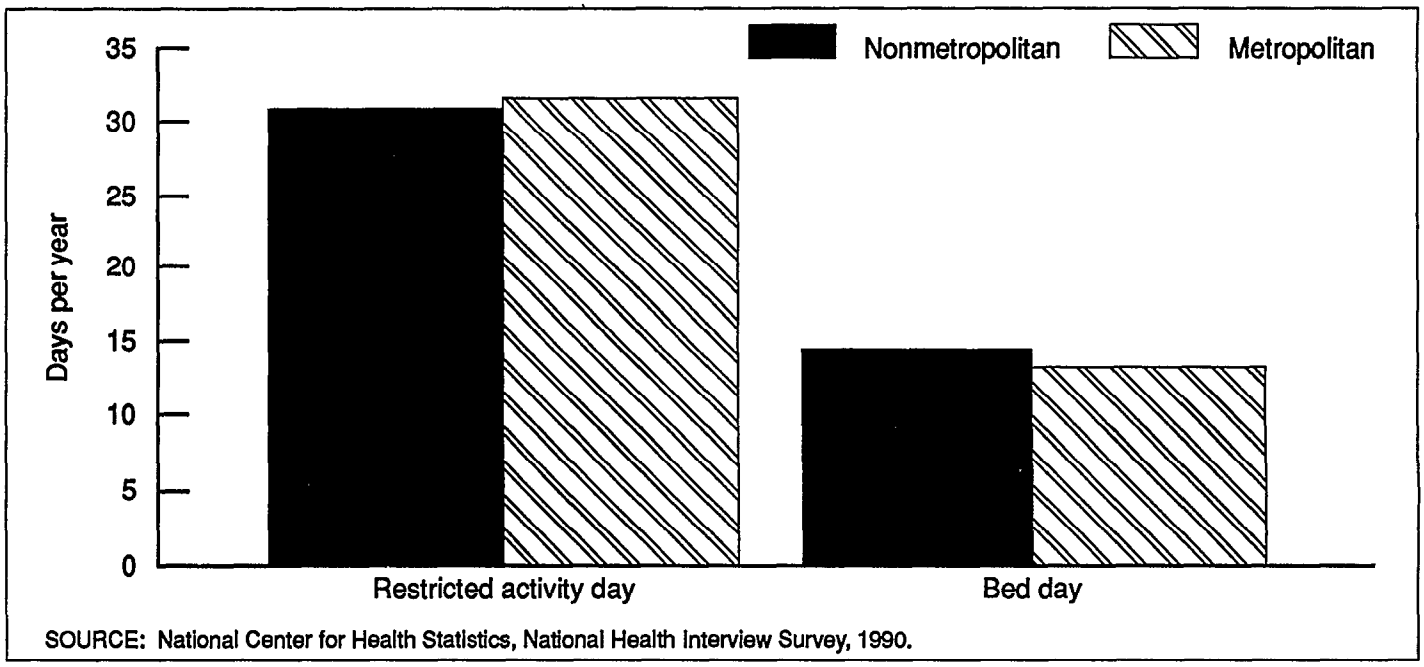


Figure 45. Days of restricted activity for the elderly, by type of restriction and area: United States, 1990

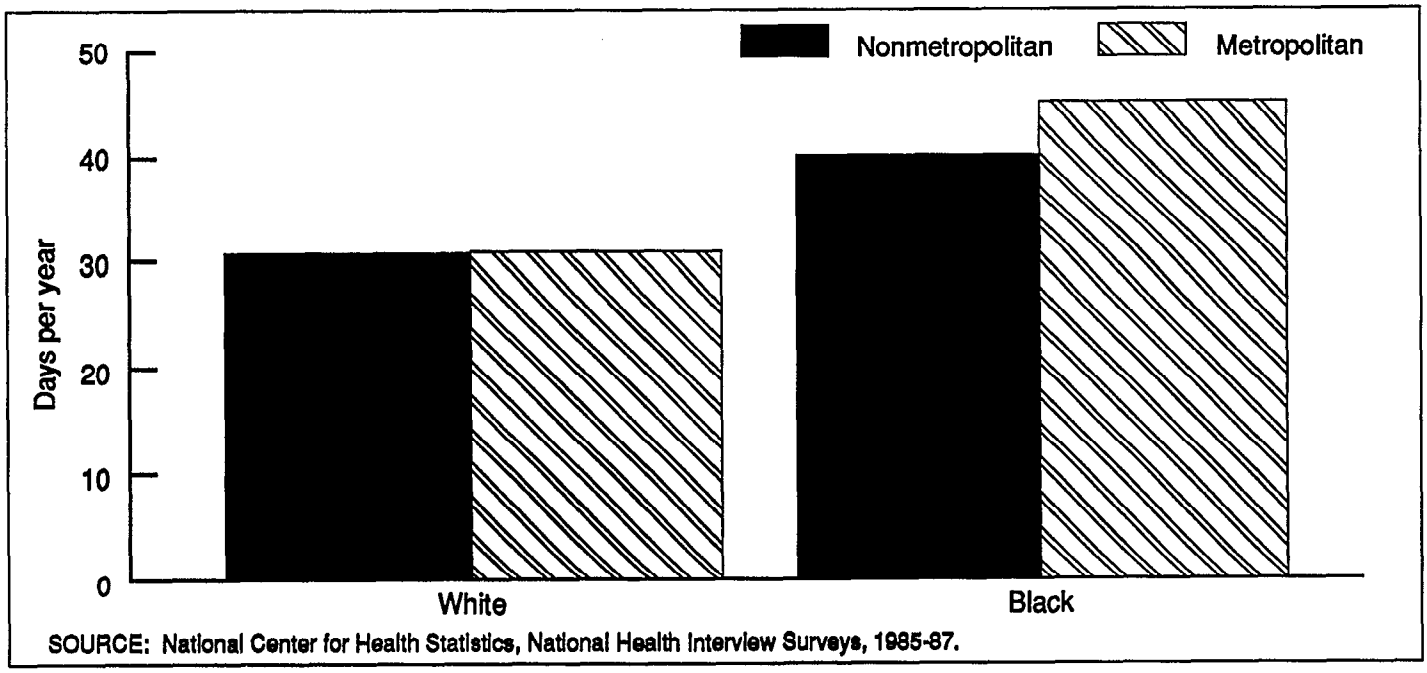
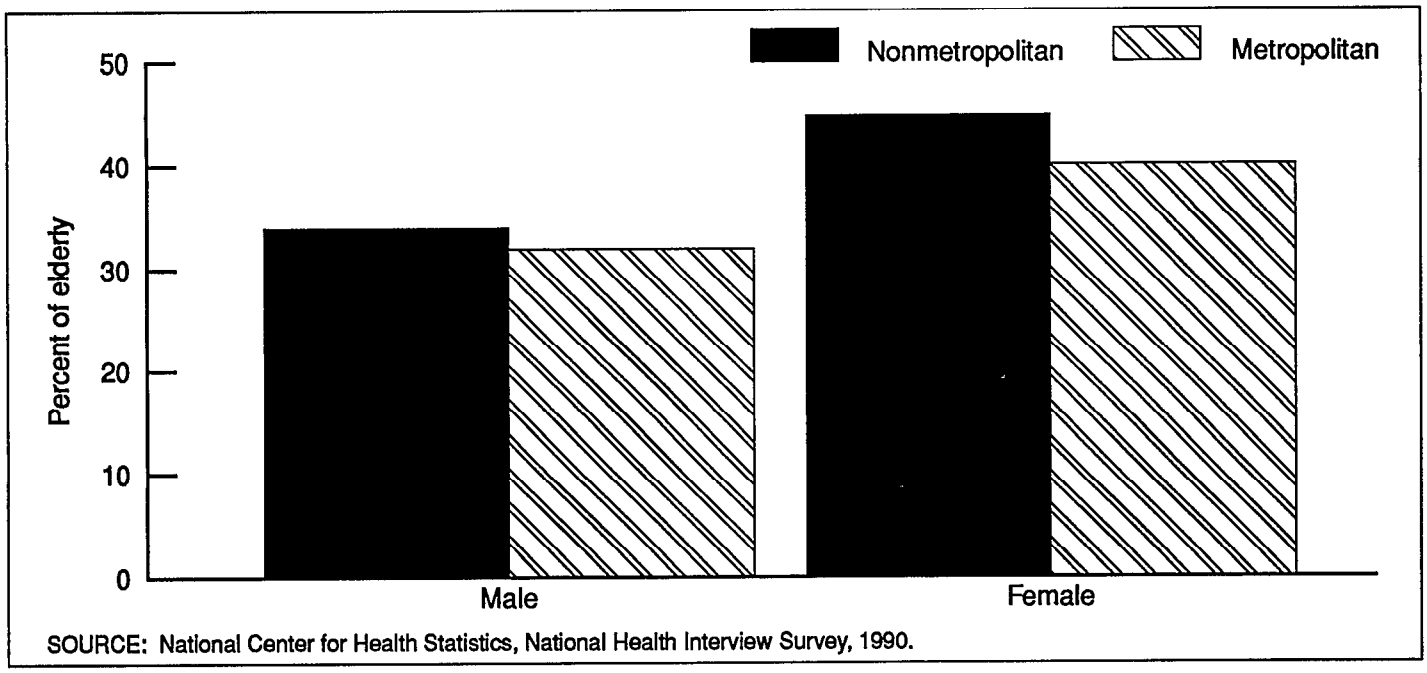
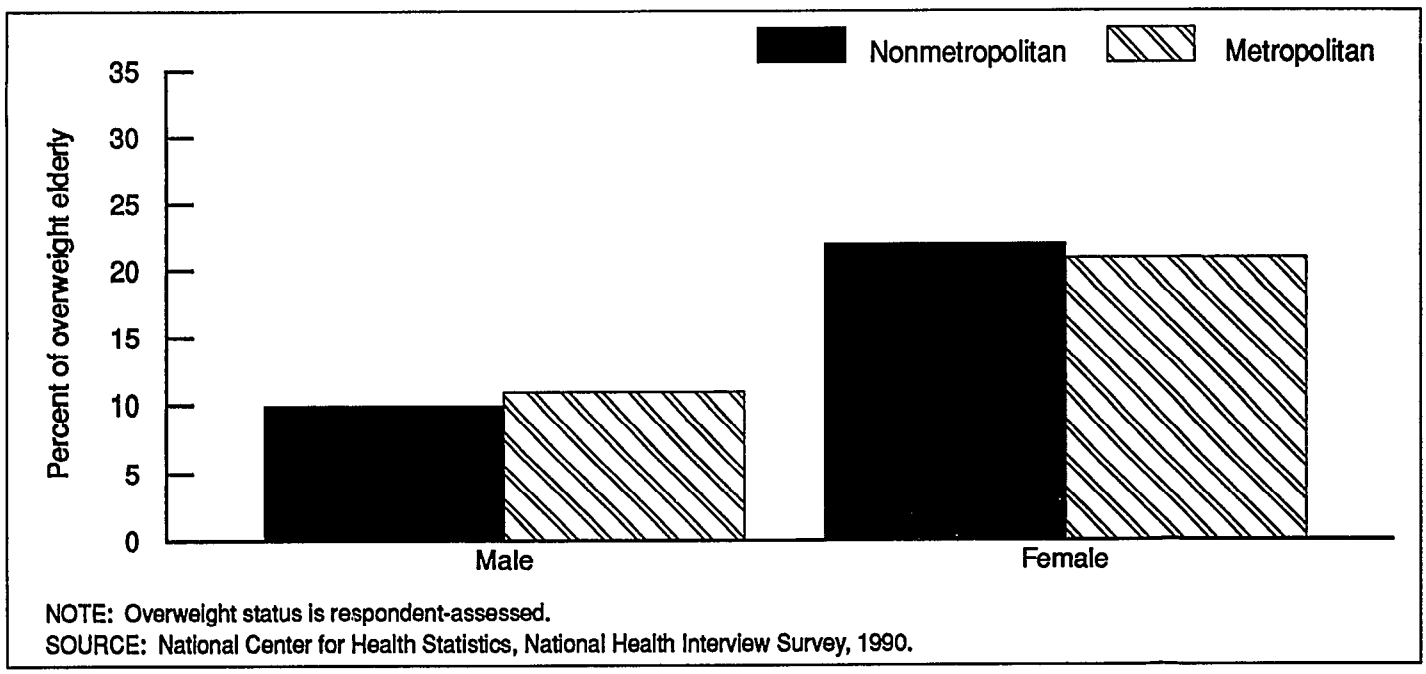


Figure 46. Days of restricted activity for the elderly, by race and area: United States, 1985-87



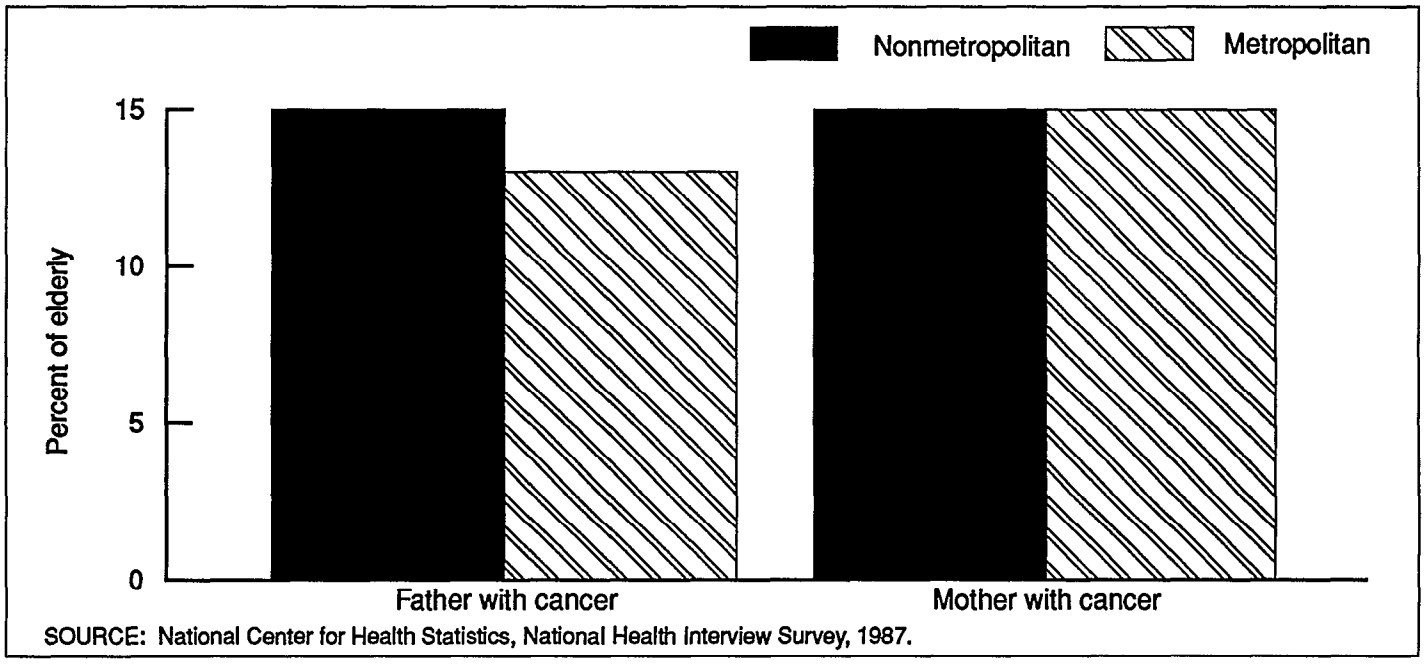
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1990.

Figure 47. Percent of the elderly who were told at least twice by a health professional that they had high blood pressure, by sex and area: United States, 1990



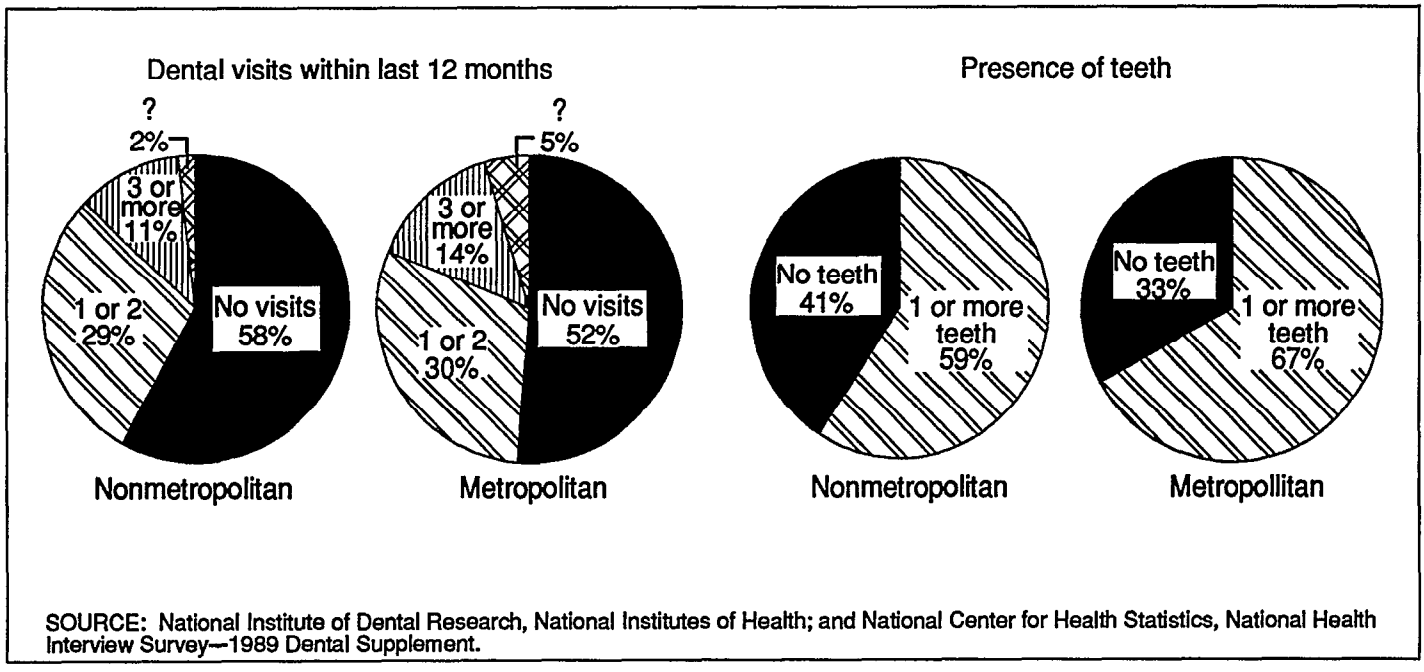
NOTE: Overweight status is respondent-assessed.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1990.

Figure 48. Percent of overweight elderly who are very overweight, by sex and area: United States, 1990



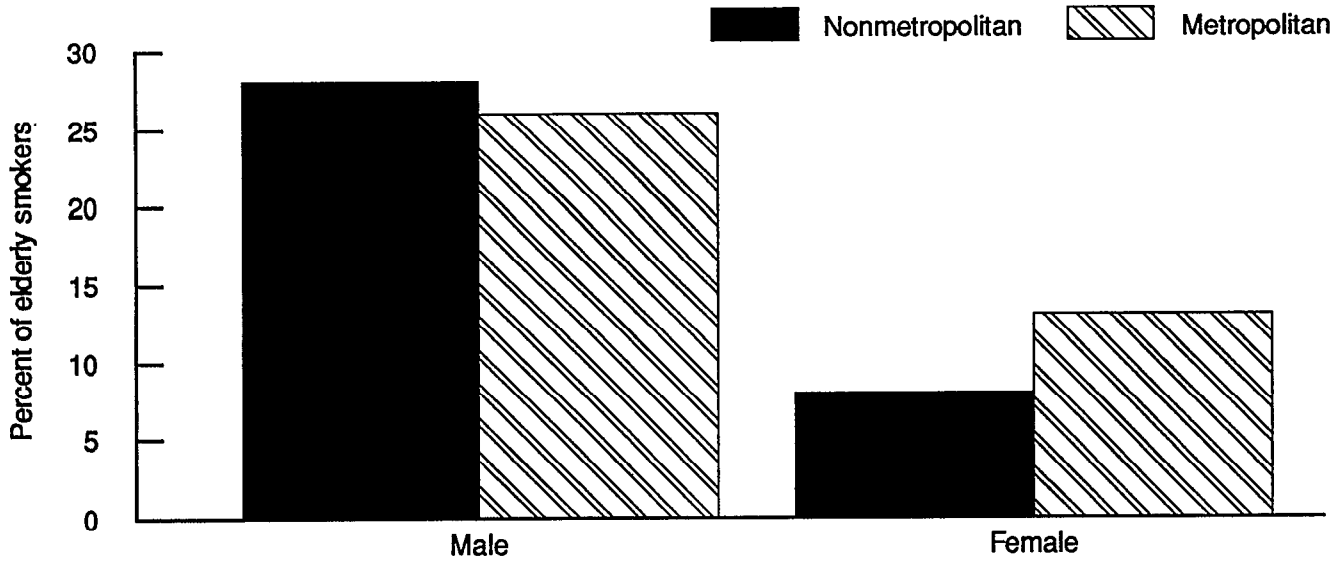
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1987.

Figure 49. Percent of the elderly whose parents had a history of cancer, by sex of parent and area: United States, 1987



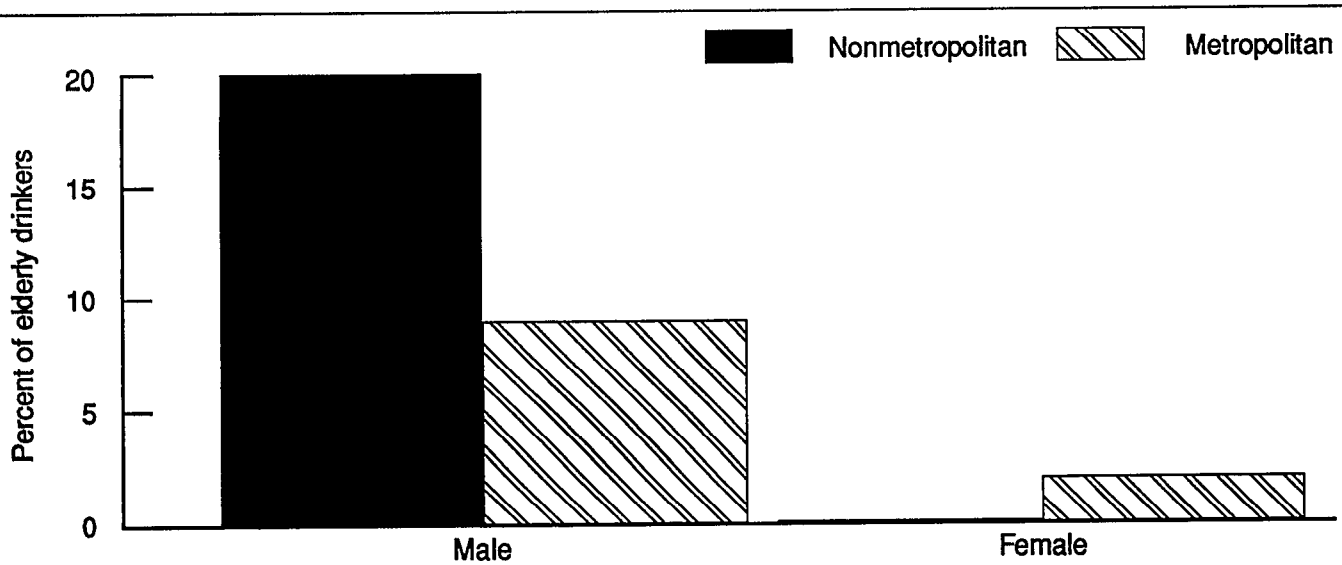
SOURCE: National Institute of Dental Research, National Institutes of Health; and National Center for Health Statistics, National Health Interview Survey—1989 Dental Supplement.

Figure 50. Percent of elderly by number of dental visits in last 12 months and by presence of teeth, by area: United States, 1989



NOTE: "Heavy smoking" is defined as at least 25 cigarettes per day.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1990.

Figure 51. Percent of elderly smokers who smoke heavily, by sex and area: United States, 1990



NOTE: "Heavy drinking" is defined as at least 5 drinks per day at least 5 times in past year. Figures do not meet standards of reliability set by the National Center for Health Statistics.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1990.

Figure 52. Percent of elderly drinkers who drink heavily, by sex and area: United States, 1990

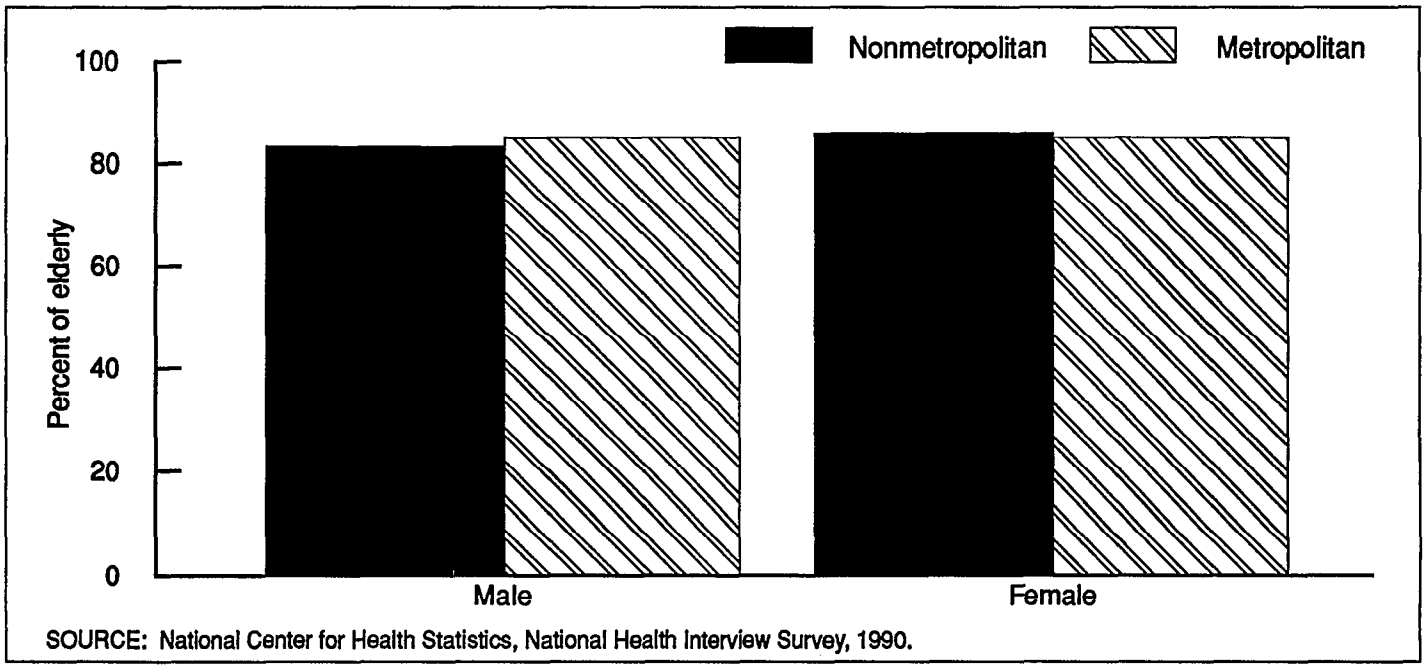


Figure 53. Percent of the elderly who had a blood pressure check within the past year, by sex and area: United States, 1990

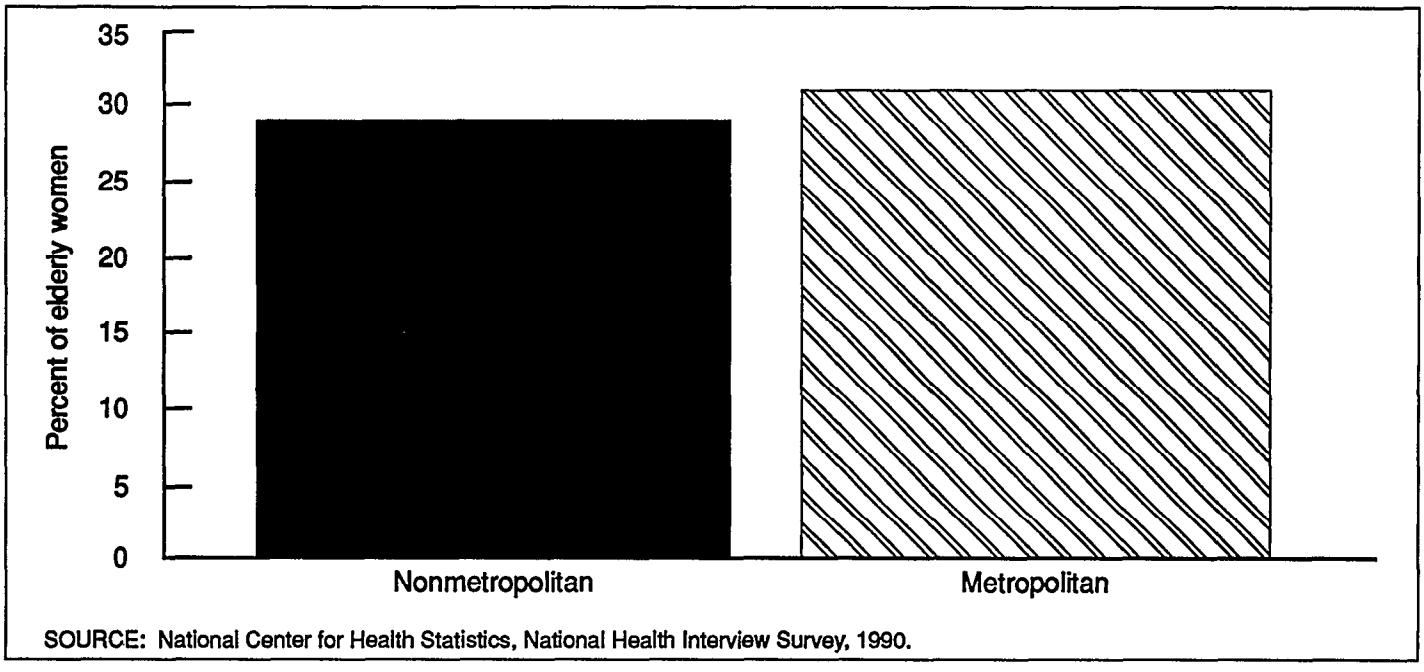


Figure 54. Percent of elderly women who had a Pap smear within the past year, by area: United States, 1990

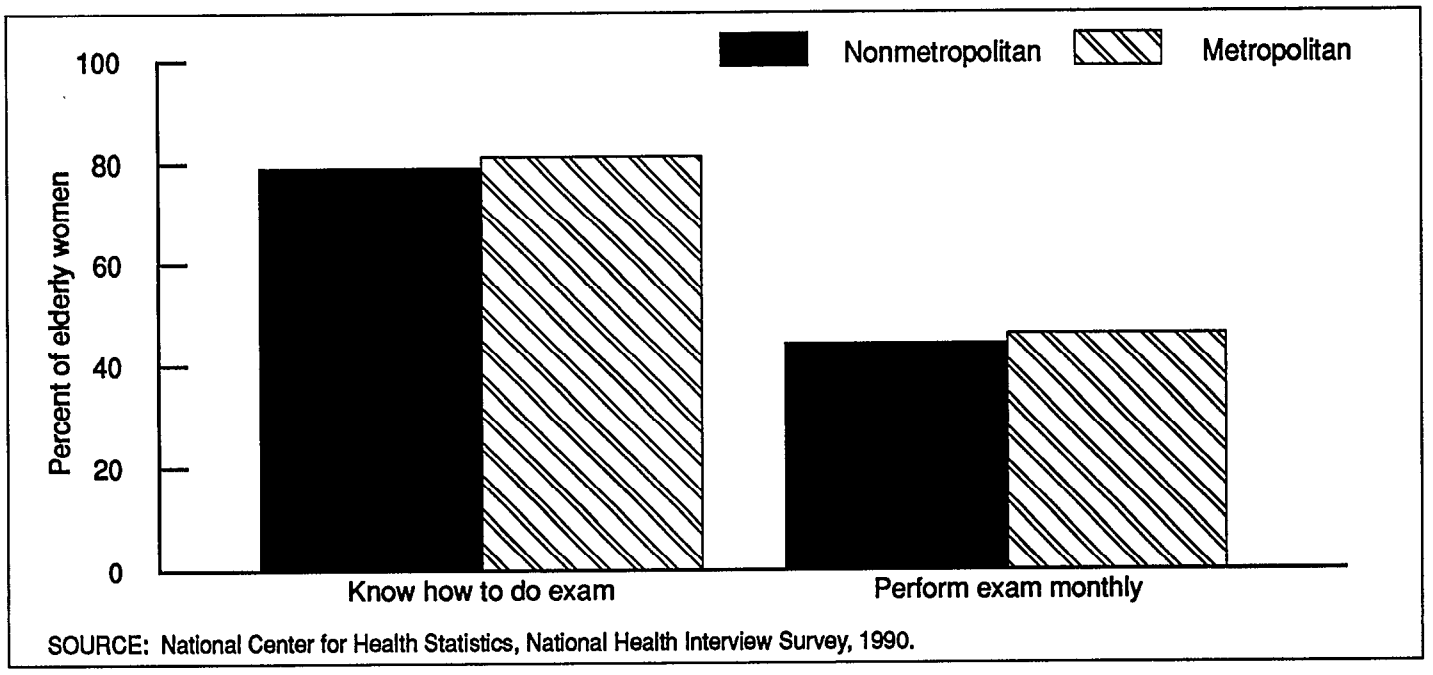


Figure 55. Percent of elderly women who know how to perform breast self-examination and percent who perform breast self-examination monthly, by area: United States, 1990

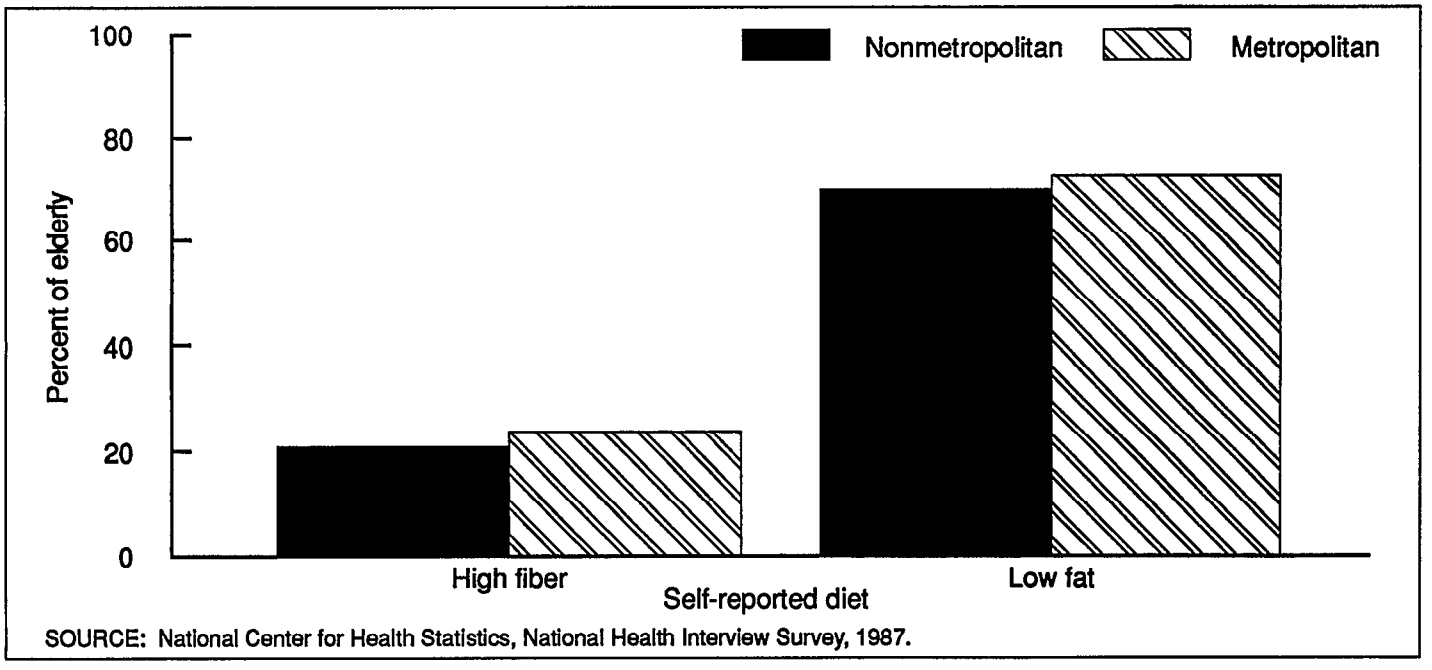


Figure 56. Percent of the elderly who report eating high-fiber or low-fat diets, by area: United States, 1987

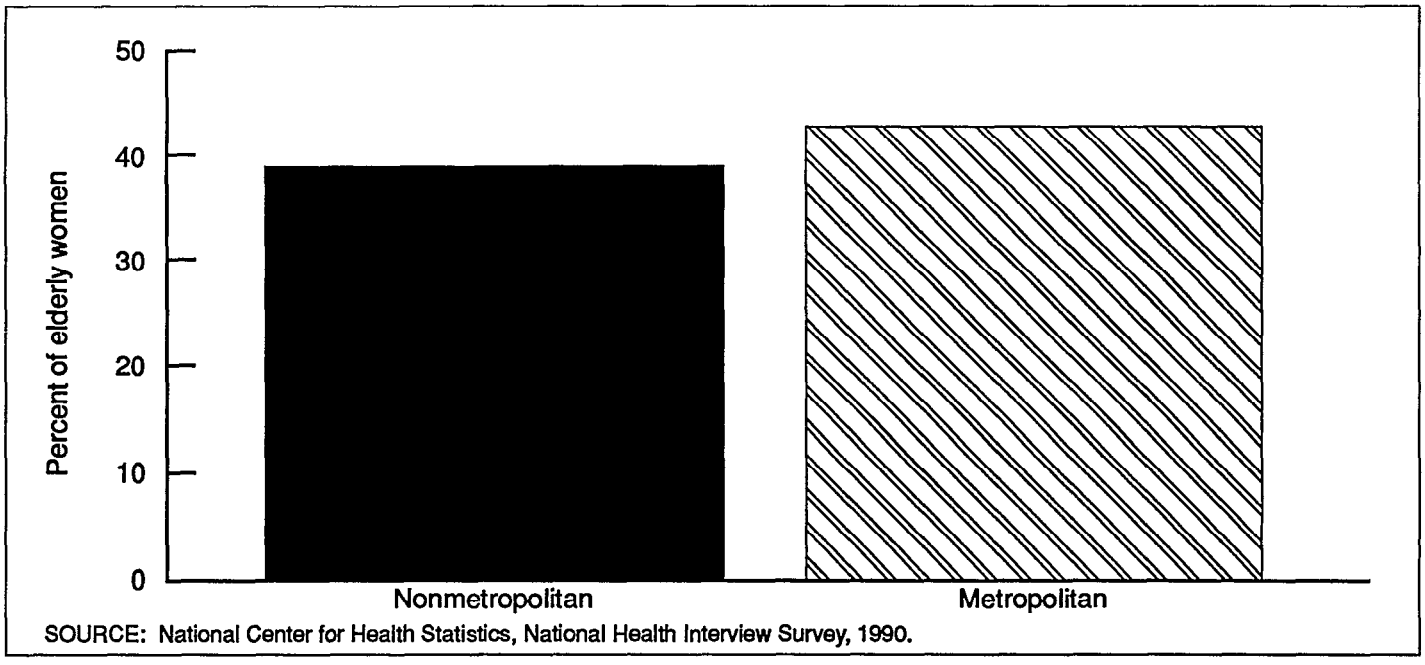


Figure 57. Percent of elderly women who received a breast examination by a health professional within the past year, by area: United States, 1990

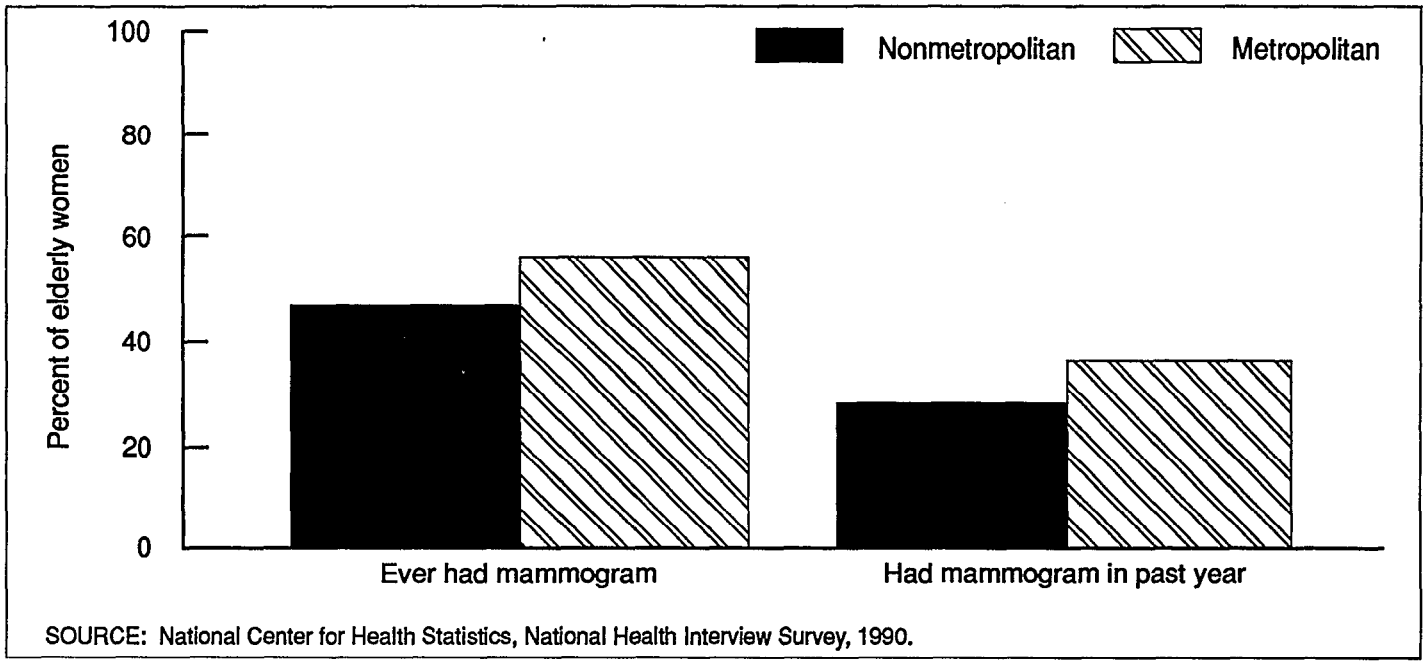


Figure 58. Percent of elderly women who received a mammogram, by area: United States, 1990

Chapter 9
Long-term care

By Jill Braden, Agency for Health Care Policy and Research; and Joan F. Van Nostrand, M.P.A., National Center for Health Statistics

Belief—Nonmetropolitan elderly have greater need for long-term care but more limited use of services compared with metropolitan elderly.

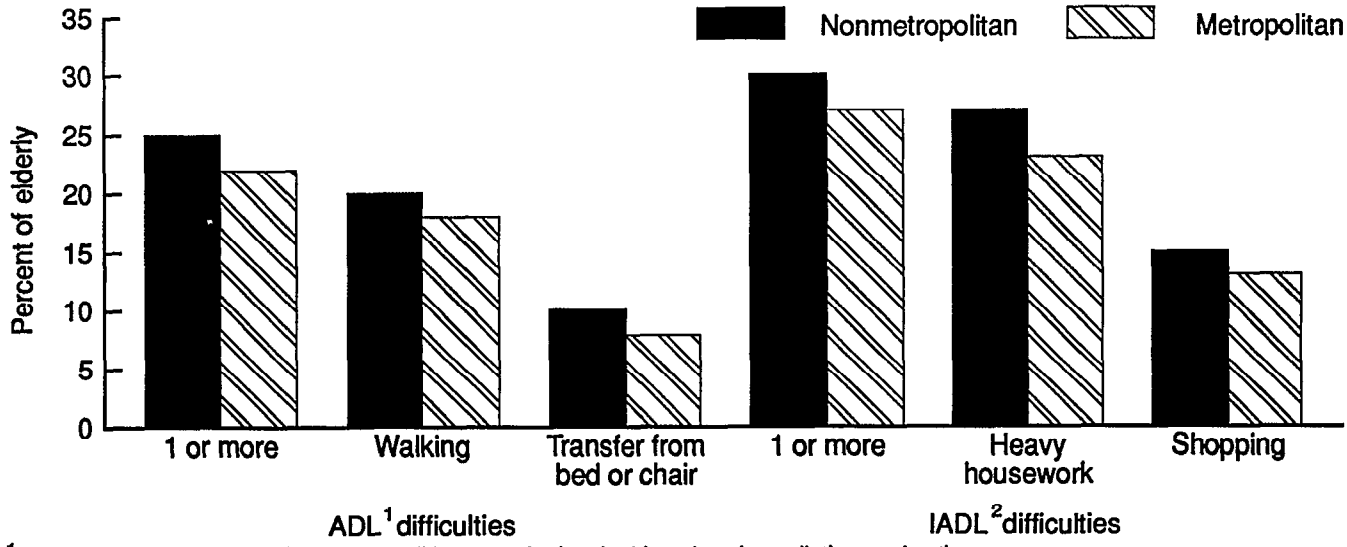
Summary

This belief is partially supported by national data. There are no significant differences between nonmetropolitan and metropolitan elderly in the proportion with difficulties in activities of daily living (ADL's) or instrumental activities of daily living (IADL's), which are often used as indicators of the need for long-term care. Home health care is one component of long-term care. There are no differences in the proportion of the metropolitan and nonmetropolitan elderly with no ADL or IADL difficulties who use home health care. However, between the metropolitan and nonmetropolitan elderly who have at least one of these types of difficulties, the differences in the proportions using home health care services are significant. A smaller proportion (27 versus 35 percent) of the functionally limited nonmetropolitan elderly use home health care services.

Discussion

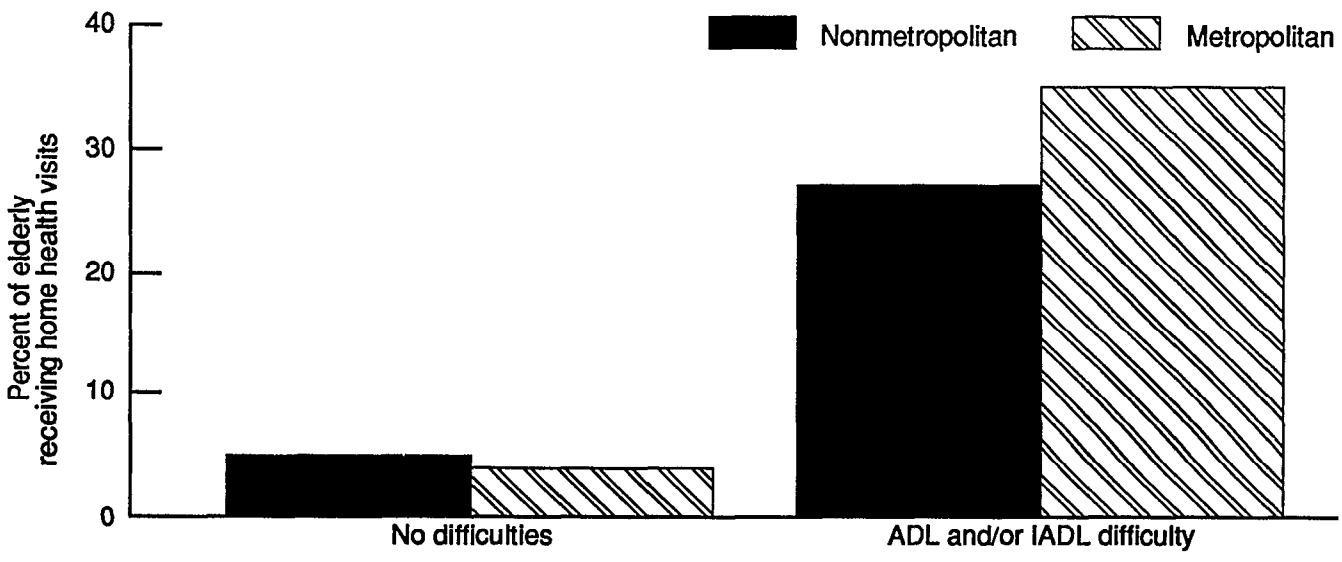
Difficulties in the ability to perform ADL's and IADL's are used increasingly as indicators of the need for long-term care. In 1986, there were no significant differences between nonmetropolitan and metropolitan elderly in the proportion with ADL difficulties or with IADL difficulties. About one-quarter of both groups had such difficulties. The most common ADL difficulty was walking. About 20 percent of the elderly, regardless of location, had difficulty walking. Less common (10 percent of the elderly) was difficulty in transferring from bed to chair. Of all the IADL's, difficulty with heavy housework, such as scrubbing floors or washing windows, was the most common. Slightly more than 25 percent of the elderly, regardless of location, had this difficulty. Less common (15 percent of the elderly) was difficulty in shopping (see figure 59).

Use of formal home health care services can serve as an alternative to institutionalization for many elderly Americans. Home health care is broadly defined to include any professional or homemaking services provided in the home except home-delivered meals. Patterns of utilization of home health care were similar for the nonmetropolitan and metropolitan elderly reporting no IADL or ADL difficulties (5 and 4 percent, respectively). However, differences in utilization of home health care are significant between nonmetropolitan and metropolitan elderly who reported at least one limitation in either ADL's or IADL's or both. More than one-third (35 percent) of the metropolitan elderly in this group received at least one home health care visit during the year 1987, but only 27 percent of the nonmetropolitan elderly with functional difficulties received this type of care (see figure 60).



[1] Activities of daily living (ADL) include walking, transferring, bathing, dressing, toileting, and eating.
[2] Instrumental activities of daily living (IADL) include heavy and light housework, shopping, preparing meals, and managing money.
SOURCE: National Center for Health Statistics, National Health Interview Survey, 1986.

Figure 59. Percent of the elderly who experience difficulty with activities of daily living or instrumental activites of daily living, by number and type of activity and area: United States, 1986



NOTE: ADL is activities of daily living. IADL is instrumental activities of daily living.
SOURCE: Agency for Health Care Policy and Research, National Medical Expenditure Survey-Household Survey, 1987.

Figure 60. Percent of the elderly receiving home health visits, by presence of difficulty with activities of daily living or instrumental activities of daily living and by area: United States, 1987

Chapter 10
Health insurance, expenditures, and benefit use

By Jill Braden, Agency for Health Care Policy and Research; and Susan G. Cooley, Ph.D., U.S. Department of Veterans Affairs

Belief—The nonmetropolitan elderly have lower health care expenses and adequate health insurance coverage.

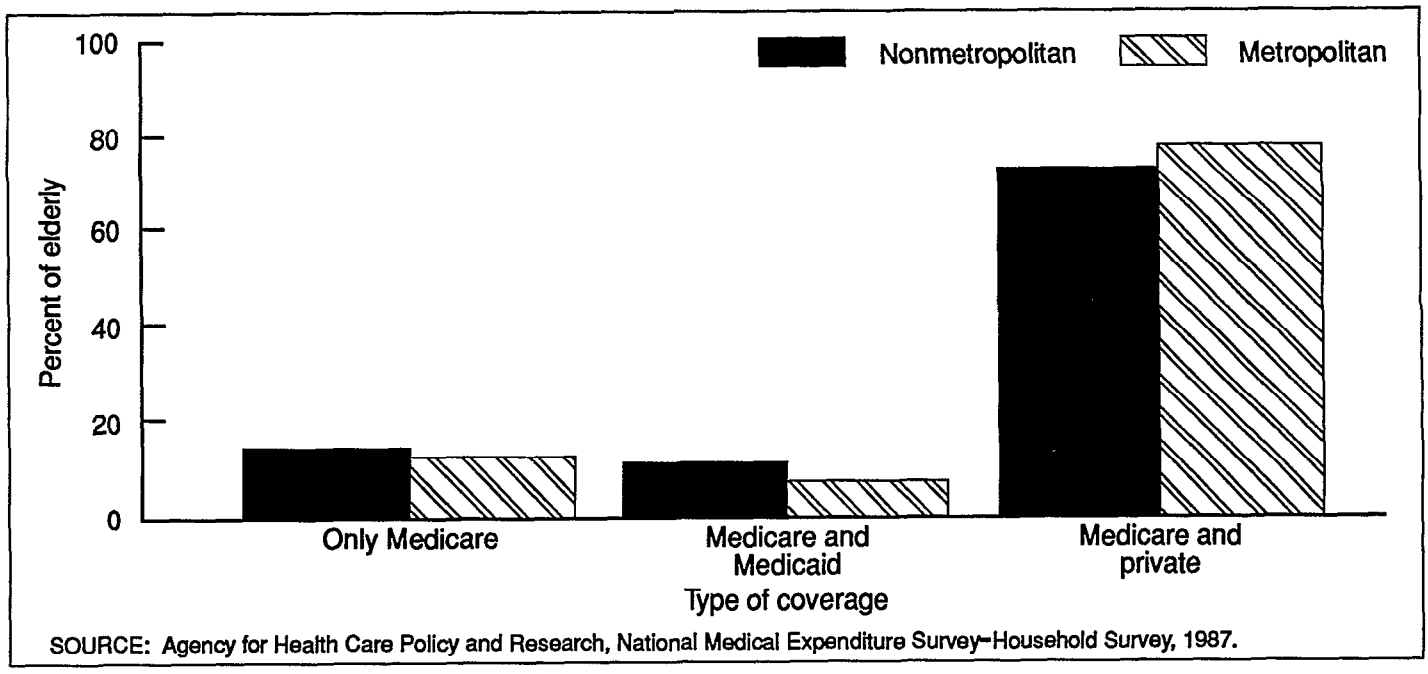
Summary

The nonmetropolitan elderly had lower average medical expenditures than the metropolitan elderly. Use of health insurance and other benefits was similar in both groups. The nonmetropolitan elderly without limitations in ADL's exhibited no differences in sources of payment, public and/or private, for their medical expenditures. However, as the elderly became more severely functionally impaired, differences in sources of payment were detected. Medicare paid, on average, a higher proportion of the expenses for the metropolitan elderly with ADL limitations, and Medicaid paid, on average, a higher proportion of the expenses for the nonmetropolitan elderly in this subgroup. Small sample sizes limit the ability to examine these issues for racial-ethnic minorities within the metropolitan-nonmetropolitan elderly populations. There were no differences between rural and urban elderly veterans in the percent receiving Medicaid or health benefits for low-income veterans from the U.S. Department of Veterans Affairs.

Discussion

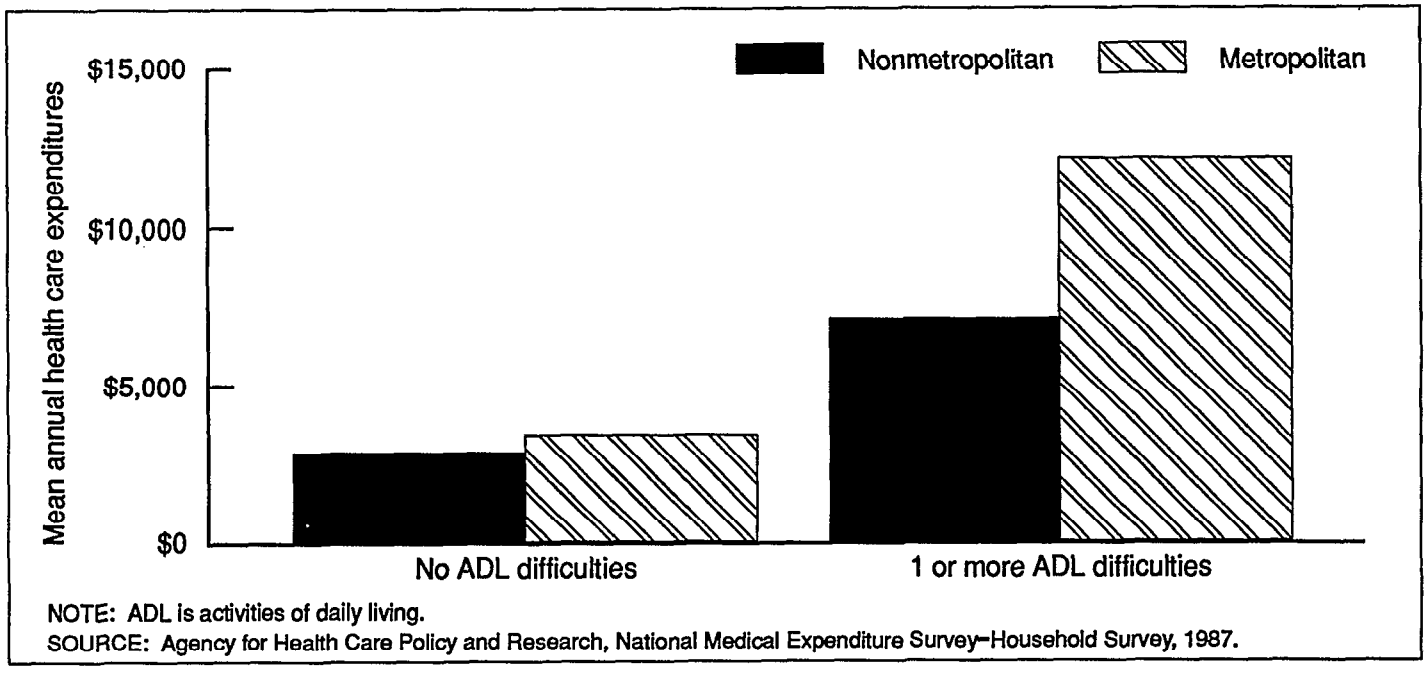
Almost all persons 65 years of age and over were covered by Medicare. However, only 73 percent of the nonmetropolitan elderly had both Medicare and private insurance coverage, compared with 78 percent of their metropolitan counterparts (see figure 61). The metropolitan elderly with no ADL limitations had average annual medical expenditures of $3,415, compared with $2,865 for nonmetropolitan elderly with no ADL difficulties. The metropolitan elderly with reported ADL limitations had the highest average total expenditures ($12,169), almost twice that of the nonmetropolitan elderly with one or more ADL difficulties ($7,100) and about four times that of the elderly with no ADL limitations (see figure 62). The elderly with no ADL limitations displayed similar source-of-payment patterns. Differences were detected for the elderly with ADL difficulties by metropolitan-nonmetropolitan location. On average, Medicare covered a higher percent of the total health care expenditures for these metropolitan elderly (36 percent) than for nonmetropolitan elderly with ADL limitations (30 percent). On the other hand, Medicaid covered a higher percent of the annual medical expenses for the nonmetropolitan elderly with ADL limitations (13 percent) than for the functionally limited metropolitan elderly (8 percent) (see figure 63).

Comparable percents of rural and urban elderly veterans received benefits from Medicaid (4 and 2 percent, respectively). Also, comparable percents of rural and urban elderly veterans (35 and 37 percent, respectively) received U.S. Department of Veterans Affairs health benefits for low-income veterans. There were no statistically significant differences between these numbers for rural and urban elderly veterans (see figure 64).



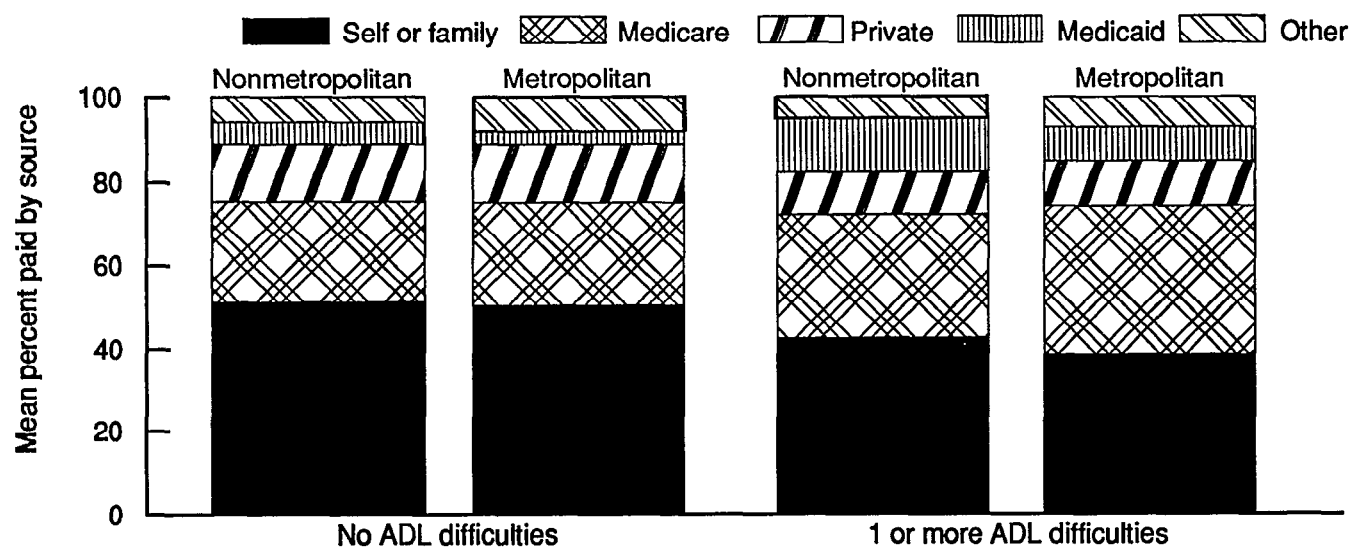
SOURCE: Agency for Health Care Policy and Research, National Medical Expenditure Survey–Household Survey, 1987.

Figure 61. Percent of the elderly with insurance coverage, by type of coverage and area: United States, 1987



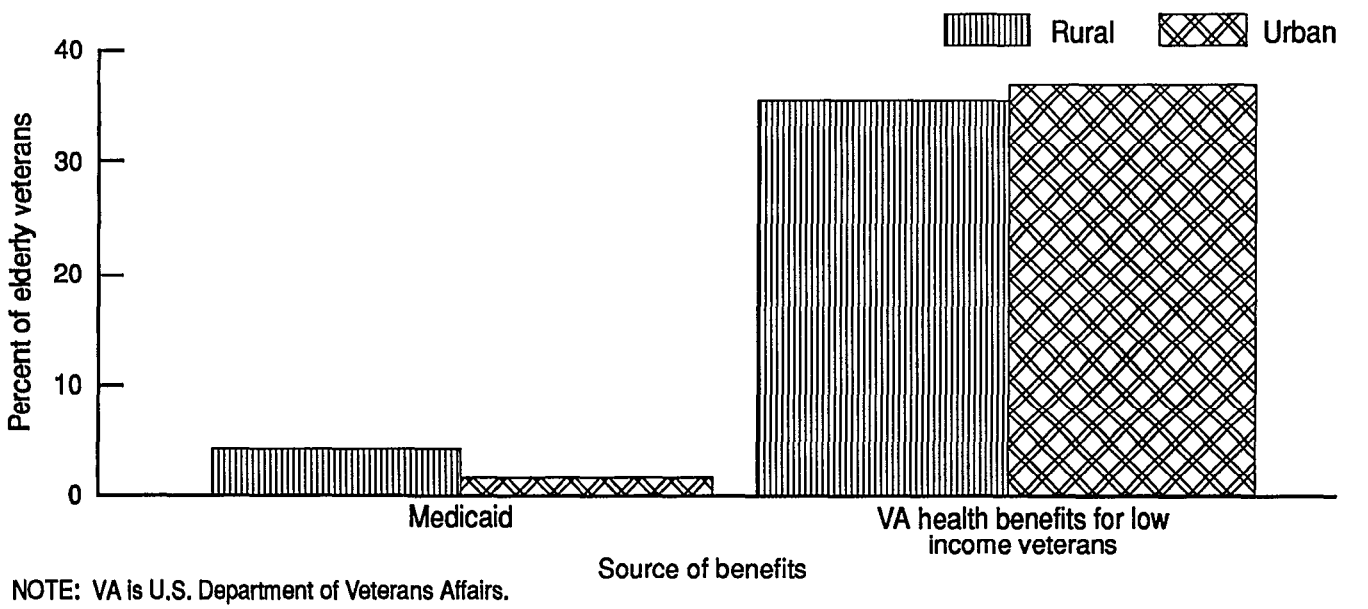
NOTE: ADL is activities of daily living.
SOURCE: Agency for Health Care Policy and Research, National Medical Expenditure Survey–Household Survey, 1987.

Figure 62. Mean annual health care expenditures by the elderly, by presence of difficulty with activities of daily living and area: United States, 1987



NOTE: ADL is activities of daily living.
SOURCE: Agency for Health Care Policy and Research, National Medical Expenditure Survey - Household Survey, 1987.

Figure 63. Percent distribution of sources of payment for health care expenditures for the elderly, by presence of difficulty with activities of daily living and area: United States, 1987



NOTE: VA is U.S. Department of Veterans Affairs.
SOURCE: U.S. Department of Veterans Affairs, *Survey of Veterans*, 1987.

Figure 64. Percent of elderly veterans receiving selected benefits, by source of benefit and area: United States, 1987

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Appendix I
Forum Work Group on Older Americans in Rural Areas

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Appendix II
Definitions

Rural versus nonmetropolitan

Alternative concepts and definitions—There is some debate over the appropriate measurement of the population living in small towns and the countryside outside large cities. Both rural and nonmetropolitan are defined by default—"rural" being anything "not urban" and "nonmetropolitan" being anything "not metropolitan."

Rural defined—According to the Bureau of the Census, "rural" is defined as territory outside places of 2,500 or more inhabitants or outside an urbanized area. An urbanized area comprises one or more places and the adjacent densely settled surrounding territory that together have a minimum of 50,000 persons.

Nonmetropolitan defined—The Office of Management and Budget's definition of "nonmetropolitan" refers to counties outside a metropolitan area. A metropolitan area is a county (or counties) containing a place or urbanized area of 50,000 or more and a total population of 100,000 or more, including adjacent counties that have a high degree of economic and social integration with the central county. (In New England, the town, as opposed to the county, is the basic building block.)

The essential difference between the two concepts is that "rural" refers to low residential density and size, and "nonmetropolitan" refers to counties lying outside metropolitan areas. This definition of rural does not necessarily imply farm residence or a sparsely settled area, because a small place is defined as rural as long as it is outside an urbanized area and has fewer than 2,500 inhabitants.

Population distribution—The 1990 census identified 8.2 million elderly persons (or 26 percent) living in nonmetropolitan areas and 23.0 million elderly in metropolitan areas. In 1989, 54.6 million (22 percent) of the U.S. population of all ages lived in nonmetropolitan areas, and 66.2 million (27 percent) lived in rural areas. Although the percents do not differ greatly, the overlap of rural and nonmetropolitan population is less than might be expected. Just over one-half (54 percent) of the rural population lived in nonmetropolitan areas, and the rest lived within metropolitan boundaries. About two-thirds (66 percent) of the nonmetropolitan population is rural. In contrast, only 16 percent of the metropolitan population is rural. Persons living in the rural fringes within metropolitan areas have a different level of access to the metropolitan economy and services than do those living in rural territory outside metropolitan areas.

Social and economic diversity—Probably the most prominent single characteristic of rural America is its social and economic diversity. The Economic Research Service of the U.S. Department of Agriculture has identified seven distinct types of rural counties according to their major economic base, presence of federally-owned land, or population characteristics:

- Counties depending heavily on farming.
- Counties depending heavily on manufacturing.

- Mining counties with economies based principally on natural resources.
- Counties specializing in government functions.
- Persistent low-income or poverty counties.
- Federal lands counties.
- Retirement counties.

The South contains the largest share of both nonmetropolitan counties (1,061 counties or 44 percent of the total) and population (23.5 million or 44 percent). However, the greatest share of nonmetropolitan territory is in the Midwest and Western regions.

Use of nonmetropolitan-metropolitan designation—The nonmetropolitan and metropolitan designations are mainly used in this report for pragmatic reasons. Most data presented are from existing national surveys of a general-purpose nature and are not from special studies of the rural population. These existing national surveys generally collect data at the county level, allowing a nonmetropolitan-metropolitan designation to be made. Hence, use of this designation does not imply it is the "best," only that it is more widely available.

Other reasons for use of the nonmetropolitan designation in this report are: (1) nonmetropolitan boundaries are drawn beyond the primary commuting field of a metropolitan area; (2) many agencies use alternate definitions of rural, increasing chances of confusion with Bureau of the Census-defined rural statistics; and (3) most data available in the years between the decennial census are collected and disseminated at the county level—designated as either metropolitan or nonmetropolitan. This facilitates the annual monitoring of conditions in nonmetropolitan counties.

Population characteristics

Elderly—Persons 65 years of age and over.

Appendix III
Descriptions of data sources

American Housing Survey—The American Housing Survey (AHS) is a biennial national survey of the Nation's housing. There are also individual surveys of 44 large metropolitan areas over a 4-year period. The surveys are longitudinal and provide information on the size, composition, and financial characteristics of the housing inventory, characteristics of its occupants, changes in the inventory resulting from new construction and from losses, indicators of housing and neighborhood quality, and characteristics and dynamics of urban housing markets. The national survey, conducted in odd-numbered years starting in 1981 (but annually prior to that, going back to 1973) also provides data for the four census regions. The surveys are conducted by the Bureau of the Census acting as collecting agent for the U.S. Department of Housing and Urban Development.

The current basic sample of housing units, first interviewed in 1985, was drawn from the 1980 census with a sampling rate of 1 in 2,148. The sample was augmented to correct for bias by several additional methods, including a sample of building permits for new construction completed since the 1980 census, a sample of living quarters that were not housing units to identify units that were converted to housing units since the census, and a sample of non-permit-issuing land areas (primarily rural) to discover and incorporate other new construction and other additions to the housing stock. Similar methods are used to update the sample for each subsequent survey.

The sample is located in 170 self-representing sampling areas and 224 other sampling areas representing (and located in) all remaining areas of the 50 States and the District of Columbia. The basic sample of about 50,000 housing units is expanded in alternate years by units in "neighbor clusters" around selected sampled units or by added units in rural areas.

A full explanation is included in each AHS publication, e.g., U.S. Bureau of the Census and U.S. Department of Housing and Urban Development, Current Housing Report H150/89, American Housing Survey for the United States in 1989, Appendix B, Source and Accuracy of the Estimates.

Census of Population—The census of population has been taken in the United States every 10 years since 1790. In the 1990 census, data were collected on sex, race, age, marital status, and certain housing characteristics from 100 percent of the enumerated population. More detailed information such as income, education, occupation, industry, and an extended set of housing characteristics was collected from a 1-in-6 sample. The sampling rate varied by size of place of residence. The more detailed information was collected from 50 percent of households in places of less than 2,500 population, 1 out of 6 households in places of 2,500 or more population, and 1 out of 8 households in census tracts and block-numbering areas having more than 2,000 housing units.

For more information on the 1990 census, see: U.S. Bureau of the Census, 1990 Census of

Population and Housing Tabulation and Publication Program (Washington, D.C.: U.S. Government Printing Office, 1989).

Current Population Survey—The Current Population Survey (CPS) is a household sample survey of the civilian noninstitutionalized population conducted monthly by the U.S. Bureau of the Census to provide estimates of employment, unemployment, and other characteristics of the general labor force, the population as a whole, and various other subgroups of the population.

A list of housing units from the 1980 census, supplemented by newly constructed units, provides the sampling frame in most areas for the present CPS. In some rural locations, current household listings of selected land areas serve as the frame.

The present CPS sample is located in 729 sample areas, with coverage in every State and the District of Columbia. In an average month, the number of housing units or living quarters eligible for the national sample was about 71,000, of which about 57,000 were interviewed households, and 2,500 were households in which the members were not available for interview. About 10,500 households were visited but were not eligible for interview.

The estimation procedure used involves inflation by the reciprocal of the probability of selection, adjustment for nonresponse, and ratio adjustment.

For more information, see: U.S. Bureau of the Census, The Current Population Survey, Design and Methodology, Technical Paper 40 (Washington, D.C.: U.S. Government Printing Office, January 1978).

National Health Interview Survey—The National Health Interview Survey (NHIS) is a continuing nationwide sample survey in which data are collected through personal household interviews. Information is obtained on personal and demographic characteristics, illnesses, injuries, impairments, chronic conditions, utilization of health resources, and other health topics. The household questionnaire is reviewed each year, with special health topics being added or deleted. For most health topics, data are collected over an entire calendar year.

The sample plan of the NHIS follows a multistage probability design that produces data about the civilian noninstitutionalized population residing in the United States. The survey is designed in such a way that the sample scheduled for each week is representative of the target population and the weekly samples are additive over time. The response rate for the survey has been 95–98 percent over the years.

The sample was designed so that a typical NHIS sample for the data collection years 1985–94 consists of approximately 7,500 segments containing about 59,000 assigned housing units. Of these households, an expected 10,000 are vacant, demolished, or occupied by persons not in the target population of the survey. The expected sample of 49,000 occupied households will yield a probability sample of about 127,000 persons. In 1988, there was a sample of about 122,000 persons and in 1989, a sample of about 117,000 persons. For further information, see: Adams, PF, and Benson, V. Current Estimates from the National Health Interview Survey, National Center for Health Statistics, Vital Health Stat, 10(181), 1991.

National Medical Expenditure Survey—The 1987 National Medical Expenditure Survey (NMES II) provides measures of health status and estimates of insurance coverage and the use of services, expenditures, and sources of payment for the period January 1 to December 31, 1987. The population groups covered are the civilian noninstitutionalized population of the United States in the Household Survey and the population resident in or admitted to nursing homes and facilities for the mentally retarded in the Institutional Population Component. The NMES is a research project of the Center for

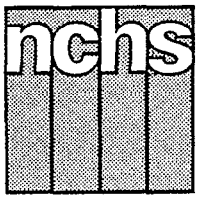
General Health Services Intramural Research in the Agency for Health Care Policy and Research.

The NMES II Household Survey sample is a national stratified multistage area probability sample of about 35,000 individuals in approximately 14,000 households. The design provided oversampling of population groups of special policy interest: black persons, Hispanic persons, the poor and the near poor, the elderly, and persons with functional limitations. Each family in this survey was interviewed four times over a period of 16 months with baseline data on household composition, employment, and insurance being updated at each interview, and information being obtained on illnesses, use of health services, and health expenditures for each family member.

Social Security and Supplemental Security Income Data—Social Security data are derived on a 100-percent basis from the Social Security Administration's Master Beneficiary Record (MBR) as of December 1990. The MBR contains information needed to administer the Social Security benefit program and limited demographic data on beneficiaries. Metropolitan-nonmetropolitan data are based on county codes in MBR. Because metropolitan statistical areas in New England are defined by cities and towns, which are not coded in the MBR, Social Security data are compiled for New England County Metropolitan Areas. Data on Supplemental Security Income beneficiaries are derived in a similar way from the Supplemental Security Record.

Survey of Veterans—The 1987 Survey of Veterans was conducted for the U.S. Department of Veterans Affairs by the Bureau of the Census. It contained an area-probability sample covering the entire United States, weighted to agree with Bureau of the Census estimates of the U.S. population by age, sex, and race. The sample was based on veterans who were in outgoing rotation panels of Current Population Surveys (CPS) conducted by the Bureau of the Census. The sample is representative of veterans living in private households in the United States at the time they were rotated out of the CPS sample. Not included are veterans in long-term hospitals or other institutional settings, which include college dormitories, correctional facilities, nursing homes, and other nonhousehold living arrangements. Nor did the sample include persons not regularly attached to a household, such as homeless persons or others whose household affiliation is temporary or transitory. For this survey, proxy answers were not accepted; that is, if the veteran was not available for interview, other members of the veteran's household were not asked to report information about the veteran. Interviews were completed on 9,442 veterans (97.8 percent of the total 11,439 cases assigned). These completed interviews included 2,122 veterans 65 years of age or over. The weighted sample total number of veterans was 26,143,086. The weighted sample number of veterans 65 years of age and over was 5,889,671. For more information, see U.S. Department of Veterans Affairs, 1987 Survey of Veterans, July 1989, Pub. No. IM&S, M-70–89-1.

Reviews of New Reports



From the CENTERS FOR DISEASE CONTROL AND PREVENTION/National Center for Health Statistics

Health Data on Older Americans: United States, 1992

Series 3, No. 27
(PHS) 93-1411

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The "graying" of America is a phenomenon of the 20th century that is without precedence. Americans are living longer lives. As age increases, perceptions of health decrease. These two conclusions about older Americans are among many of those discussed in a new report from the National Center for Health Statistics (NCHS). According to the report, life expectancy reached a high of 75.7 years (provisional data for 1991), a remarkable upturn from the 47.3 years of life expectancy noted at the turn of the century. Researchers are pondering whether these added years of life are ones of vigor or ones of dysfunction and disability. The relationship of these added years of life to health status is the topic of the new report, "Health Data on Older Americans: United States, 1992."

Support for preparation of the report was provided by the Federal Interagency Forum on Aging-Related Statistics, sponsored by the National Institute on Aging of the National Institutes of Health. The report is a cooperative activity between NCHS and the School of Public Health of the University of Illinois at Chicago through the Association of Schools of Public Health.

The report, "Health Data on Older Americans: United States, 1992," is a collage of data on the health of the elderly population residing in the United States. A combination of text and tables provides discussions on several specific topics. These include measures of health, functioning in activities and instrumental activities of daily living, mortality, living arrangements, acute care, long-term care, patterns of drug prescribing, costs and sources of health care, health of older black Americans, and international aging. The tables emphasize detailed age groups from the young-old (aged 65–74 years) to the oldest-old (aged 85 years and over). Data for those approaching older ages (persons 55–64 years) are included for comparison purposes.

Some of the report's more interesting highlights:

- Most adults, aged 65 years and over, reported no difficulty with either activities of daily living (ADL's) or instrumental activities of daily living (IADL's). About two-thirds of the total older population reported no difficulties with any of the ADL's or IADL's.
- Fewer elderly black females reported no ADL difficulties than their white counterparts; however, this difference by race did not hold for males.
- The presence of two or more limitations in basic ADL's and IADL's was associated with risk of death and nursing home residence.
- Medicare was the expected principal source of payment for 93 percent of hospital discharges for the population 65 years of age and over. For nursing home stays, Medicaid was the principal source of payment for 50 percent of the older population. For hospital discharges, self-payment was negligible (less than 1 percent). For nursing home stays, self-payment was substantial (44 percent).
- Death rates for diseases of the heart and cerebrovascular disease declined in virtually all of the race-sex groups during the 1980's, while death rates for malignant neoplasms (cancers) increased.
- Most of the increase in deaths from malignant neoplasms was a result of substantial increases in lung cancer death rates.

A 14-panel pocket edition of health data accompanies this new report. The pocket edition summarizes all the health topics covered in the report. In addition to the report and pocket edition, NCHS has made available for purchase a series of diskettes. The diskettes contain all 170 tables included in the report.

The report and accompanying pocket edition can be purchased from the U.S. Government Printing Office by completing the coupon on the back of this release. Ordering information for the diskettes is included on the back of this release.

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For answers to questions about this report or for a list of reports published in these series, contact:

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