

Access to Care among Rural Minorities: Older Adults



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Executive Summary

Key Findings about the elderly population:

- Approximately 7.71 million adults aged 65 and older lived in rural America in 1997 – 1998. “Rural” is defined as counties that are not in a metropolitan statistical area. Nearly all of these non-metro older adults were white (6.8 million, 91%). African Americans accounted for 6% of the non-metro older adults (430,000 persons), followed by Hispanics at 2% (154,000 persons) and older adults of other races at 1% (101,000 persons).
- Non-metro African American and Hispanic elders were severely handicapped in education, income and health status compared to white adults.
 - Over three quarters of non-metro African Americans (76%) and Hispanic (81%) elders have less than a high school education
 - Over three quarters of African American (77%) and Hispanic elders (76%) have a total household income of less than \$20,000
 - Over half of African American elders (52%) and 44% of Hispanic elders describe their health as poor or fair
- A greater proportion of non-metro than metropolitan elders report limitations in their ability to carry out activities of daily living (44% versus 37%). More than half of non-metro African American elders (55%) and 46% of Hispanic elders reported functional limitations.
- Government programs (Medicare and Medicaid) are the principal source of insurance for non-metro minority elders.
 - While 76% of non-metro white elders reported having private insurance, only 34% of African Americans, 33% of Hispanics, and 57% of elders of other races do so.
 - Conversely, the proportion of elder relying on Medicare alone was highest among minorities: 39% of non-metro African American elders, 29% of Hispanic elders and 28% of elders of other race have Medicare alone, versus 18% among whites.
 - The proportion of elders receiving Medicaid was highest among Hispanics (33%), followed by African Americans (26%) and whites (6%).

About older adults physician use:

- On average, 25% of older adults report having seen a physician during the previous two weeks.
- Poor health status, functional limitations and current acute illness all increase the probability of a recent visit.

- While poor health status increases the likelihood of a visit, the size of this increase is only about half as large in non-metro areas. For example, the probability that a low income African American elder living in a metropolitan area will visit a physician increases from 23.7% to 33.9% when health status is poor, a difference of 10.2%. If that same elder person lives in a non-metro area, the probability increase from 22.7% to 27.1%, a difference of only 4.4%.
- Race alone did not significantly affect whether a non-metro older person would have seen a physician during the past two weeks. However, the greater prevalence of risk factors such as poverty and limited education among nonwhite older adults still implies that minority groups are at risk for inadequate health care use.

Recommendations for Further Research

Research on non-metro, minority elderly populations is scarce. Needed research directions include:

- Defining access barriers experienced by non-metro elderly in poor health.
- Defining access barriers experienced by near-poor African-American elderly.
- Developing and testing programs to reduce or delay the progression of functional limitations in the non-metro older adult population.

Programmatic Recommendations

- Programs that encourage, support or reward health care providers for practicing in non-metro areas must be maintained, to ensure that disparities in utilization found among non-metro elders in poor health do not continue or increase.
- Health services organizations currently serving poor and minority populations, such as community health center and state Medicaid agencies, should pay particular attention to the problems of the near-poor African American elderly.
- The Health Resources and Services Administration, through its non-metro outreach and non-metro networks grant programs, should foster coalitions linking health care providers with voluntary community-based organizations to increase support services to elderly non-metro populations. For example, local organization can help by providing transportation services or arranging home visits.

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Chapter One

Introduction

Previous Research on the Non-metro Elderly

Several studies have examined the role of race and non-metro residence among health care utilization among persons 65 years of age and older, generally concluding that race and rurality effects were not present in this age group. Previous work suggested:

- No differences in utilization based on race or non-metro residence, after controlling for functional limitations (Mentnech, Ross, Park & Brenner, 1995; 1992 data).¹
- No differences in mortality based on race, although supplemental insurance reduced mortality (Doescher, Franks, Banthin and Clancy, 2000; 1987 data).
- No differences in emergency department use by race after need factors (self reported health status, comorbidity, age, education, whether living alone) were taken into consideration (Shah, Rathouz and Chin, 2001; 1993 data. Non-metro residence was not explored in this study)
- Declines in disability and functional health status among older adults were lower among African American and Hispanics than among whites. Distance to care (the only measure approaching non-metro residence) was not significant (Porell and Miltiades, 2001).

Focus of this report

The analysis presented here examines health status and health services use (measured as physician visits) among poor and minority older adults in non-metro areas. All information presented in this report comes from an analysis of the 1997 and 1998 National Health Interview Surveys. Details concerning data elements and methods are presented in the Appendix, “Method, Data Sources and Detailed Tables.” Findings and conclusions are presented as follows:

- Chapter Two provides basic demographic descriptions of non-metro versus metropolitan older adults, presenting information relevant to risk factors, race, non-metro residence, resources and health status.
- Chapter Three presents factors affecting whether a non-metro older adult will have seen a physician in the weeks before the survey.
- Chapter Four offers conclusions and recommendations.

Chapter Two

Characteristics of Non-Metro Older Adults

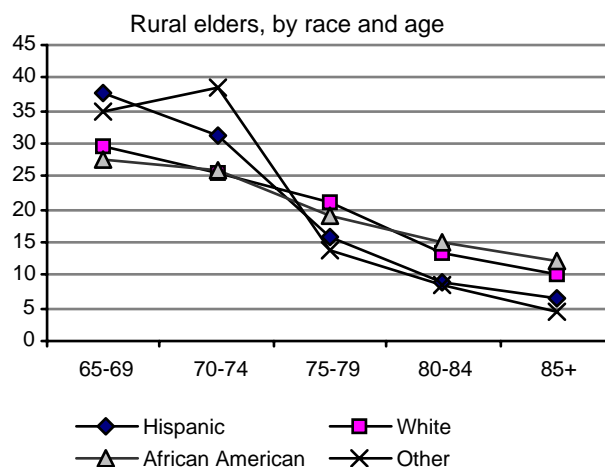
Size of the non-metro older population

Approximately 7.51 million adults aged 65 and older were living independently in non-metro America when the 1997 and 1998 NHIS was conducted (Table A-1).¹ The NHIS considers communities and areas to be “non-metro” or rural if they are not within a metropolitan statistical area. Nearly all of these non-metro older persons were white (6.8 million, 90.9%). African Americans accounted for 5.8% of the non-metro elderly (430,000 persons), followed by Hispanics at 2.0% (154,000 persons) and persons of other race² at 1.3% (101,000 persons).

The non-metro population contained a slightly higher percentage of persons aged 80 or older than the urban population, 23.7% versus 22.6%. The rural African American population contained the greatest proportion of octogenarians and above. More than a quarter of non-metro African American elders were 80 or older (27.1%), followed by white elders (23.8%), Hispanics (15.3%) and persons of other race (12.8%; see chart at right and Table A-2).

Characteristics of Non-metro Minorities

African American and Hispanic older adults in non-metro areas were severely handicapped in education, income and health status compared to white adults. (See Table, top of next page.)



Education: Over three quarters of non-metro minority elders did not complete high school. Non-metro African American elders averaged 8.6 years of education and Hispanic elders, 6.7 years, versus 11.3 years for older whites (See Table A-2). Older adults who experienced limitations in their ability to carry out activities of daily living, and thus were more likely to need medical care, had even lower levels of education, averaging 8.1 years among non-metro African Americans and 6.1 years among non-metro Hispanics, compared to 10.7 years among non-metro whites (Table A-3).

Income: Nationally, two of every five older persons lived in a household with an annual income below \$20,000, which was 189% of the Federal poverty level for a 2-person family in 1997. It would have been desirable to characterize older adults by poverty status. However, a

¹ Persons in institutional settings are not included in the NHIS sampling frame.

² Native American, Asian / Pacific Islander, other.

Percentage of Older Adult Population with Selected Characteristics

	Total	Metro	Non-metro
Less than high school education			
Total, All races	34.8%	32.6%	42.2%
White	30.5%	27.5%	39.3%
African American	57.6%	54.0%	75.6%
Hispanic	68.5%	67.3%	80.6%
Other	40.1%	39.5%	44.2%
Income below \$20,000			
Total, All races	40.7%	37.4%	51.6%
White	37.9%	34.0%	49.5%
African American	60.9%	57.5%	77.3%
Hispanic	57.1%	55.1%	76.4%
Other	35.1%	34.5%	39.1%
Self-reported health status was poor or fair			
Total, All races	26.7%	25.2%	31.9%
White	24.6%	22.6%	30.3%
African American	41.5%	39.4%	52.3%
Hispanic	38.7%	38.2%	43.8%
Other	25.4%	23.8%	36.5%

high proportion of all NHIS records for older adults, 7,407 out of 23,331 observations or nearly a third, were missing the NHIS-calculated poverty value. As a result, this report uses low-income as a surrogate for poverty.

Among non-metro elders and, in particularly, non-metro minority elders, a significantly greater proportion of persons lived in low income families. Over half of all non-metro elderly had a total household income below \$20,000. More than three quarters of non-metro African American and Hispanic elders had incomes below this level.

Health: Non-metro minority elders, in addition to being less educated and poorer than their white or metropolitan counterparts, also reported poorer health. Over half of all non-metro African American older adults (52.3%) described their own health as “poor” or “fair,” as did 43.8% of non-metro Hispanics.

Functional limitations among non-metro older adults

Just over a third (38.6%) of older adults nationwide reported functional limitations in activities of daily living. Functional limitations included work limitations, the need for personal assistance with eating, bathing, dressing, and getting around inside the house, and the need for personal assistance with routine needs such as household chores, doing necessary business, shopping, or running errands. Older adults living in non-metro areas were more likely than those in urban areas to report experiencing limitations in daily activities (43.8% in non-metro versus 36.9% in metropolitan areas, $p < 0.0001$). The proportion of non-metro older adults with

functional limitations was highest among African Americans (54.5%), followed by Hispanics (45.7%), whites (43.5%) and older adults of other race (32.1%; see Table A-3).

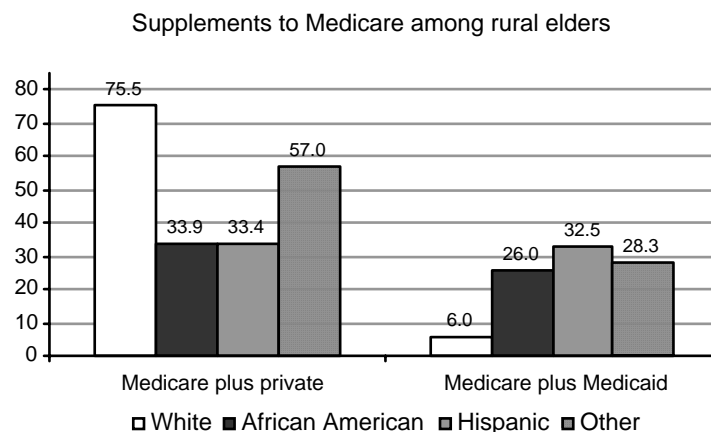
Older adults who reported functional limitations were older than their counterparts (mean ages 75.9 versus 72.8 years, respectively; $p < 0.0001$) and had slightly lower educational attainment, 10.9 versus 12.1 years ($p < 0.0001$). Older adults with some functional limitation made over twice as many health care visits during the preceding year, an estimated 13.4 visits, as older adults without such limitations, 7.0 visits ($p < 0.0001$).

Health Insurance

Nationally, only 1.02% of older adults, an estimated 49,000 persons, totally lacked health insurance during the year they were interviewed (Table A-3). Lack of insurance coverage was more common in urban areas, where 1.1% of older adults were not covered, than in non-metro areas (0.7%; $p < .001$). Across the nation as a whole, African-Americans, Hispanics, and those of other races were statistically more likely to be uninsured. So few rural elders were uninsured, however, that reliable estimates could not be calculated for each minority group.

Types of insurance coverage among older adults differed. Four categories of insurance were created for analytic purposes: private insurance, which included all elders reporting private insurance, generally as a supplement to Medicare; Medicaid, which included both Medicaid alone and Medicaid supplementing Medicare, but excluded any persons with private insurance; Medicare or other government insurance (military, veterans) alone; and uninsured.

Rural white elders were much more likely to report having private insurance than were minority elders, as shown in the chart below and detailed in Table A-3. Conversely, the proportion whose Medicare coverage was supplemented by private insurance was higher among minority elders. Medicare alone, not supplemented by either private insurance or Medicaid, was more common among non-metro African Americans (38.8%), Hispanics (29.0%) and persons of other race (28.3%) than among whites (18.1%).



Physician visits

Across the 1997 and 1998 surveys, an average of 24.9% of older adults visited a health care provider in the 2 weeks preceding their interview (Tables A-4 and A-5). Elderly women were more likely than elderly men to report a health care visit in the two weeks preceding their interview: 25.4% versus 24.1%, respectively ($p = 0.0252$, Table A-5). Visit rates were lower in non-metro than in metropolitan areas (23.8% versus 25.2%) ($p = 0.0501$).

In metropolitan locations, whether an older adult reported a health care encounter in the preceding two weeks did not differ by race. Thus, 25.5% of white older adults, 25.0% of African Americans, 23.4% of Hispanics, and 23.3% of other older adults reported having at least one healthcare visit. In non-metro locations, racial differences are more pronounced but do not attain statistical significance. In non-metro areas, 23.9% of white older adults, 26.4% of African Americans, 21.8% of Hispanics, and 13.7% of other older adults reported a medical care encounter in the last two weeks ($p = 0.06$).

The effects of other characteristics on whether an older adult would have seen a physician recently are illustrated in Table A-5. Self-described poor health, the presence of functional limitations, and current experience of an acute illness all increased the probability of a recent healthcare visit. Persons insured by Medicaid were most likely to report a recent physician visit (28.3%), followed by persons with private insurance (25.8%) and persons with Medicare or other federal government insurance alone (22.0%). Older persons without insurance were least likely to have seen a physician (8.7%).

Chapter Three

Factors Affecting Physician Visits Among Older Adults

Brief description of method

Many personal and financial characteristics affect whether an older person has recently visited a health care provider. Personal characteristics include perceived health status, limitations in activities of daily living and the presence of acute illness, as well as race and where the person lives. Financial considerations include household income and whether the person has supplemental insurance in addition to Medicare. To determine the effects of race and rural residence while controlling for other characteristics, multivariate techniques were used. The analysis focused on identifying factors that significantly influenced whether the older individual surveyed had visited a physician during the two weeks prior to the survey. Details about methods and statistical outcomes are provided in the Appendix.

The following factors affected physician utilization among older adults (See Table A-6):

- Race/ethnicity
- Residence (metropolitan / non-metropolitan)
- Income (below \$20,000 versus \$20,000 and higher). As noted earlier, income and family size were used as a proxy for poverty because the NHIS field for poverty status was missing in nearly a third of all records. In 1998, the Federal definition of poverty was \$10,850 for a family of two.³
- Family size (number of persons)
- Insurance type
- Health status
- Presence of current conditions (acute, chronic, well)
- Limited in activities
- Education
- Interaction of residence and health status
- Interaction of race/ethnicity and income

Consistent factors: Insurance, Limitations, Conditions and Education

When the analysis was completed, some characteristics of older persons affected the likelihood that they would have seen a health care provider in the past two weeks in a straightforward manner: change in the factor was associated with a change in the probability of a physician visit, and this change was consistent regardless of the person's other characteristics. These are referred to as "consistent" factors because their effects are uniform across other individual characteristics in the model. Five consistent factors were identified: the number of

³ *Federal Register*, Vol. 63, No. 36, February 24, 1998, pp. 9235-9238.

persons in the household, insurance coverage, experience of limitations, current conditions, and education.

Household size. Holding all other factors in the model equal, each additional person in the household slightly reduced the odds that an older person would have seen a physician recently (OR 0.93, CI 0.90 - .097). Reasons for this decrease are unclear. Increased family size at a given income level may reduce the money available to be spent for each person, thus reducing physician visits. Alternatively, the additional support available to the older person when more family members are present may result in reduced illness or better self-care.

Insurance: Other things held equal, older persons covered by private insurance or by Medicaid were slightly more likely to have seen a physician recently. (See Table on the next page and Table A-7 in Appendix.) The odds that an older person dependent on Medicare or other government insurance would have seen a physician recently, all other considerations held equal, were 0.84 (CI 0.77 – 0.92) those of an older person with private insurance. An older person without private insurance had only half the chance of seeing a physician recently as did a person with private insurance (OR 0.41, CI 0.24 – 0.68).

Limitations. As would be anticipated, older persons who were limited in their ability to carry out functional activities of daily living were more than twice as likely to have seen a physician recently than were their less impaired peers. Nearly a third of elders with limitations (32.3%) had seen a physician recently.

Presence of Acute Conditions. Older persons were asked whether they suffered from any chronic diseases (such as diabetes, arthritis), whether they had had a recent acute illness (colds, flu), or whether they were completely well. Nearly half (46.8%) of older adults with a recent acute illness had seen a physician. Elders with chronic conditions were not significantly more likely to report a recent physician visit than were elders who described themselves as well.

Education. Older adults who had not completed high school, all things held equal, were more likely than their better-educated counterparts to have seen a physician recently. The difference is small (22.0% of adults with less than a higher school education had seen a physician during the past two weeks versus 20.3% of other older adults), but is consistent across other risk factors.

Probability of a physician visit in the past two weeks, by characteristics of the older adult*

Consistent Factors. These factors had effects that were the same regardless of other characteristics of the person, such as race and income

Factor	% with visit
Insurance	
Any private insurance	22.0%
Any Medicaid, but not private	21.5%
Medicare, military or other government only	19.1%
Uninsured	10.3%
Limitations	
Yes	32.3%
No	14.1%
Conditions	
Chronic	22.0%
Acute	46.8%
Well	22.0%
Education	
High school graduate	20.3%
Less than high school	22.0%

Interactive Factors: Race, income and residence had complex effects, shown here

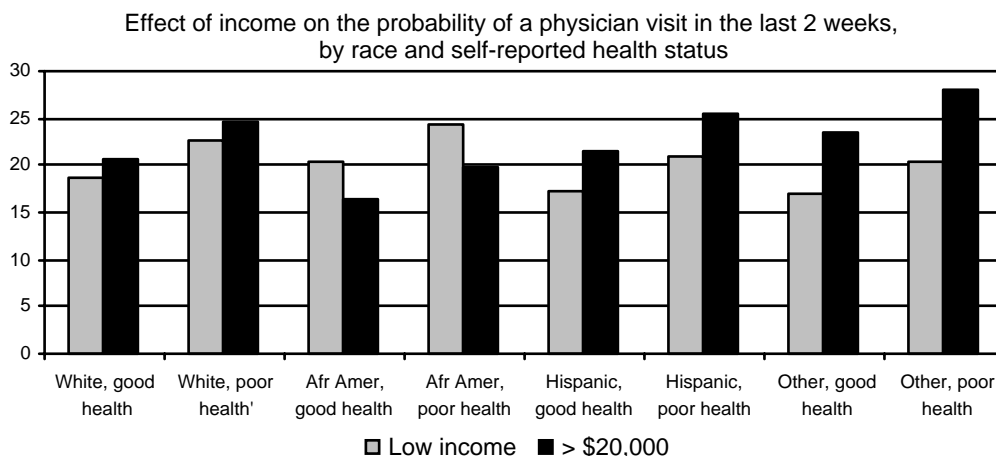
Household income above \$20,000	Metropolitan	Metropolitan	Non-metro	Non-metro
Health Status	Good to excellent	Poor to fair	Good to excellent	Poor to fair
Race/ethnicity				
White	24.8%	34.3%	23.0%	27.4%
African American	19.1%	28.1%	18.3%	22.1%
Hispanic	24.8%	35.2%	23.7%	28.3%
Other	27.1%	38.0%	26.0%	30.8%
Household income less than \$20,000				
Race/ethnicity				
White	22.0%	31.7%	21.0%	25.2%
African American	23.7%	33.9%	22.7%	27.1%
Hispanic	20.4%	29.7%	19.5%	23.4%
Other	20.1%	29.4%	19.2%	23.2%

* Probabilities are based on logistic regression models. This means that each probability shown above is adjusted for all of the other characteristics of the person.

Interactive Factors: Race/ethnicity, rural residence, income and health status

The effects of several variables were not straightforward, but varied according to other characteristics of the older person.⁴ Race/ethnicity and non-metro residence are major concerns of this report; however, a uniform “race effect” or “rural effect” was not found. The manner in which race/ethnicity and non-metro residence affected older adults’ physician utilization differed according to the person’s income and health status. This interaction is presented in the table on the previous page and described here.

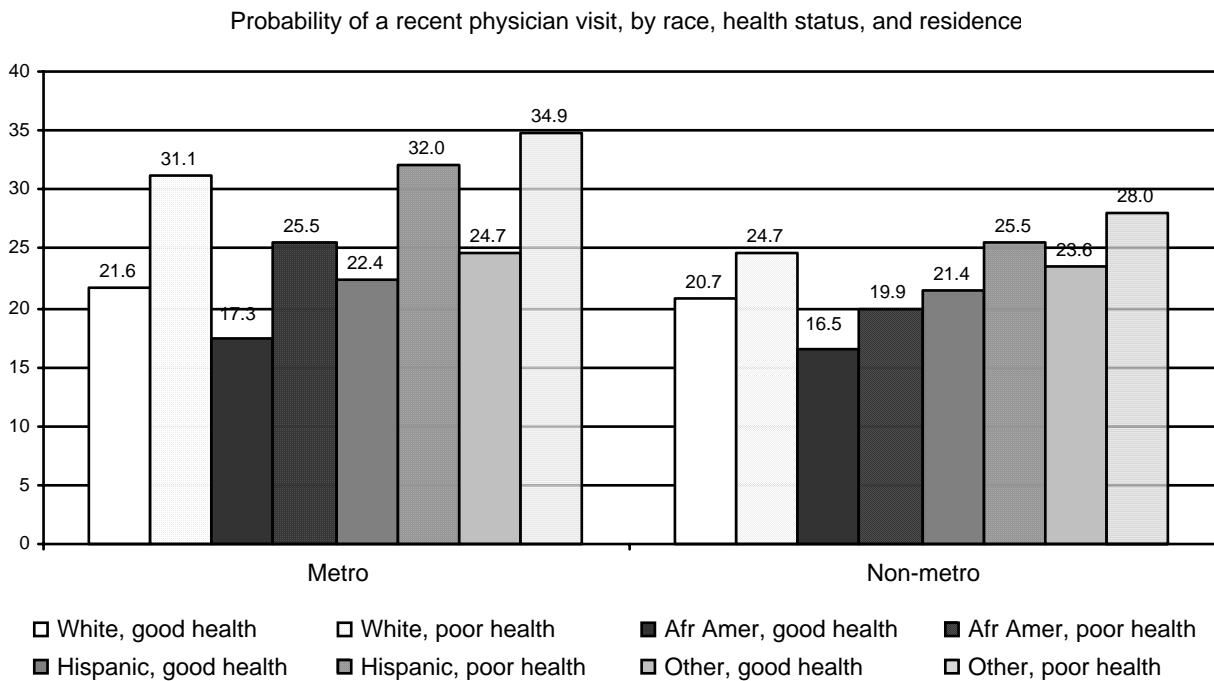
Race/ethnicity and household income: In general, persons with lower income (less than \$20,000) made fewer physician visits. However, the effects of low income were different among rural African American elders. The chart below shows how different income levels affect the probability that an older person will have visited a physician within the past two weeks, by race and self-reported health status. For all groups except African Americans, low-income elders were a few percentage points less likely to have seen a physician than are high income elders. African American low-income elders, however, were *more* likely to have made a physician visit than those in households with an income of \$20,000 or more. Given that the analysis controlled for factors such supplemental health insurance, the reasons for this difference are not immediately clear.



⁴ Interaction terms are not necessarily intuitive. A significant beta coefficient for an interaction means that the effects of the main covariates (the terms used to create the interaction) are not additive on a log scale; the effects of the covariates in the interaction must be adjusted from their sum by the value of the interaction beta coefficient.

Non-metro residence and health status: Across all races, places of residence, and other personal characteristics considered in the model, being in poor health increased the probability that an older person would have seen a physician during the past two weeks. However, the size of the increase was less in rural than in urban areas. The chart below presents this difference graphically.

Among elders living in metropolitan areas, being in poor versus good health led to increases in the probability of a physician visit that ranged from 8.2% among Hispanics to 10.2% among elders of “other” race. Among non-metro older adults, however, the increases were only half as large, ranging from 3.4% among African Americans to 4.4% among elders of “other” race. In practical terms, the effect of poor health on physician use was halved among persons living in rural areas.



Chapter Four

Conclusions and Policy Implications

The Condition of Non-metro, Minority Elders

Minority older adults living in non-metro areas constitute a high-need population. Several factors associated with higher needs for care are disproportionately present among non-metro minorities:

- Non-metro African American and Hispanic elders were severely handicapped in education, income and health status compared to white adults.
 - Over three quarters of non-metro African Americans (76%) and Hispanic (81%) elders have less than a high school education
 - Over three quarters of African American (77%) and Hispanic elders (76%) have a total household income of less than \$20,000
 - Over half of African American elders (52%) and 44% of Hispanic elders describe their health as poor or fair
- A greater proportion of non-metro than metropolitan elders report limitations in their ability to carry out activities of daily living (44% versus 37%). More than half of non-metro African American elders (55%) and 46% of Hispanic elders reported functional limitations.
- Government programs (Medicare and Medicaid) are the principal source of insurance for non-metro minority elders.
 - While 76% of non-metro white elders reported having private insurance, only 34% of African Americans, 33% of Hispanics, and 57% of elders of other races do so.
 - Conversely, the proportion of elder relying on Medicare alone was highest among minorities: 39% of non-metro African American elders, 29% of Hispanic elders and 28% of elders of other race have Medicare alone, versus 18% among whites.
 - The proportion of elders receiving Medicaid was highest among Hispanics (33%), followed by African Americans (26%) and whites (6%).
- Race alone did not significantly affect whether a non-metro older person would have seen a physician during the past two weeks. However, the greater prevalence of risk factors such as poverty and limited education among nonwhite older adults still implies that minority groups are at risk for inadequate health care use.

Recommendations for Further Research

Research on non-metro, minority elderly populations is scarce. Needed research directions include:

Defining access barriers experienced by non-metro elderly in poor health.

Elders who report that they are in poor health generally were more likely to record a recent physician visit. However, the differences between poor and good health are significantly lower in non-metro areas, across all races.

Defining access barriers experienced by near-poor African-American elderly.

African American elders with family incomes above \$20,000 were significantly less likely than poorer elders or elders of other race to report physician visits, even controlling for insurance status, current conditions, and other factors. Given the concentration of non-metro African Americans in the South, differences may be associated with availability of providers, availability of public transportation, or cultural patterns, such as differing self-definitions of health or differing perceptions of symptoms that should lead to professional care. More research is needed to elucidate the source of differences and appropriate infrastructure or educational interventions.

Developing and testing programs to reduce or delay the progression of functional limitations in the non-metro older adult population.

Limitations in ability to carry out daily activities affect non-metro elders more than their urban counterparts, and non-metro African Americans are particularly disadvantaged. Programs designed to decrease functional limitations and maintain activities of daily living in older adults have proven to reduce health care costs, allow aging in place and provide a higher quality of life. However, many such programs have been modeled in limited settings (e.g., Brill, Probst et al, 1997) or in urban locales. Research is needed to identify non-metro models that overcome barriers of distance and isolation implicit in non-metro residence, as well as models particularly targeted at non-metro African Americans. Low education levels must be considered when planning outreach or education activities among non-metro elders.

Programmatic Recommendations

Programmatic recommendations pertinent to non-metro older adults address the issues of funding and provider eligibility:

Programs that encourage, support or reward health care providers for practicing in non-metro areas must be maintained.

Across all races and all levels of function and health, non-metro older adults were less likely to report a recent visit to a health care provider than were their urban peers. This disparity may lead to delay in accessing health care services and an eventual increase in disability. Federal programs such as the National Health Service Corps, the

Indian Health Service, and the J-1 Visa program, as well as complementary state programs, are needed to improve provider availability for non-metro elderly.

Health services organizations currently serving poor and minority populations should pay particular attention to the problems of the near-poor elderly.

The analysis in the preceding report suggests that low-income non-metro elders, either because of lack of transportation or through inability to meet the financial burdens of care, are less likely to visit a health care provider than their more well to do counterparts. Examples of possible activities include:

- Outreach efforts by Community Health Centers (CHCs) and Non-metro Health Clinics (RHCs). Sliding fee scales used by CHCs and RHCs may assist non-metro near-poor and minority adults overcome financial access barriers.
- State agencies should actively promote Medicaid enrollment for eligible citizens in non-metro areas. Many non-metro elderly remain unaware of these government programs. Outreach efforts should be active and continuous, and should be sensitive to language and educational barriers.

Linking of limited resources.

The Health Resources and Services Administration, through its non-metro outreach and non-metro networks grant programs, should foster coalitions linking health care providers with voluntary community-based organizations. Working with local community resources can help to increase access to health care providers by providing transportation services, scheduling appointments, or arranging home visits. Several studies indicate successful use of community initiated volunteer programs can increase access to health care for older adults in non-metro areas.