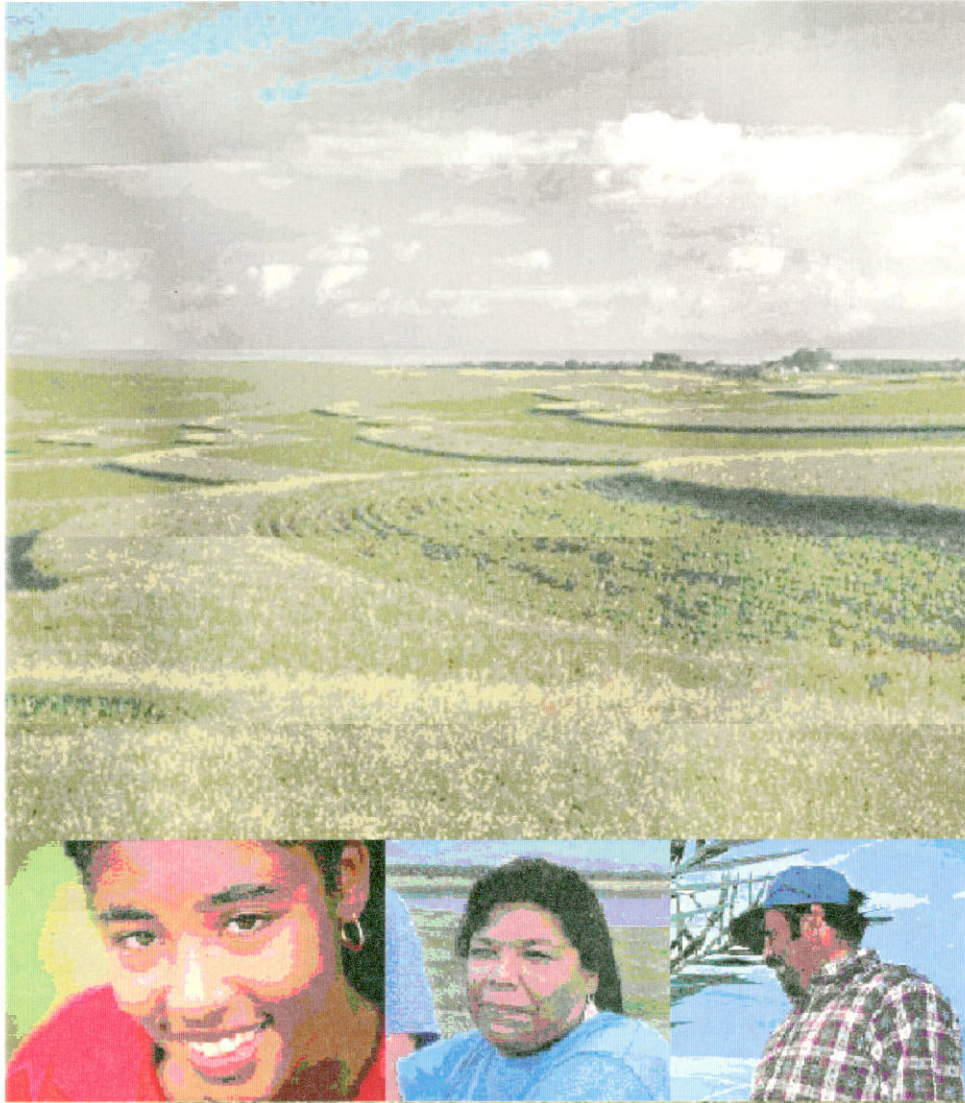


Access to Care Among Rural Minorities: Working Age Adults



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Executive Summary

Introduction

Data from the 1997 – 1998 National Health Interview Survey were used to examine health insurance coverage and recent physician visits among rural working age adults (persons aged 18 – 64). “Rural” was defined as “non-metro,” persons living in counties outside metropolitan statistical areas.

Findings

Lack of resources

Rural minority populations were handicapped by poverty and lack of education. Over half of non-metro working age African Americans (54%) and Hispanics (51%) were poor, as were over a third of non-metro residents of “other” racial / ethnic groups (38%). Half (50%) of non-metro Hispanic adults, and nearly a third of African American working age adults (31%), had not completed high school.

Health insurance

Low income and low education levels in non-metro areas translated into jobs that did not offer health insurance. Non-metro minorities were particularly disadvantaged, with rates of uninsurance ranging from 47% among the Hispanic population to 30% among non-metro African Americans.

Many circumstances, including rural residence, region of the country, age, sex, family size and health status, combined to influence whether an individual would be insured. Even holding these demographic considerations equal, rural residents were less likely to report having health insurance than persons from metropolitan areas. Minority status added further disadvantage. African Americans, Hispanics and persons of “other” race were all less likely to be insured than whites. The factors placing rural minority populations at greatest risk for being uninsured were low income, less than a high school education and being unmarried.

- All things being equal, rural African American women who lack a high school education and who have low family income (less than \$20,000 per year) have a less than an even chance of being insured throughout their entire working life.
- Non-metro Hispanic women who lacked a high school education and who had low family income also had a less than an even chance of being insured throughout their working life. Among Hispanics living in the West, even high income women without a high school diploma had less than a 50% chance of having health insurance for most of their working years.
- Rural women of “other” race (principally Native American) had less than a 50% chance of being insured if they lacked a high school education. Even if they had a high school diploma and a family income of \$20,000 or more, they still only had, at most, a 70% chance of having health insurance during their working years.
- Rural minorities who were currently married were significantly more likely to have health insurance. Having two potential workers in the household may increase the likelihood that one will have a job offering health benefits. The

implications of a “marriage effect” are strongest for rural African American women, the majority of whom are not currently married.

Rural minorities who were “high need,” that is, who reported that they were in poor health and suffered from limitations in activities of daily living, were not necessarily more likely to have health insurance than persons in good health.

Use of physician services

Although non-metro adults were less likely to have insurance than metropolitan residents, they were not less likely to have seen a physician. The proportion of working age adults who reported seeing a health care provider in the past two weeks was similar in both non-metro and metropolitan areas (13.6% and 13.5%, respectively). Racial disparities in utilization were less severe in non-metro areas, with rural whites (13.8%), persons of “other” race (13.8%) and African Americans (13.3%) having similar likelihood of a recent visit. Hispanic adults were less likely than others to report a recent health care visit (11.2%).

The overall finding that rural adults were likely to obtain health care did not imply that there were no pockets of need. Even with insurance status controlled, rural Hispanics were less likely to report a recent healthcare visit than other groups. Low education and low income, even controlling for insurance status, also reduced the probability of a recent physician visit. Most prominently, lack of health insurance nearly halved the likelihood of a recent visit. The effect was present even among high need rural minorities, those with poor health and limitations in daily activities. Lack of insurance reduces use of health care among working age adults, regardless of their health status.

Recommendations

In the short term, there are two possible approaches to ensuring that rural adults have financial access to health care: increasing the ability of rural minorities to obtain insurance, or increasing the number of practitioners in rural areas who accept indigent patients with a minimal financial requirement.

Recommendations for expanding insurance coverage:

- The Secretary of the Department of Health and Human Services should continue to promote Medicaid waiver demonstration programs that address low income adults, including both programs that promote employer buy-in to Medicaid for low income employees and programs that are marketed individually.
- The Secretary of the Department of Health and Human Services should work with State Offices of Rural Health to explore methods by which non-metro employers can obtain better “deals” on health insurance, with the possibility of expanding coverage among low-income employees.

Recommendations for expanding practitioners

- The Secretary of the Department of Health and Human Services should monitor the planned expansion of the Community Health Center program to ensure that geographic regions with a high concentration of low income and uninsured persons are appropriately targeted.

- The Secretary of the Department of Health and Human Services should evaluate the degree to which Community Health Center patients perceive sliding scale fees or co-pays as an obstacle to the receipt of care.
- The Secretary of the Department of Health and Human Services should provide Community Health Centers, particularly those in rural areas, with technical assistance in budgeting for care for uninsured adults and in helping reduce excess utilization among these adults through education and disease management.
- The Secretary of the Department of Health and Human Services should ensure adequate implementation of the “Kids into Health Careers” program in rural areas, as a means of both expanding the number of rural practitioners and of providing rural minority children with incentives to complete high school.

Future Research

Low income, minority adults, particularly women, have very low chances of being insured at different times across a working life. However, a survey conducted at a single point in time cannot describe any individual adult’s pattern of having, losing and regaining health insurance over time. Further research is needed to explore the effects of a history of extended periods of uninsurance on health as adults enter middle age, when chronic disease is likely to emerge and intensify.

Lack of a high school diploma presages a low income job; lack of an educated work force forestalls community economic development. Research is needed into effective programs that keep non-metro minority adolescents, particularly Hispanics, in school.

Recommendations:

- The Secretary of the Department of Health and Human Services should promote longitudinal research into the effects of extended periods without health insurance.
- The Secretary of the Department of Health and Human services should promote research and demonstration projects that attempt to enhance high school graduation rates among rural poor and minority adolescents. Linkages to health career planning through local Area Health Education Consortium facilities should be encouraged.

Chapter One

Background: Non-Metro Adults and Access to Care

Review of previous research

Working age adults in non-metro areas face both geographic and economic barriers to health care. They are at greater risk of being uninsured than are other populations, largely because insurance for persons this age is so closely tied to employment. Not all working age persons are employed, not all employers provide health insurance, and safety net programs, such as Medicaid, target only restricted populations, such as pregnant women and children (Mills, 2000). The net result of these factors is lower insurance coverage. Minority adults are at particular risk. For example, Seccombe and Ameuy (1995), analyzing the 1987 National Medical Expenditures Survey, found that non-metro working age adults, as well as African Americans (OR 1.48) and other minority persons (OR 1.4), were less likely to have health insurance than are other adults (OR 1.42). Non-working poor persons were actually more likely to have health insurance than working poor persons, perhaps because the former include mothers or disabled persons covered by Medicaid (Seccombe and Ameuy 1995). Structural characteristics of non-metro areas (job types, lack of unionization, small employers) contribute to poorer insurance coverage among working age adults in these regions.

The situation for working age, non-metro adults may have worsened since the 1987 data examined by Seccombe and Ameuy (1995). Health insurance coverage through employers has been declining. Between 1979 and 1992, the proportion of working age, married men age 25 – 55 with health coverage decreased from 89% to 77% (Olson, 1995). In addition, medical insurance benefits are more common in medium & large establishments (77%) than in small establishments (66%; Herz, Meisenheimer and Weinstein, 2000). This creates particular problems for non-metro areas, which are more likely to contain small businesses. Absence of large employers may contribute to the finding of Mueller, Patil and Ullrich (1997) that non-metro and frontier county residents had longer stretches of uninsurance than their metropolitan counterparts (medians: non-metro: 16 months, frontier: 22 months, metropolitan: 6 months).

Health insurance coverage affects the decisions adults make about seeking care when experiencing illness. Baker, Shapiro & Shur (2000) analyzed the 1994 National Access to Care Survey, examining beliefs and behaviors of persons who reported developing serious or morbid symptoms. Having insurance was highly predictive of whether a person who believed care was necessary actually received that care (if uninsured, OR 0.28, CI 0.13-0.62).

Purpose of the present study

Information pertaining to access to and use of health services by non-metro, working age, *minority* adults is sparse. One of the few studies to look at race and rurality simultaneously was conducted by Mueller, Patil and Boilesen (1998). Using data from the 1992 NHIS, these researchers found that non-metro residents, regardless of race, were less likely to have visited a physician in the previous year than were metropolitan whites (Table 3, pp 606-607). In their analysis, race did not add explanatory power.

Mueller, Patil and Boilesen (1998) included all individuals under age 65 in their analysis. Inclusion of children, for whom frequent clinical preventive services are required, may have concealed potential issues affecting work age adults. The purpose of the analysis that follows is to explore levels of health insurance and health care utilization among working age adults, with particular attention to disparities experienced by non-metro, minority and poor populations.

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 Appendix A, Overview of Method and Data Sources.

Findings are organized by topic. Chapter Two describes the characteristics of working age adults, presenting information relevant to race, rural residence, risk factors, resources and region. Chapter Three reports potential access to care among non-metro residents, as measured by health insurance status. Chapter Four illustrates actual access, measured by self-reported use of physician services. Conclusions and recommendations are presented in Chapter Five. To simplify presentation of findings, only summary statistics are presented in the body of the report; further information is provided in Appendix B, Detailed Tables.

References for this chapter:

- Baker DW, Shapiro MF, Schur CL. Health insurance and access to care for symptomatic conditions. *Arch Intern Med* 2000 May 8;160(9):1269-74.
- Herz E, Meisenheimer JR, and Weinstein HG. Health and retirement data from two BLS surveys. *Monthly Labor Review* 2000 (March): 3 – 20.
- Mueller KJ, Patil K, Boilesen E. The role of uninsurance and race in healthcare utilization by rural minorities. *Health Serv Res*. 1998 Aug;33(3 Pt 1):597-610.
- Olsen CA. Health benefits coverage among male workers. *Monthly Labor Review* 1996 (March) 55-61
- Seccombe K, Amey C. Playing by the rules and losing: health insurance and the working poor. *J Health Soc Behav*. 1995 Jun;36(2):168-81.

Chapter Two

Characteristics of Non-Metro Working Age Adults

Non-Metro Adults

Approximately 33.0 million working age adults lived in non-metro America during 1997-1998.¹ Most of these non-metro residents were white (28.1 million, or 85.1%; see Table B-1). The largest minority group in non-metro areas was African Americans, estimated at 2.4 million persons of working age (7.4%). Hispanics were the next largest ethnic minority at 1.7 million working age persons (5.0%) followed by approximately 815,000 persons of other racial backgrounds (2.5%).²

Mean family size was the same among non-metro and metropolitan families, averaging 3.1 persons for both. Across non-metro adults, Hispanics reported the largest average family size, 3.7 persons, followed by African Americans at 3.3 persons. Working age non-metro whites had the smallest average family size, at 3.0 persons. Non-metro working age adults were slightly older than their metropolitan counterparts, averaging 39.4 years of age versus 38.8 years of age among metropolitan respondents ($p < 0.0046$; Table B-1).

Resources

Non-metro adults were slightly less educated than metropolitan residents, averaging 12.6 years of schooling, versus 13.2 years for metropolitan residents ($p < 0.0001$). The tendency of non-metro adults to be less well educated was consistent across ethnic groups. Nearly one in five non-metro adults (18.8%) did not have at least a high school education, compared to 15.1% of metropolitan adults (Table B-2). Education levels were particularly low among rural minorities. Approximately half (49.6%) of non-metro Hispanic adults lacked a high school education, as did nearly a third of African American working age adults (30.9%). Only 15.9% of white adults and 22.0% of adults of other racial / ethnic groups had not completed high school.

Income levels were lower in non-metro than in metropolitan areas. While fewer than one in five metropolitan working age adults (17.9%) lived below poverty, one in four non-metro adults were impoverished (25.4%; Table B-2). Poverty levels were highest among non-metro minorities. Over half of non-metro working age African Americans (53.7%, or 1.3M persons) and Hispanics (51.4%, or 870,000 persons) were poor. While non-metro whites were less likely to be poor than their minority counterparts, they had nearly twice the poverty rate of urban whites (20.5% versus 11.6%). Over a third of non-metro residents of other racial / ethnic groups were poor (38.3%).

Over one-half of all non-metro, working age African Americans and Hispanics fell below the poverty line.

¹ The NHIS defines any place of residence outside of a Metropolitan Statistical Area (MSA) as "rural." MSA locations range in population from under 250,000 to 5,000,000 or more

² It would be most desirable to have separate analysis for Native Americans and Asian / Pacific Islanders, to identify any differences among these populations. However, too few observations were available for accurate estimates for these specific groups.

Health status, conditions, impairment

Fewer non-metro adults reported that they were in “good” to “excellent” health than did metropolitan working age adults (89.1% versus 92.3%; Table B-3). Non-metro African Americans reported poorer overall health than did other ethnic groups. Only 80.3% of African-Americans described themselves as being in good to excellent health, versus 89.9% for whites, 88.1% for Hispanics, and 87.9% for others.

Chronic or acute conditions were reported more frequently by non-metro residents. In metropolitan areas, 9.3% of adults reported experiencing chronic or acute conditions at the time of the NHIS interview; in non-metro areas 12.4% of adults reported such problems (Table B-3). Non-metro African Americans were more likely to report chronic conditions (16.3%) than were members of other ethnic groups, while Hispanics were least likely to report them (9.5%).

Approximately 4.3 million working age adults in non-metro areas had limitations in their ability to carry out daily activities. A larger proportion of the adult population experienced limitations in non-metro areas, 13.1%, than in metropolitan areas, 10.0% ($p < 0.0001$). Limitations of activity 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 handling routine needs such as everyday household chores, doing necessary business, shopping, or running errands. Adults with reported limitations on their activity were older than other adults (mean of 45.3 versus 38.1 years, $p < 0.0001$) and averaged a year less educational attainment, 12.0 versus 13.2 years ($p < 0.0001$). The percentage of the working age persons reporting limitations was highest among non-metro African Americans, 17.2%, followed by 13.0% among white adults, 12.2% among non-metro adults of “other” race, and 10.4% among Hispanic adults ($p < 0.0001$).

In summary, non-metro adults, and minority adults in particular, were more likely to be poor, poorly educated, and in poor health than were their urban counterparts.

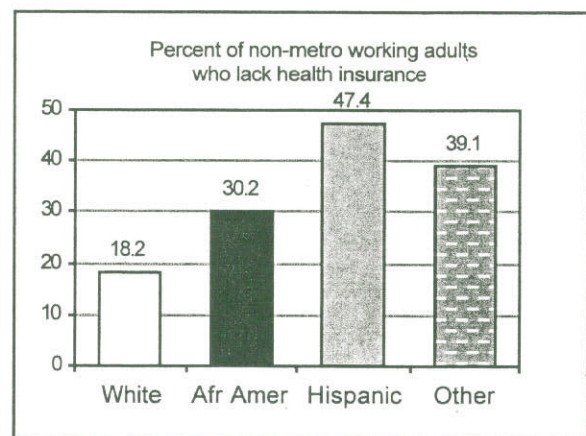
Chapter Three

Insurance Status

Rural Minorities and Health Insurance

Low income and low education levels in non-metro areas translated into jobs that did not offer health insurance. The non-metro/metropolitan disparity in the percent of the population lacking health insurance in 1997-1998 was not large: 18.0% metropolitan versus 21.1% non-metro working age adults were uninsured (Table B-4). However, non-metro minorities were severely disadvantaged, with rates of uninsurance ranging from 47.4% among the Hispanic population to 30.2% among non-metro African Americans.

Many factors affected whether a specific person had insurance in addition to race and rural residence. Gender, region, marital status, family income, family size, education, health status and limitations in daily activities all influenced coverage (See table on the next page and Tables B-5 and B-6). Some of these factors operated differently in non-metro areas than in urban areas. For example, family income over \$20,000 generally increased the likelihood that a person would be insured, but this increase was smaller in non-metro than in metro areas.



To guide policy discussion, it is necessary to go from the very complex statistical model associated with insurance coverage to concrete answers to the key question: What characteristics of non-metro minorities place them at greatest risk for being uninsured? Multiple effects are explored in Tables B-7 through B-16. We limit our presentation to the differential between non-metro white and minority populations, and the effects of income, education and marital status.

Factors affecting the likelihood of health insurance coverage among adults

- ***Race:*** Minority adults were less likely to have health insurance than whites.
- ***Rural residence:*** Non-metro adults were less likely to have health insurance.
- ***Sex:*** In general, men were less likely to have health insurance than were women. However, differences between men and women were less severe in rural areas, in regions outside the Northeast, and among men age 50-64 versus younger men.
- ***Region:*** Compared to persons in the Northeast, residents in other areas had lower odds of being insured.
- ***Age:*** As persons get older, the probability that they will have health insurance increases. Among men, as noted earlier, this reduces the differential between men and women.
- ***Family Income:*** Persons with a family income above \$20,000 per year were considerably more likely to have insurance than their poorer peers. However, this effect was extremely complicated. The beneficial effects of high income were reduced among non-metro adults and among minorities in general, but the extent of the reduction was less among rural minorities.
- ***Family size:*** Each additional person in the family decreased the probability that the responding adult would have health insurance.
- ***Health status:*** Persons who described their health as poor to fair were less likely to have health insurance than healthier persons. On the other hand, persons who reported functional limitations to their daily activities were more likely to have health insurance than persons without limitations. Among persons with limitations and family income of \$20,000 or more, differences were reduced.
- ***Education:*** Adults who had not graduated from high school were significantly less likely to have insurance.
- ***Marital status:*** Persons who were not currently married (single, separated, divorced or widowed) were significantly less likely to report having health insurance.

Influence of Residence and Race on the Probability of Health Insurance Coverage

The chart below shows the influences of residence, sex and race on the probability of health insurance coverage among persons who report relatively high income and education.³ Non-metro residents were consistently less likely to report health insurance coverage. While men and women had similar probabilities for coverage in metro areas, in non-metro regions men were consistently more likely to be insured. Finally, African American and white non-metro residents had a similar probability of being insured, but Hispanics and persons of “other” race were less likely to be insured.

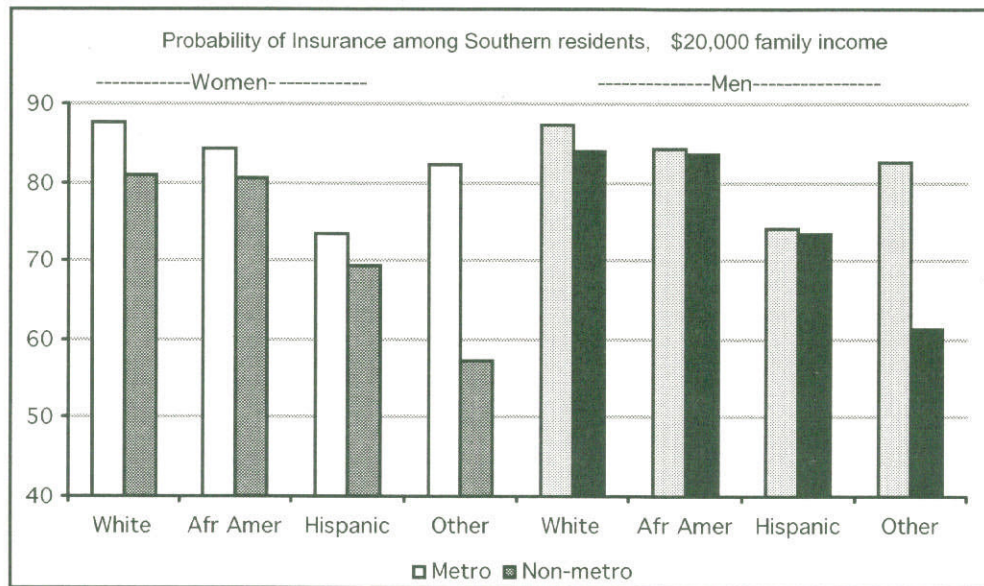


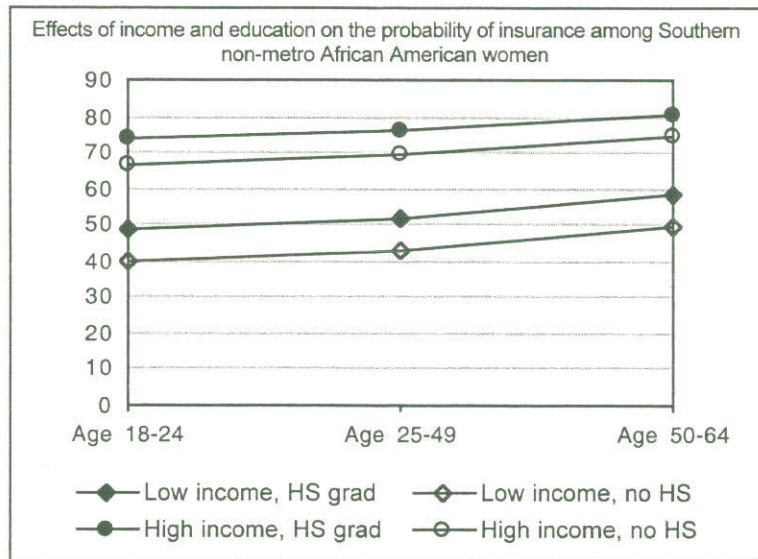
Chart limited to persons age 50 – 64 who live in the South, have family incomes of \$20,000 or higher, have graduated from high school, are married, and are in good health with no limitations in activities of daily living

Effects of Race, Age and Education on Health Insurance

African Americans

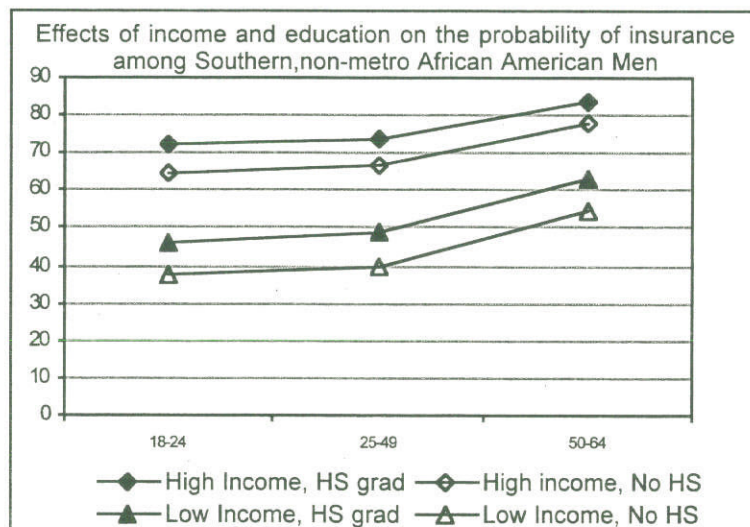
The chart at the top of the next page describes the effects of income and education on the probability that high resource non-metro African American women will have health insurance at different ages. “High resource” women were defined as those who were married and in good health, without physical limitations. The incremental effects of additional education and additional resources are illustrated clearly. Non-metro African American women who lack a high school education and who have a low family income (less than \$20,000 per year) have a less than an even chance of being insured throughout their entire working life.

³ Because probabilities must be calculated based on all factors in the model, each chart must pertain to persons with a specific set of characteristics. These are noted below the chart.



Women in this chart live in the South, are in good to excellent health, have complete high school, have a family income of \$20,000 or more, and experience no physical limitations. The South is used because most rural African Americans live in that region.

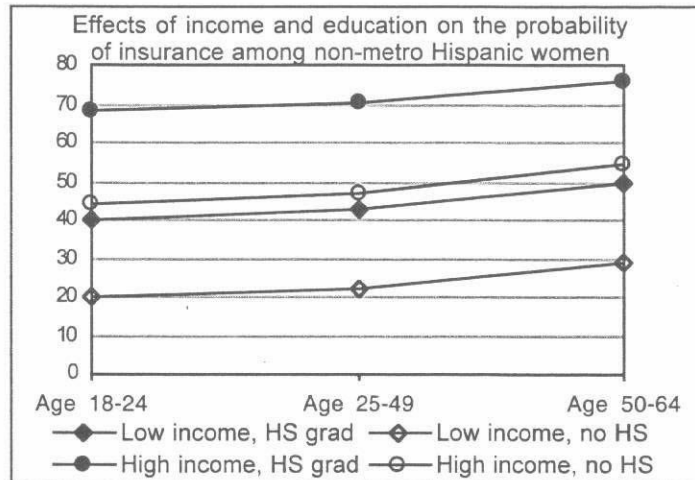
The effects of income and education were similar among high resource non-metro African American men. The differing effects of increased age among men and women are visible if this chart is compared to the one above. For women, the increase in the probability of having health insurance was gradual across the working life, while among men there was a marked increase in the probability of having insurance in middle age.



Men in this chart are married, in good health, experience no physical limitations, and live in the South.

Hispanics

On average, 47% of non-metro Hispanic adults reported having health insurance in 1997-1998. Non-metro Hispanic women who lacked a high school education and who had low family income (less than \$20,000 per year) had a less than an even chance of being insured throughout their entire working life. Even high-income women without a high school diploma had less than a 50% chance of having health insurance for most of their working years.



The chart above applies to Hispanic women who are in good health, are married, have no physical limitations, and live in the West. This locale is used because the non-metro Hispanic population is concentrated in this region.

Even the best financial situation for high-resource (married, good health) Hispanic men—that is, family income above \$20,000 and a high school diploma—still resulted in health insurance coverage that lagged behind that of white or African American non-metro residents. Fewer than one in five non-metro Hispanic men under 50 with family incomes below \$20,000 had health insurance.

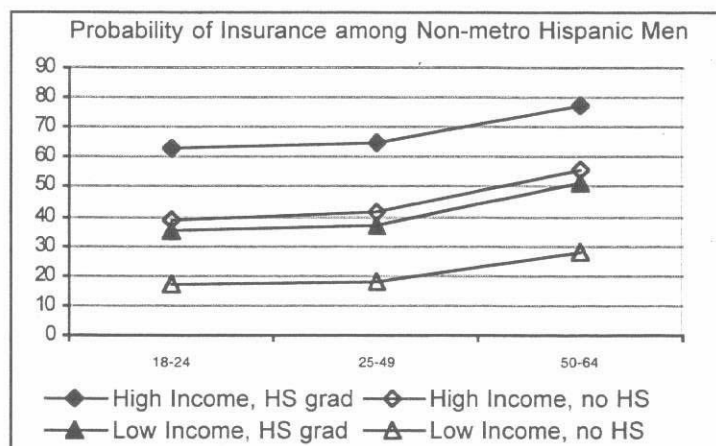


Chart applies to non-metro Hispanic men who were married, in good health, with no physical limitations, and who lived in the West.

“Other” Race

Discussing non-metro adults of “other” race is difficult. The majority of non-metro adults of “other” race surveyed were Native American, but other ethnicities were present as well.

The chart below illustrates the probability that a married, healthy non-metro woman of other race will be insured. For non-metro persons of “other” race, additional family income (less than \$20,000 per year versus higher) did not convey the advantages in terms of insurance coverage that were found among other minority groups. For this set of persons, education was the principal factor influencing the probability of coverage, with high school graduation making an important difference. Women who had not graduated from high school had less than an even chance of being insured at any age. Results for men were similar.

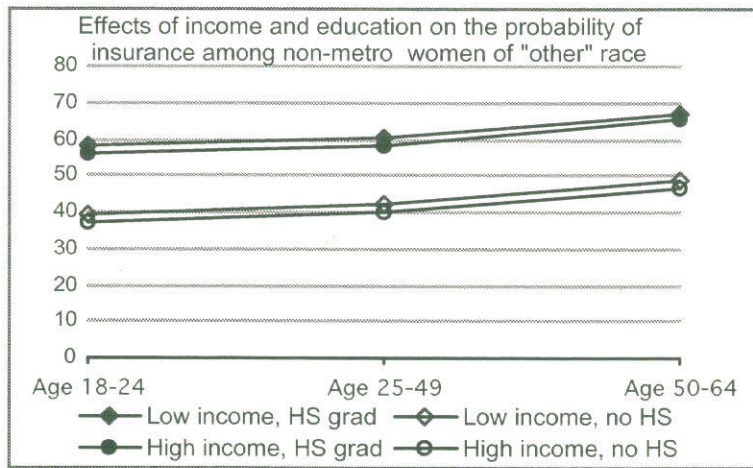


Chart assumes that the woman is in good health without physical limitations, family of 3 persons, married, living in the West.

Effects of Race, Income and Marital Status

African Americans

In every income / education, category, non-metro African American women who were married were more likely to be insured than those who were divorced (this status was used for modeling; results for single, widowed or never married persons would be similar). Less than a third of low-income, divorced women reported having health insurance, regardless of their education level. Effects

were similar for non-metro African American men. This effect is logical: marriage increases the possibility that one partner will be insured and able to secure benefits for the family.

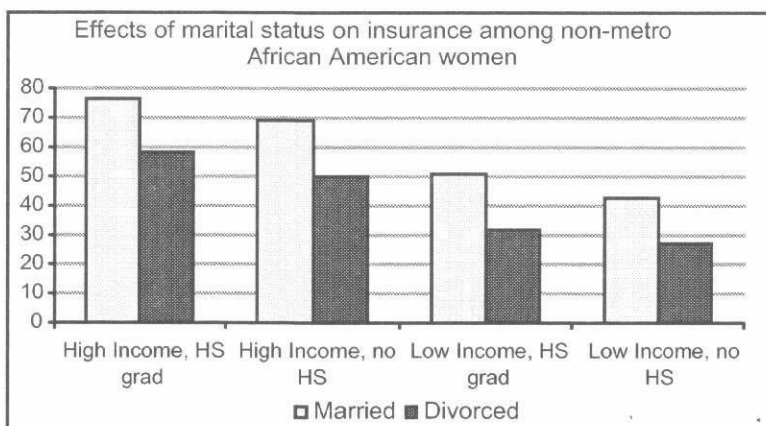


Chart shows probabilities for Southern women aged 25-50 who are in good health, and have no physical limitations.

Hispanics

Non-metro Hispanic women were at particularly high risk for being uninsured. Only Hispanic women with family incomes above \$20,000 and a high school education had better than a 50% chance of being insured.

Across each income / education combination, however, being married conveyed some level of protection. Even at the lowest resource level (low income, no high school), married Hispanic women were more than twice as likely to have insurance as those who were not (25% versus 11%). The pattern among Hispanic men was similar.

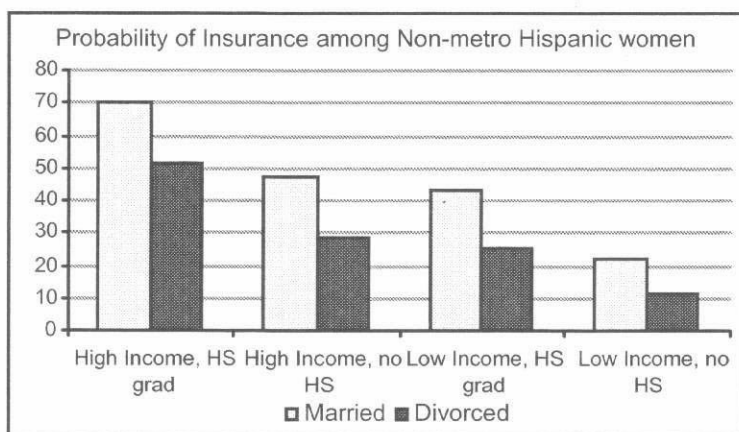


Chart pertains to 25-49 year old non-metro women in good health, with no physical limitations, living in the West.

Other race

The differential in insurance probability associated with marriage was similar among non-metro residents of “other” race. Among both men and women (men not shown), only persons who were married and had graduated from high school had a better than 50% chance of being insured.

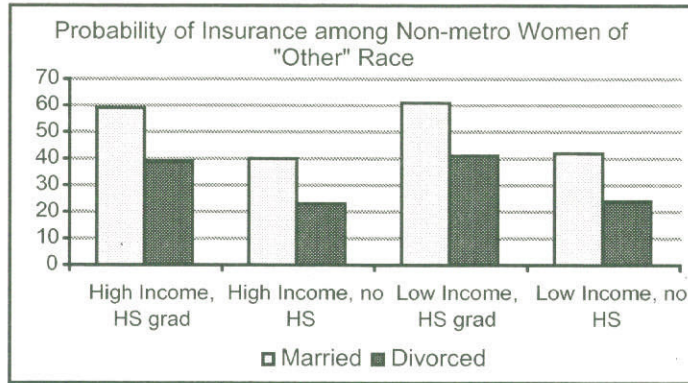


Chart pertains to a 25-49 year old non-metro woman in good health, with no physical limitations, in a family of 3 persons, living in the West.

Health Insurance among High Need Non-Metro Residents

The preceding analyses applied only to persons who reported themselves to be in good health, without physical limitations. In general, persons who stated they were in poor health were less likely to have health insurance, while persons who reported limitations in the activities of daily living were more likely to report that they were insured. These dual factors played out differently across different rural populations. For illustrative purposes, rates of insurance coverage among these high need persons are displayed in the chart at the top of the next page.

High-resource non-metro men (income over \$20,000 and a high school education) were likely to have health insurance, whether or not they suffered from poor health and limited activities. Among low resource men (low income and less than high school education), high need persons were more likely to be insured than others. However, the proportion of low resource men having insurance was very low, with only African Americans having better than a 50% probability of being insured.

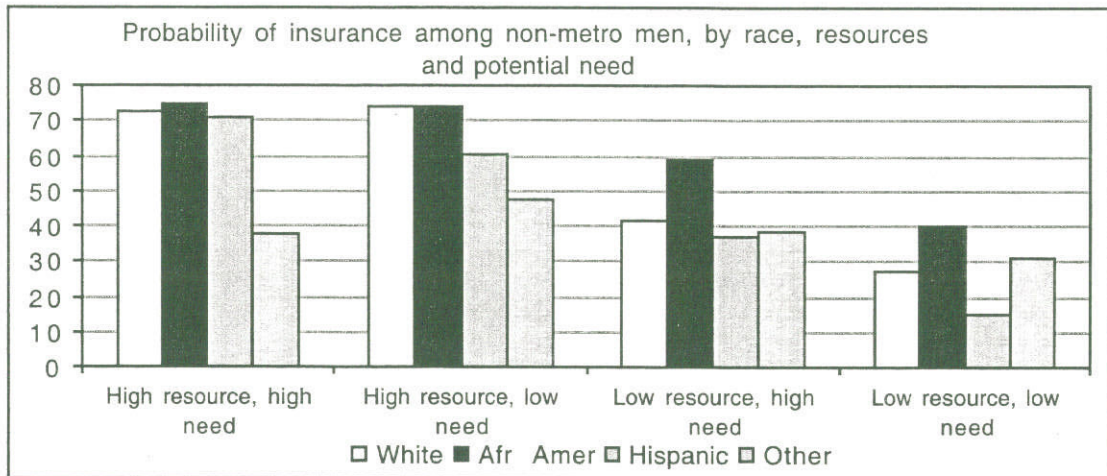


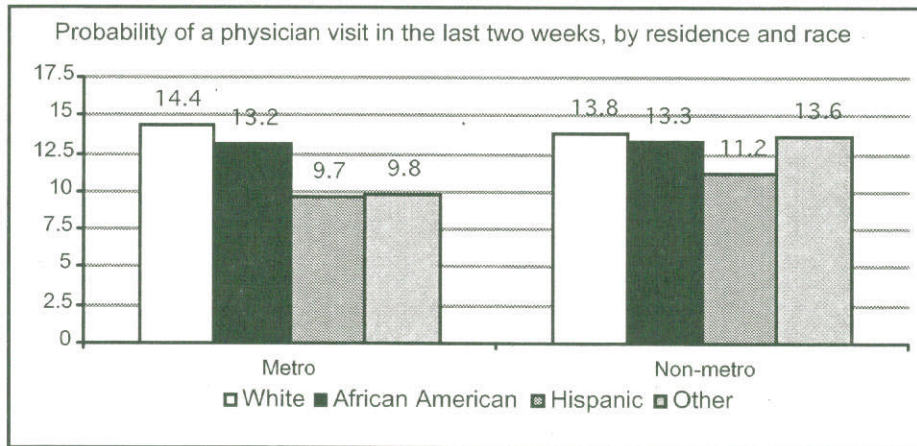
Chart applies to non-metro men age 25-49, who are married and come from a family of 3 persons. High resource men have income over \$20,000 per year and a high school education. High need persons report that they have poor health and limitations in activities of daily living; persons who are not limited report good health and no limitations.

Chapter Four

Physician Visits

A physician visit within the last two weeks was used as a measure of actual use of health services. While most adults do not need medical services in any given two week period, over a whole population a certain proportion of persons can be anticipated to need care for acute or chronic problems. Racial or other disparities should be evident if the proportion of persons visiting a physician varies for factors other than personal health status.

Although non-metro adults were less likely to have insurance, they were not less likely to have seen a physician than their urban peers. The proportion of working age adults who reported seeing a health care provider in the past two weeks was similar in both non-metro and metropolitan areas (13.6% and 13.5%, respectively; see Table B-17). Racial disparities in utilization were less severe in non-metro areas, as shown in the chart below.



Multivariate Analysis: Use of Physician Services

The overall finding that rural adults were likely to obtain health care did not imply that there were no pockets of need among non-metro populations. Accordingly, we examined the effects of specific factors, such as insurance, on the likelihood of a recent physician visit (see next page; details in Tables B-18 and B-19).

Rural residence, controlling for other factors, increased the probability that an adult would have seen a physician in the past two weeks. African Americans did not have lower visit rates than whites, all things held equal, but Hispanics and persons of “other” race were less likely to report a recent visit. These differences, however, were not present in the rural population. High need, caused by poor health or limitations in activities of daily living, increased the probability of a recent health care visit, as did increased education and income. The single largest effect, however, was that caused by health insurance coverage; which roughly doubled the likelihood of a visit.

Several important factors affecting whether a person would have seen a physician affected different groups in different ways. For example, while Hispanics in general were less likely to have seen a physician, this effect was slightly ameliorated in non-metro areas. Thus, specific probabilities were calculated for various at-risk populations. These are detailed in Tables B-20 through B-25. Selected important findings are presented here.

Factors affecting the likelihood of a physician visit within the past two weeks

- ***Race:*** Overall, Hispanic adults and those of “other” race were less likely to have seen a health care provider in the past two weeks. Racial disparities were less among rural residents and among persons with limitations in activities of daily living. African Americans were not significantly less likely than whites to have a visit.
- ***Rural residence:*** In general, non-metro adults were more likely to have seen a physician during the past two weeks than were urban residents. However, the likelihood of a physician visit declined with age among non-metro adults more than among urban adults.
- ***Sex:*** Women were more likely to have seen a physician within the past two weeks than were men. Differences between men and women declined slightly among older age groups.
- ***Insurance coverage:*** Absence of insurance coverage nearly halved the likelihood of a recent physician visit.
- ***Need:*** Adults with limitations in their ability to carry out daily activities had a higher probability of having seen a physician recently, as did those who perceived their health as poor.
- ***Education and income:*** Persons with less than a high school education were less likely to have seen a physician than more educated adults. Similarly, persons with a family income of less than \$20,000 per year were less likely to have visited a physician.
- ***Family:*** Each additional family member decreased the probability that a person would have seen a physician. At the same time, however, single or divorced persons were less likely to have seen a physician than were married persons.

Race and Insurance status

Non-metro overall disparities in physician visits, shown in the table on page 19, were almost entirely due to insurance status. The chart below, which varies insurance status while holding other personal characteristics constant, illustrates the absence of disparities based on race alone.

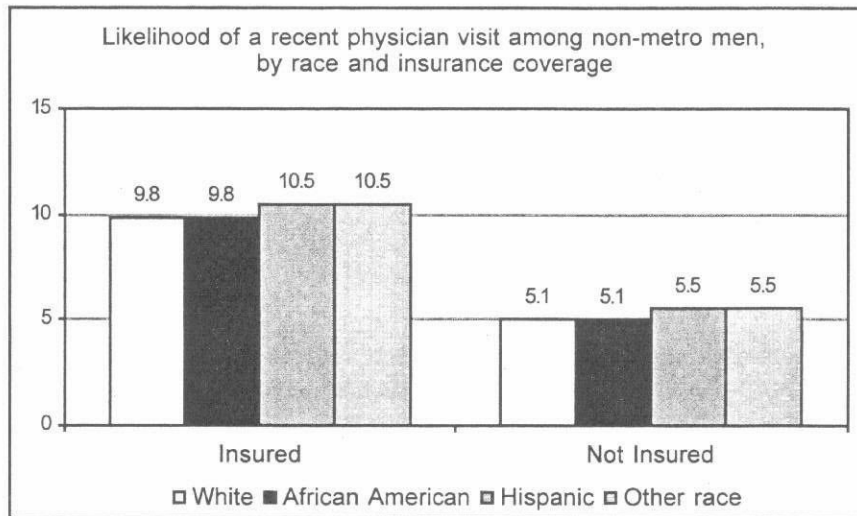
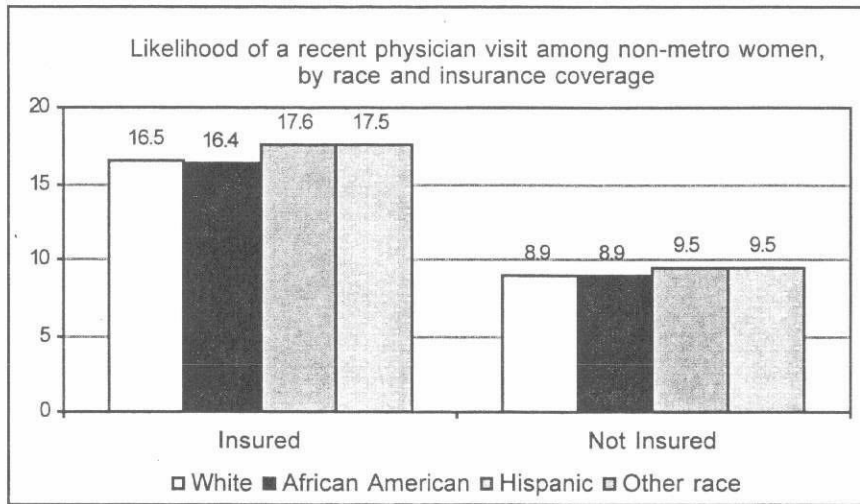


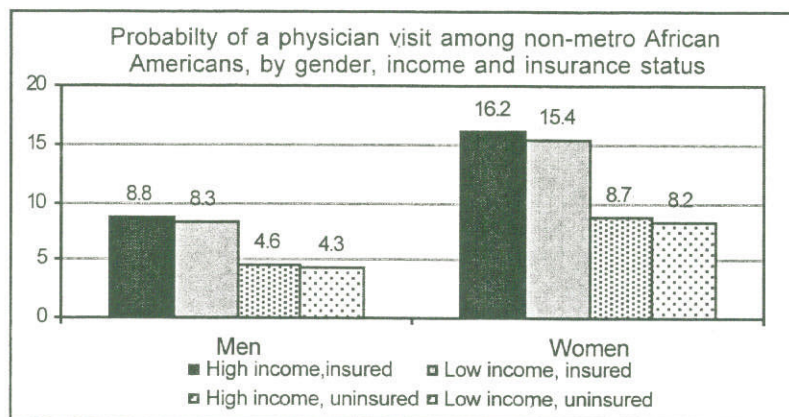
Table limited to adults age 25-49 living in the West, who are married, in good health with no limitations in daily activities, with family income of \$20,000 or more, living in a 3-person family.

African Americans

Gender and insurance

Gender, income and insurance effects are illustrated in the chart below. Whether insured or not, rural African American women were more likely to have seen a physician recently than were men. Among both sexes, having insurance sharply increased the probability of a physician visit. The effects of insurance were larger than those of income, which had only a small, barely significant effect on visits.

Chart is specific to African Americans aged 25-49 living in the South, who are married, in good health, not limited in



physical activities, and have at least a high school education.

Need

The chart below illustrates the probability of a physician visit among high need non-metro African Americans. High need persons reported poor health and limitations in daily activity, both of which strongly increased the probability of a recent healthcare visit. Even among persons who are likely to have a high need for services, insurance coverage strongly influenced whether a physician was seen.

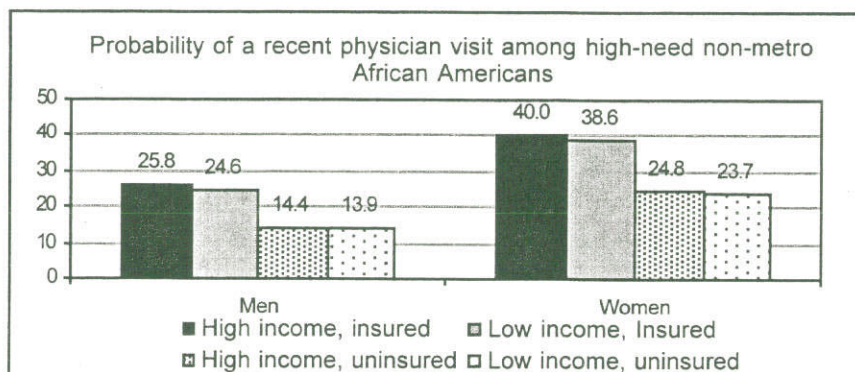
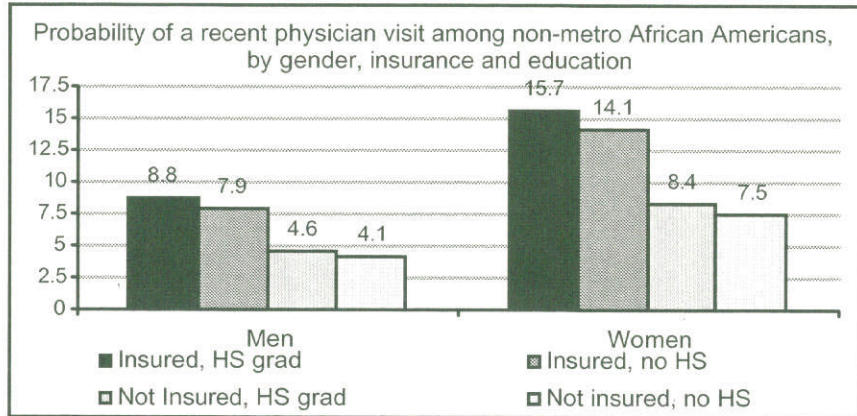


Chart assumes a person living in the South, age 25-49, who is single or never married, has less than a high school education, had poor health and limitations in daily activity, and lives in a family of 3 persons.

Education

Education had a small but statistically significant effect on physician visits, with more educated persons being more likely to report a recent physician visit. Education increased visit probability among both men and women.

Chart is limited to non-metro African Americans age 25 – 49 living in the South, who are married, have family



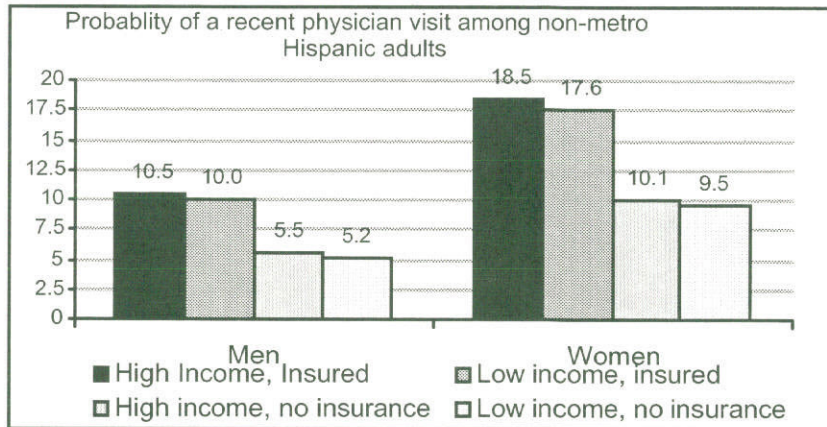
incomes of \$20,000 or more, in good health with no limitations in daily activity, living in a 3-person family.

Hispanics

Gender and insurance

The chart below illustrates the probability that non-metro Hispanic adults in good health, with no limitations in daily living, will have seen a physician in the past two weeks. As was the case among rural African Americans, women were more likely to report seeing a physician than men. Having a family income of less than \$20,000 slightly reduced health care use. The strongest influence after gender, however, was health insurance. Without insurance, the probability of a visit was markedly less.

Chart is limited to adult Hispanics living in the West who have a high school education, are in good



health and not limited in activities of daily living, are married, and come from a 3-person family.

Need

The chart below illustrates the probability of a physician visit in the last two weeks among high need Hispanic adults living in non-metro areas. High need persons are those who reported that they were in poor to fair health and limited in their ability to carry out activities of daily living. As was the case among non-metro African Americans, high need Hispanic adults were less likely to have seen a physician if they were uninsured.

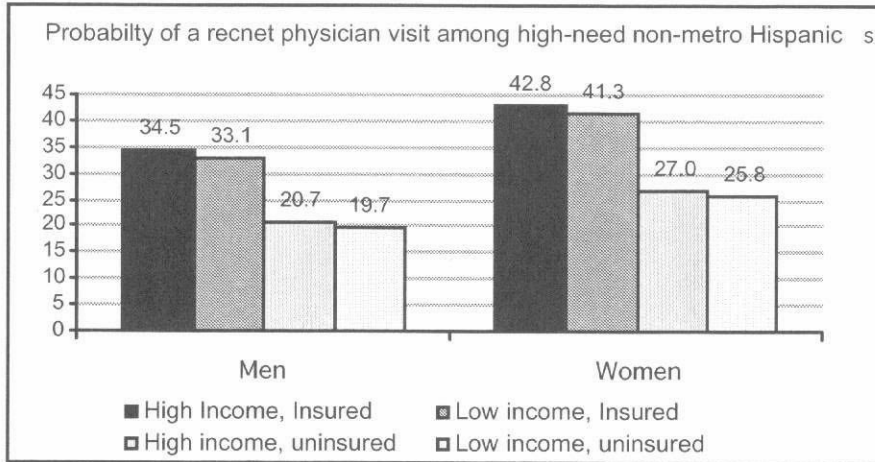


Chart is limited to Hispanic adults ages 25-49, living in the West, who report that they are in poor to fair health, are limited in daily activities, have not completed high school, are single or never married, and live in a 3-person family.

Education

As was the case among non-metro Africans, non-metro Hispanics with less than a high school education were slightly less likely to have seen a physician recently. However, the effects of education were small compared to the effects of insurance coverage.

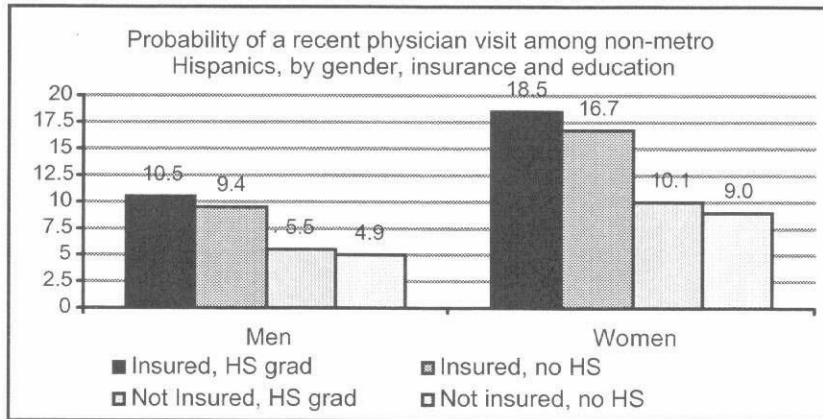


Chart is limited to married adults age 25 – 49, living in the West, in good health with no limitations in daily activity, who have a family income of \$20,000 or more and live in a 3-person family.

Adults of "other" race

Gender, Income and Insurance

The probability of a physician visit by persons of "other" race, as among other non-metro adults, was strongly influenced by gender and insurance. Women were more likely to report a recent physician visit than were men, and those with insurance more likely than those who lacked it. Income effects were relatively small.

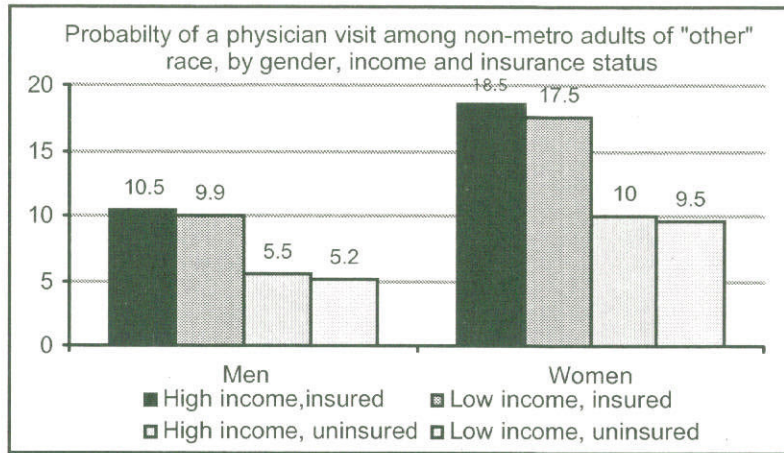


Chart is limited to adults of "other" aged 25-49, living in the West, who have a high school education, are in good health and not limited in activities of daily living, are married, and come from a 3-person family.

Need

The chart below illustrates the probability of a physician visit in the last two weeks among high need adults of "other" living in non-metro areas. High need persons are those who reported that they were in poor to fair health and limited in their ability to carry out activities of daily living. As was the case among all non-metro residents, high need adults were less likely to have seen a physician if they were uninsured.

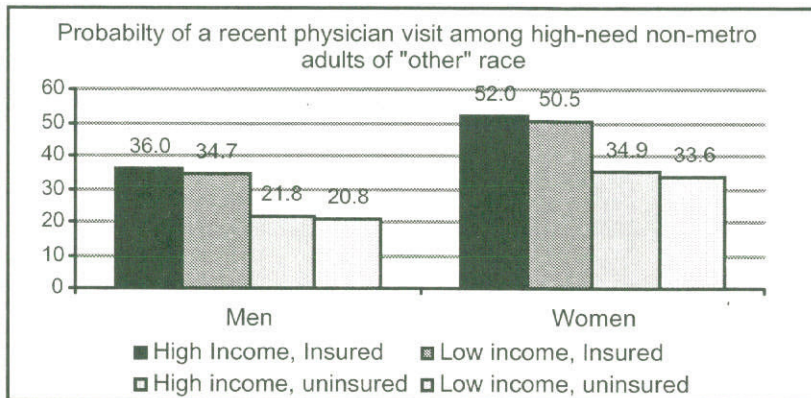


Chart is limited to adults of other race aged 25-49, living in the West, who report that they are in poor to fair health, are limited in daily activities, have not completed high school, are single or never married, and live in a 3-person family.

Education

As was the case among other minorities, non-metro adults of “other” race with less than a high school education were slightly less likely to have seen a physician recently than persons with more education. However, the effects of education were small compared to the effects of insurance coverage.

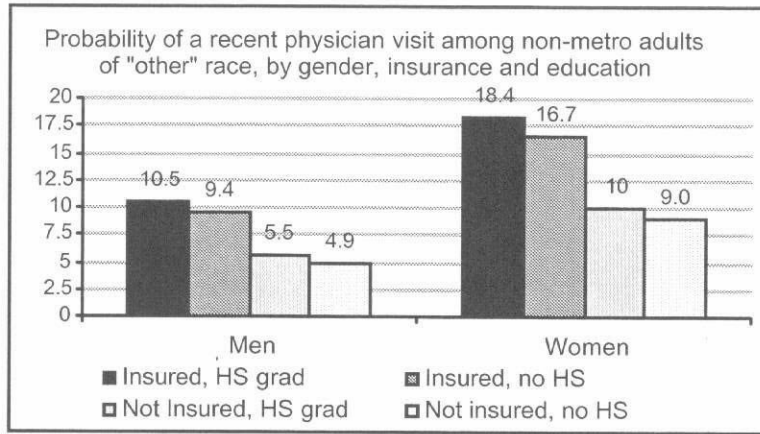


Chart is limited to married adults age 25 – 49, living in the West, in good health with no limitations in daily activity, who have a family income of \$20,000 or more and live in a 3-person family.

Chapter Five

Conclusions and Recommendations

Summary of Findings

Health insurance

Rural minority populations, as measured in the 1997 -1998 National Health Interview Survey, were resource poor, handicapped by poverty and lack of education. Over half of non-metro working age African Americans (54%) and Hispanics (51%) were poor, as were over a third of non-metro residents of "other" racial / ethnic groups (38%). In contrast, only 21% of the non-metro white population, and only 18% of the metropolitan population regardless of race, were poor. Half (50%) of non-metro Hispanic adults had not completed high school, as had nearly a third of African American working age adults (31%).

Low income and low education levels in non-metro areas translated into jobs that did not offer health insurance. Non-metro minorities were particularly disadvantaged, with rates of uninsurance ranging from 47% among the Hispanic population to 30% among non-metro African Americans.

Many circumstances, including rural residence, region of the country, age, sex, family size and health status, combined to influence whether an individual would be insured. Even with all factors held equal, rural residents were less likely to report having health insurance than persons from metropolitan areas. Minority status added further disadvantage, as African Americans, Hispanics and persons of "other" race were all less likely to be insured than whites. The factors placing rural minority populations at greatest risk for being uninsured were income, education and marital status.

- All things being equal, rural African American women who lack a high school education and who have low family income (less than \$20,000 per year) have a less than an even chance of being insured throughout their entire working life. Higher income or education raised the likelihood that African American women would have health insurance, to a maximum of approximately 80% in the Northeast.
- Non-metro Hispanic women who lacked a high school education and who had low family income also had a less than an even chance of being insured throughout their working life. Among Hispanics living in the West, even high income women without a high school diploma had less than a 50% chance of having health insurance for most of their working years.
- Rural women of "other" race (principally Native American) had less than a 50% chance of being insured if they lacked a high school education. Even if they had a high school diploma and a family income of \$20,000 or more, they still only had, at most, a 70% chance of having health insurance during their working years.
- Rural minorities who were currently married were significantly more likely to have health insurance, an effect that was present across all races, both sexes, and all income and education levels. This finding probably results from the fact that

having two potential workers in the household increases the likelihood that one will have a job offering health benefits. The implications of a “marriage effect” are strongest for rural African American women, the majority of whom are not currently married.

Rural minorities who were “high need,” that is, who reported that they were in poor health and suffered from limitations in activities of daily living, were not necessarily more likely to have health insurance than persons in good health. Among high need minority individuals who were low income and low education, only non-metro African Americans had better than a 50% chance of being insured. Rural high need Hispanics and adults of “other” race who fell into the low income, low education category reported having health insurance less than 40% of the time.

Use of physician services

Although non-metro adults were less likely to have insurance than metropolitan residents, they were not less likely to have seen a physician. The proportion of working age adults who reported seeing a health care provider in the past two weeks was similar in both non-metro and metropolitan areas (13.6% and 13.5%, respectively). Racial disparities in utilization were less severe in non-metro areas, with rural whites (13.8%), persons of “other” race (13.8%) and African Americans (13.3%) having similar likelihood of a recent visit, followed by Hispanics (11.2%).

The overall finding that rural adults were likely to obtain health care did not imply that there were no pockets of need. Even with insurance status controlled, rural Hispanics were less likely to report a recent healthcare visit than other groups. Low education and low income, even controlling for insurance status, also reduced the probability of a recent physician visit. Most prominently, lack of health insurance nearly halved the likelihood of a recent visit. The effect was present even among high need rural minorities, those with poor health and limitations in daily activities. Lack of insurance reduces use of health care among working age adults, regardless of their health status.

Discussion and Recommendations

There are both short-term and long-term actions that can serve to reduce disparities in insurance and health services use among rural minorities. However, actions in both time frames are likely to be constrained by current economic circumstances and budgetary priorities.

In the short term, there are two possible approaches to ensuring that rural adults have financial access to health care: increasing the ability of rural minorities to obtain insurance, or increasing the number of practitioners in rural areas who accept indigent patients with a minimal financial requirement.

Expanding coverage

One way to expand coverage is to subsidize the participation of low income employees in current employer health plans. One in five uninsured persons has access to employer based insurance, but the majority of these persons decline to purchase coverage, citing high costs (Cunningham, Schaefer and Hogan, 1999). While an income-based system might result in subsidies for low-income persons who already purchase health insurance, as well as to the uninsured, the authors deemed the effect small enough to be acceptable in terms of the benefits gained.

A second alternative entails increasing the ability of low-income adults to access Medicaid (e.g., Rosenbaum Borzi and Smith, 2000). Such a program could be targeted through employers of low income persons, as well as individually marketed. Medicaid expansion in the current economic environment may face economic barriers. Medicaid enrollment had been increasing from mid-1998 through 2001 in response to the current economic downturn, at the same time as state government revenues have been declining (Wachino, 2002). In consequence, a majority of states (41) are acting to constrain Medicaid growth in FY 2003, including 18 states planning to reduce eligibility categories (Wachino, 2002).

Recommendations:

- The Secretary of the Department of Health and Human Services should continue to promote Medicaid waiver demonstration programs that address low income adults, including both programs that promote employer buy-in to Medicaid for low income employees and programs that are marketed individually.
- The Secretary of the Department of Health and Human Services should work with State Offices of Rural Health to explore methods by which non-metro employers can obtain better “deals” on health insurance, with the possibility of expanding coverage among low-income employees.

Expanding practitioners

The second major approach to providing health care to medically indigent persons involves increasing the number of facilities providing free or low cost care. Research has shown that a substantial proportion of the primary care received by minority persons who lack insurance or who are covered by Medicaid comes from hospital outpatient centers and federally qualified community health centers (Forrest and Whelan, 2000). Academic medical centers (AMCs) have called for reform of Medicare and Medicaid disproportionate share regulations to help underwrite the care they already provide (The Commonwealth Fund, April 2001). AMCs, however, are generally located in urban areas. Rural medical training is unusual. Thus, AMCs are not a viable means for extending health care to rural poor and minority populations.

Federally qualified community health centers are an existing vehicle for providing care to medically indigent persons. However, their geographic and financial availability may need to be expanded. A New York study assessing the accessibility of various sites to persons without insurance rated FQHCs highly for range of services offered, but noted that sliding fee scales and a requirement that payment be provided before services could be received may have deterred uninsured persons from seeking care. FQHCs were found to have a smaller proportion of medically indigent persons in their patient population than did city-sponsored hospital clinics (Weiss, Haslanger and Cantor, 2001).

Recommendations:

- The Secretary of the Department of Health and Human Services should monitor the planned expansion of the Community Health Center program to ensure that geographic regions with a high concentration of low income and uninsured persons are appropriately targeted.
- The Secretary of the Department of Health and Human Services should evaluate the degree to which Community Health Center patients perceive sliding scale fees or co-pays as an obstacle to the receipt of care.

- The Secretary of the Department of Health and Human Services should provide Community Health Centers, particularly those in rural areas, with technical assistance in budgeting for care for uninsured adults and in helping reduce excess utilization among these adults through education and disease management.
- The Secretary of the Department of Health and Human Services should ensure adequate implementation of the “Kids into Health Careers” program in rural areas, as a means of both expanding the number of rural practitioners and of providing rural minority children with incentives to complete high school.

Future Research

The current study found that low income, minority adults, particularly women, have very low chances of being insured at different times across a working life. However, a survey conducted at a single point in time cannot describe any individual adult’s pattern of having, losing and regaining health insurance over time. It is quite possible that a subgroup of low-income adults will spend up to half of their working life, ages 18 through 64, without insurance. Further research is needed to explore the effects of a history of extended periods of uninsurance on health as adults enter middle age, when chronic disease is likely to emerge and intensify.

Lack of a high school diploma presages a low income job; lack of an educated work force forestalls community economic development. The 1996 Rural Manufacturing Survey found that quality of labor force was the principal barrier keeping businesses from locating in non-metro areas, with such issues as transportation and telecommunications secondary (Gale, McGranahan, Teixeira, and Greenberg, 1999). Research is needed into effective programs that keep non-metro minority adolescents, particularly Hispanics, in school.

Recommendations:

- The Secretary of the Department of Health and Human Services should promote longitudinal research into the effects of extended periods without health insurance.
- The Secretary of the Department of Health and Human services should promote research and demonstration projects that attempt to enhance high school graduation rates among rural poor and minority adolescents. Linkages to health career planning through local Area Health Education Consortium facilities should be encouraged.

References for this chapter:

The Commonwealth Fund. *A Shared Responsibility: Academic Health Centers and the Provision of Care to the Poor and Uninsured*, April 2001, The Commonwealth Fund, [www. Cmwf.org](http://www.Cmwf.org)

Cunningham PJ, Schaefer E and Hogan C. (1999) *Who Declines Employer-sponsored Health Insurance and Is Uninsured?* Issue Brief, Center for Studying Health System Change

Forrest CB and Whelan EM. A comparison of community health centers, hospital outpatient departments, and physician's offices. *JAMA* 2000; 284:2077-2083.

Gale HF, McGranahan DA, Teixeira R, and Greenberg E. *Rural Competitiveness: Results of the 1996 Rural Manufacturing Survey*. Agricultural Economics Report No. 776. 36 pp, March 1999.

Rosenbaum S, Borzi PC and Smith, Vernon. (2000). *Allowing Small Businesses and the Self-Employed to buy Health Care Coverage Through Public Programs*. (The Commonwealth Fund, Washington, DC) www.cmwf.org.

Wachino, Victoria. *State Budgets Under Stress: How are States Planning to Reduce The Growth in Medicaid Costs?* July 30, 2002. The Kaiser Commission on Medicaid and the Uninsured.

Weiss E, Haslanger K, Cantor JC. Accessibility of primary care services in safety net clinics in New York City. *Am J Public Health* 2001; Aug;91(8):1240-5

Appendix A

Overview of Method & Data Sources

Study Design

A cross-sectional analysis of data from the combined 1997 and 1998 National Health Interview Surveys (NHIS) was used to explore the interrelationship of rural residence and race on health care access, measured by health insurance, and health care utilization, measured as reported health care encounters. The population of interest was working age adults. Working-age adults are defined as persons between the ages of 18 and 64.

Data Source

The NHIS is an annual survey conducted for the National Center for Health Statistics by the U.S. Bureau of the Census and is the principal source of information on the health of the civilian, noninstitutionalized household population of the United States. It uses a complex sample design involving stratification, clustering, and multistage sampling. In both 1997 and 1998, the Hispanic and African American populations were oversampled. NHIS files include weights for each person that reflect design, ratio, nonresponse, and post-stratification adjustments. The analysis on working age adults used data from the combined 1997 and 1998 Person-Level Files.

The 1997 NHIS consisted of 39,832 households with 103,447 people in 40,623 families; the 1998 NHIS had 38,209 households with 98,785 people in 38,773 families. The combined sample size for the Person-Level Files is 202,262. The total response rate for the NHIS in 1997 was 91.8%; in 1998 it was 90.0%.

The data used to analyze working age adults came from the 1997 and 1998 NHIS Person-Level Files. These files were concatenated and the survey sampling weights adjusted to half their original size to convert two years of data to the equivalent of data for a single year. Slight differences in the surveys from 1997 and 1998 required some manipulation of the 1997 data to get comparable values for person-level health insurance status (insured/not insured/missing).

There are six sections in the Family Core, which is the source for the Person-level variables. These six sections are the Health Status and Limitation of Activity Section; the Injury Section; the Health Care Access and Utilization Section; the Health Insurance Section; the Socio-demographic Section; and the Income and Assets Section.

The *Health Status and Limitation of Activity Section* contains respondent-assessed disabilities, disability-associated conditions, and overall health status for all family members. For activity limitations, respondents were asked questions about work limitations, the need for personal assistance with personal care needs such as eating, bathing, dressing, getting around inside the home, and the need for personal assistance with routine needs such as everyday household chores, and doing necessary business, shopping or running errands. Only if any such limitations were identified were respondents asked to specify the health condition(s) causing the limitation(s) and how long they had each condition. For adults, the fixed response categories for conditions or health problems were broad: vision/problem seeing; hearing problem; arthritis/rheumatism; back or neck problem; fractures, bone/joint injury; other injury; heart problem; stroke problem; hypertension/high blood pressure; diabetes; lung/breathing problem; cancer; birth defect; mental retardation; other developmental problem; senility;

depression/anxiety/emotional problem; weight problem; and other impairment. Each condition was classified as chronic, not chronic, or unknown if chronic. Conditions that cannot be cured once acquired, such as heart disease, diabetes, birth defects, amputations, and senility, were considered chronic. Conditions related to pregnancy were always considered not chronic. Additionally, conditions must have been present at least three months to be considered chronic.

The *Injury Section* contains information about medically attended injuries and poisonings that occurred to any member of the family within a three-month period. Both injuries and poisonings were episode-based, with each episode consisting of at least one injury or poisoning. Injuries were classified according to the nature-of-injury codes 800-959 or 990-999 of the Ninth Revision of the International Classification of Diseases (ICD-9-CM).

The *Health Care Access and Utilization Sections* from the 1997 and 1998 NHIS are identical and contain information addressing access to health care and utilization of services. This section has three parts: Access to Care; Hospitalization; and Health Care Contacts. Home care and office visits were distinguished beginning in 1997 and there were separate questions for both. Also beginning in 1997, respondents were asked about care from all types of medical doctors such as dermatologists, psychiatrists, ophthalmologists, general practitioners, nurses, physical therapists, and chiropractors. Respondents were also asked about 10 or more visits to doctors or other health care professionals in the last 12 months.

The *Health Insurance Section* covers type of health care coverage (Medicare, Medicaid, military/VA, CHAMPUS/TRICARE/CHAPM-VA, state-sponsored health plan, other government program, Indian Health Service, or private insurance); private insurance characteristics, periods of time without health insurance and reasons for no health insurance, and out-of-pocket costs in the last year.

The *Socio-demographic Section* collected information on place of birth, citizenship status, and educational attainment for all family members regardless of age. Adults were also asked if they were working in the week before the interview, and if not, their main reason for not working. For those who were working, additional questions inquired about the number of hours worked, how many months they worked in the previous year, how much they earned in the last year, and whether their employer provided health insurance.

The *Income and Assets Section* contains information regarding income sources and total combined family income and home tenure status. Specifically, respondents were asked if their income came from wages and salary, Social Security or Railroad Retirement, other pensions, Supplemental Security Income, Welfare/Temporary Assistance to Needy Families, interest from saving or other bank accounts, dividends from stocks or mutual funds, rental income, royalties, estates, or trusts, child support payments, alimony, Worker's Compensation, and Unemployment Compensation. A detailed poverty indicator used information from the U.S. Bureau of the Census on 1997 poverty thresholds. The poverty indicator was a ratio of the 1997 income value to the poverty threshold, given the family's overall size as well as the number of children aged 17 and under in the family. The resulting ratio, ordered into 14 gradients, applies to each family in the survey.

The principal variable of interest was rural residence. The NHIS measure of rurality was used. The NHIS defines any place of residence outside of a Metropolitan Statistical Area (MSA) as "rural."

Non-informative responses were not used in the analysis. Non-informative responses include those coded to reflect "Don't Know," "Not in universe", "Not ascertained", "Refused",

and all missing responses. Exclusion of non-informative answers changes the base for calculating the percentages in each cross-classification cell, so sample sizes are the maximum possible number of responses that could be used and not necessarily the actual number used.

Analysis began with series of descriptive tables including the important demographic variables and covariates. Two principal outcomes were explored as a measure of access: physician visits in the last twelve months, expressed as a binary variable (yes/no), and insured status (medical insurance coverage in the last 12 months yes/no).

The weighted and unweighted populations included in the analyses for working age adults are shown in Table B-1. All population estimates and estimates of the proportions with accompanying standard errors and all logistic regressions were done with SAS-callable SUDAAN 8 and SAS 8.1. Use of this technique guarantees both unbiased point estimates and valid variance estimation. Because the NHIS sample survey design does not oversample persons who live in rural areas, some sample sizes are small for rural minorities. The NHIS documentation does not specify a minimum numeric value for valid point estimates, but some of the rural minority sample sizes are small enough for concern (fewer than 60 observations in the combined data).

Table A-1. Unweighted and Weighted (italicized) Sample Sizes for the Combined 1997 & 1998 NHIS Data

	<i>White</i>	<i>Afr Amer</i>	<i>Hispanic</i>	<i>Other</i>
<i>Metro</i>				
<i>Working Age Adults* (18-64)</i>				
<i>Male</i>	27,786 <i>44,965,383</i>	6,033 <i>7,606,837</i>	10,598 <i>88,378,071</i>	2,168 <i>3,257,459</i>
<i>Female</i>	29,638 <i>46,137,945</i>	8,195 <i>9,258,784</i>	11,367 <i>7,961,159</i>	2,377 <i>3,431,998</i>
<i>Non-metro</i>				
<i>Working Age Adults* (18-64)</i>				
<i>Male</i>	8,489 <i>14,010,328</i>	841 <i>1,107,079</i>	1,241 <i>947,788</i>	244 <i>402,001</i>
<i>Female</i>	8,826 <i>14,079,126</i>	1,107 <i>1,334,106</i>	1,183 <i>740,494</i>	266 <i>405,320</i>

* Figures from the combined 1997 & 1998 NHIS Person-Level Files calculated in SAS-Callable SUDAAN 8

Analytic approach

Covariates used in the analysis for working age adults are sex (male or female), race (non-Hispanic white; non-Hispanic African American; Hispanic; and other), limitation of normal activities (such as walking, climbing, standing, sitting, stooping, grasping, carrying, pushing, going out to shop, attend movies or sporting events, visit friends, attend clubs and meetings, go to parties, or to relax at home reading, watching TV, sewing, or listening to music), region (Northeast, Midwest, South, and West), level of education (high school graduate or non-high school graduate), rurality (rural or non-rural, where rural is defined as “non-MSA” and non-rural locations range in population from 5,000,000 or more to under 250,000), insurance (covered or not in the last 12 months), poverty status (poor defined as up to 1.49 times the 1997 poverty threshold), self-reported health status (good-to-excellent or poor/fair), presence of an acute or chronic condition, and age in years.

The algorithm used to build each separate model was to start with a model that included all covariates of interest, including specific pre-identified two- and three-way interactions. Then, starting with the highest order interactions, statistically insignificant interactions were deleted one at a time ($\alpha = 0.01$), then main effects ($\alpha = 0.05$). The final model in each case has only statistically significant main effects and main effects associated with an interaction term, with the exceptions described already.

The model-building process for working age adults using *health insurance coverage* as the outcome started with the following list of covariates and interactions. Each was selected based on its possible or suspected association with the outcome.

Variables:

- Sex (male or female)
- Race/ethnicity (white, African American, Hispanic, other)
- Family income (above/below \$20,000)
- Family size
- High school graduate (yes or no)
- Region
- Health (good-to-excellent or poor/fair)
- Limited in activities?
- Rurality (urban or rural)
- Age (ages 18 to 24, ages 25 to 49, ages 50 to 64)
- Marital status

Two way interactions:

- Rurality and sex
- Rurality and race/ethnicity
- Rurality and family income
- Rurality and high school graduate
- Rurality and region
- Rurality and age
- Rurality and limited activity
- Sex and age
- Sex and region

- Race and region
- Race and family income
- Race and high school graduate
- Limited activity and race/ethnicity
- Limited activity and family income

Three way interactions:

- Rurality, sex, and age
- Rurality, race, and family income
- Rurality, race, and high school graduate

Even with fairly stringent criteria for inclusion of interaction terms, the model describing possession of health insurance is complex, with 11 main effects, 10 two-way and one three-way interaction:

- Sex (male or female)
- Race/ethnicity (white, African American, Hispanic, other)
- Family income (above/below \$20,000)
- Family size
- High school graduate (yes or no)
- Region
- Health (good-to-excellent or poor/fair)
- Limited in activities?
- Rurality (urban or rural)
- Age (ages 18 to 24, ages 25 to 49, ages 50 to 64)
- Marital status

Two way interactions:

- Rurality and sex
- Rurality and race/ethnicity
- Rurality and family income
- Sex and age
- Sex and region
- Race and region
- Race and family income
- Race and high school graduate
- Limited activity and race/ethnicity
- Limited activity and family income

Three way interaction:

- Rurality, race, and family income

Physician visits

The model-building process for working age adults using *visits to a physician in the last 2 weeks* as the outcome started with the following list of covariates and interactions. Each was selected based on its possible or suspected association with the outcome.

Variables:

- Sex (male or female)
- Race/ethnicity (white, African American, Hispanic, other)
- Family income (above/below \$20,000)
- Family size
- Insurance (yes/no)
- High school graduate (yes or no)
- Region
- Health (good-to-excellent or poor/fair)
- Limited in activities?
- Rurality (urban or rural)
- Age (ages 18 to 24, ages 25 to 49, ages 50 to 64)
- Marital status

Two way interactions:

- Rurality and sex
- Rurality and race/ethnicity
- Rurality and family income
- Rurality and high school graduate
- Rurality and limited activity
- Rurality and age
- Rurality and insurance
- Sex and age
- Family income and insurance
- Race and family income
- Race and high school graduate
- High school graduate and insurance
- Limited activity and race/ethnicity
- Limited activity and family income

Three way interactions:

- Rurality, family income, and insurance
- Rurality, sex, and age
- Rurality, race, and family income
- Rurality, race, and high school graduate
- Rurality, high school graduate, and insurance

The following variables proved to be significant and were retained in the final model:

- Sex (male or female)
- Race/ethnicity (white, African American, Hispanic, other)
- Family income (above/below \$20,000)
- Family size

- Insurance (yes/no)
- High school graduate (yes or no)
- Region
- Health (good-to-excellent or poor/fair)
- Limited in activities?
- Rurality (urban or rural)
- Age (ages 18 to 24, ages 25 to 49, ages 50 to 64)
- Marital status

Two way interactions:

- Rurality and age
- Rurality and race/ethnicity
- Sex and age
- Limited activity and race/ethnicity

Appendix B

Detailed Tables

Chapter Two

- B-1. Summary Characteristics for Non-Elderly Adults (under 65 years old) by Race/Ethnicity and Metropolitan and Non-metro Locations, 1997 & 1998 NHIS Data
- B-2. Education and income among working age adults, by residence and race/ethnicity
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Chapter Three

- B-4. Health insurance among working age adults, by residence and race / ethnicity
- B-5. Percent of working age adults who lack health insurance, by residence, race/ethnicity, and demographic characteristics
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- B-9. Probability of health insurance coverage for a married woman living in the Midwest, by residence, race, family income, education and age. (Model assumes that the woman is in good health without physical limitations, family of 3 persons).
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- B-11. Probability of health insurance coverage for a married woman living in the South, by residence, race, family income, education and age. (Model assumes that the woman is in good health without physical limitations, family of 3 persons).
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- B-14. Probability of health insurance coverage for a divorced woman living in the West, by residence, race, family income, education and age. (Model assumes that the woman is in poor health and has physical limitations, family of 3 persons).
- B-15. Probability of health insurance coverage for a married man living in the South, by residence, race, family income, education and age. (Model assumes that the man is in good health without physical limitations, family of 3 persons).
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Chapter Four

- B-17. Probability of a physician visit in the past two weeks among working age adults, by residence and race.
- B-18. Probability of a physician visit in the past two weeks among working age adults, by residence, race and selected characteristics.
- B-19. Factors affecting the probability of a physician visit within the past two weeks among working age adults, based on logistic regression.
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- B-25. Probability of a physician visit within the past two weeks among women aged 50-64, by race, residence, income and insurance status. (Model specific to women who have completed high school, are married, in good health with no physical limitations)

Table B-1. Summary Characteristics for Working Age Adults (18-64 years old) by Race/Ethnicity and Metropolitan and Non-metro Locations, 1997 & 1998 NHIS Data

	<i>Overall</i>	<i>White</i>	<i>Afr. Amer.</i>	<i>Hispanic</i>	<i>Other</i>
Metropolitan					
Total Sample	98,216	57,571	14,219	21,854	4,572
<i>Weighted population estimate</i>	<i>131,147,026</i>	<i>91,315,577</i>	<i>16,831,289</i>	<i>16,279,823</i>	<i>6,720,339</i>
Age (mean in years)	38.8	39.7	37.4	35.7	37.3
Education (mean in years)	13.2	13.7	12.7	11.0	13.9
Family Size (mean number of persons)	3.1	2.9	3.1	3.8	3.5
Number of Conditions (mean per respondent)	0.15	0.15	0.22	0.13	0.09
Non-metro					
Total Sample	22,169	17,333	1,942	2,379	515
<i>Weighted population estimate</i>	<i>33,025,422</i>	<i>28,111,821</i>	<i>2,458,203</i>	<i>1,665,687</i>	<i>815,214</i>
Age (mean in years)	39.4	39.8	37.3	35.3	37.1
Education (mean in years)	12.6	12.8	11.8	10.2	12.6
Family Size (mean number of persons)	3.1	3.0	3.3	3.7	3.1
Number of Conditions (mean per respondent)	0.21	0.20	0.29	0.17	0.19

Unweighted and weighted sample sizes calculated using the 1997 & 1998 NHIS Person-Level Data in SAS-Callable SUDAAN 8.0.0. Means and percentages calculated using the 1997 & 1998 NHIS Person-Level Data in SAS 8.02

Table B-2. Education and income among working age adults, by residence and race/ethnicity

	<i>Total</i>	<i>White</i>	<i>African-American</i>	<i>Hispanic</i>	<i>Other</i>
Metropolitan	98,216				
Education					
Less than HS	15.1%	9.6%	19.9%	41.6%	13.3%
HS or above	84.9%	90.4%	80.1%	58.4%	86.7%
Income (a)					
Poverty	17.9%	11.6%	32.7%	39.3%	22.8%
Above poverty	82.1%	88.4%	67.3%	60.7%	77.2%
Family Income					
<\$20,000	18.2%	13.0%	32.7%	33.3%	19.2%
>\$20,000	81.8%	87.0%	67.3%	66.7%	80.8%
Health insurance (b)					
Not covered	18.1%	13.3%	22.8%	38.2%	22.2%
Covered	81.9%	86.7%	77.2%	61.8%	77.8%
Non-metro	22,169				
Education					
Less than HS	18.8%	15.9%	30.9%	49.6%	22.0%
HS or above	81.2%	84.1%	69.1%	50.4%	78.0%
Income (a)					
Poverty	25.4%	20.9%	53.7%	51.4%	38.3%
Above poverty	74.6%	79.1%	46.3%	48.6%	61.7%
Family Income					
<\$20,000	25.3%	21.9%	49.3%	43.4%	36.9%
>\$20,000	74.7%	78.1%	50.7%	56.6%	63.1%
Health insurance (b)					
Not covered	21.1%	18.3%	30.2%	47.4%	39.1%
Covered	78.9%	81.7%	69.8%	52.6%	60.9%

Means and percentages calculated using the 1997 & 1998 NHIS Person-Level Data in SAS 8.02
(a) "Poverty" means less than 150% of the 1997 Federal Poverty level.

Table B-3. Overall health status, current health and presence of limitations among working age adults, by residence and race / ethnicity

	<i>Total</i>	<i>White</i>	<i>African-American</i>	<i>Hispanic</i>	<i>Other</i>
Metropolitan	98,216 unweighted observations				
Self-reported health status					
Good to Excellent	92.32%	93.62%	86.75%	90.46%	93.00%
Fair to poor	7.68%	6.38%	13.25%	9.54%	7.00%
Current health status					
Chronic condition	9.34%	9.45%	12.06%	7.50%	5.47%
Acute condition	0.25%	0.25%	0.30%	0.28%	0.16%
Well	90.40%	90.29%	87.64%	92.23%	94.37%
Limitations					
Limited	10.02%	10.12%	13.10%	7.99%	5.86%
Not Limited	89.98%	89.88%	86.90%	92.01%	94.14%
Non-metro	22,169 unweighted observations				
Self-reported health status					
Good to Excellent	89.10%	89.96%	80.31%	88.06%	87.90%
Fair to poor	10.90%	10.04%	19.69%	11.94%	12.10%
Current health status					
Chronic condition	12.44%	12.31%	16.28%	9.45%	11.51%
Acute condition	0.34%	0.33%	0.25%	0.69%	0.18%
Well	87.22%	87.36%	83.47%	89.86%	88.31%
Limitations					
Limited	13.14%	12.97%	17.17%	10.42%	12.22%
Not Limited	86.86%	87.03%	82.83%	89.58%	87.78%

Table B-4. Health insurance among working age adults, by residence and race / ethnicity

	<i>Total</i>	<i>White</i>	<i>African American</i>	<i>Hispanic</i>	<i>Other</i>
Metropolitan					
Percent uninsured (raw)	16.6%	11.8%	21.0%	37.2%	19.6%
Percent uninsured (adjusted)	18.0%	13.2%	22.9%	38.2%	22.2%
Covered	82.0%	86.8%	77.1%	61.8%	77.8%
Non-metro					
Percent Uninsured (raw)	19.5%	17.0%	29.4%	46.7%	21.3%
Percent uninsured (adjusted)	21.1%	18.2%	30.2%	47.4%	39.1%
Covered	78.9%	81.8%	69.8%	52.6%	60.9%

Percentages calculated using the 1997 & 1998 NHIS Person-Level Data in SAS-Callable SUDAAN 8.0.0
Means calculated using the 1997 & 1998 NHIS Person-Level Data in SAS 8.02

(a) Adjusted health insurance rates. "Raw" health insurance rates are based on a yes / no answer to the question, "do you have health insurance?" Adjusted rates remove from the "yes" category persons who could not name their health insurer, who had coverage limited to specific services or diseases instead of general coverage, and who answered "Indian Health Service" with no other insurer named.

B-5

Percent of working age adults who lack health insurance, by residence,
race/ethnicity, and demographic characteristics

	<i>Total</i>	<i>White</i>	<i>African American</i>	<i>Hispanic</i>	<i>Other</i>
Metropolitan					
Education					
Less than high school	37.6	28.0	31.7	53.3	37.4
High school graduate	14.0	11.2	20.1	26.5	18.9
Household Income*					
• \$20,000	12.5	9.7	15.5	28.2	17.4
< \$20,000	39.2	32.8	35.6	56.7	39.6
Health status					
Good	17.5	12.7	22.7	38.5	21.2
Fair to poor	22.9	19.0	23.2	34.5	30.6
Gender					
Male	19.9	14.5	25.9	41.9	23.7
Female	16.2	12.0	20.4	34.3	20.8
Non-Metro					
Education					
Less than high school	37.1	32.0	39.0	61.1	47.1
High school graduate	16.9	15.3	25.8	32.4	36.1
Household Income*					
• \$20,000	14.4	12.8	19.1	32.6	38.4
< \$20,000	39.1	35.8	42.0	62.6	39.8
Health status					
Good	20.8	18.0	30.3	47.9	39.2
Fair to poor	23.0	19.9	29.6	43.1	38.6
Gender					
Male	22.1	19.0	30.9	49.7	40.6
Female	20.2	17.5	29.5	44.4	37.6

*Household income is used in lieu of poverty for multivariate analysis, because information on poverty status was missing from over 20% of all records. Accordingly, income information is provided here, as well.

Table B-6. Factors affecting the probability of health insurance coverage among working age adults, based on logistic regression

Factor	Beta coefficient	SE Beta	p-value
Intercept	1.813	0.087	0.00000
Sex			
Male	-0.558	0.063	0.00000
Female	0.000	0.000	.
Region			
Northeast	0.000	0.000	.
Midwest	-0.596	0.067	0.37623
South	-0.579	0.064	0.00000
West	-0.394	0.068	0.00000
Age Category			
18 to 24	0.000	0.000	.
25 to 49	0.110	0.046	0.01867
50 to 64	0.391	0.059	0.00000
Combined race/ethnicity recode			
Hispanic	-0.566	0.105	0.00000
White	0.000	0.000	.
African American	-0.234	0.113	0.04045
Other	-0.692	0.159	0.00002
Family income			
\$20,000 or more	1.432	0.046	0.00000
below \$20,000	0.000	0.000	.
Family size			
Each additional member	-0.098	0.008	0.00000
Rurality			
Non-rural	0.000	0.000	.
Rural	-0.213	0.068	0.00203
Health			
Good to excellent	0.000	0.000	.
Poor/fair	-0.135	0.038	0.00047
High school graduate			
Not a HS graduate	-0.806	0.040	0.00000
HS graduate	0.000	0.000	.
Marital Status			
Separated	-0.634	0.054	0.00000
Divorced	-0.815	0.034	0.00000
Married	0.000	0.000	.
Single/Never Married	-0.662	0.029	0.00000
Widowed	-0.654	0.063	0.00000
Limitations			
Limited in any way	0.757	0.057	0.00000
Not limited in any way	0.000	0.000	.
Rurality and Family Income			
Non-rural and \$20,000 or more	0.000	0.000	.
Non-rural and <\$20,000	0.000	0.000	.
Rural and \$20,000 or more	-0.206	0.079	0.01005
Rural and <\$20,000	0.000	0.000	.

Covariates	Beta coefficient	SE Beta	p-value
Rurality and Sex			
Non-rural and Male	0.000	0.000	.
Non-rural and Female	0.000	0.000	.
Rural and Male	0.183	0.040	0.00001
Rural and Female	0.000	0.000	.
Rurality and Race/ethnicity			
Non-rural and Hispanic	0.000	0.000	.
Non-rural and white	0.000	0.000	.
Non-rural and black	0.000	0.000	.
Non-rural and Other	0.000	0.000	.
Rural and Hispanic	-0.081	0.162	0.61413
Rural and White	0.000	0.000	.
Rural and Black	-0.002	0.118	0.99149
Rural and Other	0.125	0.208	0.54816
Region and Race/ethnicity			
Northeast and Hispanic	0.000	0.000	.
Northeast and White	0.000	0.000	.
Northeast and Black	0.000	0.000	.
Northeast and Other	0.000	0.000	.
Midwest and Hispanic	0.033	0.113	0.77104
Midwest and White	0.000	0.000	.
Midwest and Black	0.029	0.126	0.81623
Midwest and Other	0.337	0.227	0.13800
South and Hispanic	-0.076	0.107	0.47680
South and White	0.000	0.000	.
South and Black	0.262	0.107	0.01562
South and Other	0.626	0.164	0.00017
West and Hispanic	0.076	0.108	0.48175
West and White	0.000	0.000	.
West and Black	0.457	0.133	0.00068
West and Other	0.791	0.155	0.00000
Region and Sex			
Northeast and Male	0.000	0.000	.
Northeast and Female	0.000	0.000	.
Midwest and Male	0.166	0.064	0.00990
Midwest and Female	0.000	0.000	.
South and Male	0.284	0.054	0.00000
South and Female	0.000	0.000	.
West and Male	0.146	0.056	0.01038
West and Female	0.000	0.000	.
Sex and Age category			
Male and age 18 to 24	0.000	0.000	.
Male and age 25 to 49	-0.018	0.051	0.71861
Male and age 50 to 64	0.289	0.062	0.00001
Female and age 18 to 24	0.000	0.000	.
Female and age 25 to 49	0.000	0.000	.
Female and age 50 to 64	0.000	0.000	.

Covariates	Beta coefficient	SE Beta	p-value
Family Income and Race/ethnicity			
\$20,000 or more and Hispanic	-0.282	0.067	0.00004
\$20,000 or more and White	0.000	0.000	.
\$20,000 or more and Black	-0.310	0.076	0.00007
\$20,000 or more and Other	-0.353	0.144	0.01494
<\$20,000 and Hispanic	0.000	0.000	.
<\$20,000 and White	0.000	0.000	.
<\$20,000 and Black	0.000	0.000	.
<\$20,000 and Other	0.000	0.000	.
High school grad & Race/ethnicity			
< HS and Hispanic	-0.182	0.057	0.00158
< HS and White	0.000	0.000	.
< HS and Black	0.455	0.077	0.00000
< HS and Other	0.048	0.123	0.69589
HS+ and Hispanic	0.000	0.000	.
HS+ and White	0.000	0.000	.
HS+ and Black	0.000	0.000	.
HS+ and Other	0.000	0.000	.
Limitations and Family Income			
Limited and \$20,000 or more	-0.708	0.066	0.00000
Limited and <\$20,000	0.000	0.000	.
Not limited and \$20,000 or more	0.000	0.000	.
Not limited and <\$20,000	0.000	0.000	.
Limitations and Race/ethnicity			
Limited and Hispanic	0.571	0.086	0.00000
Limited and White	0.000	0.000	.
Limited and Black	0.140	0.091	0.12357
Limited and Other	-0.293	0.169	0.08342
Not Limited and Hispanic	0.000	0.000	.
Not Limited and White	0.000	0.000	.
Not Limited and Black	0.000	0.000	.
Not Limited and Other	0.000	0.000	.
Rurality, Race, and Family Income			
Metro, Hispanic, \$20,000 or more	0.000	0.000	.
Metro, Hispanic, < \$20,000	0.000	0.000	.
Metro, White, \$20,000 or more	0.000	0.000	.
Metro, White, < \$20,000	0.000	0.000	.
Metro, Black, \$20,000 or more	0.000	0.000	.
Metro, Black, < \$20,000	0.000	0.000	.
Metro, Other, \$20,000 or more	0.000	0.000	.
Metro, Other, < \$20,000	0.000	0.000	.
Rural, Hispanic, \$20,000 or more	0.212	0.193	0.27190
Rural, Hispanic, < \$20,000	0.000	0.000	.
Rural, White, \$20,000 or more	0.000	0.000	.
Rural, White, < \$20,000	0.000	0.000	.
Rural, Black, \$20,000 or more	0.184	0.146	0.20860
Rural, Black, < \$20,000	0.000	0.000	.
Rural, Other, \$20,000 or more	-0.953	0.361	0.00877
Rural, Other, < \$20,000	0.000	0.000	.

The beta coefficients in the preceding table present relative changes in the probability that a person will have health insurance, as influenced by varying personal characteristics. For policy purposes, the absolute probability that a particular person with a particular set of needs will be insured needs to be addressed.

A long series of probabilities could be calculated from the very complex model of insurance coverage that emerged from the analysis. For purposes of this report, several key variables have been used to calculate the likelihood that persons across differing regions of the country will be insured. These calculations are presented in Tables B-7 through B-16.

Table B-7. Probability of health insurance coverage for a married woman living in the Northeast, by residence, race, family income, education and age. (Model assumes that the woman is in good health with no physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
18-24				
Metropolitan				
White	89.4	79.1	67.0	47.5
African American	83.1	77.6	61.6	53.0
Hispanic	78.4	57.5	53.5	30.0
Other	74.9	58.3	50.4	32.2
Non-metro				
White	83.7	70.0	60.2	40.3
African American	79.6	73.3	56.4	47.7
Hispanic	74.7	52.3	48.1	25.7
Other	46.2	28.7	48.2	30.3
25-49				
Metropolitan				
White	90.5	80.9	69.3	50.3
African American	84.6	79.5	64.2	55.8
Hispanic	80.2	60.2	56.2	32.3
Other	76.9	60.9	53.1	34.4
Non-metro				
White	85.2	72.0	62.8	43.0
African American	81.3	75.4	59.1	50.5
Hispanic	76.7	55.1	50.9	27.8
Other	48.9	31.0	50.9	32.7
50-64 years				
Metropolitan				
White	92.6	84.9	75.0	57.2
African American	87.9	83.7	70.3	62.5
Hispanic	84.3	66.7	63.0	38.8
Other	81.5	67.4	60.0	41.3
Non-metro				
White	88.4	77.3	69.1	49.3
African American	85.2	80.2	65.7	57.4
Hispanic	81.6	61.9	57.8	33.8
Other	55.9	37.3	57.9	39.2

Table B-8. Probability of health insurance coverage for a divorced woman living in the Northeast, by residence, race, family income, education and age. (Model assumes that the woman is in poor health and has physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
18-24				
Metropolitan				
White	77.5	60.6	62.6	42.7
African American	69.7	61.8	60.3	51.7
Hispanic	72.3	49.3	62.7	38.5
Other	47.5	29.8	38.4	22.6
Non-metro				
White	67.6	48.3	55.5	35.7
African American	64.5	56.1	55.1	46.4
Hispanic	67.9	44.1	57.5	33.5
Other	70.6	10.9	36.4	21.1
25-49				
Metropolitan				
White	79.4	63.2	65.1	45.4
African American	72.0	64.4	62.9	54.4
Hispanic	74.5	52.1	65.2	41.1
Other	50.2	32.1	41.1	24.6
Non-metro				
White	70.0	51.0	58.2	38.3
African American	67.0	58.8	57.8	49.1
Hispanic	70.3	46.8	60.2	36.0
Other	22.5	12.0	38.9	23.0
50-64 years				
Metropolitan				
White	83.6	69.4	71.2	52.5
African American	77.3	70.5	69.2	61.3
Hispanic	79.4	59.0	71.3	48.0
Other	57.2	38.5	48.0	30.2
Non-metro				
White	75.6	58.0	64.8	45.1
African American	77.9	65.4	64.5	56.1
Hispanic	75.8	53.8	66.7	42.7
Other	27.8	15.3	45.8	28.4

Table B-9. Probability of health insurance coverage for a married woman living in the Midwest, by residence, race, family income, education and age. (Model assumes that the woman is in good health without physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
18-24	HS Grad	Not HS Grad	HS Grad	Not HS Grad
Metropolitan				
White	82.4	67.6	52.6	33.3
African American	73.6	66.3	47.6	39.0
Hispanic	67.4	43.5	39.6	19.6
Other	69.7	51.9	43.9	26.8
Non-metro				
White	73.9	55.9	45.4	27.1
African American	68.8	60.9	42.4	34.1
Hispanic	62.6	38.5	34.6	16.4
Other	39.8	23.7	41.8	25.1
25-49				
Metropolitan				
White	83.9	70.0	55.5	35.8
African American	75.7	68.7	50.4	41.7
Hispanic	69.8	46.2	42.2	21.4
Other	72.0	54.6	46.6	29.1
Non-metro				
White	76.0	58.6	48.2	29.3
African American	74.1	63.4	45.1	36.6
Hispanic	65.2	41.1	37.1	18.0
Other	42.5	25.7	44.5	27.3
50-64 years				
Metropolitan				
White	87.4	75.5	62.3	42.4
African American	80.5	74.4	57.4	48.6
Hispanic	75.4	53.3	49.2	26.5
Other	77.3	61.5	53.6	35.1
Non-metro				
White	80.7	65.2	55.2	35.5
African American	76.6	69.7	52.1	43.3
Hispanic	71.3	48.0	43.9	22.5
Other	49.5	31.4	51.5	33.2

Table B-10. Probability of health insurance coverage for a divorced woman living in the Midwest, by residence, race, family income, education and age. (Model assumes that the woman is in poor health and has physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
18-24				
Metropolitan				
White	66.5	45.9	47.9	29.1
African American	56.6	47.9	46.3	37.8
Hispanic	59.8	35.6	48.9	26.3
Other	41.1	24.6	32.5	18.4
Non-metro				
White	53.5	34.0	40.7	23.5
African American	50.8	42.1	41.1	32.9
Hispanic	54.7	31.0	43.5	22.3
Other	16.7	8.6	30.6	17.1
25-49				
Metropolitan				
White	67.9	48.6	50.7	31.5
African American	59.3	50.6	49.1	40.4
Hispanic	62.4	38.2	51.6	28.4
Other	43.8	26.7	35.0	20.1
Non-metro				
White	56.2	36.5	43.4	25.5
African American	53.5	44.8	43.8	35.4
Hispanic	57.4	33.4	46.3	24.3
Other	18.3	9.5	33.0	18.7
50-64 years				
Metropolitan				
White	73.7	55.6	57.6	37.8
African American	65.9	57.6	56.1	47.3
Hispanic	68.7	45.0	58.6	34.5
Other	50.8	32.6	41.6	25.0
Non-metro				
White	63.0	43.2	50.4	31.2
African American	60.4	51.8	50.3	42.0
Hispanic	64.1	39.9	53.3	29.8
Other	22.9	12.2	39.5	23.4

Table B-11. Probability of health insurance coverage for a married woman living in the South, by residence, race, family income, education and age. (Model assumes that the woman is in good health without physical limitations, family of 3 persons).

18-24	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
Metropolitan				
White	82.6	68.0	53.2	33.7
African American	78.2	71.6	53.9	45.1
Hispanic	65.4	41.3	37.4	18.2
Other	75.8	59.4	52.5	33.3
Non-metro				
White	74.3	56.3	45.8	27.4
African American	73.9	66.6	48.6	39.9
Hispanic	60.5	36.3	32.5	15.2
Other	47.3	29.6	49.3	31.3
25-49				
Metropolitan				
White	84.1	70.3	55.9	36.2
African American	80.0	73.8	56.6	47.9
Hispanic	67.8	44.0	40.0	19.9
Other	77.7	62.1	54.3	35.7
Non-metro				
White	76.3	59.0	48.6	29.7
African American	76.0	69.0	51.3	42.6
Hispanic	63.1	38.9	35.0	16.7
Other	50.1	32.0	52.1	33.7
50-64 years				
Metropolitan				
White	87.5	75.8	62.7	42.9
African American	84.1	78.9	63.3	54.9
Hispanic	73.6	51.0	46.9	24.8
Other	82.2	68.4	61.1	42.4
Non-metro				
White	81.0	65.6	55.6	35.9
African American	80.7	74.7	58.3	49.6
Hispanic	69.4	75.7	41.6	21.0
Other	57.1	38.4	59.0	50.3

Table B-12. Probability of health insurance coverage for a divorced woman living in the South, by residence, race, family income, education and age. (Model assumes that the woman is in poor health and has physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
18-24	HS Grad	Not HS Grad	HS Grad	Not HS Grad
Metropolitan				
White	65.9	46.3	48.4	29.5
African American	62.6	54.1	52.6	43.8
Hispanic	57.6	33.6	46.6	24.5
Other	48.7	30.8	39.5	23.5
Non-metro				
White	53.9	34.3	41.1	23.8
African American	57.0	48.3	47.2	38.7
Hispanic	52.4	29.1	41.3	20.8
Other	21.4	11.3	32.5	21.9
25-49				
Metropolitan				
White	68.3	49.1	21.1	31.8
African American	65.2	56.8	55.3	46.5
Hispanic	60.2	36.1	42.3	26.6
Other	51.4	33.1	42.2	28.5
Non-metro				
White	56.7	36.9	43.8	25.8
African American	59.7	51.0	50.0	41.3
Hispanic	55.1	31.4	44.0	22.6
Other	23.3	12.5	40.1	23.9
50-64 years				
Metropolitan				
White	74.1	56.1	58.1	38.2
African American	71.2	63.6	62.1	53.5
Hispanic	66.7	42.8	56.3	32.4
Other	58.4	39.6	49.2	31.2
Non-metro				
White	83.4	43.6	50.3	31.5
African American	66.2	58.0	57.0	48.2
Hispanic	61.9	37.7	51.0	27.9
Other	28.7	15.9	47.0	29.3

Table B-13. Probability of health insurance coverage for a married woman living in the West, by residence, race, family income, education and age. (Model assumes that the woman is in good health without physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
18-24				
Metropolitan				
White	85.1	71.9	57.7	37.2
African American	84.0	76.7	63.1	54.6
Hispanic	72.6	49.6	45.6	23.8
Other	81.6	67.5	60.1	41.4
Non-metro				
White	77.6	60.8	50.5	31.3
African American	80.6	74.5	58.0	49.3
Hispanic	68.2	44.4	40.3	20.1
Other	56.1	37.4	58.0	39.3
25-49				
Metropolitan				
White	86.5	74.0	60.4	40.5
African American	85.4	80.5	65.6	57.3
Hispanic	74.7	52.3	48.3	25.8
Other	83.2	69.9	62.7	44.1
Non-metro				
White	79.5	63.4	53.2	33.7
African American	82.2	76.5	60.6	52.0
Hispanic	70.5	47.1	43.0	21.9
Other	58.3	40.0	60.6	42.0
50-64 years				
Metropolitan				
White	89.4	79.1	66.9	47.4
African American	88.6	84.5	71.6	64.0
Hispanic	79.6	59.3	55.3	31.5
Other	86.8	75.5	69.1	51.1
Non-metro				
White	83.7	69.6	60.1	40.2
African American	86.0	81.2	67.1	59.0
Hispanic	76.0	54.1	50.0	29.1
Other	65.4	46.9	67.1	48.9

Table B-14. Probability of health insurance coverage for a divorced woman living in the West, by residence, race, family income, education and age. (Model assumes that the woman is in poor health and has physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
18-24	HS Grad	Not HS Grad	HS Grad	Not HS Grad
Metropolitan				
White	69.9	50.9	53.0	33.5
African American	71.0	63.3	61.8	53.3
Hispanic	65.5	41.4	55.0	31.3
Other	57.4	38.7	48.1	30.3
Non-metro				
White	58.5	38.6	45.6	27.3
African American	66.0	57.7	56.7	47.0
Hispanic	60.7	36.5	49.6	26.8
Other	27.9	15.3	45.9	28.5
25-49				
Metropolitan				
White	72.2	53.7	55.7	36.0
African American	73.2	65.8	64.4	56.0
Hispanic	68.0	44.1	57.7	33.7
Other	60.0	41.3	50.9	32.7
Non-metro				
White	61.1	41.3	48.4	29.5
African American	68.4	60.4	59.4	50.7
Hispanic	63.3	39.1	52.4	29.1
Other	30.1	16.8	48.7	30.8
50-64 years				
Metropolitan				
White	77.5	60.5	62.5	42.7
African American	78.4	71.8	70.5	62.8
Hispanic	73.8	51.1	64.4	40.2
Other	66.5	48.2	57.8	39.1
Non-metro				
White	67.6	48.2	55.4	35.6
African American	74.1	66.8	65.9	57.7
Hispanic	69.5	45.9	59.3	35.2
Other	36.4	21.1	55.7	37.1

Gender interacted with rurality, region, and age, with men generally having higher rates of insurance coverage than women in each situation. Effects of income and education were similar across men and women. To save space, the next two tables presents results for the South; other regions are not presented but may be calculated using the information from Table B-6.

Table B-15. Probability of health insurance coverage for a married man living in the South, by residence, race, family income, education and age. (Model assumes that the man is in good health without physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
	HS Grad	Not HS Grad	HS Grad	Not HS Grad
18-24				
Metropolitan				
White	78.3	61.8	46.3	27.8
African American	73.2	65.8	47.0	38.5
Hispanic	58.9	34.8	31.2	14.5
Other	70.4	52.2	44.7	27.5
Non-metro				
White	72.5	54.0	43.6	25.7
African American	72.1	64.6	46.3	37.8
Hispanic	58.3	32.2	30.6	14.1
Other	45.1	27.8	47.1	29.4
25-49				
Metropolitan				
White	79.9	63.9	48.6	29.7
African American	74.9	67.8	49.3	40.7
Hispanic	61.1	36.9	33.3	15.6
Other	72.3	55.0	47.0	29.3
Non-metro				
White	74.3	56.3	45.9	27.5
African American	73.9	66.6	48.6	39.9
Hispanic	60.5	36.3	32.5	15.2
Other	47.4	29.7	49.4	31.4
50-64 years				
Metropolitan				
White	87.2	76.1	63.0	43.2
African American	84.3	79.1	63.9	55.2
Hispanic	74.0	51.3	47.3	25.0
Other	82.4	68.7	61.5	42.8
Non-metro				
White	83.8	69.9	60.4	40.5
African American	83.6	78.2	63.0	54.5
Hispanic	73.4	50.7	46.5	24.4
Other	61.4	43.1	63.7	45.1

Table B-16. Probability of health insurance coverage for a divorced man living in the South, by residence, race, family income, education and age. (Model assumes that the man is in poor health and has physical limitations, family of 3 persons).

	Over \$20,000		Under \$20,000	
18-24	HS Grad	Not HS Grad	HS Grad	Not HS Grad
Metropolitan				
White	59.5	39.6	41.6	24.1
African American	56.0	47.3	45.7	37.2
Hispanic	50.8	27.3	39.9	19.8
Other	41.9	25.2	33.2	18.9
Non-metro				
White	51.7	32.3	38.9	22.2
African American	54.7	46.0	45.0	36.5
Hispanic	50.1	27.2	39.1	19.3
Other	19.9	10.4	35.3	20.4
25-49				
Metropolitan				
White	61.7	41.8	43.8	25.9
African American	58.3	49.6	48.0	39.4
Hispanic	53.1	29.6	42.1	21.3
Other	44.1	27.0	35.3	20.3
Non-metro				
White	54.0	34.4	41.1	23.3
African American	57.0	48.3	47.3	38.7
Hispanic	52.4	22.1	41.3	20.3
Other	21.4	11.3	37.5	21.9
50-64 years				
Metropolitan				
White	74.3	56.4	58.4	38.6
African American	71.5	63.9	62.4	53.9
Hispanic	67.1	43.1	56.7	32.8
Other	58.7	40.0	49.5	31.5
Non-metro				
White	67.9	48.5	55.7	33.0
African American	70.5	62.7	61.7	53.2
Hispanic	66.5	42.5	55.9	32.1
Other	32.9	18.7	51.9	33.6

Table B-17. Probability of a physician visit in the past two weeks among working age adults, by residence and race.

	Total	White	African American	Hispanic	Other
Metropolitan					
No Visit in last 2 weeks	86.50%	85.52%	86.73%	90.25%	90.14%
Visit(s) in last 2 weeks	13.50%	14.44%	13.20%	9.73%	9.84%
Mean # of Visits Per Year	5.3	5.6	5.2	3.9	3.9
Non-metro					
No Visit in last 2 weeks	86.31%	86.13%	86.68%	88.76%	86.38%
Visit(s) in last 2 weeks	13.64%	13.82%	13.28%	11.21%	13.62%
Mean # of Visits Per Year	5.2	5.3	5.3	4.6	5.2

Percentages calculated using the 1997 & 1998 NHIS Person-Level Data in SAS-Callable SUDAAN 8.0.0
Means calculated using the 1997 & 1998 NHIS Person-Level Data in SAS 8.02

Table B-18. Probability of a physician visit in the past two weeks among working age adults, by residence, race and selected characteristics.

	<i>Total</i>	<i>White</i>	<i>African-American</i>	<i>Hispanic</i>	<i>Other</i>
Metro					
Education					
Less than high school	12.3	14.9	14.1	8.5	7.9
High school & above	13.9	14.6	13.3	11.0	10.5
Household Income					
• \$20,000	13.5	14.4	12.7	9.7	9.7
< \$20,000	14.9	16.7	15.8	10.7	11.2
Health status					
Good	12.1	13.2	11.1	7.9	8.8
Fair to poor	30.6	33.1	27.5	27.2	24.6
Gender					
Male	10.1	11.0	9.4	6.8	7.2
Female	16.7	17.8	16.3	12.8	12.3
Non-Metro					
Education					
Less than high school	14.3	15.0	14.0	10.8	13.6
High school & above	13.6	13.7	13.0	11.9	14.2
Household Income					
• \$20,000	13.4	13.4	14.9	12.1	12.7
< \$20,000	15.2	16.0	11.2	11.4	14.1
Health status					
Good	12.0	12.3	10.8	9.1	11.3
Fair to poor	27.6	28.2	23.5	27.2	30.6
Gender					
Male	10.4	10.5	11.4	8.1	10.9
Female	16.9	17.2	14.9	15.1	16.3

Table B- 19. Factors affecting the probability of a physician visit within the past two weeks among working age adults, based on logistic regression.

	Beta coefficient	SE Beta	p-value
Intercept	-1.055	0.067	0.00000
Sex			
Male	-0.862	0.065	0.00000
Female	0.000	0.000	.
Region			
Northeast	0.000	0.000	.
Midwest	-0.103	0.031	0.00097
South	-0.129	0.029	0.00002
West	-0.015	0.031	0.62891
Age Category			
18 to 24	0.000	0.000	.
25 to 49	0.008	0.043	0.85001
50 to 64	-0.102	0.050	0.04354
Combined race/ethnicity recode			
Hispanic	-0.176	0.040	0.00001
White	0.000	0.000	.
African American	-0.044	0.039	0.25809
Other	-0.299	0.067	0.00001
Family income			
\$20,000 or more	0.061	0.030	0.04148
below \$20,000	0.000	0.000	.
Family size			
Each additional person	-0.162	0.009	0.00000
Insurance			
Not covered	-0.703	0.033	0.00000
Covered	0.000	0.000	.
Rurality			
Metro	0.000	0.000	.
Rural	0.193	0.067	0.00462
Health			
Good to excellent	0.000	0.000	.
Poor/fair	0.626	0.035	0.00000
High school graduate			
Not a HS graduate	-0.121	0.031	0.00012
HS graduate	0.000	0.000	.
Marital Status			
Separated	-0.053	0.057	0.35707
Divorced	-0.072	0.033	0.03187
Married	0.000	0.000	.
Single/Never Married	-0.254	0.030	0.00000
Widowed	-0.086	0.064	0.18110

	Beta coefficient	SE Beta	p-value
Limitations			
Limited in any way	1.007	0.034	0.00000
Not limited in any way	0.000	0.000	.
Rurality and Age			
Metro and age 18 to 24	0.000	0.000	.
Metro and age 25 to 49	0.000	0.000	.
Metro and age 50 to 64	0.000	0.000	.
Non-metro and age 18 to 24	0.000	0.000	.
Non-metro and age 25 to 49	-0.268	0.072	0.00023
Non-metro and age 50 to 64	-0.372	0.078	0.00000
Rurality and Race/ethnicity			
Metro and Hispanic	0.000	0.000	.
Metro and white	0.000	0.000	.
Metro and black	0.000	0.000	.
Metro and Other	0.000	0.000	.
Non-metro and Hispanic	0.252	0.096	0.00939
Non-metro and White	0.000	0.000	.
Non-metro and Black	0.038	0.091	0.67953
Non-metro and Other	0.370	0.124	0.00314
Sex and Age category			
Male and age 18 to 24	0.000	0.000	.
Male and age 25 to 49	0.208	0.069	0.00293
Male and age 50 to 64	0.576	0.073	0.00000
Female and age 18 to 24	0.000	0.000	.
Female and age 25 to 49	0.000	0.000	.
Female and age 50 to 64	0.000	0.000	.
Limitations and Race/ethnicity			
Limited and Hispanic	0.241	0.078	0.00223
Limited and White	0.000	0.000	.
Limited and Black	0.020	0.073	0.78183
Limited and Other	0.314	0.142	0.02760
Not limited and Hispanic	0.000	0.000	.
Not limited and White	0.000	0.000	.
Not limited and Black	0.000	0.000	.
Not limited and Other	0.000	0.000	.

Table B-20. Probability of a physician visit within the past two weeks among men aged 18 – 24, by race, residence, income and insurance status. (Model specific to men who have completed high school, are married, in good health with no physical limitations)

<i>Region</i>	Over \$20,000		Under \$20,000	
	Insured	Not insured	Insured	Not insured
Northeast				
Metropolitan				
White	10.4%	4.5%	8.3%	4.2%
Afr. Amer.	8.4%	4.4%	7.9%	4.1%
Hispanic	7.4%	3.8%	7.0%	3.6%
Other	6.7%	3.4%	6.3%	3.3%
Non-metro				
White	10.4%	5.5%	9.9%	5.2%
Afr. Amer.	10.4%	5.4%	9.8%	5.1%
Hispanic	11.2%	5.9%	10.6%	5.5%
Other	11.1%	5.8%	10.5%	5.5%
Midwest				
Metropolitan				
White	7.5%	3.9%	8.0%	4.1%
Afr. Amer.	7.2%	3.7%	7.7%	3.9%
Hispanic	6.4%	3.3%	6.8%	3.5%
Other	5.7%	2.9%	6.0%	3.1%
Non-metro				
White	9.5%	5.0%	9.0%	4.7%
Afr. Amer.	9.5%	4.9%	9.0%	4.6%
Hispanic	10.2%	5.3%	9.6%	5.0%
Other	10.1%	5.3%	9.6%	5.0%
South				
Metropolitan				
White	7.8%	4.0%	7.4%	3.8%
Afr. Amer.	7.5%	3.8%	7.1%	3.6%
Hispanic	6.6%	3.4%	6.3%	3.2%
Other	5.9%	3.0%	5.6%	2.9%
Non-metro				
White	9.3%	4.8%	8.8%	4.6%
Afr. Amer.	9.2%	4.8%	8.7%	4.5%
Hispanic	10.0%	5.2%	9.4%	4.9%
Other	9.9%	5.2%	9.4%	4.9%
West				
Metropolitan				
White	8.7%	4.5%	8.2%	4.2%
Afr. Amer.	8.3%	4.3%	7.9%	4.5%
Hispanic	7.4%	3.8%	7.0%	4.9%
Other	6.6%	3.4%	6.2%	4.9%
Non-metro				
White	10.3%	5.4%	9.8%	5.1%
Afr. Amer.	10.2%	5.4%	9.7%	5.0%
Hispanic	11.0%	5.8%	10.4%	5.5%
Other	11.0%	5.8%	10.4%	5.4%

Table B-21. Probability of a physician visit within the past two weeks among men aged 25-49, by race, residence, income and insurance status. (Model specific to men who have completed high school, are married, in good health with no physical limitations)

<i>Region</i>	Over \$20,000		Under \$20,000	
	Insured	Not insured	Insured	Not insured
Northeast				
Metropolitan				
White	10.7%	5.6%	10.1%	5.3%
Afr. Amer.	10.2%	5.4%	9.7%	5.0%
Hispanic	9.1%	4.7%	8.6%	4.4%
Other	8.1%	4.2%	7.7%	4.0%
Non-metro				
White	10.0%	5.2%	9.4%	4.9%
Afr. Amer.	10.0%	5.2%	9.4%	4.9%
Hispanic	10.7%	5.6%	10.1%	5.3%
Other	10.6%	5.6%	10.1%	5.2%
Midwest				
Metropolitan	9.7%	5.1%	9.2%	4.8%
White	9.7%	5.1%	9.2%	4.8%
Afr. Amer.	9.3%	4.9%	8.8%	4.6%
Hispanic	8.3%	4.3%	7.8%	4.0%
Other	7.4%	3.8%	7.0%	3.6%
Non-metro				
White	9.1%	4.7%	8.6%	4.4%
Afr. Amer.	9.0%	4.7%	8.5%	4.4%
Hispanic	9.7%	5.1%	9.2%	4.8%
Other	9.7%	5.0%	9.2%	4.8%
South				
Metropolitan	9.7%	5.1%	9.2%	4.8%
White	9.5%	4.9%	9.0%	4.7%
Afr. Amer.	9.1%	4.7%	8.6%	4.5%
Hispanic	8.1%	4.2%	7.6%	3.9%
Other	7.2%	3.7%	6.8%	3.5%
Non-metro				
White	8.9%	4.6%	8.4%	4.3%
Afr. Amer.	8.8%	4.6%	8.3%	4.3%
Hispanic	9.5%	4.9%	9.0%	4.7%
Other	9.5%	4.9%	8.9%	4.6%
West				
Metropolitan	9.7%	5.1%	9.2%	4.8%
White	10.5%	5.5%	10.0%	5.2%
Afr. Amer.	10.1%	5.3%	9.6%	5.0%
Hispanic	9.0%	4.7%	8.5%	4.4%
Other	8.0%	4.1%	7.6%	3.9%
Non-metro				
White	9.8%	5.1%	9.3%	4.8%
Afr. Amer.	9.8%	5.1%	9.3%	4.8%
Hispanic	10.5%	5.5%	10.0%	5.2%
Other	10.5%	5.5%	9.9%	5.2%

Table B-22. Probability of a physician visit within the past two weeks among men aged 50-64, by race, residence, income and insurance status. (Model specific to men who have completed high school, are married, in good health with no physical limitations)

Region	Over \$20,000		Under \$20,000	
Northeast	Insured	Not insured	Insured	Not insured
Metropolitan				
White	13.4%	7.1%	12.7%	5.6%
Afr. Amer.	12.9%	6.8%	12.2%	6.4%
Hispanic	11.5%	6.0%	10.9%	5.7%
Other	10.3%	5.4%	9.7%	5.1%
Non-metro				
White	14.4%	6.0%	10.8%	5.7%
Afr. Amer.	14.4%	6.0%	10.8%	5.6%
Hispanic	12.2%	6.5%	11.6%	6.1%
Other	12.2%	6.4%	11.5%	6.1%
Midwest	Insured	Not insured	Insured	Not insured
Metropolitan				
White	12.2%	6.5%	11.6%	6.1%
Afr. Amer.	11.8%	6.2%	11.1%	5.8%
Hispanic	10.5%	5.5%	9.9%	5.2%
Other	9.4%	4.9%	8.9%	4.6%
Non-metro				
White	10.4%	5.5%	9.9%	5.1%
Afr. Amer.	10.4%	5.4%	9.8%	5.1%
Hispanic	12.2%	5.9%	10.6%	5.5%
Other	11.1%	5.8%	10.5%	5.5%
South	Insured	Not insured	Insured	Not insured
Metropolitan				
White	12.0%	6.3%	11.3%	5.9%
Afr. Amer.	11.5%	6.0%	10.9%	5.7%
Hispanic	10.2%	5.3%	9.7%	5.0%
Other	9.1%	4.7%	8.7%	4.5%
Non-metro				
White	10.2%	5.3%	9.6%	5.0%
Afr. Amer.	10.1%	5.3%	9.6%	5.0%
Hispanic	10.9%	5.7%	10.3%	5.4%
Other	10.6%	5.7%	10.3%	5.4%
West	Insured	Not insured	Insured	Not insured
Metropolitan				
White	13.2%	7.0%	12.5%	6.6%
Afr. Amer.	12.7%	6.7%	12.0%	6.4%
Hispanic	11.3%	5.9%	10.7%	5.6%
Other	10.1%	5.3%	9.6%	5.0%
Non-metro				
White	11.3%	5.9%	10.7%	5.6%
Afr. Amer.	11.2%	5.9%	10.6%	5.6%
Hispanic	12.1%	6.4%	11.4%	6.0%
Other	12.0%	6.3%	11.4%	6.0%

Table B-23. Probability of a physician visit within the past two weeks among women aged 18 – 24, by race, residence, income and insurance status. (Model specific to women who have completed high school, are married, in good health with no physical limitations)

<i>Region</i>	Over \$20,000		Under \$20,000	
	Insured	Not insured	Insured	Not insured
Northeast				
Metropolitan				
White	18.5%	10.1%	17.6%	9.6%
Afr. Amer.	17.9%	10.0%	17.0%	9.2%
Hispanic	16.0%	9.0%	15.2%	8.2%
Other	14.4%	7.7%	13.7%	7.3%
Non-metro				
White	21.6%	12.0%	20.6%	11.4%
Afr. Amer.	21.5%	12.0%	20.5%	11.3%
Hispanic	23.0%	12.9%	21.9%	12.2%
Other	22.9%	12.8%	21.8%	12.1%
Midwest				
Metropolitan				
White	17.0%	10.2%	16.2%	8.7%
Afr. Amer.	16.4%	8.9%	15.6%	8.4%
Hispanic	14.7%	7.9%	13.9%	7.4%
Other	13.2%	7.0%	12.5%	6.6%
Non-metro				
White	19.9%	11.0%	19.0%	10.4%
Afr. Amer.	19.8%	10.9%	18.9%	10.3%
Hispanic	21.2%	11.7%	21.2%	11.1%
Other	21.1%	11.7%	20.1%	11.1%
South				
Metropolitan				
White	16.7%	9.0%	1.6%	8.5%
Afr. Amer.	16.1%	8.7%	15.3%	8.2%
Hispanic	14.4%	7.7%	13.6%	7.2%
Other	12.9%	6.8%	12.2%	6.5%
Non-metro				
White	19.5%	10.7%	18.6%	10.2%
Afr. Amer.	19.4%	10.7%	18.5%	10.1%
Hispanic	20.8%	11.5%	19.8%	10.9%
Other	20.7%	11.4%	19.7%	10.8%
West				
Metropolitan				
White	18.3%	10.0%	17.4%	9.5%
Afr. Amer.	17.7%	9.6%	16.8%	9.1%
Hispanic	15.8%	8.5%	15.0%	8.1%
Other	14.3%	7.6%	13.5%	7.2%
Non-metro				
White	21.4%	11.9%	20.4%	11.2%
Afr. Amer.	21.3%	11.8%	20.3%	11.2%
Hispanic	22.7%	12.7%	21.6%	12.0%
Other	22.6%	12.6%	21.6%	12.0%

Table B-24. Probability of a physician visit within the past two weeks among women aged 25-49, by race, residence, income and insurance status. (Model specific to women who have completed high school, are married, in good health with no physical limitations)

<i>Region</i>	Over \$20,000		Under \$20,000	
	Insured	Not insured	Insured	Not insured
Northeast				
Metropolitan				
White	18.7%	10.2%	17.8%	9.7%
Afr. Amer.	18.0%	9.8%	17.1%	9.3%
Hispanic	16.1%	8.7%	15.3%	8.2%
Other	14.5%	7.8%	13.8%	7.3%
Non-metro				
White	17.6%	9.5%	16.7%	9.0%
Afr. Amer.	17.5%	9.5%	16.6%	9.0%
Hispanic	18.7%	10.2%	17.8%	9.7%
Other	18.6%	10.2%	17.7%	9.6%
Midwest				
Metropolitan				
White	17.2%	9.3%	16.3%	8.8%
Afr. Amer.	16.5%	8.9%	15.7%	8.4%
Hispanic	14.8%	7.9%	14.0%	7.5%
Other	13.3%	7.1%	12.3%	6.7%
Non-metro				
White	16.1%	8.7%	15.6%	8.2%
Afr. Amer.	16.0%	8.6%	15.2%	8.2%
Hispanic	17.2%	9.3%	16.3%	8.8%
Other	17.1%	9.3%	16.2%	8.8%
South				
Metropolitan				
White	16.8%	9.1%	15.9%	8.6%
Afr. Amer.	16.2%	8.7%	15.4%	8.2%
Hispanic	14.5%	7.7%	13.7%	7.3%
Other	13.0%	6.9%	12.3%	6.5%
Non-metro				
White	15.8%	8.5%	15.0%	8.0%
Afr. Amer.	15.7%	8.4%	14.9%	8.0%
Hispanic	16.8%	9.1%	16.0%	8.6%
Other	16.7%	9.0%	15.9%	8.6%
West				
Metropolitan				
White	18.4%	10.1%	17.5%	9.5%
Afr. Amer.	17.8%	9.7%	16.9%	9.2%
Hispanic	15.9%	8.6%	15.1%	8.1%
Other	14.4%	7.7%	13.6%	7.2%
Non-metro				
White	17.3%	9.4%	16.5%	8.9%
Afr. Amer.	17.3%	9.4%	16.4%	8.9%
Hispanic	18.5%	10.1%	17.6%	9.5%
Other	18.5%	10.0%	17.5%	9.5%

Table B-25. Probability of a physician visit within the past two weeks among women aged 50-64, by race, residence, income and insurance status. (Model specific to women who have completed high school, are married, in good health with no physical limitations)

Region	Over \$20,000		Under \$20,000	
	Insured	Not insured	Insured	Not insured
Northeast				
Metropolitan				
White	17.1%	9.2%	16.2%	8.7%
Afr. Amer.	16.4%	8.9%	15.6%	8.4%
Hispanic	14.7%	7.9%	14.0%	7.4%
Other	13.2%	7.0%	12.5%	6.6%
Non-metro				
White	14.7%	7.8%	13.9%	7.4%
Afr. Amer.	14.6%	7.8%	13.8%	7.4%
Hispanic	15.6%	8.4%	14.9%	8.0%
Other	15.6%	8.4%	14.8%	7.9%
Midwest				
Metropolitan				
White	15.6%	8.4%	14.9%	8.0%
Afr. Amer.	15.1%	8.1%	14.3%	7.6%
Hispanic	13.5%	7.1%	12.8%	6.8%
Other	12.1%	6.4%	14.5%	6.0%
Non-metro				
White	13.4%	7.1%	12.7%	6.7%
Afr. Amer.	13.4%	7.1%	12.7%	6.7%
Hispanic	14.3%	7.6%	13.6%	7.2%
Other	14.3%	7.6%	13.5%	7.2%
South				
Metropolitan				
White	15.3%	8.2%	14.5%	7.8%
Afr. Amer.	14.7%	7.9%	14.0%	7.5%
Hispanic	13.2%	7.0%	12.5%	6.6%
Other	11.8%	6.2%	12.2%	5.9%
Non-metro				
White	13.1%	7.0%	12.4%	6.6%
Afr. Amer.	13.1%	6.9%	12.4%	6.5%
Hispanic	14.0%	7.5%	13.3%	7.1%
Other	14.0%	7.4%	13.2%	7.0%
West				
Metropolitan				
White	16.8%	9.1%	16.0%	8.6%
Afr. Amer.	16.2%	8.8%	15.4%	8.3%
Hispanic	14.5%	7.8%	13.8%	7.3%
Other	13.1%	6.9%	12.4%	6.5%
Non-metro				
White	14.5%	7.7%	13.7%	7.3%
Afr. Amer.	14.4%	7.7%	13.7%	7.3%
Hispanic	15.4%	8.3%	14.7%	7.8%
Other	15.4%	8.3%	14.6%	7.8%

