

Discussion Papers

Racial and Ethnic
Differences in Insurance
Coverage and Health Care
Access and Use
A Synthesis of Findings
from the *Assessing the New
Federalism* Project

Bowen Garrett
Alshadye Yemane
The Urban Institute

06-01

April
2006



Assessing
the New
Federalism

*An Urban Institute
Program to Assess
Changing Social
Policies*

Assessing the New Federalism is a multiyear Urban Institute project designed to analyze the devolution of responsibility for social programs from the federal government to the states, focusing primarily on health care, income security, employment and training programs, and social services. Researchers monitor program changes and fiscal developments. Olivia Golden is the project director. In collaboration with Child Trends, the project studies changes in family well-being. The project aims to provide timely, nonpartisan information to inform public debate and to help state and local decisionmakers carry out their new responsibilities more effectively.

Key components of the project include a household survey and studies of policies in 13 states, available at the Urban Institute's web site, <http://www.urban.org>. This paper is one in a series of discussion papers analyzing information from these and other sources.

The *Assessing the New Federalism* project is currently supported by The Annie E. Casey Foundation, The Robert Wood Johnson Foundation, the W. K. Kellogg Foundation, The John D. and Catherine T. MacArthur Foundation, and The Ford Foundation.

This report was funded by the *Assessing the New Federalism* project. The authors thank Fiona Blackshaw, Lisa Dubay, Susan S. Lee, Sharon Long, Josh McFeeters, Tim Waidmann, Laura Wherry, and Justin Yee for comments, useful discussions, and other help in preparing this report. They are especially grateful to Genevieve Kenney, John Holahan, and Stephen Zuckerman for detailed comments on an earlier draft. Any remaining errors are solely the responsibility of the authors.

The nonpartisan Urban Institute publishes studies, reports, and books on timely topics worthy of public consideration. The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, its funders, or other authors in the series.

Publisher: The Urban Institute, 2100 M Street, NW, Washington, DC 20037
Copyright © 2006. Permission is granted for reproduction of this document, with attribution to the Urban Institute.

Contents

List of Tables	iv
List of Figures	v
Background and Conceptual Framework.....	3
Racial and Ethnic Differences versus Disparities in Health Care.....	3
The National Survey of America’s Families and Analyses of Racial and Ethnic Differences in Health Care	4
Adjusted Differences and Their Interpretation	5
Findings	7
Differences between Black and White Children.....	8
Differences between Black and White Adults	11
Differences between Hispanic and White Children.....	14
Differences between Hispanic and White Adults	18
Differences for American Indians and Alaskan Natives.....	21
Regression-Based Decompositions of Racial and Ethnic Differences	22
Geographical Variation in Coverage and Access/Utilization Differences.....	23
Race/Ethnicity and Geographical Variation in Insurance Coverage	24
Discussion and Conclusion.....	25
References.....	29
Tables.....	33
Figures	47

Tables

1. Health Insurance Coverage Differences between Black and White Children, 1997 and 2002
2. Health Care Access and Use Differences between Low-Income Black and White Children, 1999 and 2002
3. Health Insurance Coverage Differences between Black and White Adults, 1997 and 2002
4. Health Care Access and Use Differences between Low-Income Black and White Adults, 1999 and 2002
5. Health Insurance Coverage Differences between Hispanic and White Children, 1997 and 2002
6. Health Insurance, Health Care Access, Health Status, and Economic Well-Being of Children, by Parent Nativity
7. Health Insurance for Low-Income Citizen Children, by Parent Citizenship Status
8. Health Care Access and Use Differences between Hispanic and White Children, 1999 and 2002
9. Health Care Access and Use Differences between Hispanic and White Children, by Citizenship and Primary Language of Hispanics, 2002
10. Health Insurance Coverage Differences between Hispanic and White Adults, 1997 and 2002
11. Health Care Access and Use Differences between Hispanic and White Adults, 1999 and 2002
12. Health Care Access and Use Differences between Hispanic and White Adults, by Citizenship and Primary Language of Hispanics, 2002
13. Decomposition of Differences between Black and White Adults in Health Insurance, Health Care Access and Use, and Health Status, 1997
14. Decomposition of Differences between Hispanic and White Adults in Health Insurance, Health Care Access and Use, and Health Status, 1997

Figures

1. Unadjusted and Adjusted Differences in Insurance Coverage between Low-Income Black and White Children, 2002
2. Unadjusted and Adjusted Differences in Insurance Coverage between Low-Income Black and White Adults, 2002
3. Medicaid/SCHIP Participation Rates for Low-Income Citizen Children by Primary Language of Caregiver, 1999 and 2002 (percent)
4. Adjusted Differences in Insurance Coverage between Low-Income Hispanic and White Children, by Citizenship and Primary Language of Hispanics, 2002
5. Participation Rate among Medicaid/SCHIP-Eligible Children without Private Coverage, by Citizenship and Primary Language of Hispanics, 2002
6. Adjusted Differences in Insurance Coverage between Low-Income Hispanic and White Adults, by Citizenship and Primary Language of Hispanics, 2002
7. Participation Rate among Medicaid/State-Eligible Adults without Private Coverage, by Citizenship and Primary Language of Hispanics, 2002
8. Health Insurance of Low-Income American Indians/Alaska Natives and Whites

Racial and ethnic minorities in the United States exhibit worse health outcomes on average than nonminority whites across a variety of health conditions. Despite an overall improvement in the U.S. population health status over the past several decades, the health status differences between minorities and whites have remained (Collins, Hall, and Neuhas 1999). While several factors contribute to the poorer health outcomes of minority communities, their diminished access to insurance, which contributes to poorer access to medical care, can play an important role in explaining these differences (Geiger 2003).

Several studies funded under the Urban Institute's *Assessing the New Federalism* (ANF) project document and seek to better understand racial and ethnic differences in insurance coverage, access to care, and use of care. This review emphasizes the new or unique contributions of ANF studies to the broad and growing literature, including the following:

- **More recent trend data on racial and ethnic differences in insurance coverage**

The ANF project has produced studies and data based on its National Survey of America's Families (NSAF) that reflect trends in insurance and health care patterns across different racial and ethnic groups from 1997 to 2002.

- **Insurance coverage differences among individuals eligible for public insurance**

While many studies have looked at insurance coverage differences among the low-income population, relatively few look at insurance coverage differences specifically among those who are the target of public coverage expansions.

- **Geographic variation in racial and ethnic differences in insurance coverage**

NSAF data also gave researchers the ability to do state-specific analyses for 13 states.

Understanding geographic variation of these differences is particularly useful as more health policy issues are decided at the state level.

- **Studies that document insurance coverage and health care for American Indian/Alaska Native populations**

Two rounds of the NSAF data produced sufficient sample sizes (not often available in other surveys) to study insurance and health care access and use differences between the American Indian/Alaska Native and white populations.

- **Analyses that estimate the relative importance of various factors in explaining differences**

Regression-based decompositions help determine which underlying factors are responsible for differences in insurance coverage and health care patterns. Better accounting for differences can help design better policies to reduce them.

We also discuss racial and ethnic differences in insurance coverage, and differences in health care access and use, that are similar to what has been reported frequently elsewhere. This illustrates how differences estimated with the NSAF resemble what is generally known about these differences.¹ We supplement our review of existing studies with additional results from our own analyses of the 2002 NSAF. Among our main findings are the following:

- The gap in insurance coverage between low-income Hispanic and white adults increased from 1997 to 2002.
- Low-income black and white children were equally likely to be uninsured, but black children were 24 percentage points more likely to have public coverage and 19 percentage points less likely to have employer-sponsored coverage.
- Coverage differences between Hispanics and whites are small for citizens who are proficient in English. Noncitizens and Hispanics who primarily speak Spanish are much less likely to have employer-sponsored insurance (ESI) coverage than whites.

¹ Recent reviews include Collins et al. (1999), Lillie-Blanton, Rushing, and Ruiz (2003), and Mayberry, Mili, and Ofili (2000).

- Black and Hispanic adults were less likely than white adults to have a usual source of health care or to have seen a physician in the past 12 months, even after controlling for demographic and socioeconomic characteristics, health insurance coverage, and other characteristics.
- Some racial and ethnic differences in access and use can be attributed to differences in health insurance coverage. Yet insurance coverage is at best a partial explanation for differences in access and use. Differences in income, education, and employment also matter and are even more important in some cases.

Background and Conceptual Framework

Racial and Ethnic Differences versus Disparities in Health Care

A clear concept of how insurance and health care differences and disparities arise is necessary for interpreting the findings in this report. Differences in the quantity and quality of health care received by minorities and whites is a function of several factors, including

1. individual preferences for health care and clinical appropriateness and need for care;
2. access-related barriers including lack of insurance, inadequate income to cover medical care costs, and inaccessibility of providers;
3. aspects of health care, legal, and regulatory systems that disproportionately affect racial and ethnic minorities; and
4. discrimination in the patient-provider relationship (Smedley, Stith, and Nelson 2003).

The last three factors contribute to what are broadly considered disparities in health care—implying unfair differences—because they do not represent differences that appropriately result from patients’ freedom to pursue and comply with medical treatment, or a provider’s unbiased professional opinion of required care (Smedley et al. 2003). We note, however, that the Institute of Medicine report’s definition of disparities only includes differences arising from the last two factors, with access-related factors excluded from their charge. Whether access-related

factors contribute to disparities depends conceptually on the source of such differences. For example, it is possible for patient preferences to drive access-related factors, including insurance status.

All the ANF studies included in this review focus on either differences in health care access and use or differences in insurance status (one of the major access-related factors that contribute to health care disparities). However, all the reviewed studies report either unadjusted descriptive statistics that do not attempt to remove the contribution of patient preferences and clinical appropriateness and need or regression-adjusted differences (or other comparative statistics) that are not designed to identify one of the formal definitions offered above. For this reason, we refer to the findings we review as racial and ethnic *differences* rather than *disparities*. We say more about why disparities are difficult to identify from household surveys in the “adjusted differences and their interpretation” section on page 5.

The National Survey of America’s Families and Analyses of Racial and Ethnic Differences in Health Care

Most of the studies that we discuss used data from the National Survey of America’s Families, conducted as a key component of the ANF project. The NSAF is a household survey of the noninstitutionalized civilian U.S. population under age 65 that oversampled low-income families with children. Survey questions collected information on child and adult well-being, including data on economic, health, social, and demographic issues that are not commonly available within a single national survey (e.g., extensive questions on economic hardship like housing or food burden, as well as public social program participation). While the NSAF is nationally representative, it also allows for state-specific analysis of 13 states that were chosen to broadly reflect the variation in demographic and socioeconomic characteristics, state government fiscal

capacity, and public program offerings that exists across states.² Rounds of the survey were conducted in 1997, 1999, and 2002, with each round collecting data for over 100,000 sampled individuals.

These features of the survey enabled analyses that can add to what is known about racial and ethnic differences in insurance and health care access and use. For example, the large sample sizes and oversampling of low-income populations increase the ability to study differences among low-income populations, which are the usual target for public initiatives focused on reducing disparities, as well as racial and ethnic groups that have been difficult to study due to their relatively small numbers. Also, data collected on citizenship, economic hardship, and public program participation can help expand our understanding of how racial and ethnic differences develop and the context in which they occur. Finally, the ability to produce state-level estimates for 13 states allows NSAF-based analyses to explore state-level variations in insurance and health care differences among racial and ethnic groups.

Adjusted Differences and Their Interpretation

In addition to the published unadjusted and adjusted differences we present, we generate regression-adjusted differences for low-income children and adults (those with family incomes below 200 percent of the federal poverty level) for a variety of insurance coverage and health care access and use measures. In most cases, we report our own estimates of regression-adjusted differences using the 2002 NSAF. We use linear probability models of the outcome measures

² The 13 states are Alabama, California, Colorado, Florida, Massachusetts, Michigan, Minnesota, Mississippi, New Jersey, New York, Texas, Washington, and Wisconsin.

with racial/ethnic/citizenship/interview language categories as explanatory variables, while also controlling for several other demographic, socioeconomic, and health status measures.³

We use as control variables age, age-squared, female, self-reported health status, having a health condition that limits work (adults) or usual activities (children), income as a percent of poverty categories, noncitizen, single-parent household, and urban status. Control variables for the access and use models include all the variables above in addition to insurance coverage categories.

Adjusted differences are provided by the estimated coefficients on the race/ethnicity indicators. The results provide estimates of racial and ethnic differences that net out the influence of the additional control variables as well as unobserved factors that are associated with the explanatory variables. For example, by controlling for age, we net out any direct contribution of age to racial and ethnic differences (age distributions may not be identical and medical need varies with age) as well as unobserved factors (such as preferences toward health care) to the extent they are associated with age.

We consider the control variables strongly related to patient preferences and somewhat related to clinical need, but they tell us little about clinical appropriateness. We also consider them strongly related to access-related factors.⁴ They may also be related to a limited degree to a patient's relationship with the health care, legal, and regulatory systems. We view the control variables, however, as having little ability to capture discrimination in the patient-provider

³ The racial/ethnic/citizenship categories are non-Hispanic black, Hispanic citizen with English interview, Hispanic citizen with Spanish interview, Hispanic noncitizen with English interview, and Hispanic noncitizen with Spanish interview, with non-Hispanic white as the omitted category and other race categories dropped from the sample to be consistent with most of the published studies. Significance levels are based on standard errors that are adjusted for the NSAF's complex survey design.

⁴ For example, income and insurance coverage affect affordability and access to provider networks, while urban status is related to proximity to providers.

relationship, thereby leaving the race/ethnicity indicators to capture the influence of this and all remaining unmeasured factors.

The key point is that the control variables capture much—but not all—of the characteristics which are not considered to contribute to disparities. They may also capture, to a limited degree, factors that are considered to contribute to disparities even under the narrower Institute of Medicine definition of disparity. Therefore, we consider the adjusted differences for access and use more indicative of disparities than the unadjusted differences (perhaps even lower-bound estimates under the broader definition of disparities). But we cannot go so far as to claim that they are unambiguous estimates of disparities.⁵

Findings

ANF has produced descriptive studies that took advantage of the multiple rounds of NSAF data to look at insurance coverage trends across non-Hispanic whites, blacks,⁶ and Hispanic children and adults (Finegold and Wherry 2004; Kenney, Haley, and Tebay 2003; Zuckerman 2003; Zuckerman et al. 2001).⁷ These studies looked at insurance coverage rates in 1997, 1999, and 2002, a period of dramatic change in both the private and public insurance sectors. In the private sector, employer-sponsored insurance coverage has been falling as employees' share of premiums has risen (Gabel et al. 2002; Holahan 2003). Among publicly sponsored insurance programs, there were major expansions for children under the State Children's Health Insurance

⁵ Distinct from racial and ethnic disparities in access and use, McGuire (2004) proposes a definition of disparity in insurance coverage. It begins with the assumption that everyone is risk averse and has some demand for insurance coverage, but that there are also life-cycle changes in coverage that could appropriately contribute to differences in coverage. Under this definition, health insurance disparities are identified simply by adjusting coverage differences for age. Because this adjustment is usually quite small in comparison to the overall difference, the unadjusted differences we report should suffice for readers interested in this notion of coverage disparity.

⁶ Throughout this report, the white and black categories exclude Hispanics/Latinos.

⁷ Using the 1987 National Medical Expenditure Survey and the 1996 Medical Expenditure Panel Survey, Monheit and Vistnes (2000) examine changes in health insurance coverage separately for white, black, and Hispanic adults

Program (SCHIP) as well as more modest state-funded coverage expansions for parents and childless adults.

Coverage rates appear to have been affected by these developments, although the effects vary across different racial and ethnic groups. Within each racial and ethnic group, we discuss separately differences for children (age 17 or below) and adults (age 18 to 64), since these two populations face different opportunities and constraints in obtaining health insurance coverage and have different health care needs.

Differences between Black and White Children

Insurance coverage. Wherry and Finegold (2004) present comparable estimates of insurance coverage for 1997 and 2002 by racial and ethnic group (table 1). In 1997, black children were 25.8 percentage points less likely than white children to have ESI coverage, 24.2 percentage points more likely to have public coverage, and 4.3 percentage points more likely to be uninsured. Some differences are to be expected, as black children tend to live in families with lower incomes than white children. Limiting the comparison to children in low-income families (defined as income below 200 percent of the federal poverty level), however, the data still show that black children are much less likely to be covered by ESI and more likely to have public coverage. Among low-income children, the uninsurance gap between black children is eliminated (and actually reverses sign, but this difference is not statistically significant). This is largely due to the higher rate of public coverage among low-income black children that fully compensates for the lower rate of ESI coverage relative to low-income white children.

For black and white children, ESI coverage fell between 1997 and 2002. Public insurance coverage increased dramatically between 1997 and 2002, which is most apparent when the

from 1987 to 1996 and find that work-related coverage fell substantially, and uninsured rates increased, for all

sample is limited to low-income children. This growth reflects the rapid expansion of state SCHIP programs. The public coverage expansions for children were large enough to more than compensate for falling ESI coverage over this period for children. As a result, uninsurance rates fell overall for both groups of children.⁸

The patterns observed for low-income children in 2002 continue to hold even after we adjust the differences for several demographic, health status, and geographical characteristics. Figure 1 shows unadjusted and adjusted coverage rate differences. While the public coverage difference between black and white children is reduced from 23.0 percentage points to 17.0 percentage points with further adjustment, the adjusted differences in private coverage are also reduced. Thus, the adjusted results continue to show there is virtually no difference in uninsurance rates.⁹

Some ANF studies developed algorithms to explicitly identify those who are eligible for public insurance to examine how they responded to the offer of public coverage. Dubay and McFeeters updated an algorithm described in Dubay, Haley, and Kenney (2002) to determine which children were eligible for Medicaid or SCHIP in 2002.¹⁰ Using their measure, we find that among eligible children without private coverage (who are the target group of Medicaid/SCHIP expansions), 84.3 percent of black children were enrolled, compared with 73.1 percent of white children. With adjustment, the magnitude of the difference is reduced to 5.1 percent, but it remains statistically significant. Using 1999 NSAF data, Dubay, Kenney, and Haley (2002) report that among Medicaid-eligible children who are eligible under TANF-related criteria

groups over the period. The racial/ethnic gaps persisted and were stable or widened slightly over the period.

⁸ Wherry and Finegold (2004) report changes from 1997 to 2002 for higher income groups as well, and find substantial reductions in ESI coverage for children in each race/ethnicity category.

⁹ The unadjusted figures differ slightly from those reported in table 1 because of sample differences driven by missing values in some control variables and the need to compare unadjusted and adjusted numbers for identical samples.

¹⁰ Lisa Dubay and Joshua McFeeters, unpublished analyses of 2002 NSAF data, the Urban Institute, 2005.

(typically the poorest group among the eligible population), black children were 9 percentage points more likely than white children to be enrolled.

Access and use. Ku and Waidmann (2003) examine access and use differences among low-income children and adults, by race and ethnicity, using 1999 NSAF data. We supplemented their analysis of 1999 data with additional access, use, and satisfaction measures—namely, whether the child had no usual source of care (USOC), any well-child visit in the past 12 months, and any emergency room (ER) visit in the past 12 months.

The 1999 data show that low-income black children fared worse than white children on some measures,¹¹ with the former being more likely to not have a usual source of care and more likely to have an ER visit in the past 12 months (table 2).¹² Black children were, however, considerably more likely to have a well-child visit in the past 12 months.¹³

Updated analyses using 2002 NSAF data show similar patterns of access and use differences (also shown in table 2). We examined whether any of the differences changed between 1999 and 2002 (using our own set of 1999 estimates), and found no statistically significant changes (also shown in table 2). It is worth noting though that for five of the eight measures we examine, there are no significant differences between black and white children.

We also computed adjusted differences for 2002. Comparing the unadjusted to the adjusted differences, one notable finding is that the difference between black and white children for emergency room use is smaller and no longer statistically significant after adjustment. Living in a single-parent household and having public coverage are both more likely among black

¹¹ For some of the differences in 1999, statistical significance was not reported.

¹² More ER visits may indicate worse access to appropriate forms of care.

¹³ The 2002 National Health Interview Survey shows a similar higher rate of well-child visits among black versus white low-income children. This difference is also not explained away in the adjusted results we report, nor when we adjust additionally for usual source of care, state of residence, and a full set of child age dummy variables in the 2002 data. With the more extensive adjustment, the adjusted difference is 12.6 percentage points, which is very similar to the unadjusted difference.

children and are associated with higher emergency room use. Controlling for these two variables alone is enough to eliminate the difference in ER use. The differences in not having a usual source of care and having well-child visits remain after adjustment. For other measures, there is little difference between black and white children.

In related studies, Kenney, Ko, and Ormond (2000) using 1997 NSAF data find no statistically significant difference in the likelihood of having a dental visit between black and white children. Long and Coughlin (2001/2002) estimate adjusted odds ratios for blacks compared to whites for children enrolled in Medicaid for many of the same outcome measures.¹⁴ The only statistically significant difference they report indicates that black children were less likely to have a usual source of care, which is consistent with the result we find for low-income children in 2002.

Differences between Black and White Adults

Insurance coverage. Black adults were 13.4 percentage points less likely than white adults to have ESI coverage in the 1997 NSAF, and 6.9 percentage points more likely to have public coverage (table 3). Black adults' uninsurance rate was 8.7 percentage points higher than whites' in 1997. When we look only at low-income adults, the difference in uninsurance rates is smaller (3.1 percent) and no longer statistically significant. As with children, public coverage differences are larger and private coverage differences are smaller when we limit to low-income adults.

Changes in the uninsured rates for black and white adults between 1997 and 2002 were small and statistically insignificant. This is despite a slightly higher increase in public insurance coverage for black adults relative to white adults (a 1.9 percentage-point increase for blacks

¹⁴ Their logit regression models controlled for age, gender, insurance status, welfare and SSI participation, self-reported health status, parent and family characteristics, local area health care supply characteristics, and state Medicaid program characteristics.

versus a 0.6 percentage-point increase for whites), and no statistically significant changes in ESI coverage rates for either group. The uninsurance gap between these two groups was therefore stable, with black adults having an uninsurance rate 7.6 percentage points higher than that of white adults by 2002.¹⁵

When we further adjust for demographic and other differences between adults with low incomes, we find the adjusted differences are similar to the unadjusted differences (figure 2). However, with adjustment we see that black adults are 8.4 percentage points more likely to have public coverage, compared with 12.1 percentage points without adjustment. The main reason the difference falls with adjustment is that black adults are more likely to be poorer, in worse health, and in single-parent households than white adults, and these factors are all associated with higher rates of public coverage.¹⁶

Among eligible adults in the 1999 NSAF, a study by Davidoff and colleagues (2004) found, consistent with our estimates, no statistically significant differences between the uninsurance rates of blacks and whites, largely due to higher public insurance enrollment among blacks adults that compensated for lower private insurance enrollment for blacks relative to whites. Private insurance rates for white versus black eligible adults were 33 percent versus 17 percent, respectively, whereas public insurance rates were 35 percent versus 48 percent, respectively.

Using the measure of adult Medicaid/state coverage eligibility created by Davidoff and colleagues (2004) for the 2002 NSAF, we estimate that among Medicaid/state-eligible adults

¹⁵ See Wherry and Finegold (2004) for results for higher-income groups.

¹⁶ Shen and Long (forthcoming) report no significant effects of race/ethnicity on the likelihood that middle-income workers are offered health care coverage from their employer or on the likelihood of participating in the coverage given an offer. However, in unreported analyses, the authors find that overall ESI coverage rates (capturing both offer and participation) are lower for black (and Hispanic) workers than white middle-income workers after adjusting a large number of factors. They obtained similar results for low-income workers.

without private coverage, 67.8 percent of black adults received Medicaid, compared with 60.4 percent of white adults (not shown in table). Adjustment has little effect on this difference in participation among the target population, with black adults 7.6 percentage points more likely to participate. It is not clear whether the differences in public coverage reflect higher aversion to public program participation among whites or higher dependence on public programs among blacks.

Access and use. For access and use differences among low-income adults, we again look at the Ku and Waidmann (2003) study, supplemented with additional access and use measures (no USOC, any ER visit, and any breast exam in the past 12 months). According to the 1999 data, black adults were less likely to have a USOC and more likely to have an ER visit in the past 12 months (table 4). In similar analyses using the 2002 data, we continue to see differences that generally point to worse access and use for black adults relative to whites, but with some exceptions. In 2002, blacks were more likely not to have a USOC, less likely to have a doctor visit or have a breast exam in the past 12 months, less likely to report that their health care provider listens to them and explains information well, and more likely to have an ER visit in the past 12 months. Adjusted differences are mostly similar to the unadjusted differences, but differences in the probability of women having a breast exam and adults indicating that health care providers listen and explain well lose statistical significance.

We also find, however, that black adults were less likely to report that they postponed care at all or postponed care for cost. It would be logical to suspect that high public coverage participation rates were related to the lower likelihood of postponing care among black adults, but we find instead that the adjusted results are even larger in magnitude. This finding may be due to cultural differences in the perceived need for care. A person must first perceive a need for

care before reporting that care was postponed. Through a combination of historical (e.g., Tuskegee experiments) and personal experiences, mistrust in the medical system is higher among blacks and may affect their desire for treatment (Smedley et al. 2003).

Differences between Hispanic and White Children

Insurance coverage. In 1997, the uninsurance gap was more pronounced for Hispanic relative to white children than for black children relative to white children, with Hispanic children 14.2 percentage points more likely than white children to be uninsured (table 5). The uninsurance gap between Hispanic and white children decreased only slightly to 11.2 percentage points when we look at low-income children. The higher uninsurance gap for Hispanic children relative to black children was due to their lower rates of both ESI and public insurance coverage.

Changes between 1997 and 2002 were roughly similar for Hispanic and white children, such that the size of the differences were fairly stable. The change that stands out is the gain in public coverage for low-income white children. There is also a gain for Hispanic children, but the percentage-point gain is somewhat smaller. The implementation of the SCHIP program included extensive enrollment outreach efforts and was associated with increased public coverage participation rates by children (Dubay and Kenney 2004, Selden, Hudson, and Banthin 2004). The smaller growth in public coverage for Hispanic children relative to white children may have been due to welfare effects. Following national welfare reform, qualified immigrants were sometimes discouraged from applying for public benefits due to confusion about what groups were no longer eligible (Ellwood 1999).

A more complete and useful picture of the differences in insurance coverage between Hispanic and white children (and adults) emerges by distinguishing among citizen and noncitizen children and whether the primary language spoken at home is English or Spanish. NSAF

respondents could complete the interview in either language, and we categorize sample children (as well as sample adults) according to whether the interview was conducted in English or Spanish. For the remainder of the paper, we simply refer to children classified in this way as (primarily) English-speaking or Spanish-speaking.

Ku and Waidmann (2003) find, after noting that low-income Hispanics are much more likely to be uninsured than low-income whites overall, that the uninsurance gap widens for English-speaking Hispanic noncitizens compared with English-speaking citizens (a 27 percentage-point higher uninsurance rate than whites versus a 5 percentage-point higher rate, respectively) and is the widest for Spanish-speaking Hispanic noncitizens (a 44 percentage-point higher uninsurance rate than whites). Employment opportunities and thereby access to ESI are clearly linked to citizenship and language status and contribute to these differences. Further, federal rules and state policies put restrictions on Medicaid eligibility for noncitizens.

Using 1999 NSAF data, Capps (2001) finds that children of immigrants are more likely to be uninsured, to have no USOC, and to report being in fair or poor health (table 6). Taking advantage of the measures of economic hardship that are collected on the NSAF, the study also examines the food and housing burden of these children. Children of immigrants were more likely to live in families with incomes below the poverty level; have one or more food-related problems; be unable to pay their rent, mortgage, or utilities last year; and live in crowded housing conditions (defined as more than two persons sharing a bedroom). The difference in the percentage living in crowded housing between the two groups was quite large, with children of immigrants over four times more likely to live in such conditions than children of natives (29 percent versus 7 percent). The correlation of high uninsurance rates and economic hardships for this population suggests that affordability is a major limitation when it comes to obtaining health

insurance coverage, and that many of these families would face stark tradeoffs in devoting additional resources to insurance premiums, copayments, and deductibles rather than rent, utilities, and other necessities.

Capps, Kenney, and Fix (2003) looks at insurance coverage trends for children in mixed-status immigrant families (table 7). The study shows a decline in the uninsurance rate between 1999 and 2002, but this decline was bigger for citizen children with at least one noncitizen parent (a 7.1 percentage-point decline versus a 6.1 percentage-point decline for citizen children of citizen parents). The decline was mostly due to increases in public coverage.

The study also examined the importance of the primary language of caregivers on Medicaid/SCHIP participation. Low-income citizen children with Spanish-speaking caregivers had higher rates of public coverage in both 1999 and 2002 than children with English-speaking caregivers, which compensates for their lower rates of ESI coverage (figure 3). But both sets of children had comparable gains in public coverage between 1999 and 2002 (12.8 percentage points for English-speaking and 11.2 percentage points for Spanish-speaking). This suggests that state efforts to accommodate Spanish-speaking families when performing outreach and enrollment activities may have had a positive effect on participation.

Returning to insurance coverage differences between Hispanic and white children, figure 4 reports adjusted differences separately by citizenship and primary language from our analysis of the 2002 NSAF. English-speaking citizen Hispanic children were 12.0 percentage points less likely than white children to have ESI coverage. Spanish-speaking citizen children were 24.0 percentage points less likely and Spanish-speaking noncitizen children were 31.2 percentage points less likely to have ESI coverage. Spanish-speaking noncitizens were 15.9 percentage points less likely to have public coverage, whereas citizen Hispanic children were more likely to

have public coverage. Being doubly disadvantaged in getting coverage, Spanish-speaking noncitizen Hispanic children are 44.6 percentage points more likely to be uninsured.

Using the measure of child eligibility for Medicaid/SCHIP coverage created by Dubay and McFeeters, we find that among the target population of children without private coverage who are eligible for public coverage, citizen Hispanic children, with both English and Spanish interviews, were as likely to participate as white children (figure 5). Noncitizen children were much less likely to participate (31.4 percent versus 73.2 percent for whites). Adjusted results confirmed the pattern of differences shown in figure 5, except that with adjustment, citizen Hispanic children with a primarily Spanish-speaking caretaker were 8.3 percentage points less likely to participate.¹⁷

Access and use. Access and use differences using the 2002 NSAF for all Hispanics compared with whites are very similar to those obtained by Ku and Waidmann (2003) and ourselves using the 1999 data, so we focus on the 2002 results (table 8). Hispanic children overall were 10.6 percentage points more likely than whites to lack a usual source of care, 11.7 percentage points less likely to have had a physician visit in the past year, and 12.8 percentage points less likely to answer that health care providers listen and explain well. While black children were found more likely than white children to visit an emergency room, Hispanic children were 7.0 percentage points less likely to have had an emergency room visit. Combined with the other findings, this difference is consistent with lowered access for Hispanic children.

¹⁷ In related work, Kenney, Haley, and Tebay (1999) use the extensive data on public social program participation available from the NSAF to examine the programs in which low-income uninsured children participate. Using 1997 NSAF data, the study found that 81 percent of low-income uninsured Hispanic children and 78 percent of low-income uninsured black children were in families that participate in at least one of the following four programs: the National School Lunch Program, WIC, Food Stamps, or Unemployment Compensation. Participation in one of these programs is also very high for foreign-born low-income uninsured residents (76 percent). In comparison, these figures are all higher than the rate for low-income children overall (i.e., including non-Hispanic white U.S.-born), which was 73 percent. Program participation rates are highest for the National School Lunch Program for the three groups.

In another study, Kenney and others (2000) using 1997 NSAF data find that low-income Hispanic children were less likely to have any dental visit in the past 12 months. For those with any dental visit, Hispanic children were more likely to have fewer than two visits in the past 12 months. Kenney, McFeeters, and Yee (2005) examine dental care and unmet need using 2002 NSAF data. Differences between Hispanic and white children were not statistically significant in their multivariate models that included citizenship among the control variables, although being a noncitizen was significantly associated with lower use of dental care. They find no significant difference between Hispanic and white children in reported unmet need for dental care.

Table 9 compares 2002 unadjusted and adjusted differences in health care access and use separately by Hispanic citizenship/language status. Before adjustment, English-speaking citizen Hispanic children are actually more likely to have a well-child visit than white children. After adjustment, the only statistically significant difference is that Hispanic children are less likely to have a usual source of care. For primarily Spanish-speaking citizen Hispanic children, differences relative to whites are much larger, often even more so after adjustment. The differences suggest that broad-based barriers to health care exist for these children. Spanish-speaking noncitizen Hispanic children have the lowest access to care according to most measures. In particular, they are 22 percentage points less likely than white children to have a usual source of care (after adjustment).

Differences between Hispanic and White Adults

Insurance coverage. In the 1997 NSAF, Hispanic adults were 25 percentage points less likely than white adults to have ESI, 4.8 percentage points more likely to have public coverage, and 23.5 percentage points more likely to be uninsured (table 10). Unlike the situation with other populations we discussed above, public coverage does relatively little to compensate for the

lower rate of ESI coverage for Hispanic adults. This is particularly true when we focus on low-income adults. While there is virtually no difference in public coverage rates, low-income Hispanic adults were 14.6 percentage points less likely to have ESI coverage, and 21.5 percentage points more likely to be uninsured. Davidoff and colleagues (2004) obtain similar results using the 2002 NSAF focusing on Medicaid-eligible adults. In their study, differences in public coverage takeup rates between Hispanic and white Medicaid eligible adults were statistically insignificant.

One meaningful change between 1997 and 2002 is that the rate of Hispanic adult ESI coverage fell from 50.9 percent to 46.8 percent. In addition, public coverage increased significantly for white adults. Within the low-income subsample, rates of public coverage increased for white adults but changed little for Hispanic adults. The difference in uninsurance rates between low-income Hispanic adults increased from 21.5 percentage points to 27.2 percentage points over this period.¹⁸

Adjusted insurance coverage differences, estimated separately by citizenship and language status of Hispanic adults, show that the gap in ESI coverage relative to whites is -13.8 percentage points for English-speaking citizens, -17.5 percentage points for Spanish-speaking citizens, and -33.1 percentage points for Spanish-speaking noncitizens (figure 6). While citizen Hispanic adults are more likely to have public coverage, primarily Spanish-speaking noncitizen Hispanic adults are less likely to have public coverage. The rate of uninsurance for Spanish-speaking noncitizen Hispanic adults is 44.3 percentage points higher than for whites adults.

Participation in Medicaid and state programs among eligible adults lacking private coverage is shown in figure 7. As for children, there is virtually no difference in participation rates between white and citizen Hispanic adults, regardless of primary language. Noncitizen

Hispanic adults with a Spanish interview were 29 percentage points less likely to participate, a participation rate about half that of white adults. With adjustment, this difference is reduced only slightly to 25 percentage points.

Access and use. For low-income Hispanic adults overall, the Ku and Waidmann (2003) study and our supplemental analyses are similar for 1999 and 2002 (table 11). We focus, therefore, on the 2002 numbers. Hispanic adults fare much worse than white adults on health care access and use. As with black adults, they were more likely to lack a USOC, but the magnitude of this difference to whites was much greater for Hispanic adults than it was for black adults. Hispanic adults were less likely to have a physician visit, less likely to have an emergency room visit in the past 12 months, and less likely to feel like their health care provider listens to them and explains medical issues well. Hispanic women were also less likely to report having a breast exam in the past 12 months relative to white women. However, Hispanic adults were also less likely to report that they postponed care at all or postponed care due to cost.

Comparisons of unadjusted and adjusted differences, by Hispanic citizenship and language status, are shown in table 12. For English-speaking citizen Hispanic adults, differences relative to whites are substantially reduced and/or become statistically insignificant with adjustment. However, the reduced propensity for Hispanic adults to report postponing care is robust and becomes even more apparent with adjustment. This is also true for the two primarily Spanish-speaking groups. Differences in the health care-seeking behavior of Hispanics and whites—perhaps due to cultural differences or different experiences with the medical system in the past—could make Hispanics are less likely to seek services than white adults when faced with the same circumstances.

¹⁸ This change in the difference over time is statistically significant at the 5 percent level.

With the exception of the two outcomes related to postponing care, we find for both citizen and noncitizen Spanish-speaking Hispanic adults, with or without adjustment, that health care access and use are at far lower levels than those for white adults. For example, Spanish-speaking citizen Hispanics are 10.3 percentage points less likely to have a physician visit, while Spanish-speaking noncitizen Hispanics are 16.5 percentage points less likely to have a physician visit. Interestingly, there is no significant adjusted difference between Hispanic and white women in the likelihood of having a breast exam.

Differences for American Indians and Alaskan Natives

Insufficient sample sizes for other racial and ethnic groups within household surveys often limit analyses to insurance and health care differences among whites, blacks and Hispanics. Using NSAF data for 1997 and 1999, however, Zuckerman and colleagues (2004) are able to study differences between non-Hispanic whites and American Indians/Alaska Natives (AIAN)—a group that is rarely the focus of analysis. This study found that AIANs were on average younger, less educated, poorer, and more likely to be in fair or poor health or have a functional limitation than non-Hispanic whites.

With respect to insurance status, AIANs were less likely to have employer or private insurance, more likely to have public coverage, and more likely to be uninsured (using the census definition of uninsured, which does not count the Indian Health Service [IHS] as coverage). This pattern held within each income category. Their findings comparing low-income AIANs are shown in figure 8. The IHS is the only form of coverage for 23 percent of AIANs. Counting those with only the IHS as uninsured, 48 percent of low-income AIANs are uninsured, compared with 26 percent of whites.

For access and use differences, unadjusted results show that AIANs are more likely to have unmet need (largely due to lacking dental care); more likely to have an ER visit; less confident in access to care and less satisfied with care; less satisfied with provider communication; and less likely to have any provider visit, dental visit, and preventive care (for women). According to their regression-adjusted results, AIAN–white differences in socioeconomic status—particularly income—explain many of these differences; but even after adjustment for several factors including age and other demographic characteristics, socioeconomic status, and health status, differences persist in satisfaction with care, satisfaction with provider communication, and having any ER visit.

Regression-Based Decompositions of Racial and Ethnic Differences

Regression-based decompositions can be used to test the relative importance of various factors that may contribute to differences in uninsurance rates, access to care, and utilization. One such study, Waidmann and Rajan (2000), looks at differences in the overall population (i.e., pooling children and adults). The study finds that differences in income were by far the dominant factor explaining the lower rate of insurance coverage among blacks relative to whites, accounting for 45 percent of the variation (table 13). Insurance coverage, income, education, and family structure differences between blacks and whites largely explained differences in access and use. The higher rate of blacks with no USOC relative to whites is mostly explained by the lower rate of insurance coverage and family structure differences. Lower education levels relative to whites, followed in importance by lower rates of coverage and lower income levels, largely explain blacks' being less likely to have had a breast exam in the past 12 months relative to whites.

Waidmann and Rajan (2000) also decompose racial/ethnic differences in self-reported health status. The higher rate of fair or poor health reported among blacks is largely explained by

differences in employment characteristics (blacks are more likely to be unemployed), income, and educational levels.

Differences in citizenship status, educational level, and income largely explain the uninsurance gap between Hispanics and whites (table 14). Citizenship status also figures prominently in explaining differences in access and use, on top of the contributing factors of insurance, income, and educational differences. Differences in insurance coverage rates and citizenship status explained the majority of the USOC difference between Hispanics and whites (a 15.4 percentage-point difference).

As with blacks, differences in breast cancer screening rates (42 percent of white women versus 58 percent of Hispanic women have no breast exam) are largely explained by higher education levels for whites relative to Hispanics. Education level differences explain 34 percent of the difference. Lower coverage rates and income among Hispanics relative to whites also explain some of the difference in breast exam rates (19 percent and 15 percent of the difference, respectively).

The difference in the likelihood of fair or poor health between Hispanics and whites is partly explained by lower income and educational levels, although nearly half the difference in this measure is unexplained. Interestingly, insurance coverage was not an important factor associated with differences in self-reported health status. This suggests that reducing differences in income, education, and employment is more likely to address racial and ethnic differences in health status than equalizing insurance coverage.

Geographical Variation in Coverage and Access/Utilization Differences

The NSAF permits analyses of geographic variation in insurance, access, and use measures for the 13 study states that were selected as part of the ANF project for in-depth analysis. Waidmann

and Rajan (2000) also examine geographic variation in uninsurance rates, the percentage of people with no USOC, the percentage of woman with no clinical breast exam in the past 12 months, and the percentage of people in fair or poor health.¹⁹ The study finds that uninsurance rates and rates of people with no USOC for all racial and ethnic groups tend to be higher in southern states relative to states in other parts of the country. There was little geographic variation in the rate of women with prior-year clinical breast exams. Blacks in western ANF states and Hispanics in the north-central ANF states reported themselves to be in better health than their counterparts in other regions of the country.

With respect to geographical variation in racial and ethnic differences, the differences in all four measures were higher in Texas relative to the national average, while the differences in Florida were smaller than the national average. New York and California (two other states with large Hispanic populations) showed mixed results with respect to the national average, depending on the measure. For blacks, differences were consistently higher than the national average for all four measures in Alabama and Mississippi—two states with relatively large black populations.

Race/Ethnicity and Geographical Variation in Insurance Coverage

In related work, Shen and Zuckerman (2003) examine how differences in the racial and ethnic composition of states, as well as other state characteristics, explain geographic differences in ESI rates. Describing state characteristics relative to a national average baseline, the study finds that racial and ethnic composition accounted for a sizable portion of variation in ESI rates across states: 27 percent of explained variation in Texas, 25 percent in California, 21 percent in Minnesota, and 17 percent in Wisconsin. Specifically, the higher proportion of Hispanics and

¹⁹ The study also performed separate regression-based decompositions as described above within each state.

blacks in California and Texas contributed to these states' ESI rates being 1.6 and 1.8 percentage points lower, respectively, than the national average. Conversely, the lower proportion of Hispanics and blacks in Wisconsin and Minnesota contributed to the states having ESI rates 1.3 and 1.5 percentage points higher, respectively, than the national average ESI rate. The findings demonstrate that racial and ethnic differences are substantial compared with a host of other factors associated with geographical variation in ESI coverage, such individual employment characteristics and state unionization rates.

Discussion and Conclusion

Studies conducted as part of the *Assessing the New Federalism* project have contributed to the large and growing literature on racial and ethnic differences in health care access and use. The key contributions of these studies center around features of ANF's National Survey of America's Families. The NSAF has allowed various researchers to (1) examine recent trends on a consistent basis; (2) draw on a rich set of socioeconomic, health status, and other factors that can be used to better understand their relative importance on racial/ethnic differences; (3) uncover geographical variation in differences and the factors that contribute to differences; and (4) document differences for populations that have been understudied, such as American Indians and Alaskan natives.

These benefits notwithstanding, there are limitations to what NSAF and other household survey data can tell us about racial and ethnic differences or disparities. First, like most large surveys, the NSAF contains few questions that directly measure patient preferences for insurance or medical care and virtually no information on clinical appropriateness of health care services used. Without such measures, we are not able to tease out the relative contribution of clinical appropriateness, patient preferences, and other access-, system-, and discrimination-related

factors that explain racial and ethnic differences. This limitation makes it difficult to isolate the part of the difference that can be considered a disparity in insurance coverage or medical care, as discussed above. Second, while the NSAF provided for Spanish-language interviews, individuals who were not proficient in either English or Spanish were not captured by the survey.

Despite these limitations, many of the findings discussed above are relevant to the design of public policies to reduce racial and ethnic disparities in health care access and use. Among the more original findings and/or those most directly linked to policy choices are the following:

- Insurance coverage differences between black and white adults and children, and between Hispanic and white children, were mostly stable from 1997 to 2002. The insurance coverage difference between low-income Hispanic and white adults, however, became wider over this period.
- Coverage differences between blacks and whites are related to type of coverage. Low-income black and white children were equally likely to be uninsured, but black children were 24 percentage points more likely to have public coverage and 19 percentage points less likely to have ESI coverage. Similar coverage patterns were found comparing low-income black and white adults, though on net, black adults were more likely to be uninsured. Whether higher participation in Medicaid among African-Americans has health care implications is an important question. Findings by Coughlin, Long, and Shen (2005) suggest that there is little difference in access to ambulatory care between Medicaid enrollees and the low-income privately insured, but that access to dental care and prescription drugs may be lower under Medicaid.
- Coverage differences between Hispanics and whites are small for citizens who are proficient in English. Noncitizens and Hispanics who primarily speak Spanish are much less likely to have ESI coverage than whites. Hispanics who are not citizens are also less likely than whites to have public coverage. Public coverage rates are higher for Hispanics who are citizens than whites, but the difference is not large enough to offset lower ESI coverage among Hispanics whose primary language is Spanish.

- Black and Hispanic adults are less likely than white adults to have a usual source of health care or to have seen a physician in the past 12 months, even after controlling for demographic and socioeconomic characteristics, health insurance coverage, and other characteristics. The Hispanic–white differences were much larger than the black–white differences.
- Access and use differences by race and ethnicity are larger among adults than children. Children have lower baseline use levels. School systems, Medicaid, SCHIP, and other social programs and institutions involve children to a greater extent and may help reduce racial and ethnic differences in access to care for children compared with adults. Another hypothesis is that whatever discrimination that occurs within the health care system applies more strongly to adults than to children.
- Some racial/ethnic differences in access and use can be attributed to differences in health insurance coverage. Expanding health insurance coverage of low-income populations will assist individuals and families of all races and ethnicities, but will disproportionately assist minority populations and would help reduce the gaps in health care access and use. Yet insurance coverage is at best a partial explanation for differences in access and use. Differences in income, education, and employment also matter and are even more important in some cases, which suggests that policy interventions outside the scope of health policy may also be required.
- Some evidence presented above comparing Hispanics and whites suggests language proficiency plays an important role in explaining some of the observed differences in access and use. Improved language competency among health care providers, therefore, would help reduce the size of the differences for populations that are primarily non-English-speaking.
- Health care access and use differences vary across regions of the country. This finding highlights the need for exploring further what factors are driving these differences and whether public policy interventions can do anything about them.

Given policymakers' increased focus on disparities and additional resources devoted to reducing them, it is important to maintain and expand the monitoring of racial and ethnic differences in health insurance coverage and health care access and use over time. Beyond the

ongoing measurement of differences or disparities, more analytical work is needed to better understand the relative importance of factors that contribute to racial and ethnic differences. Only by knowing the main pathways through which differences arise can we learn which policies seeking to address disparities will be most effective. Regression-based decompositions represent one way of studying the contributions of different factors associated with disparities. A potentially useful avenue for further research is to use a richer set of covariates in such studies, such as measures of accessibility of safety net providers and state and local policies. These research efforts will require the ongoing collection of household survey data with broad geographical coverage, sufficient sample sizes for minority populations, and consistent measurement over time.

References

- Capps, Randy. 2001. "Hardship among Children of Immigrants: Findings from the 1999 National Survey of America's Families." *Assessing the New Federalism Policy Brief B-29*. Washington, DC: The Urban Institute.
- Capps, Randy, Genevieve Kenney, and Michael Fix. 2003. "Health Insurance Coverage of Children in Mixed-Status Immigrant Families." *Snapshots of America's Families III*, No. 12. Washington, DC: The Urban Institute.
- Collins, Karen Scott, Allyson Hall, and Charlotte Neuhaus. 1999. *U.S. Minority Health: A Chartbook*. New York: The Commonwealth Fund.
- Coughlin, Terri, Sharon K. Long, and Yu-Chu Shen. 2005. "Assessing Access to Care under Medicaid: Evidence for the Nation and Thirteen States." *Health Affairs* 24(4):1073–83.
- Davidoff, Amy J., Anna S. Sommers, Jennifer Lesko, and Alshadye Yemane. 2004. "Medicaid and State-Funded Coverage for Adults: Estimates of Eligibility and Enrollment." Washington, DC: Kaiser Commission on Medicaid and the Uninsured.
- Dubay, Lisa, and Genevieve Kenney. 2004. "Gains in Children's Health Insurance Coverage but Additional Progress Needed." *Pediatrics* 114(5): 1338–40.
- Dubay, Lisa, Jennifer Haley, and Genevieve Kenney. 2002. "Children's Eligibility for Medicaid and SCHIP: A View from 2000." *Assessing the New Federalism Policy Brief B-41*. Washington, DC: The Urban Institute.
- Dubay, Lisa, Genevieve Kenney, and Jennifer Haley. 2002. "Children's Participation in Medicaid and SCHIP: Early in the SCHIP Era." *Assessing the New Federalism Policy Brief B-40*. Washington, DC: The Urban Institute.
- Ellwood, Marilyn. 1999. *The Medicaid Eligibility Maze: Coverage Expands but Enrollment Problems Persist*. Washington, DC: The Urban Institute. *Assessing the New Federalism Occasional Paper No. 30*.
- Finegold, Kenneth, and Laura Wherry. 2004. "Race, Ethnicity, and Health." *Snapshots of America's Families III*, No. 20. Washington, DC: The Urban Institute.
- Gabel, Jon, Larry Levitt, Erin Holve, Jerney Pickreign, Heidi Whitmore, Kelley Dhont, Samantha Hawkins, and Diane Rowlands. 2002. "Job-Based Health Benefits in 2002: Some Important Trends." *Health Affairs* 21(5): 143–51.
- Geiger, H. Jack. 2003. "Racial and Ethnic Disparities in Diagnosis and Treatment: A Review of the Evidence and a Consideration of Causes." In *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, edited by Brian D. Smedley, Adrienne Y. Stith, and Alan R. Nelson (415–54). Washington, DC: The National Academies Press.

- Holahan, John. 2003. "Changes in Employer-Sponsored Health Insurance Coverage." *Snapshots of America's Families III*, No. 9. Washington, DC: The Urban Institute.
- Kenney, Genevieve, Jennifer Haley, and Alexandra Tebay. 2003. "Children's Insurance Coverage and Service Use Improve." *Snapshots of America's Families III*, No. 1. Washington, DC: The Urban Institute.
- Kenney, Genevieve, Jennifer Haley, and Frank Ullman. 1999. "Most Uninsured Children Are in Families Served by Government Programs." *Assessing the New Federalism Policy Brief B-4*. Washington, DC: The Urban Institute.
- Kenney, Genevieve, Grace Ko, and Barbara Ormond. 2000. "Gaps in Prevention and Treatment: Dental Care for Low-Income Children." *Assessing the New Federalism Policy Brief B-15*. Washington, DC: The Urban Institute.
- Kenney, Genevieve, Joshua McFeeters, and Justin Yee. 2005. "Preventive Dental Care and Unmet Dental Needs among Low-Income Children." *American Journal of Public Health* 95(8): 1360–66.
- Ku, Leighton, and Timothy Waidmann. 2003. "How Race/Ethnicity, Immigration Status and Language Affect Health Insurance Coverage, Access to Care and Quality of Care among the Low-Income Population." Washington, DC: Kaiser Commission on Medicaid and the Uninsured.
- Lillie-Blanton, Marsha, Osula Evadne Rushing, and Sonia Ruiz. 2003. *Key Facts: Race, Ethnicity, and Medical Care*. Washington, DC: Kaiser Commission on Medicaid and the Uninsured.
- Long, Sharon, and Teresa Coughlin. 2001/2002. "Access and Use by Children on Medicaid: Does State Matter?" *Inquiry* 38: 409–22.
- Mayberry, Robert M., Fatima Mili, and Elizabeth Ofili. 2000. "Racial and Ethnic Difference in Access to Medical Care." *Medical Care Research and Review* 57(Suppl. 1): 108–45.
- McGuire, Thomas. 2004. Slides presented at Economic Research Initiative on the Uninsured Conference on Coverage for Vulnerable Populations, Ann Arbor, October 22.
- Monheit, Alan, and Jessica Vistnes. 2000. "Race/Ethnicity and Health Insurance Status: 1987 and 1996." *Medical Care Research and Review* 57(Suppl. 1): 11–35.
- Selden, Thomas M., Julie L. Hudson, and Jessica S. Banthin. 2004. "Tracking Changes in Eligibility and Coverage among Children, 1996–2002." *Health Affairs* 23(5): 39–50.
- Shen, Yu-Chu, and Sharon K. Long. Forthcoming. "What's Driving the Downward Trend in Employer-Sponsored Health Insurance?" *Health Services Research*.
- Shen, Yu-Chu, and Stephen Zuckerman. 2003. "Why Is There State Variation in Employer-Sponsored Insurance?" *Health Affairs* 22(1): 241–251.

- Smedley, Brian D., Adrienne Y. Stith, and Alan R. Nelson, eds. 2003. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: The National Academies Press.
- Waidmann, Timothy, and Shruti Rajan. 2000. "Race and Ethnic Disparities in Health Care Access and Utilization: An Examination of State Variation." *Medical Care Research and Review* 57(Suppl. 1): 55–84.
- Wherry, Laura, and Kenneth Finegold. 2004. "Changes in Health Insurance Coverage and Health Status by Race and Ethnicity, 1997–2002." *Journal of the National Medical Association* 96(12): 1577–82.
- Zuckerman, Stephen. 2003. "Gains in Public Health Insurance Offset Reductions in Employer Coverage among Adults." *Snapshots of America's Families III*, No. 8. Washington, DC: The Urban Institute.
- Zuckerman, Stephen, Jennifer Haley, Yvette Roubideaux, and Marsha Lillie-Blanton. 2004. "Health Service Access, Use, and Insurance Coverage among American Indians/Alaska Natives and Whites: What Role Does the Indian Health Service Play?" *American Journal of Public Health* 94(1): 53–59.
- Zuckerman, Stephen, Genevieve Kenney, Lisa Dubay, Jennifer Haley, and John Holahan. 2001. "Shifting Health Insurance Coverage, 1997–1999." *Health Affairs* 20(1):169–77.

Table 1. Health Insurance Coverage Differences between Black and White Children, 1997 and 2002

Insurance Status	1997			2002		
	Black children (%)	White children (%)	Percentage point difference	Black children (%)	White children (%)	Percentage point difference
<i>All Incomes</i>						
ESI	50.2	76.0	-25.8 *	44.5 ^t	74.2 ^t	-29.7 *
Public	34.3	10.1	24.2 *	44.2 ^t	14.5 ^t	29.7 *
Uninsured	13.2	8.9	4.3 *	8.8 ^t	6.6 ^t	2.2 *
<i>Low-Income</i>						
ESI	31.2	48.5	-17.3 *	23.6 ^t	42.9 ^t	-19.3 *
Public	49.3	27.4	21.9 *	63.2 ^t	39.7 ^t	23.5 *
Uninsured	16.8	18.6	-1.8	10.8 ^t	12.7 ^t	-1.9

Source: 1997 and 2002 NSAF data reported in Wherry and Finegold (2004).

Note: Insurance rate estimates do not sum to 100 percent because estimates for "other" insurance (non-group private insurance, Medicare, and other unspecified insurance) are not included.

* Black estimate is significantly different from the white estimate within a particular year at the 0.05 level.

^t Difference from 1997 is significant at the 0.05 level.

Table 2. Health Care Access and Use Differences between Low-Income Black and White Children, 1999 and 2002

Outcome Measure	1999			2002			
	Black children (%)	White children (%)	Unadjusted percentage point difference	Black children (%)	White children (%)	Percentage Point Difference	
						Unadjusted	Adjusted
No usual source of care	11.9	5.7	6.2 *	10.5	5.8	4.7 *	4.6 *
Physician visit (past 12 months)	70.8	71.0	-0.2 ^t	75.7	73.7	1.9	-2.1
Any well-child visits	72.6	59.4	13.2 *	77.1	62.2	14.8 *	10.8 *
Any inpatient hospitalization (12 months)	7.8	7.6	0.2 ^t	9.7	8.4	1.2	0.2
Any emergency room visit (12 months)	38.1	28.2	9.9 *	35.2	30.3	4.9 *	0.8
Health care providers listen and explain well	74.5	78.8	-4.3 ^t	78.3	81.7	-3.5	-2.6
Postpone care for any reason	6.1	5.2	0.9 ^t	3.2	3.6	-0.4	-1.0
Postpone care for cost	4.5	3.6	0.9 ^t	1.8	2.1	-0.3	-0.5

Sources: For usual source of care, well-child visits, and emergency room visits, authors' estimates based on 1999 and 2002 NSAF data. For all others, 1999 estimates from Ku and Waidmann (2003); 2002 estimates based on authors' analysis of NSAF data.

Notes: Adjusted differences are from linear probability regression models. Explanatory variables are race/ethnic/citizenship/interview language status categories, insurance coverage categories, age, age-squared, female, self-reported health status, having a health condition that limits usual activities, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level.

* Difference is statistically significant at the 0.05 level.

^t = Statistical significance of difference not reported.

Table 3. Health Insurance Coverage Differences between Black and White Adults, 1997 and 2002

Insurance Status	1997			2002		
	Black adults (%)	White adults (%)	Percentage point difference	Black adults (%)	White adults (%)	Percentage point difference
<i>All Incomes</i>						
ESI	62.5	75.9	-13.4 *	62.6	75.4	-12.8 *
Public	10.6	3.7	6.9 *	12.5 ^t	4.3 ^t	8.2 *
Uninsured	21.7	13.0	8.7 *	20.0	12.4	7.6 *
<i>Low-Income</i>						
ESI	34.5	43.4	-8.9 *	33.4	43.2	-9.8 *
Public	23.9	13.3	10.6 *	27.9	16.5 ^t	11.4 *
Uninsured	34.3	31.2	3.1	32.3	29.2	3.1

Source: 1997 and 2002 NSAF data reported in Wherry and Finegold (2004).

Note: Insurance rate estimates do not sum to 100 percent because estimates for "other" insurance (non-group private insurance, Medicare, and other unspecified insurance) are not included.

* Black estimate is significantly different from the white estimate within a particular year at the 0.05 level.

^t Difference from 1997 is significant at the 0.05 level.

Table 4. Health Care Access and Use Differences between Low-Income Black and White Adults, 1999 and 2002

Outcome Measure	1999			2002			
	Black adults (%)	White adults (%)	Unadjusted percentage point difference	Black adults (%)	White adults (%)	Percentage Point Difference	
						Unadjusted	Adjusted
No usual source of care	26.1	18.9	7.2 *	26.2	18.4	7.8 *	5.8 *
Physician visit (past 12 months)	66.0	67.2	-1.2 ^t	65.7	69.8	-4.1 *	-3.3 *
Any breast exam (past 12 months, women only)	47.8	48.4	-0.6	47.0	52.4	-5.4 *	-3.1
Any inpatient hospitalization (12 months)	17.0	13.2	3.8 ^t	15.2	13.4	1.8	-0.4
Any emergency room visit (12 months)	37.1	28.1	9.0 *	35.3	28.2	7.2 *	3.9 *
Health care providers listen and explain well	68.5	72.9	-4.4 ^t	74.1	79.0	-4.9 *	-3.4
Postpone care for any reason	17.6	18.3	-0.7 ^t	8.8	12.3	-3.6 *	-5.1 *
Postpone care for cost	12.7	13.9	-1.2 ^t	5.2	8.3	-3.0 *	-4.5 *

Sources: For usual source of care, breast exams, and emergency room visits, authors' estimates based on 1999 and 2002 NSAF data. For all others, 1999 estimates from Ku and Waidmann (2003); 2002 estimates based on authors' analysis of NSAF data.

Notes: Adjusted differences are from linear probability regression models. Explanatory variables are race/ethnic/citizenship/interview language status categories, insurance coverage categories, age, age-squared, female, self-reported health status, having a health condition that limits usual activities, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level.

* Difference is statistically significant at the 0.05 level.

t = Statistical significance of difference not reported.

Table 5. Health Insurance Coverage Differences between Hispanic and White Children, 1997 and 2002

Insurance Status	1997			2002		
	Hispanic children (%)	White children (%)	Percentage point difference	Hispanic children (%)	White children (%)	Percentage point difference
<i>All Incomes</i>						
ESI	43.4	76.0	-32.6 *	40.3	74.2 ^t	-33.9 *
Public	30.8	10.1	20.7 *	36.7 ^t	14.5 ^t	22.2 *
Uninsured	23.1	8.9	14.2 *	20.2	6.6 ^t	13.6 *
<i>Low-Income</i>						
ESI	25.5	48.5	-23.0 *	21.7 ^t	42.9 ^t	-21.2 *
Public	41.9	27.4	14.5 *	50.9 ^t	39.7 ^t	11.2 *
Uninsured	29.8	18.6	11.2 *	25.2 ^t	12.7 ^t	12.5 *

Source: 1997 and 2002 NSAF data reported in Wherry and Finegold (2004).

Note: Insurance rate estimates do not sum to 100 percent because estimates for "other" insurance (non-group private insurance, Medicare, and other unspecified insurance) are not included.

* Hispanic estimate is significantly different from the white estimate within a particular year at the 0.05 level.

^t Difference from 1997 is significant at the 0.05 level.

Table 6. Health Insurance, Health Care Access, Health Status, and Economic Well-Being of Children, by Parent Nativity

Measure	Children of natives (%)	Children of immigrants (%)
<i>Health Insurance, Access, and Health Status</i>		
Uninsured	10	22 *
No usual source of care	4	14 *
Fair or poor health	4	9 *
<i>Economic Well-Being</i>		
Below federal poverty level	16	24 *
Families with one or more food-related problems	27	37 *
Families paying at least half of income for rent/mortgage	6	14 *
Families unable to pay rent, mortgage, or utilities last year	17	18
Living in crowded housing	7	29 *

Source: Unadjusted estimates from Capps (2001) using 1999 NSAF data.

* Difference between children of immigrants and children of natives is significantly different from 0 at the 0.10 level.

Table 7. Health Insurance for Low-Income Citizen Children, by Parent Citizenship Status

Insurance Status	All Low-Income Citizen Children			Citizen Children with Citizen Parents			Citizen Children with Noncitizen Parents		
	1999 (%)	2002 (%)	Percentage point difference	1999 (%)	2002 (%)	Percentage point difference	1999 (%)	2002 (%)	Percentage point difference
ESI	39.5	32.9	-6.6 *	41.4	34.9	-6.5 *	26.1	22.1	-4.0
Public	37.1	50	12.9 *	36.4	49.3	12.9 *	42.3	53.8	11.5 *
Uninsured	19.7	13.8	-5.9 *	18.5	12.4	-6.1 *	28.7	21.6	-7.1 *

Source: Unadjusted estimates from Capps, Kenney, and Fix (2003).

* 2002 estimates are statistically significant from 1999 estimates at the 0.10 level.

Table 8. Health Care Access and Use Differences between Hispanic and White Children, 1999 and 2002

Outcome Measure	1999			2002		
	Hispanic children (%)	White children (%)	Unadjusted percentage point difference	Hispanic children (%)	White children (%)	Unadjusted percentage point difference
No usual source of care	18.6	5.7	12.9 *	16.4	5.8	10.6 *
Physician visit (past 12 months)	61.6	71.0	-9.4 ^t	62.1	73.7	-11.7 *
Any well-child visits	61.3	59.4	1.9	62.6	62.2	0.4
Any inpatient hospitalization (12 months)	7.6	7.6	0.0 ^t	6.9	8.4	-1.5
Any emergency room visit (12 months)	24.4	28.2	-3.8 *	23.3	30.3	-7.0 *
Health care providers listen and explain well	64.0	78.8	-14.8 ^t	69.0	81.7	-12.8 *
Postpone care for any reason	5.4	5.2	0.2	3.2	3.6	-0.4
Postpone care for cost	3.9	3.6	0.3 ^t	1.5	2.1	-0.5

Sources: For usual source of care, well-child visits, and emergency room visits, authors' estimates based on 1999 and 2002 NSAF data. For all others, 1999 estimates from Ku and Waidmann (2003); 2002 estimates based on authors' analysis of NSAF data.

Note: Low-income is family income below 200 percent of the federal poverty level.

* Difference is statistically significant with $p < 0.05$.

^t = Statistical significance of difference not reported.

Table 9. Health Care Access and Use Differences between Hispanic and White Children, by Citizenship and Primary Language of Hispanics, 2002 (percentage points)

Outcome Measure	Citizen				Noncitizen	
	English-Speaking		Spanish-Speaking		Spanish-Speaking	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
No usual source of care	3.1 *	3.4 *	11.6 *	11.0 *	28.4 *	21.5 *
Physician visit (past 12 months)	1.0	-2.2	-16.7 *	-20.2 *	-33.9 *	-24.1 *
Any well-child visits	7.3 *	3.1	0.4	-6.0 *	-18.4 *	-7.5 *
Any inpatient hospitalization (12 months)	1.0	-0.3	-3.1 *	-6.7 *	-4.9 *	-1.6
Any emergency room visit (12 months)	-0.6	-2.8	-10.0 *	-14.5 *	-16.9 *	-12.2 *
Health care providers listen and explain well	-4.6	-4.1	-18.1 *	-15.7 *	-22.5 *	-16.7 *
Postpone care for any reason	0.4	-0.1	-0.9	-2.3 *	-1.2 *	-3.3 *
Postpone care for cost	0.0	-0.1	-1.2 *	-2.0 *	-0.4 *	-2.6 *

Source: Authors' analysis of 2002 NSAF data.

Notes: Adjusted differences are from linear probability regression models. Explanatory variables are race/ethnic/citizenship/interview language status categories, insurance coverage categories, age, age-squared, female, self-reported health status, having a health condition that limits usual activities, income above the federal poverty level, noncitizen, single-parent household, and urban status. Sample sizes for English-speaking Hispanic noncitizens were too small to produce reliable estimates.

* Estimates of differences are statistically significant at the 0.05 level.

Table 10. Health Insurance Coverage Differences between Hispanic and White Adults, 1997 and 2002

Insurance Status	1997			2002		
	Hispanic adults (%)	White adults (%)	Percentage point difference	Hispanic adults (%)	White adults (%)	Percentage point difference
<i>All Incomes</i>						
ESI	50.9	75.9	-25.0 *	46.8 ^t	75.4	-28.6 *
Public	8.5	3.7	4.8 *	8.9	4.3 ^t	4.6 *
Uninsured	36.5	13.0	23.5 *	40.7 ^t	12.4	28.3 *
<i>Low-Income</i>						
ESI	28.8	43.4	-14.6 *	25.5	43.2	-17.7 *
Public	14.1	13.3	0.8	14.5	16.5 ^t	-2.0
Uninsured	52.7	31.2	21.5 *	56.4	29.2	27.2 *

Source: 1997 and 2002 NSAF data reported in Wherry and Finegold (2004).

Note: Insurance rate estimates do not sum to 100 percent because estimates for "other" insurance (non-group private insurance, Medicare, and other unspecified insurance) are not included.

* Hispanic estimate is significantly different from the white estimate within a particular year at the 0.05 level.

^t Difference from 1997 is significant at the 0.05 level.

Table 11. Health Care Access and Use Differences between Hispanic and White Adults, 1999 and 2002

Outcome Measure	1999			2002		
	Hispanic adults (%)	White adults (%)	Unadjusted percentage point difference	Hispanic adults (%)	White adults (%)	Unadjusted percentage point difference
No usual source of care	34.7	18.9	15.8 *	35.5	18.4	17.1 *
Physician visit (past 12 months)	45.1	67.2	-22.1 ^t	50.6	69.8	-19.2 *
Any breast exam (past 12 months, women only)	38.1	48.4	-10.3 *	39.1	52.4	-13.3 *
Any inpatient hospitalization (12 months)	10.3	13.2	-2.9 ^t	11.5	13.4	-1.9
Any emergency room visit (12 months)	21.8	28.1	-6.3 *	22.0	28.2	-6.2 *
Health care providers listen and explain well	54.3	72.9	-18.6 ^t	66.1	79.0	-12.9 *
Postpone care for any reason	8.4	18.3	-9.9 ^t	7.2	12.3	-5.1 *
Postpone care for cost	6.6	13.9	-7.3 ^t	5.3	8.3	-3.0 *

Sources: For usual source of care, breast exams, and emergency room visits, authors' estimates based on 1999 and 2002 NSAF data. For all others, 1999 estimates from Ku and Waidmann (2003); 2002 estimates based on authors' analysis of NSAF data.

Note: Low-income is family income below 200 percent of the federal poverty level.

* Difference is statistically significant with $p < 0.05$.

^t = Statistical significance of difference not reported.

Table 12. Health Care Access and Use Differences between Hispanic and White Adults, by Citizenship and Primary Language of Hispanics, 2002 (percentage points)

Outcome Measure	Citizen				Noncitizen	
	English-Speaking		Spanish-Speaking		Spanish-Speaking	
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
No usual source of care	8.5 *	4.4 *	10.2 *	6.9 *	24.9 *	11.6 *
Physician visit (past 12 months)	-5.6 *	-1.1	-12.4 *	-10.3 *	-31.7 *	-16.5 *
Any breast exam (past 12 months, women only)	-11.6 *	-6.1	-7.7	-4.3	-16.1 *	-1.5
Any inpatient hospitalization (12 months)	1.8	1.2	-2.9	-5.9 *	-4.2 *	-3.7 *
Any emergency room visit (12 months)	2.7	1.1	-7.8	-6.7 *	-12.3 *	-11.6 *
Health care providers listen and explain well	-4.0 *	-3.5	-14.4 *	-9.2 *	-19.7 *	-14.2 *
Postpone care for any reason	-2.1	-3.4 *	-7.5 *	-11.2 *	-6.8 *	-11.9 *
Postpone care for cost	-1.3	-2.7 *	-6.7 *	-10.8 *	-3.3 *	-9.8 *

Source: Authors' analysis of 2002 NSAF data.

Notes: Adjusted differences are from linear probability regression models. Explanatory variables are race/ethnic/citizenship/interview language status categories, insurance coverage categories, age, age-squared, female, self-reported health status, having a health condition that limits work, income above the federal poverty level, noncitizen, single-parent household, and urban status. Sample sizes for English-speaking Hispanic noncitizens were too small to produce reliable estimates.

* Estimates of differences are statistically significant at the 0.05 level.

Table 13. Decomposition of Differences between Black and White Adults in Health Insurance, Health Care Access and Use, and Health Status, 1997

Differences	Uninsurance	No usual source of care	Breast cancer screening	Fair or poor health
Total percentage point difference from whites	8.6	5.0	4.8	6.2
<i>Percent of Difference Attributable to Differences in Characteristics</i>				
Insurance coverage	---	37	16	3
Employment	-7	0	12	22
Income	45	14	29	26
Education	10	5	39	22
Citizenship	3	4	0	2
Family structure	16	26	20	12
Demography	4	4	10	-18
Residual	29	9	-24	31

Source: Waidmann and Rajan (2000).

Notes: Percent of difference attributable to differences in characteristics may not sum to 100 percent due to rounding error. The "residual" category represents the percent of difference that is not explained by the listed characteristics.

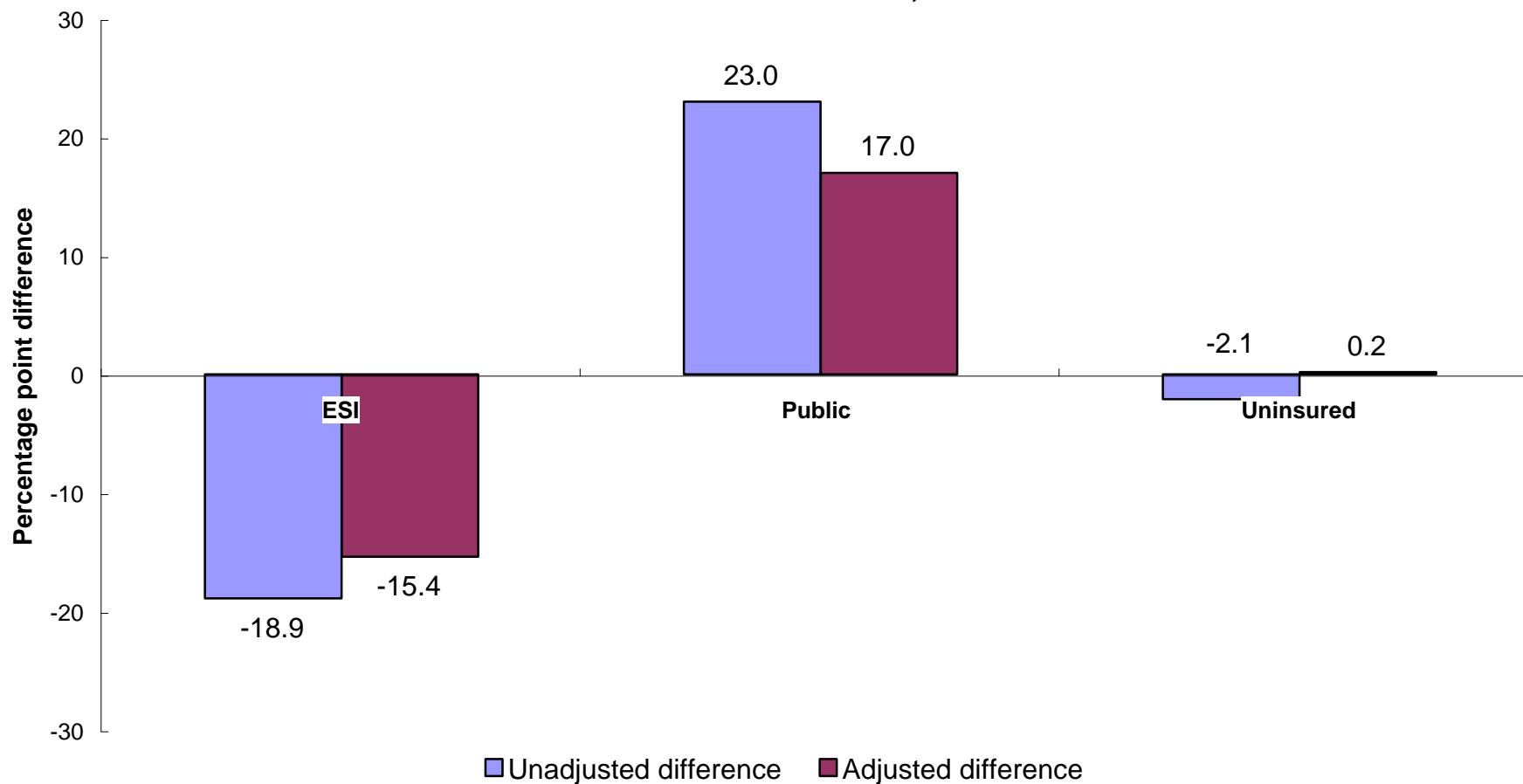
Table 14. Decomposition of Differences between Hispanic and White Adults in Health Insurance, Health Care Access and Use, and Health Status, 1997

Differences	Uninsurance	No usual source of care	Breast cancer screening	Fair or poor health
Total percentage point difference from whites	23.5	15.4	16	14.8
<i>Percent of Difference Attributable to Differences in Characteristics</i>				
Insurance coverage	---	33	19	4
Employment	7	2	4	8
Income	28	8	15	18
Education	11	8	34	27
Citizenship	14	19	0	11
Family structure	1	2	4	1
Demography	5	9	6	-14
Residual	33	19	19	45

Source: Waidmann and Rajan (2000).

Notes: Percent of difference attributable to differences in characteristics may not sum to 100 percent due to rounding error. The "residual" category represents the percent of difference that is not explained by the listed characteristics.

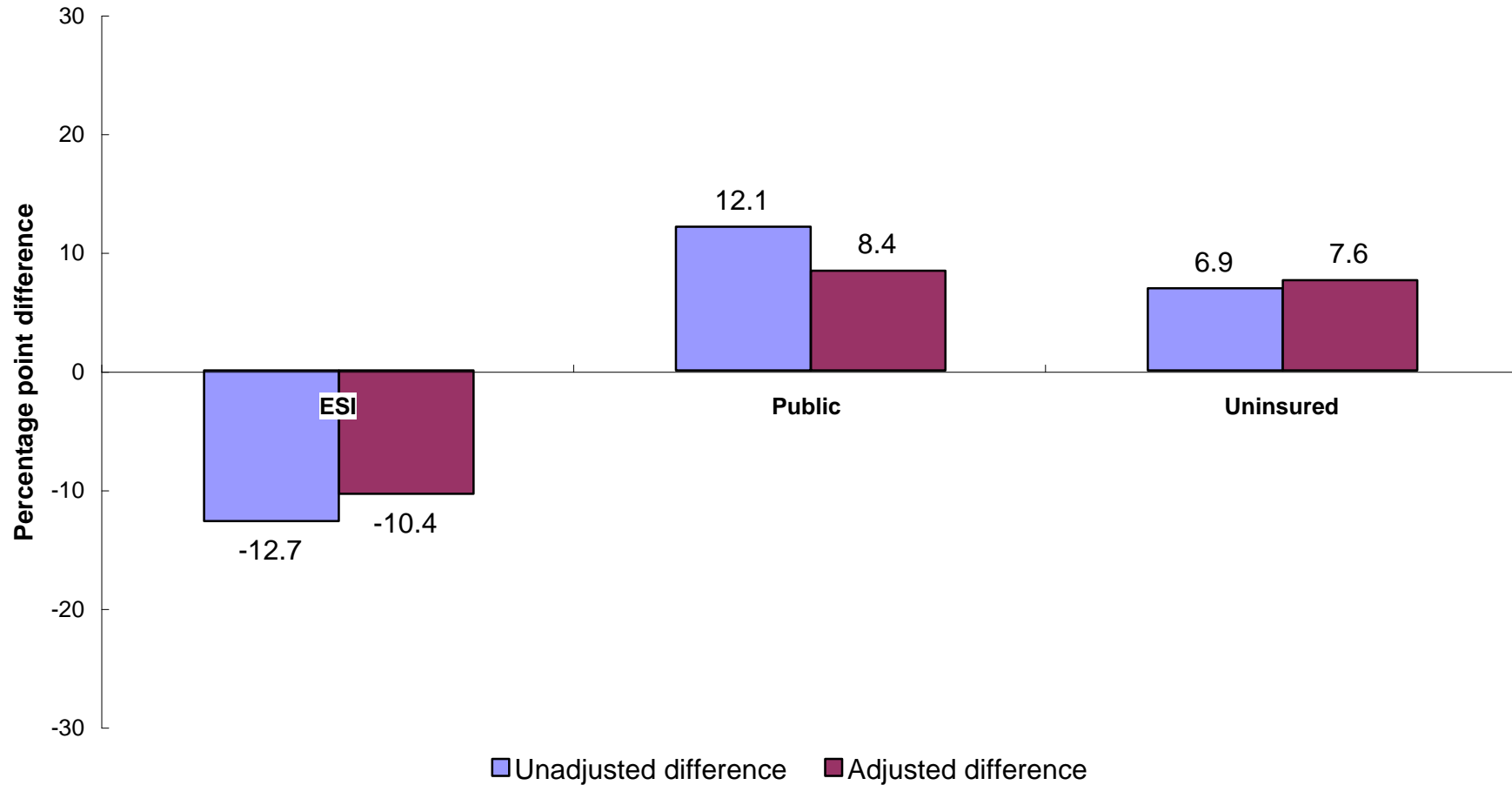
Figure 1. Unadjusted and Adjusted Differences in Insurance Coverage between Low-Income Black and White Children, 2002



Source: Authors' analysis of 2002 NSAF data.

Notes: Unadjusted and adjusted estimates are based on identical samples. Explanatory variables are race/ethnic/citizenship/interview language status categories, age, age-squared, female, self-reported health status, having a health condition that limits usual activities, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level.

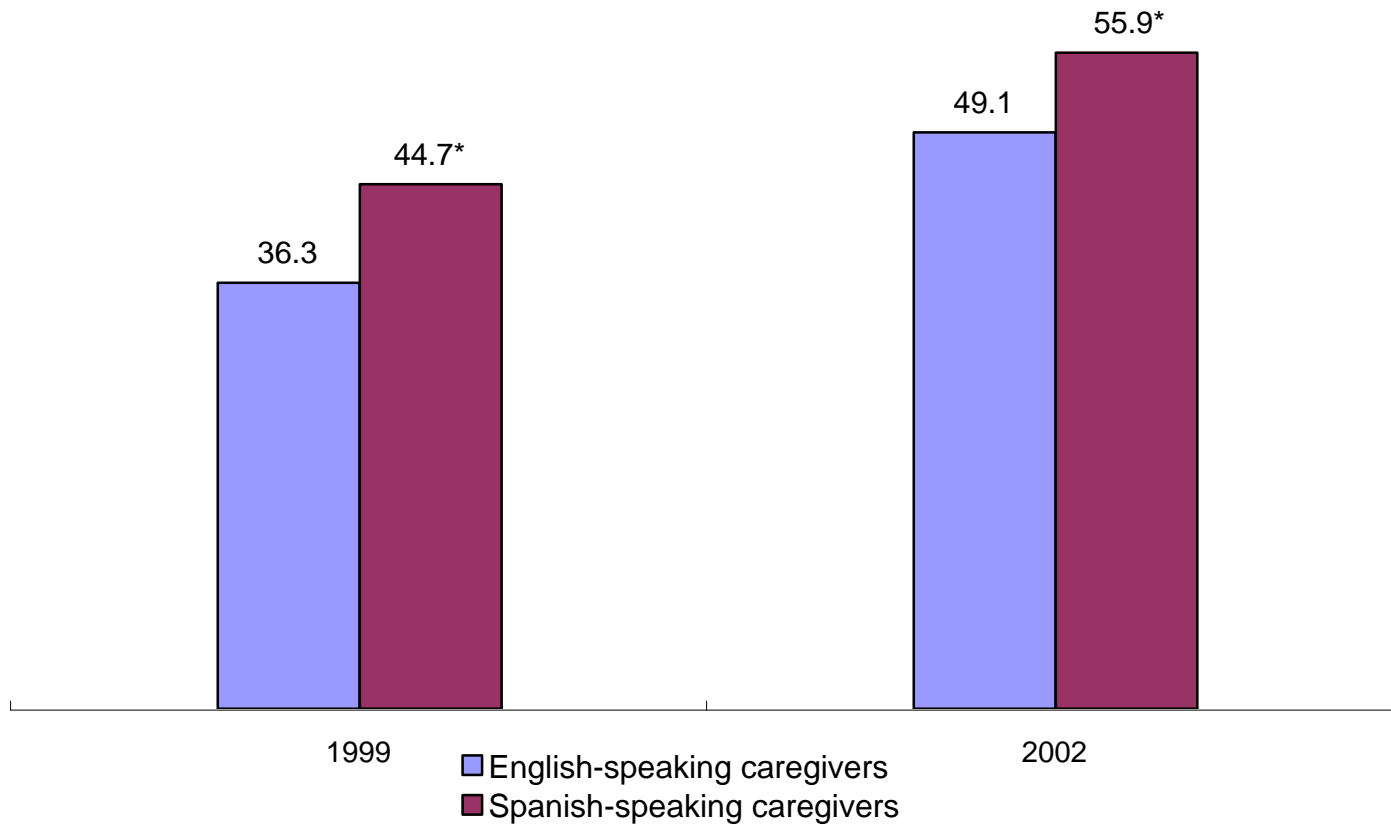
Figure 2. Unadjusted and Adjusted Differences in Insurance Coverage between Low-Income Black and White Adults, 2002



Source: Authors' analysis of 2002 NSAF data.

Notes: Unadjusted and adjusted estimates are based on identical samples. Explanatory variables are race/ethnic/citizenship/interview language status categories, age, age-squared, female, self-reported health status, having a health condition that limits work, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level.

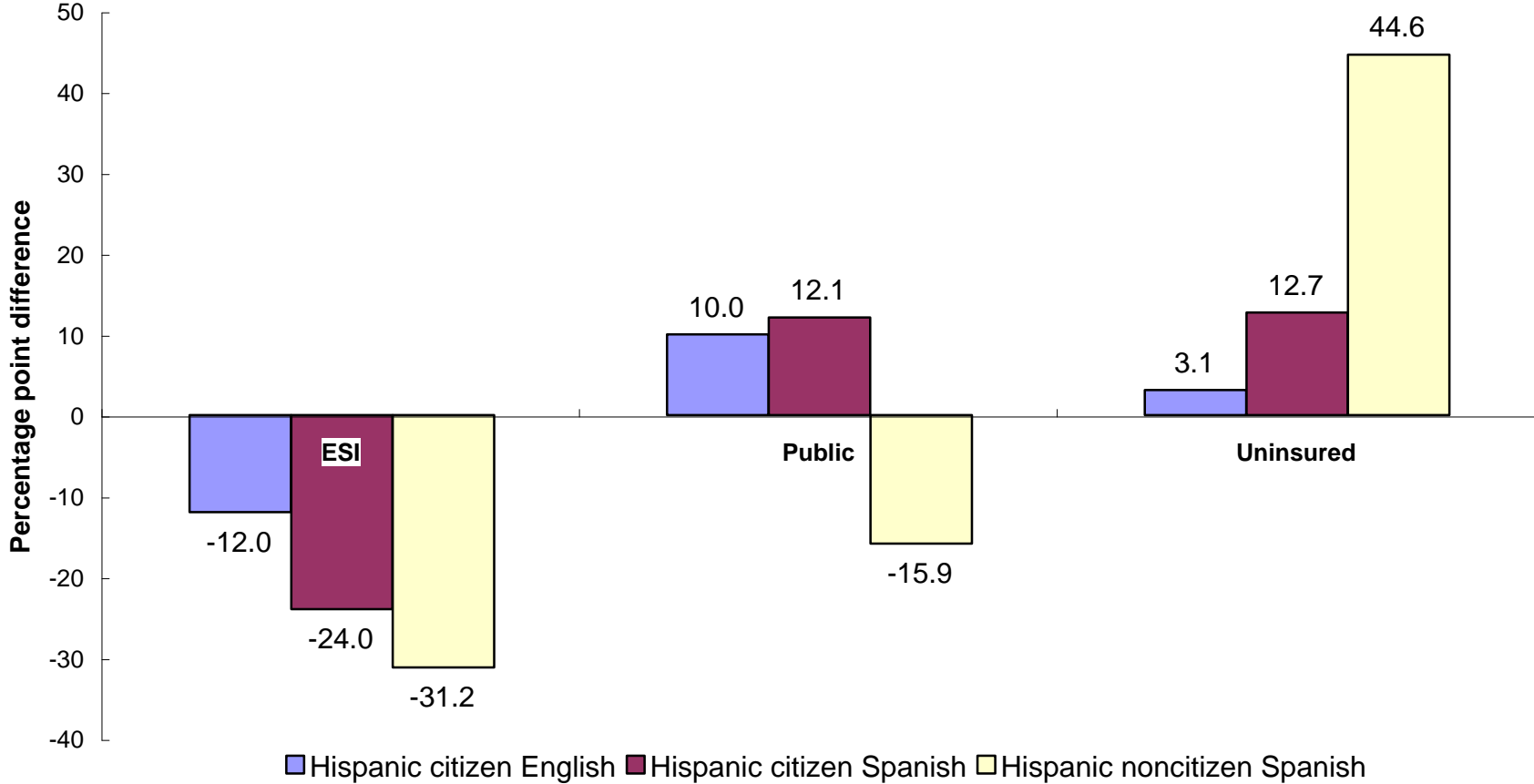
Figure 3. Medicaid/SCHIP Participation Rates for Low-Income Citizen Children by Primary Language of Caregiver, 1999 and 2002 (percent)



Source: Capps, Kenney, and Fix (2003).

* 2002 estimates are significantly different from 1999 estimates at the 10 percent level.

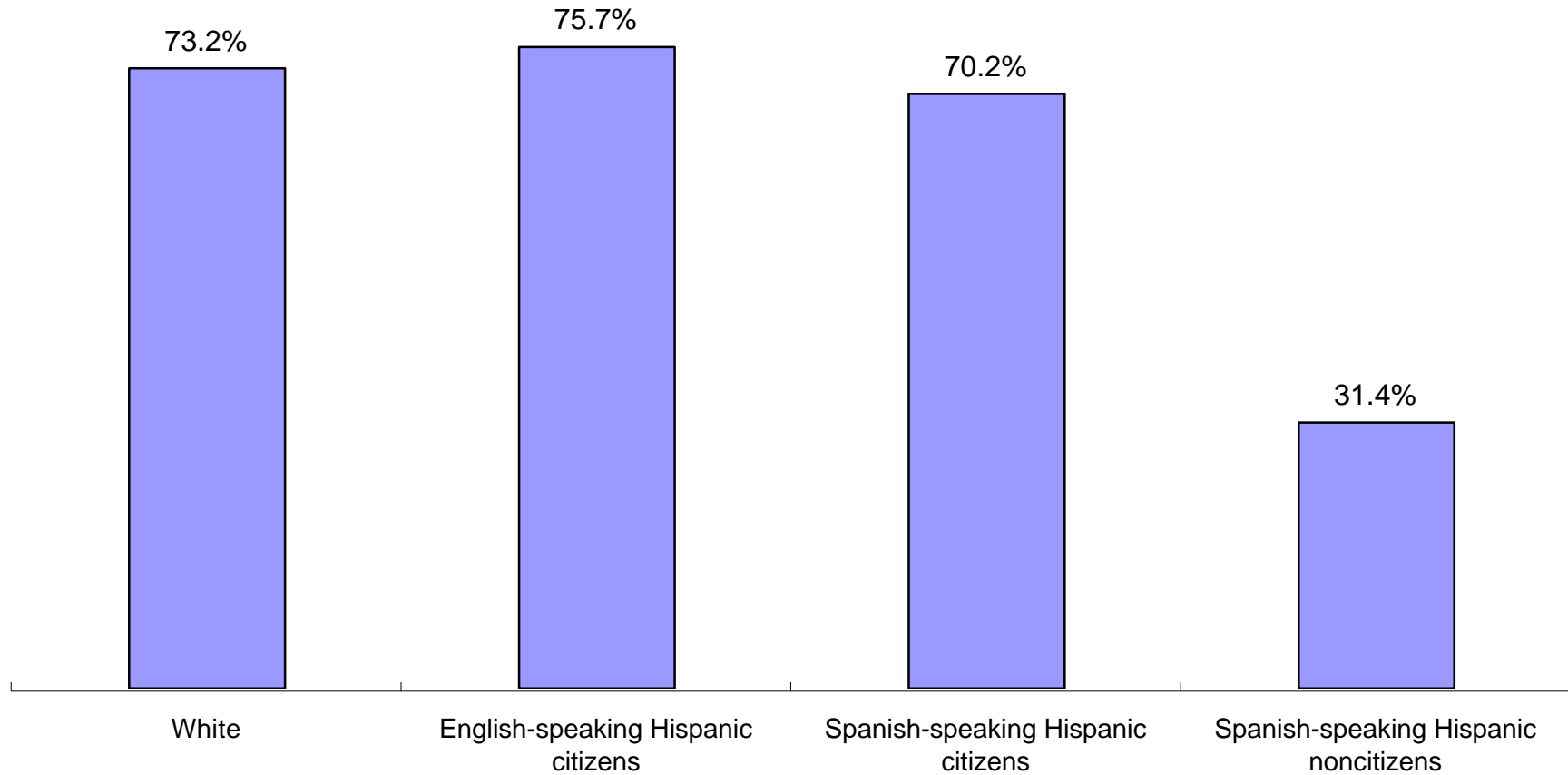
Figure 4. Adjusted Differences in Insurance Coverage between Low-Income Hispanic and White Children, by Citizenship and Primary Language of Hispanics, 2002



Source: Authors' analysis of 2002 NSAF data.

Notes: Unadjusted and adjusted estimates are based on identical samples. Explanatory variables are race/ethnic/citizenship/interview language status categories, age, age-squared, female, self-reported health status, having a health condition that limits usual activities, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level. Sample sizes for English-speaking Hispanic noncitizens were too small to produce reliable estimates.

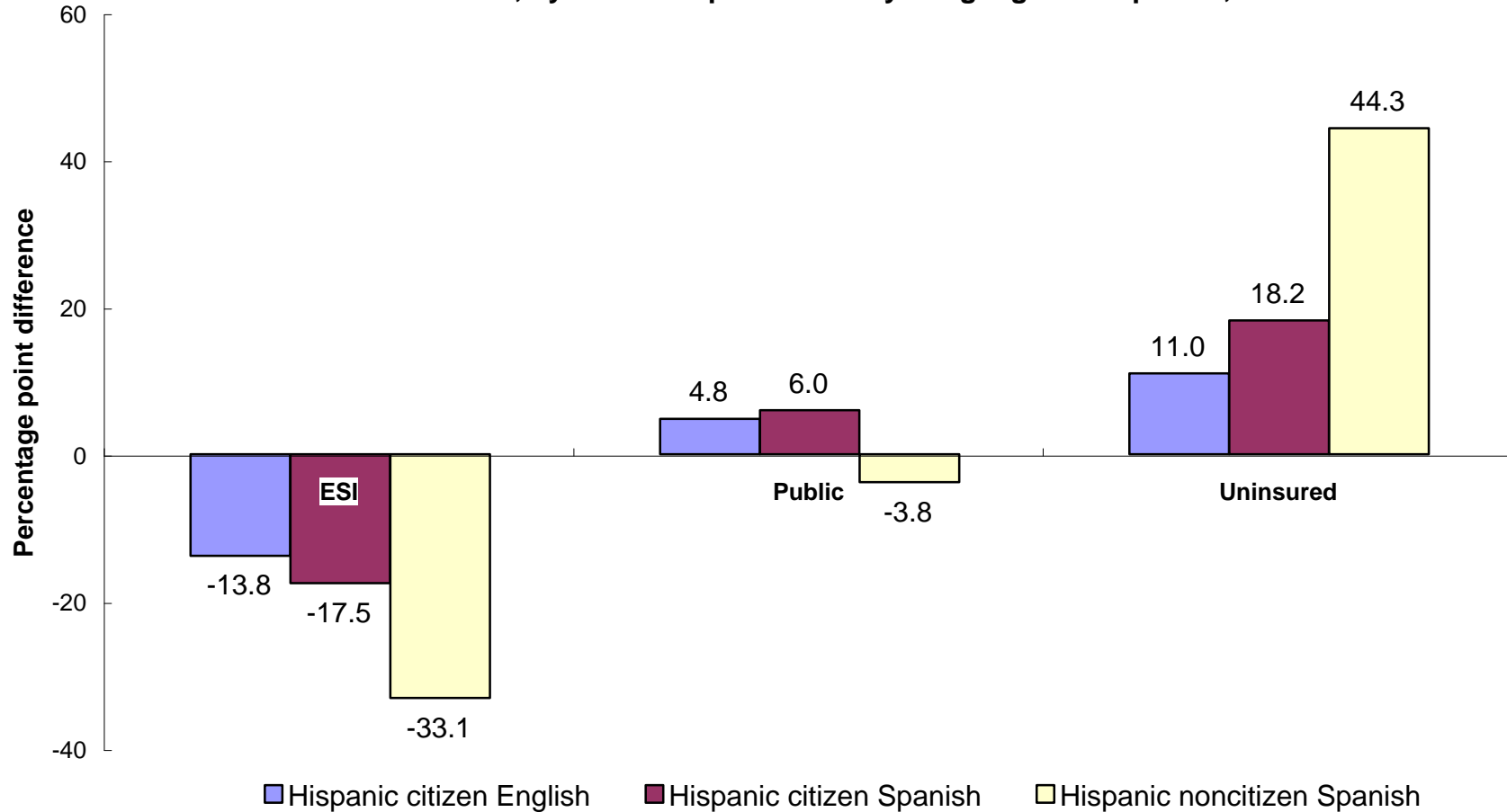
Figure 5. Participation Rate among Medicaid/SCHIP-Eligible Children without Private Coverage, by Citizenship and Primary Language of Hispanics, 2002



Source: Authors' analysis of 2002 NSAF data, using child Medicaid eligibility indicator created by Dubay and McFeeters.

Note: Some noncitizens categorized as eligible may be ineligible because the algorithm was not designed to capture eligibility rules specific to immigrants.

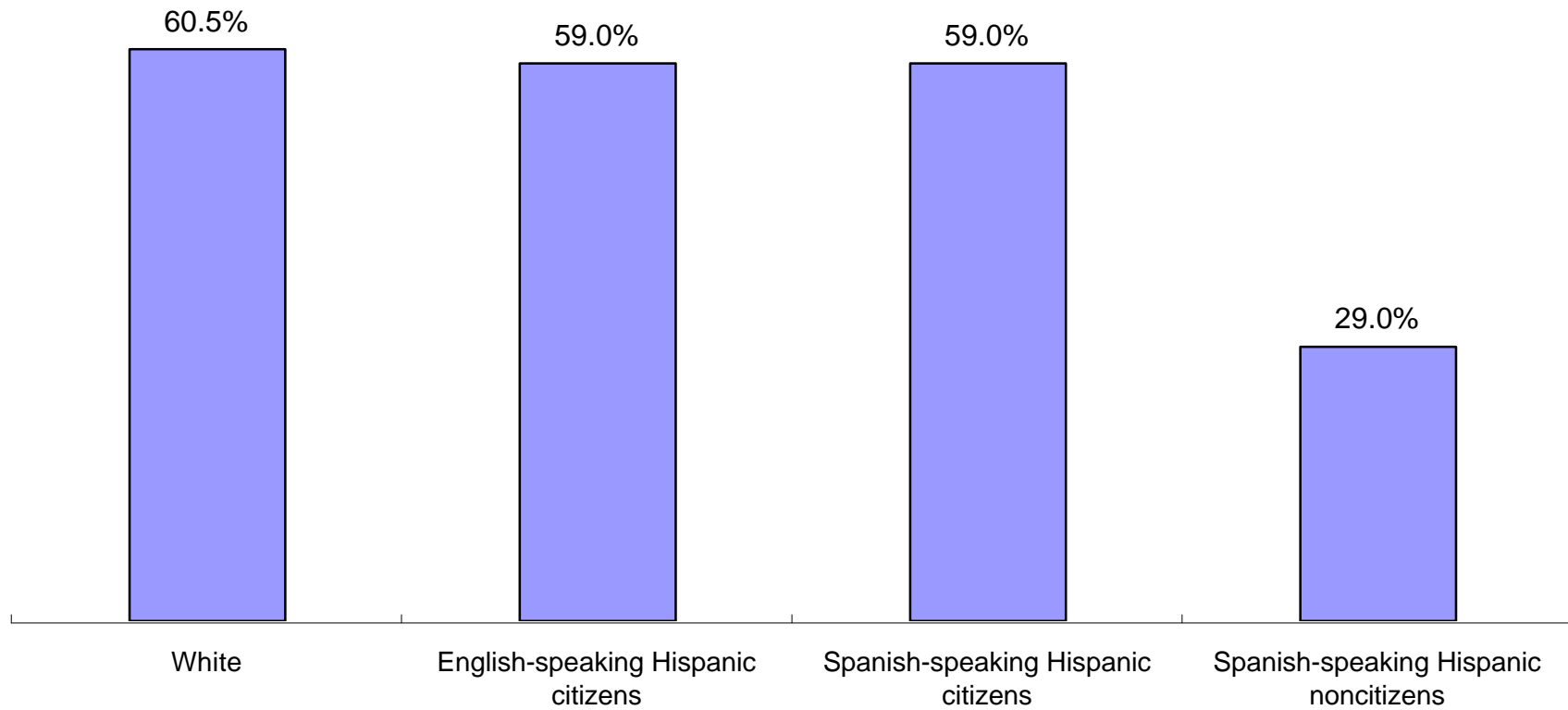
Figure 6. Adjusted Differences in Insurance Coverage between Low-Income Hispanic and White Adults, by Citizenship and Primary Language of Hispanics, 2002



Source: Authors' analysis of 2002 NSAF data.

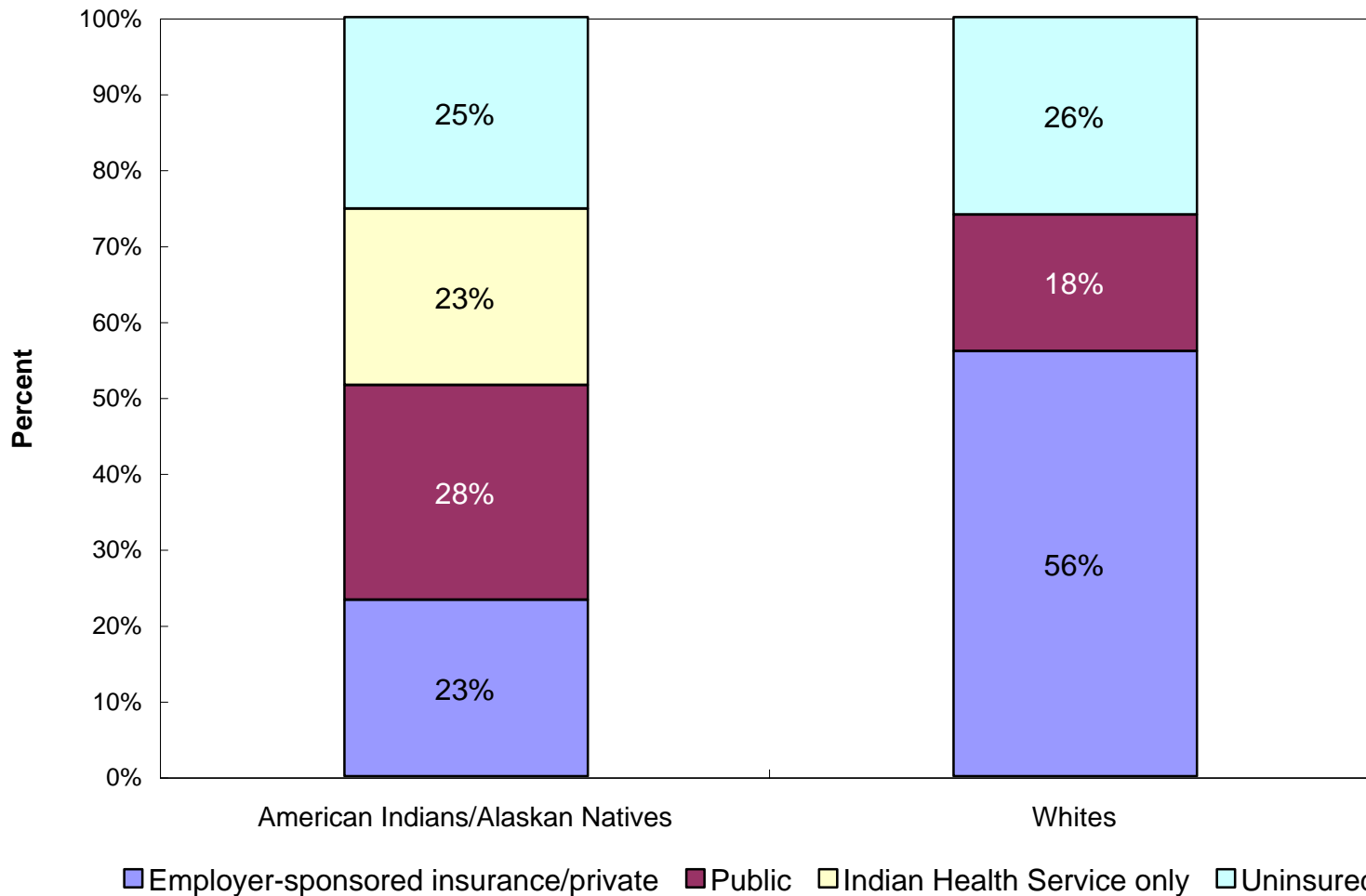
Notes: Unadjusted and adjusted estimates are based on identical samples. Explanatory variables are race/ethnic/citizenship/interview language status categories, age, age-squared, female, self-reported health status, having a health condition that limits work, income above the federal poverty level, noncitizen, single-parent household, and urban status. Low-income is family income below 200 percent of the federal poverty level. Sample sizes for English-speaking Hispanic noncitizens were too small to produce reliable estimates.

Figure 7. Participation Rate among Medicaid/State-Eligible Adults without Private Coverage, by Citizenship and Primary Language of Hispanics, 2002



Source: Authors' analysis of 2002 NSAF data, using adult Medicaid eligibility indicator created by Davidoff et al. (2004).

Figure 8. Health Insurance of Low-Income American Indians/Alaska Natives and Whites



Source: Zuckerman et al. (2004).

Notes: "Indian Health Service only" includes American Indians/Alaska Natives who are uninsured and indicate that the Indian Health Service was their only source of coverage. Low-income is family income below 200 percent of the federal poverty level. Columns may not sum to 100% due to rounding.