Public Policy Institute of California

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Foreword

Many Americans are without health insurance. Others have insurance but are vulnerable to the cost of catastrophic events, some lack coverage because they are unemployed, and still others are uncovered even though they hold full-time jobs—sometimes more than one. These simple facts have challenged decisionmakers in Washington and Sacramento for well over 30 years.

With the nation now approaching 12 million illegal immigrants, the issue of un- or underinsured Americans has reached critical proportions. Meanwhile, Californians have an interest in health insurance not only because so many regions of the state have low-wage workers but also because the cost of providing care to the uninsured inevitably rests with the county governments and taxpayers of the state.

Marianne Bitler and Weiyi Shi have analyzed detailed data on health insurance coverage, individual health status, and the use of the health care system in Los Angeles County. They investigate three questions: Who has health insurance? How does health care use differ among residents in Los Angeles County? And how does health status differ across population groups in the county? Their findings will be of immediate benefit to decisionmakers wishing to address the rising cost of care in both the public and private sectors.

The answer to the first question is not unexpected—Hispanic adults are much more likely to be uninsured, after accounting for gender and age, than white, black, and Asian adults. Once immigration status is taken into account, however, the difference in coverage rates is greatly reduced—suggesting that immigration is indeed a factor that will be central to the resolution of this debate at the national level. In fact, both documented and undocumented immigrants were much more likely than U.S.-born residents to be uninsured.

Perhaps the most surprising finding regarding the use of care is that hospital and emergency room (ER) visits did not differ much by race/

ethnicity or immigration status. Some immigrant groups and their children may even have been less likely than other groups to have used the hospital or the emergency room. These findings suggest that concerns about immigrants and their children disproportionately using hospitals and ERs may not be well-founded for Los Angeles County.

Health status showed the least amount of variation by race/ethnicity and immigration group. However, according to some measures, Hispanic immigrants appeared healthier than U.S.-born residents—for example, naturalized and undocumented immigrants were less likely than the U.S.-born to report high blood pressure, and the documented and undocumented were less likely to report asthma. Although the authors warn of possible underreporting, these differences are significant enough to provide useful insights into the health status of the Hispanic immigrant population in Los Angeles County.

As usual, when researchers take a close look at detailed personal and family data, simple generalizations melt away and the task of making new policy becomes even more challenging. Nevertheless, PPIC has been providing decisionmakers with findings like these for over 12 years, and new policies at the federal, state, and local level have benefited greatly from our efforts. With the coming session of the 110th Congress, the opportunity for improved policies in health insurance is with us again. These findings should help greatly to shape those improvements.

David W. Lyon
President and CEO
Public Policy Institute of California

Summary

Government plays a large role in health care in the United States. More than 40 percent of health care is paid for by federal, state, and local governments. The eventual goal of government involvement is to safeguard people's health, with the hope of improving the health of all groups, particularly the least well off. It is a government objective—explicitly articulated in the guidelines for the U.S. Department of Health and Human Services' Healthy People 2010 initiative—to eradicate existing health disparities. Government involvement in health, however, is predominately through the provision of insurance and subsidized care. Research has shown that a considerable amount of variation in health among different population groups cannot be explained by differences in insurance coverage or health care use. However, coverage and use of care are correlated with health for some groups.

The government provides or subsidizes health care in two main ways. First, federal, state, and local governments provide public health insurance to a number of groups, including the aged, blind, and disabled; low-income women and children; parents of low-income children; and the medically needy. Second, the government either provides free care through publicly owned facilities or subsidizes care via grants to clinics and payments to hospitals that disproportionately serve the uninsured and those covered by Medicaid (the public health insurance program for low-income individuals and the blind or disabled). Given the large costs associated with public insurance and the public provision and subsidization of care, it is important for policymakers to have accurate information on the health insurance coverage, health care use, and health status of various population groups to inform the development, funding, and targeting of these public expenditures.

In this report, we provide information about differences in health insurance coverage, health care use and access to a usual source of care, and health status. We look at both children and adults in Los Angeles

County, whose diverse population likely resembles the future demographics of the state and is a large share of California. We pay particular attention to Hispanics, who are a large, heterogeneous, and growing part of the state's population. Because such a large fraction of Hispanics and Californians in general are immigrants, we analyze differences in insurance coverage, health care use, and general health status by nativity (born in the United States or elsewhere), by citizenship for the foreign-born (naturalized), and by immigration status (among noncitizens, documented or undocumented).

The ability to differentiate between the undocumented and the documented in looking at health outcomes is relatively novel. We can look separately at adult outcomes for the U.S.-born, naturalized citizens, the documented, and the undocumented. Our data on children allow us to examine families with blended immigration status; that is, we are able to show differences in health outcomes both for families in which one parent is undocumented and the children are not U.S. citizens and thus are likely ineligible for public insurance, and for families in which an undocumented parent has children who are U.S. citizens and thus may be eligible for public insurance if their income is low enough. As debates over immigration and immigrant status continue, such distinctions should help to provide some factual ground for discussing and determining public health policies and choices.

Key Facts and Findings

We use a number of data sources and methods to conduct the analysis for this report but rely primarily on the unique, high-quality, individual-level data available from the Los Angeles Family and Neighborhood Survey (LAFANS). In a series of interviews at respondents' homes, LAFANS asked about demographics, health insurance coverage, use of care, chronic conditions, and general health status. In-person interviewing was completed during 2000–2001.

Race, Ethnicity, and Insurance Coverage

We found extensive differences in insurance coverage between Hispanics and other groups. Because there are big differences in insurance coverage (and our other outcomes) by age and gender (e.g.,

young adults are less likely than older adults to be insured), we adjusted all of our comparisons to take these differences into account. Having done so, we found that Hispanics were much more likely than other groups to be uninsured. In addition, we found that coverage differences between Hispanics and others were larger when we looked at gaps in insurance coverage over time. That is, more Hispanics than members of other groups had been uninsured at some point in the two years before the LAFANS interview, and this number was even larger than the number of those who were uninsured at the time of the interview. This finding calls attention to the fact that looking at coverage at a single point in time may not reveal the extent to which individuals are uninsured.

To further refine our findings on race/ethnicity and insurance coverage, we explored the effects of a number of individual and neighborhood characteristics. We know that Hispanics differ from whites, blacks, and Asians in terms of immigrant status, family income, home ownership, net worth, completed education, and where they live. Thus, some of the differences we see in comparisons that adjust only for age and gender may be related to differences in these or other characteristics. As it turns out, immigration status is an important factor in explaining insurance coverage differences between whites and Hispanics, for both adults and children. Controlling for immigration status made the Hispanic-white differences disappear for adults and shrink considerably for children.

Table S.1 presents how much more or less likely Hispanic, black, and Asian children were to lack insurance, compared to non-Hispanic white children. The first column takes into account age and gender, and the next four columns take into account a number of other characteristics. Note that in Table S.1, differences that are statistically significant at the 5 percent level or below are marked with an asterisk.

As we can see, Table S.1 shows that Hispanic children were 20 percentage points more likely than whites to lack insurance coverage, after controlling for age and gender. They were 15 percentage points more likely than whites to lack insurance after also controlling for parent's education and 13 percentage points more likely after

Table S.1

Percentage by Which Hispanic, Black, and Asian Children in Los Angeles County Are More or Less Likely Than Non-Hispanic White Children to Be Uninsured or to Have Had a Gap in Coverage

	Adjustment Characteristic				
	Age and Gender	Age, Gender, and Parent's Education	Age, Gender, Parent's Education, and Parent's Immigration Status	Age, Gender, Parent's Education, and Family Income	Age, Gender, Parent's Education, and Within-Census-Tract
Percentage difference between Hispanic children and white children					
Uninsured	20*	15*	9*	13*	14*
Gap in coverage	28*	23*	16*	20*	21*
Percentage difference between black children and white children					
Uninsured	–2	–3	–4	–4	–7
Gap in coverage	–2	–2	–2	–4	–7
Percentage difference between Asian children and white children					
Uninsured	–1	–1	–4	–1	–4
Gap in coverage	6	9	5	11	7

SOURCE: Authors' calculations from LAFANS.

NOTES: Uninsured status is as of the time of the LAFANS interview. Gaps in insurance coverage include any uninsured periods occurring during the two years before the LAFANS interview. Data are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

controlling for family income along with a parent's education. Together, a parent's immigration status and education level had a marked effect on the insurance coverage differences between white and Hispanic children, dropping that difference to 9 percentage points.

The table also shows that a larger share of children had experienced a gap in coverage some time over the two years before the LAFANS interview than were uninsured at the time of the interview. Hispanic children were 16 percentage points more likely than white children to have had a gap in coverage after controlling for immigration status and the education of a parent (compared to a difference of 9 percentage points in the share uninsured with the same controls). In contrast to the

findings for Hispanic children, black children were about as likely as white children to be uninsured or have a gap in coverage as were Asian children.

Race, Ethnicity, and the Use of Ambulatory Health Care

We also found some significant differences between Hispanic and white adults, both in the use of ambulatory health care (for example, doctor and dentist visits) and in having a usual source of care. Even after controlling for education, we found that Hispanic adults were less likely than white adults to have seen a doctor or dentist during the year before the LAFANS interview. To the extent that the dental visits were for preventive care, this finding suggests that Hispanic adults have been missing recommended care. In addition, there is some evidence that Hispanic adults may also have been less likely than white adults to have a usual source of health care.

We also found noteworthy patterns of health care use among black adults. On average, in Los Angeles County, black and Hispanic adults have lower socioeconomic status than white adults. But in contrast to Hispanic adults, black adults were more likely than whites both to have seen a doctor in the year before the interview and, in some cases, to have a usual source of care, after adjusting for education and immigration status, income, and other characteristics. These findings were similar when comparing blacks and Hispanics, with black adults being more likely to have used these forms of health care.

We found some significant, perhaps surprising, differences between Hispanic children and others in the use of ambulatory care. For example, despite the fact that Hispanic children were less likely than white children to have insurance coverage, they were not significantly less likely than white children to have seen a doctor or to have had a checkup in the year before the interview or to have a usual source of care. Hispanic children were less likely than white children to have seen a dentist after adjusting for gender and age only. However, this difference goes away after we adjust for parent's education alone or for a parent's immigration status, family income, or family housing assets and nonhousing net worth.

Both black and Asian children tended to be more likely than white children to have used any of several forms of health care. Black and Asian children were both about as likely as white children to have seen a dentist. Black children were about as likely and Asian children more likely than white children to have seen a doctor. Both black and Asian children were more likely than white children to have gotten a checkup in the year before the interview. These differences were mostly unchanged after controlling for the immigration status of a parent, family income, net worth, or neighborhood characteristics.

Race, Ethnicity, and Health Status

We examined the prevalence of various doctor-diagnosed chronic conditions in adults and children, in part because health status bears some relation both to insurance coverage and to health care use.[1] We also looked at levels of self-rated health for adults and parent-rated health for children. We found that differences in prevalence across conditions for adults differed among racial and ethnic groups. We also found that these differences were often sensitive to our adjustments for individual characteristics. For example, we found racial and ethnic differences in asthma prevalence for adults, with Hispanic adults reporting lower levels of asthma diagnoses. However, these differences go away once we account for education and immigration status, family income, assets/net worth, or neighborhood characteristics. In addition, we found few differences in self-rated health among adults across race/ethnicity once we account for age, gender, education, and the language in which the interview was conducted.

We found fewer differences across racial and ethnic groups in doctor-diagnosed conditions for children. However, we did find racial and ethnic differences in parent-rated general health for children. Parents of black and Hispanic children were considerably less likely than parents of white children to report that their children were in excellent or very good health, and these differences remained even after accounting

[1]There is some dispute in the literature about the strength of the ties between health insurance, health care use, and health status (e.g., Levy and Meltzer, 2004; McGinnis, Williams-Russo, and Knickman, 2002).

for parent's education alone or along with parent's immigration, family income, or comparisons within neighborhoods.

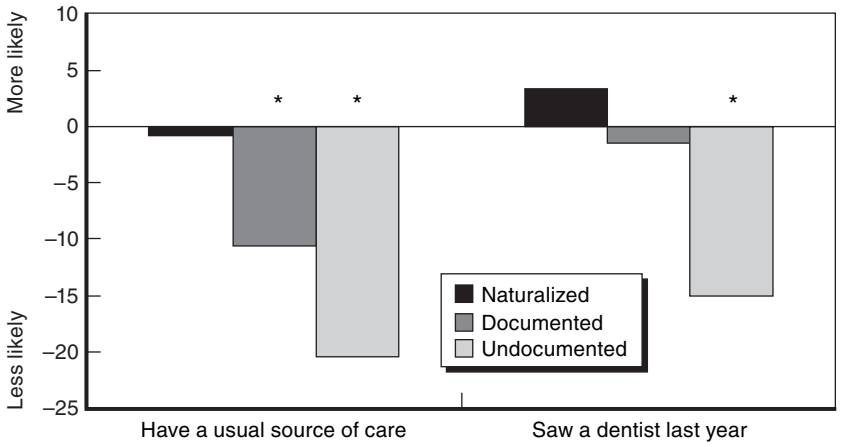
Immigration Status, Insurance Coverage, and Health Care Use

Immigration status is a strong predictor of insurance coverage and health care use. Undocumented adults were by far the most likely to lack insurance. This finding suggests that expanded outreach related to public insurance eligibility is unlikely to fully address current Hispanic-white differences in insurance coverage.

Our measures of health care use are also closely tied to documentation status, with the undocumented much less likely to have seen a dentist in the year before the interview or to have a usual source of care. Figure S.1 presents a comparison of foreign-born and U.S.-born adults for these two measures, controlling for age, gender, education, and race/ethnicity. As we can see, documented immigrants were 11 percentage points less likely than the U.S.-born to have a usual source of care. For the undocumented, the differences were even greater—they were 20 percentage points less likely than the U.S.-born to have a usual source of care. Undocumented immigrants were also 15 percentage points less likely than the U.S.-born to have seen a dentist during the last year.

Immigration status comes into play somewhat differently for children. Most children in our data were born in the United States. Therefore, we examine children according to the immigration status of their primary caregiver (almost always a parent). Among children of the undocumented, we also looked at whether the child was a citizen. The distinction between citizen children and noncitizen children is particularly important when it comes to insurance coverage. Many low-income citizen children are likely eligible for public health insurance, but many low-income noncitizen children are not.

We found that noncitizen children of an undocumented parent were much less likely than children of a U.S.-born parent to have insurance coverage, both after adjusting for age and gender and after adjusting additionally for race/ethnicity and a parent's education. Even after



SOURCE: Authors' calculations from LAFANS.

NOTES: Usual source of care is as of the time of the LAFANS interview. A dentist visit is any visit occurring during the year before the LAFANS interview. Data have been adjusted for gender, age, race/ethnicity, and education and are weighted.

*Significantly different from the value for U.S.-born adults at the 5 percent level of significance or below.

Figure S.1—Percentage by Which Foreign-Born Adults in Los Angeles County Are More or Less Likely Than U.S.-Born Adults to Have Had a Usual Source of Care or to Have Had Any Dentist Visit

adjusting for all of these factors, the noncitizen children of an undocumented parent were 44 percentage points more likely than children of a U.S.-born parent to be uninsured at the time of the LAFANS interview. Citizen children of an undocumented parent were also more likely than children of a U.S.-born parent to be uninsured, adjusting only for age and gender. However, they were much more likely than noncitizen children of an undocumented parent to be covered. After adjusting additionally for a parent's education and children's race/ethnicity, citizen children of the undocumented were only 8 percentage points more likely than children of the U.S.-born to be uninsured. (This finding is significant only at the 10 percent level.)

Differences according to immigration status in the use of care were somewhat less stark. Children with a parent of any immigration status were about equally likely to have seen a doctor or to have had a checkup in the year before the interview, adjusting for race/ethnicity and parent's

education. Noncitizen children of an undocumented parent were much less likely than children of a U.S.-born parent and children of a documented parent were less likely to have visited a dentist in the year before the interview.

Use of Hospitals and Emergency Rooms

There is considerable public policy discussion about immigrant groups using emergency rooms (ERs) and hospitals unnecessarily or excessively. There is also concern about the relationship of that use to uncompensated care. In fact, a section of the 2003 Medicare Modernization Act (MMA) devotes federal funds to reimbursing states for uncompensated emergency care given to undocumented aliens.[2] The LAFANS data allow us to look at the overnight use of a hospital at any time in the two years before the survey (for adults) and at any visits to an emergency room during the year before the interview (for children). However, we do not know if these visits were a form of uncompensated care.

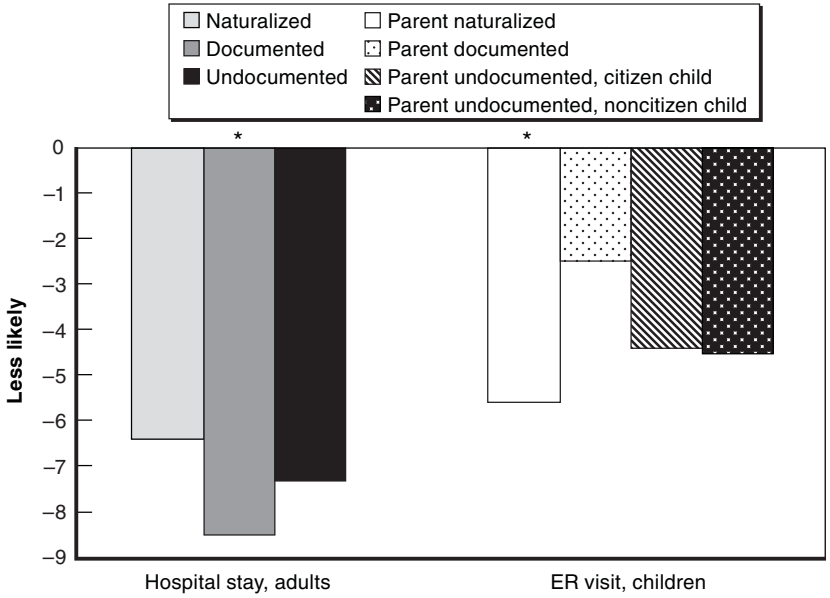
Additionally, we cannot assess the cause of these visits. For example, we do not know whether they were for treatment for flare-ups of chronic conditions, such as hypertension or asthma, or for other problems that would have been preventable if timely and adequate ambulatory care had been provided. We also do not know whether the visits were for causes that could have been attended to by ambulatory care providers. In addition, it is important to note that different population groups may have different levels of general health, suggesting they would have different rates of use of care.

That said, we found that the use of hospitals overnight (for adults) and emergency rooms (for children) did not vary much by race/ethnicity or immigration status. If anything, some of the results suggest that some groups of immigrants and their children were less likely than other groups to have stayed overnight in the hospital (adults) or have visited the emergency room (children). This is true both when we adjust for age

[2]The MMA funds are to reimburse hospitals, physicians, and ambulance services for emergency care required under the Emergency Treatment and Labor Act (EMTALA). EMTALA requires that Medicare-participating hospitals with emergency departments screen any person requesting examination or treatment for the presence of an emergency medical condition, and stabilize persons with such conditions.

and gender and once we adjust for education or a number of other characteristics. These findings suggest that perhaps concerns about particular groups disproportionately using these sources of care may not be well-founded for Los Angeles County.

Figure S.2 shows the percentage by which foreign-born adults were less likely than U.S. born adults to have had an overnight hospital stay. It also shows the percentage by which children with a foreign-born parent were less likely than children with a U.S.-born parent to have had



SOURCE: Authors' calculations from LAFANS.

NOTES: Hospital stays are any stay occurring during the two years before the LAFANS interview. ER visits are any visit occurring during the year before the LAFANS interview. Data have been adjusted for gender, age, race/ethnicity, and parent's or adult's education and are weighted. Statistics for ER visits are reported according to the Hispanic ethnicity of the child and the immigration status of the parent who is the child's primary caregiver and for children of an undocumented parent, by whether the child is a citizen.

*Significantly different from the value for U.S.-born adults or children with a U.S.-born parent at the 5 percent level of significance or below.

Figure S.2—Percentage by Which Foreign-Born Adults in Los Angeles County Are Less Likely Than U.S.-Born Adults to Have Had Any Overnight Hospital Stays and by Which Children with a Foreign-Born Parent Are Less Likely Than Children with a U.S.-Born Parent to Have Had Any ER Visits

an emergency room visit. For children with an undocumented parent, we show results for both citizen and noncitizen children.

We see from the figure that no group of foreign-born adults was significantly more likely than U.S.-born adults to have stayed in the hospital overnight. Documented adults were a statistically significant 9 percentage points less likely than the U.S.-born to have had an overnight stay. Similarly, no group of children with a foreign-born parent was more likely—and children of a naturalized parent were actually less likely—than children with a U.S.-born parent to have had an ER visit.

Conclusion

This report presents an overview of insurance coverage, use of care, and general health status of the population in Los Angeles County. As our key findings indicate, large racial and ethnic differences exist in health insurance coverage and the use of some forms of medical care. Immigration status plays an important part in these differences as well. That said, controlling for other individual characteristics makes many of the significant race/ethnicity or immigrant status differences shrink. In addition, we found that racial, ethnic, and, in some cases, immigrant status differences in our health status measures were smaller than those found in our other measures. Because government plays an important role in the public provision and subsidization of care in California, a clear need exists for specific information about the populations that may use these public services. The large cost of these services, and their importance to the public's overall health, makes this need more pressing. Our findings offer some insight into how particular population groups were faring in 2000–2001 with regard to several health-related measures. These findings may be of use to policymakers and others interested in public health insurance and the public health safety net in Los Angeles County.

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Acronyms

AIM	Access for Infants and Mothers
CalWORKs	California Work Opportunity and Responsibility to Kids
CHIS	California Health Interview Survey
DHHS	Department of Health and Human Services
DHS	Department of Health Services
EMTALA	Emergency Treatment and Labor Act
ER	Emergency Room
FPL	Federal Poverty Level
FQHC	Federally Qualified Health Center
GAO	General Accounting Office
HIE	Health Insurance Experiment
HIV	Human Immunodeficiency Virus
HMO	Health Maintenance Organization
LAFANS	Los Angeles Family and Neighborhood Survey
MMA	Medicare Modernization Act
NAICS	North American Industry Classification System
OSHPD	Office of Statewide Health Planning and Development
PPP	Public-Private Partnership
SCHIP	State Children's Health Insurance Program
TANF	Temporary Assistance for Needy Families
ZBP	ZIP Code Business Patterns
ZCTA	ZIP Code Tabulation Area

1. Introduction

The long-term goal of government involvement in the health care system is to improve the health status of all groups, with particular concern for those who lack private insurance, lack care, or incur extraordinary costs. Government involvement in health care takes several forms, including the provision of public health insurance for the elderly, disabled, and poor via Medicare; Medicaid (known as Medi-Cal in California); the State Children's Health Insurance Program (SCHIP, known as Healthy Families in California); and the provision of free or subsidized care. The share of health care paid for by public spending is sizable. In 2002, for the entire United States, Medicare, Medicaid, and SCHIP financed one-third of overall health care spending and three-quarters of all public spending on health, with the other one-quarter of public spending for health care including federal, state, and local expenditures. Given the considerable cost of government provision of health care ($718 billion in 2002 for the whole country), it is important for policymakers to have accurate information on the health insurance coverage, the use of health care, and the health status of different racial, ethnic, and immigrant groups to inform the development, funding, and targeting of health expenditures.

Although it is well understood that there are large disparities in insurance coverage, the use of care, and health status not only by race and ethnicity but also by income, education, and wealth, the determinants of these disparities are less well understood.[1] Yet eradicating disparities is a key goal of government. For example, the goals of the U.S. Department of Health and Human Services' (DHHS's) Healthy People 2010 initiative are to increase the length and quality of

[1]For a discussion of existing health disparities, see Smedley, Stith, and Nelson (2003) and Adler et al. (1993) and the references therein. There are also widespread disparities by geographic location, which may suggest that where you live matters as much as who you are (Baicker, Chandra, and Skinner, 2005).

life and to eliminate health disparities.[2] In addition, state government maintains significant oversight of health issues. For example, California's Office of Minority Health advises the state's Secretary of Health on state and local health activities affecting minority groups, and the state Office of Multicultural Health monitors the state's progress in eliminating disparities. Programs such as First 5 LA seek to expand health insurance coverage to all uninsured children ages 0–5 with family income below 300 percent of the federal poverty guideline ($52,950 for a family of four in February 2001) who are not eligible for other public health insurance.

This report provides key information on the differences among racial and ethnic groups in health insurance coverage, health care use, and health status in Los Angeles County, California. We focus particular attention on Hispanics. The growing size of that population means that understanding Hispanic health outcomes and the costs of providing care is important for health policy in California.[3] We focus on Los Angeles County because its demographic patterns and, in particular, its large Hispanic population mirror future population projections for the rest of the state. Because such a large share of Hispanics and other Californians are immigrants, we pay particular attention to differences in coverage, health care use, and health status by nativity (born in the United States or elsewhere), citizenship (naturalized or U.S.-born), and immigration status (among noncitizens, documented or undocumented).

Little previous work has focused on differences within immigrant groups, in particular between undocumented and other immigrants, mainly because of data constraints. As we explain in detail below, our data allow us to analyze differences in health outcomes among native-born U.S. residents, naturalized residents, documented residents, and undocumented residents. The magnitude of these differences, or lack

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[2]The initiative also seeks to identify public health priorities and specific, measurable objectives.

[3]A second reason to focus attention on Hispanics is that we know less about Hispanic health differences relative to other groups than about white-black differences. There is also an outstanding puzzle, the so-called Hispanic Paradox, namely, that Hispanics tend to be healthier than one would otherwise expect given their socioeconomic status (e.g., Palloni and Morenoff, 2001; Sorlie et al., 1993; Markides and Coreil, 1986). The Hispanic Paradox is discussed in greater detail in Chapter 5.

thereof, may have important implications for health policy. For example, if differences in insurance coverage or health care use among Hispanics (who are less likely than non-Hispanics to be U.S. citizens in Los Angeles County) and other groups look relatively uniform across all groups of Hispanics (U.S.-born, naturalized, documented, or undocumented), then assessing outreach and considering the expansion of public insurance programs will likely have a different focus than if such differences are concentrated among the undocumented or recent legal immigrants—groups who are ineligible for most publicly provided insurance. Clarifying where differences may be is relevant both for considering policies aimed at reducing disparities and to the ongoing debate about the increasing use of uncompensated care.

A central challenge in this analysis is identifying differences across racial, ethnic, and immigrant groups while accounting for the influence of many other factors. Research suggests that some of the existing differences in insurance coverage, use of care, and health status are driven by such factors as education, economic conditions, the tax system, and the financing and organization of the larger health care system itself. Recent changes in the broader health care system, such as the expanded penetration of managed care, the erosion of employer-provided insurance coverage, and cost pressures, further complicate our efforts to study differences in health outcomes. Neighborhoods may also be an influential factor in racial and ethnic differences in insurance, health care use, and health status, perhaps because the presence or absence of health care (and other) facilities affects health outcomes or perhaps because neighbors influence each other's health behaviors or knowledge about the health care system. We look at the influence of neighborhoods throughout the report.

On their own, differences in health insurance coverage and health care use explain only a portion of the existing disparities in health status across racial and ethnic groups. However, understanding insurance coverage and the use of care is important, both because of their considerable cost and because they are most directly and immediately affected by policy. As noted above, health differences are driven by a broad range of factors, many of which are hard to measure. In this

report, we focus rather narrowly on differences related to the individual and neighborhood characteristics that can be measured in our data.

This report addresses the following key questions:

- Why focus on Los Angeles County for examining health differences?
- What are the underlying insurance coverage, health care use, and health status differences across race and ethnicity in Los Angeles County?
- What are the differences by citizenship and immigration status and how do these change as we control for key factors known to drive health differences?
- How important are neighborhoods?

Chapter 2 focuses on the demographics of Los Angeles County and explains some of the key features of the LAFANS data. Chapter 3 first presents key facts about the public sector's role in providing insurance coverage and then examines health insurance coverage overall and by source (public or private). Chapter 4 looks at health care use (preventive and otherwise) and at access to a usual source of care. Chapter 5 focuses on health status. Chapter 6 discusses the conclusions and implications of the study. For a summary of publicly provided care in Los Angeles County, refer to Appendix B. For a discussion of data and methods, refer to Appendix A.

2. Los Angeles County: Context and Data

Los Angeles County is the most populous county both in California and in the United States as a whole, with a population of 10.2 million in 2006 (27% of the state total), according to the California Department of Finance. It is also one of the most diverse counties in the state and the nation, with 31 percent of the county population being non-Hispanic white, 9 percent non-Hispanic black, and 11 percent non-Hispanic Asian or Pacific Islander. Forty-six percent of the total population is of Hispanic origin, regardless of race. The diverse makeup of Los Angeles County foreshadows to some extent the future demographics of California. It is estimated that the percentage of Hispanics in the state will have risen from 33 percent in 2000 to 47 percent in 2030 and that of Asians and Pacific Islanders from 11 percent to 13 percent in the same time period (California Department of Finance, 2004). Studying insurance coverage, health care use, and health status in Los Angeles County not only provides information about the current environment for a large share of the state's residents but may suggest implications for the rest of the state as future demographics change.

In addition to racial and ethnic diversity, Los Angeles County has a large number of first-, second-, and third- or later-generation immigrants in various stages of naturalization and the acculturation process. Previous literature suggests that immigration status is an important factor associated with outcomes in insurance coverage, health care use, and health status, but few studies have examined noncitizens according to their documentation status. Because of its large population of immigrants, Los Angeles County is a good candidate for examining such

links. This is possible because of unique new data for Los Angeles County containing information about documentation status.[1]

Beyond sheer demographics, another important reason to focus on Los Angeles County is that it has one of the highest uninsurance rates and one of the lowest rates of employer-provided insurance in the country. Public insurance programs such as Medi-Cal and Healthy Families play a vital role in the county's health system, providing coverage for many low-income children and their families.[2] The county, like other counties in the state, also provides or subsidizes care to the medically indigent population through direct operation of or contracting with hospitals and clinics.

The past decade has been a challenging time for the county. In 1995, Los Angeles County experienced an unprecedented $655 million budget deficit in health services because of declining revenues, escalating costs, and a large uninsured population. During the crisis, the county was granted a Medicaid 1115 waiver that brought in $2.1 billion in additional federal funds over ten years. The waiver also allowed the county to restructure the health system, which had relied heavily on emergency care, to emphasize primary and preventive care in community settings.[3] Our analysis provides a snapshot of conditions in Los Angeles County during the middle of this waiver period.

An additional reason to focus on Los Angeles County is the availability of unique, high-quality, individual-level data. We use the Los Angeles Family and Neighborhood Survey (LAFANS) as our source of microdata. The LAFANS data sampled about 2,500 adults and 1,900

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[1]The California Health Interview Survey collects information on whether noncitizens are permanent residents or have a valid green card, but it does not ask about refugee status, current visas, or other reasons why noncitizens might be legally in the United States.

[2]Technically, Medi-Cal is a social insurance program. However, we refer to it and other similar programs as health insurance programs.

[3]One such innovative response is the Public-Private Partnership (PPP) program, launched in 1995 to facilitate collaboration between the county health department and private community clinics and health centers. Lim (2003) found that after 1995, the PPP clinics provided more care to the uninsured. We discuss federal, state, and county programs to provide public health insurance briefly in Chapter 3 and describe them in detail in Appendix B, where we also discuss publicly provided or subsidized care.

children in each of 65 Census tracts in Los Angeles County. Sampling weights provided with the data make them representative of Los Angeles County in 2000–2001. LAFANS asked about demographics, health insurance coverage, health care use, and health status. (A detailed discussion of the LAFANS data can be found in Appendix A.) Unfortunately, as LAFANS interviews were conducted only in English and Spanish, those who could not speak these languages were out of the survey's scope. Therefore, the data may not be representative for other non-English-speaking groups (particularly Asians).

Nevertheless, we rely on the LAFANS data to describe the racial and ethnic makeup of children and adults in our final sample of Los Angeles County residents.[4] We focus particular attention on health differences by race and ethnicity. Table 2.1 shows that although about 40 percent of adults are Hispanic, nearly three-fifths of children are Hispanic. Whites are the next largest group of adults and children. Asians constitute the third-largest group of adults, at 13 percent, but that group

Table 2.1

Adults and Children in Los Angeles County, by Race and Ethnicity

	Adults	Children
White	36%	21%
Hispanic	39	57
Black	10	12
Asian	13	9
Other/unknown	3	1

SOURCE: Authors' calculations from LAFANS.

NOTES: Data are weighted. All groups but Hispanics are non-Hispanics. Other/unknown group includes persons who are not white, black, Asian, or Hispanic, or who did not provide a race or did not answer the question about Hispanic ethnicity. Numbers within columns do not necessarily add to 100 percent because of independent rounding.

[4]Note that for this report, all groups but Hispanics are non-Hispanic. For ease of exposition, we refer to non-Hispanic whites as whites, non-Hispanic blacks as blacks, and so on.

contains the smallest number of children (except the other or race unknown category), at 9 percent. Blacks are the converse of Asians, with fewer adults (10%) but slightly more children (12%).

In addition to these standard demographic measures, LAFANS collects information on immigrant respondents' documentation status, rarely available in survey data. Specifically, we are able to identify whether an individual is a U.S.-born citizen (a native), a naturalized citizen, or a noncitizen—measures available in many datasets. However, among noncitizens, the data further indicate whether an individual is in the United States with or without legal documentation (e.g., has an unexpired green card or is a permanent resident; has been granted asylum or refugee status; or has a valid work, tourist, or student visa). We are particularly interested in these variables because they allow us to examine the link between immigrants' documentation status and insurance coverage, use of care and health—understudied areas in the existing literature. For more information about comparisons between the data on immigration status in LAFANS and other sources, see Appendix A.

Table 2.2 shows the adult and child samples broken down by nativity, immigration, and documentation status. Here, we see that nearly 60 percent of adults and 86 percent of children were born in the United States. About equal numbers of adults are either naturalized citizens or documented—about 16 percent. Among children, a much smaller share are naturalized (1%) or documented (4%). About 10 percent of adults and 5 percent of children are undocumented, whereas about 2 percent of adults and 4 percent of children did not provide information allowing us to determine their immigration status.[5]

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[5]Appendix A contains information on our efforts to assess how well the documentation status measures in the LAFANS data match those from other sources. Specifically, we compare the share of each group to estimates from the Census and to estimates from the 2001 California Health Interview Survey (CHIS) for Los Angeles County. The CHIS does not ask about documentation status directly but merely asks noncitizens whether they have a green card or are permanent residents. We have verified the robustness of our findings on immigration status additionally by pooling the persons with unknown immigration status with the undocumented and by comparing our results to ones obtained from the CHIS data restricted to Los Angeles County. Generally, the findings in CHIS are similar to those from LAFANS (controlling for age, gender, and any additional factors). Details on these comparisons are also in Appendix A.

Table 2.2

Adults and Children in Los Angeles County, by Nativity, Immigration, and Documentation Status

	Adults	Children
U.S.-born	57%	86%
Naturalized	16	1
Documented	16	4
Undocumented	10	5
Unknown	2	4

SOURCE: Authors' calculations from LAFANS.

NOTES: Data are weighted. The unknown group includes persons who did not answer any of the series of questions about place of birth, whether naturalized, types of documentation, and whether the documentation has expired. Numbers within columns do not necessarily add to 100 percent because of independent rounding.

In much of our analysis of children's insurance, use of care, and health, we focus on nativity, immigration, and documentation for the child's primary caregiver, usually a parent, but in a few cases another adult. Among the group of children with an undocumented parent (or primary caregiver, if not a parent), we also look at whether the child is a citizen. This focus on a parent's immigration status is important for several reasons. First, as shown in Table 2.2, most children in Los Angeles County were born in the United States, but Table 2.3 shows that a majority of their parents were not. Thus, our data include a large share of families with mixed immigration status, a potentially useful feature for analyzing children's health outcomes. Second, because the samples of foreign-born children were likely too small to detect any but very large differences between them and children born in the United States, we do not focus on children's immigrant status alone but consider parent and child immigration status together. Finally, there is concern among some policymakers and researchers about whether citizen children living in families with mixed immigration status (those families in which a parent is not a citizen) are enrolling in health insurance programs like

Table 2.3

Children in Los Angeles County, by Parental Nativity, Immigration Status, and Documentation, and Child Citizenship Status

Parent	Children
U.S.-born	42%
Naturalized	16
Documented	20
Undocumented and child is a citizen	11
Undocumented and child is not a citizen	4
Unknown	7

SOURCE: Authors' calculations from LAFANS.

NOTES: Data are weighted. The unknown group includes children whose parents did not answer or did not know the answer to any of the series of questions about place of birth, whether naturalized, type of documentation, and whether the documentation has expired for themselves or their children. Numbers within columns do not necessarily add to 100 percent because of independent rounding.

Medi-Cal if they are eligible for them or if they are discouraged from enrolling because of concerns about ramifications to a parent. All of these factors contribute to the importance of looking at parental immigration status when considering child health.

In addition to providing key data on personal characteristics, LAFANS provides useful information on the neighborhoods where individuals live, work, go to school, and see health professionals. Neighborhoods may affect health in a number of ways, and we discuss various possible ways throughout the report. For example, we know that people choose to live in neighborhoods where the inhabitants are similar to them, and they may obtain information about various public programs (e.g., Medi-Cal) from their neighbors. Neighborhoods can also matter in terms of the facilities located there (e.g., clinics, doctors' offices, and hospitals) or in terms of the cohesion between residents (e.g., areas with politically active and knowledgeable individuals may be able to obtain more public services). The health literature has documented considerable variation across areas in the use of care and the supply of

such health care inputs as the number of doctors, the number of facilities of various kinds, and the number and type of procedures used (e.g., Wennberg and Cooper, 1998; Baicker et al., 2004).

Given the potential importance of neighborhoods in determining health-related outcomes, the advantages of the LAFANS data are twofold: The data on individuals can be linked to a wide array of neighborhood variables and, because many people from the same neighborhoods were surveyed, we can compare differences within single neighborhoods and across all of Los Angeles County.[6] Our neighborhood variables (described in further detail in Appendix A) measure the local presence of health facilities (including doctors' or dentists' offices, clinics, and hospitals), as well as that of other types of facilities often thought to affect health, access to and use of health services, or enrollment in public health programs (e.g., social service agencies, churches, grocery stores, liquor stores, restaurants and bars, and recreational facilities).

LAFANS collected extensive information about health insurance coverage, health care use, and health status. The next three chapters will examine this information for adults and children in Los Angeles County. Throughout, we analyze racial and ethnic differences in these measures as well as differences among immigrant groups. We also evaluate the importance of additional individual characteristics measured with particular care in LAFANS relative to most health surveys (income, assets/net worth) and neighborhood factors (demographics, presence of health or other facilities).

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[6]Our main measure of neighborhood is the Census tract in which the person lives. LAFANS selected tracts first and then surveyed individuals within tracts. We also explore other neighborhood concepts such as tracts within a three-mile radius of one's own tract.

3. Health Insurance Coverage in Los Angeles County

On average, more than 19 percent of Californians were uninsured, or lacked health insurance coverage, between 2002 and 2004 (DeNavas-Walt, Proctor, and Lee, 2004). This lack is of widespread concern to policymakers for at least two important reasons. First, much existing research ties health insurance coverage to more health care use and, to some extent, to better health.[1] In fact, an objective of the U.S. Department of Health and Human Services' Healthy People 2010 initiative is to have all people under age 65 to be covered by health insurance. Second, in California, public health insurance programs (e.g., Medi-Cal, Healthy Families) and Medi-Cal in particular consume a large and growing share of the state budget (e.g., MaCurdy et al., 2005).

In this chapter, we examine the extent of public and private health insurance coverage among adults and children in Los Angeles County, paying particular attention to differences in coverage by race and ethnicity. We also analyze the relationship between Hispanic ethnicity, immigration status (born in the United States, naturalized, documented, or undocumented), and insurance coverage. For children, we pay particular attention to the immigration status of the child's primary caregiver (almost always a parent) as well. This allows us to examine families with mixed immigration status. We then examine individual and neighborhood factors that mitigate some coverage disparities. Finally, we look at gaps in insurance coverage, comparing coverage rates at a single point in time to coverage rates over a two-year period. This last comparison provides greater detail on the overall picture of the

[1] As we discuss below, there is some dispute about the strength of the relationship tying insurance coverage to better health as well as the relationship linking medical care and better health. Although most research has found some link between the two, there is considerable debate about the extent to which the link is causal.

uninsured, which changes according to the way coverage is measured (at a single point in time versus an interval of time). Our findings, analyzed across race, ethnicity, and immigrant status, provide a useful snapshot of the scope of insurance coverage in Los Angeles County; in particular, examining coverage by immigration status sheds light on what share of the uninsured might be ineligible for public insurance, regardless of their income level.

Public and Private Health Insurance

Above, we noted that federal, state, and local governments are important providers of health insurance in California. The federal government funds or subsidizes health insurance coverage for several groups, including the elderly (through Medicare), children and families with low income (through the Medicaid program, known in California as Medi-Cal), and otherwise uninsured low-income children (through SCHIP, known in California as Healthy Families).[2] These programs differ in their eligibility criteria (e.g., noncitizens may or may not be eligible and income cutoffs for eligibility vary), benefits, and the share of the program funded by the state or federal government.

Medicare provides coverage for ambulatory or outpatient care (optionally), hospital care, and, since January 2006, pharmaceuticals (also optional) for citizens and legal resident aliens age 65 and older who have worked in covered employment (or their spouse has) for 10 years, as well as for some disabled adults who satisfy other eligibility rules. Medicare is funded by a mix of premiums paid by recipients and federal funds.

Unlike Medicare, the state pays a substantial share—nearly half—of Medi-Cal costs. The program provides acute and long-term care coverage to low-income people who satisfy one of a number of other eligibility criteria in addition to income. A large share of Californians participate in Medi-Cal (6.5 million were participating in January 2005).

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[2]Technically, most so-called public health insurance programs such as Medi-Cal and SCHIP are social insurance programs and not true health insurance programs (as they are legally defined for state regulatory purposes). However, for ease of exposition we refer to them as health insurance programs.

Eligible groups include public assistance recipients; aged, blind, and disabled persons receiving Supplemental Security Income; low-income pregnant women and children; low-income Medicare recipients with few assets; and members of some other groups. Citizens and permanent residents are eligible for all Medi-Cal benefits. Undocumented immigrants are eligible only for emergency care and some state-funded benefits. Legal resident aliens must wait five years before becoming eligible. Medi-Cal recipients generally must also be low income, with eligibility thresholds set according to the Social Security Administration's federal poverty guidelines, which vary by family size (and are higher for residents of Hawaii and Alaska). Different groups have different income thresholds for eligibility (as a share of the federal poverty guidelines). Medi-Cal covers different procedures and services for different groups of recipients, and services are provided through a mix of fee-for-service and managed care, depending on group and county. Recent increases in the share of the budget consumed by Medi-Cal have led to discussions about changing benefits and expanding managed care.

The third large program in California, Healthy Families, is funded partially by the state and partially by the federal government. It covers uninsured children in low-income families whose income is not low enough to qualify for Medi-Cal. Nearly 800,000 children were enrolled in Healthy Families in December 2004. Participant children must also be citizens, permanent residents, or members of other eligible immigrant groups (e.g., refugees). The undocumented are generally ineligible. Other state programs cover some individuals ineligible for Medi-Cal, Healthy Families, or Medicare. These programs are discussed in Appendix B, which also provides more detail about Medicare, Medi-Cal, and Healthy Families.

There is an ongoing policy discussion and public debate about public health insurance in California. On the one hand, groups concerned with fiscal pressures advocate cutting or holding the line on expenditures (for example, by cutting benefits or increasing the share of services provided by managed care). On the other hand, groups concerned with the large number of uninsured in California advocate expanding public health insurance coverage (San Francisco's recent proposal to cover the uninsured is one example). Concerns about

expanding coverage or making eligibility changes may be particularly important in an era of increasing employee health insurance premiums, which have led to a decline in the share of those who are privately insured and a rise in the share of those who do not have insurance (Chernew, Cutler, and Keenan, 2005). These trends may also have increased pressure to expand public programs. Therefore, identifying who lacks insurance coverage and who has public insurance is an important first step toward understanding the possible ramifications of expanding eligibility for public health insurance coverage, changing its eligibility rules, or expanding managed care.

As we can see, budgetary implications as well as the fact that eligibility for public programs is directly affected by policy make the need for analyzing the scope of public health insurance fairly clear. At first glance, the value of analyzing private insurance coverage may be less obvious. However, there are at least three good reasons to examine private coverage. First, a number of people are ineligible for most forms of public health insurance, most notably undocumented immigrants and recently arrived documented immigrants. Private insurance may be the only insurance to which these groups have access. Second, as private insurance becomes more expensive or public insurance becomes more generous—by either expanding benefits or making eligibility requirements less stringent—evidence suggests that some people will drop private insurance to take up the comparatively more generous public insurance (Cutler and Gruber, 1996).[3] Third, even after accounting for other factors, health outcomes may differ according to whether one's insurance coverage is public or private.[4]

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[3]Note that the number of participants can be affected in two ways. Changes in eligibility rules can increase the number of persons potentially eligible for public insurance. Changes in benefits can increase participation among those already eligible, as could changes in eligibility if they reduced the stigma associated with participating in public programs.

[4]For example, Bhattacharya, Goldman, and Sood (2003) found that public insurance is less effective than private insurance in preventing premature death among the human immunodeficiency virus (HIV) population after accounting for observed and unobserved health status.

Health Insurance and Health Status

The possible relationship between health status and health insurance provides an additional rationale for examining health insurance coverage, even though the effect of coverage on health may not be very large. Two recent Institute of Medicine reports summarize many studies concluding that the uninsured receive less preventive care and less care for chronic conditions than the insured and that the uninsured are sicker, receive worse care, and die sooner than the insured (Institute of Medicine, 2001, 2002). Losing insurance coverage and experiencing a gap in coverage have been linked to receiving less preventive care (Kogan et al., 1995; Burstin et al., 1998–1999). Even after an unexpected bad health shock such as a traffic accident, when all the injured are taken to the hospital, the uninsured receive less care than the insured and are more likely to die (Doyle, 2005).[5]

A recent, skeptical review of this literature dismisses much of the evidence about the influence of health insurance on health, arguing that unobserved differences between the insured and uninsured may themselves have led to these findings (Levy and Meltzer, 2004). However, when these critics focus on other evidence comparing individuals who vary mostly according to insurance status, they, too, conclude that a causal relationship between health insurance and health does indeed exist, even though health insurance may explain only a small part of the variation in health status.[6] In fact, they conclude that health insurance improves health and that the effects appear larger for more

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[5]Some literature suggests that private coverage may be associated with better health than public coverage (e.g., Ross and Mirowsky, 2000), although obviously selection may be difficult to fully control for in such a comparison.

[6]The most compelling evidence was provided by the RAND Health Insurance Experiment (HIE), which randomly assigned families to catastrophic care or to more generous health insurance with differing amounts of cost sharing. The results of the HIE suggest that more generous insurance led to more health care use but had little effect on health (Newhouse and the Insurance Experiment Group, 1993; Brook et al., 1983). However, more generous care led to health benefits for those with elevated blood pressure and poor vision. Other work found that the Medicaid eligibility expansions during the late 1980s and early 1990s led to better infant health outcomes and improvements in child health (Currie and Gruber, 1996a, 1996b). Levy and Meltzer (2004) placed more confidence in evidence based on the HIE, or on quasi-experiments such as Medicaid changes, than in simple comparisons of the uninsured and the insured.

vulnerable populations. Thus, in addition to informing debate about changing public insurance programs, identifying those with health insurance may also be important because of the relationship between health insurance and health, even if the overall effect of coverage on health is small.[7]

Overview of Insurance Coverage

In this chapter, we examine four coverage possibilities: no coverage, private coverage, public coverage, and Medi-Cal.[8] Our measure of private coverage includes both employer-provided coverage and individually purchased coverage. Our measure of public coverage includes the major public insurance programs discussed above: Medi-Cal, which provides health insurance coverage to low-income and other groups; Medicare, which provides coverage to adults age 65 and older; and Healthy Families, which provides public coverage to uninsured low-income children ineligible for Medi-Cal. It also includes coverage under programs provided by Los Angeles County.[9] Although Medi-Cal coverage is included in our measure of public coverage, we often put it into its own category. We do so for several reasons. It is the largest public program in terms of state expenditures and is the program for which the state is most actively considering reform. Additionally, the federal Deficit Reduction Act of 2005 allows states to experiment with changes in Medicaid rules much more freely than they previously could (for example, they no longer need a waiver to offer different benefit packages in different regions of the state). Therefore, knowledge about Medi-Cal coverage in particular may be helpful to policy discussions regarding program changes.

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[7]In Chapter 4, we will discuss evidence about the magnitude of the link between preventive and other forms of medical care and health.

[8]Unfortunately, LAFANS did not ask interviewees whether employer-provided health insurance was available to them. Note that the first three categories—uninsured or lacks insurance, private insurance, and public insurance—are mutually exclusive. If more than one form of coverage was mentioned and one form was public, such as private and Medi-Cal, that person was coded as having public coverage. Medi-Cal is a subset of public coverage.

[9]For more information about publicly provided insurance as well as programs to subsidize care for low-income persons in Los Angeles County, see Appendix B.

All of our results are for Los Angeles County in 2000–2001 and use data from LAFANS.[10] Table 3.1 provides a general overview of these categories, presenting summary statistics for health insurance coverage.[11] These numbers are simple means, unadjusted for age and gender differences, unlike the numbers presented in the rest of the chapter.[12] Here, we see that lacking insurance was more common for adults than for children and that children were much more likely than adults to have Medi-Cal coverage. Public coverage (which also includes Healthy Families and Medicare) was also more common for children, whereas private coverage was slightly more likely for adults.

Table 3.1

Health Insurance Coverage of Adults and Children in Los Angeles County

Health Insurance Coverage	Adults	Children
Uninsured	25%	15%
Private	57	52
Public	19	33
Medi-Cal	9	28

SOURCE: Authors' calculations from LAFANS.

NOTES: Data are weighted. Numbers within columns do not necessarily add to 100 percent because of independent rounding.

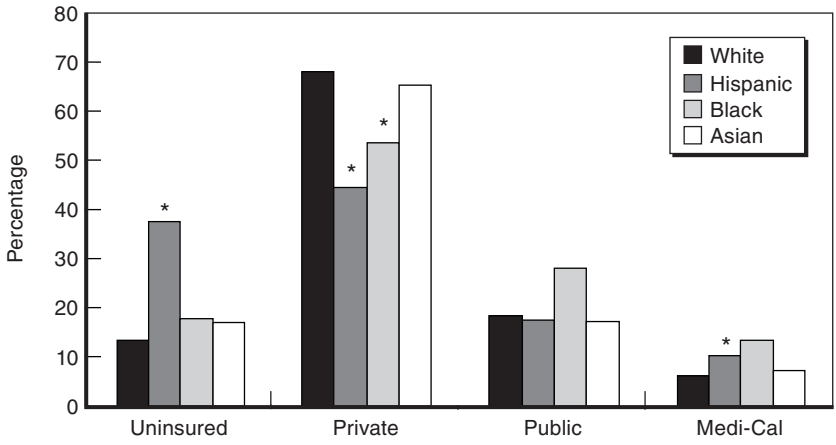
Racial and Ethnic Differences in Insurance Coverage

Figure 3.1 presents the percentage of adults in Los Angeles County in each of the four coverage categories, broken into racial and ethnic

[10]For more information about our outcomes or about the methodology for our comparisons, see Appendix A.

[11]As noted, the categories here of uninsured, privately covered, and publicly covered are mutually exclusive. This is for two reasons. LAFANS collected insurance status as part of an event history calendar, and we have coded current insurance coverage based on the most recent form reported. Further, we have coded people reporting private and public insurance as having public coverage.

[12]All results in this chapter except those in Table 3.1 are adjusted for age and gender because there are large differences in coverage by age and gender. If we did not make these adjustments, we would run the risk of attributing differences by age and gender to race/ethnicity or other factors.



SOURCE: Authors' calculations from LAFANS.

NOTES: Insurance status is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

Figure 3.1—Health Insurance Coverage of Adults in Los Angeles County, by Race and Ethnicity

groups and adjusted for differences in gender and age. All groups are compared to non-Hispanic whites. All Hispanics are grouped together in this analysis, and for the remainder of the report, when we refer to whites, blacks, or Asians, we mean non-Hispanic members of those groups. Bars are marked with an asterisk if the mean for that group is significantly different from the mean for whites, at the 5 percent level of statistical significance or below. We discuss differences that are significant at the 10 percent level or below, but they are not designated on the figures, since they are more likely than those that are significant at the 5 percent level or below to have occurred by chance. Differences between two groups may not be not statistically significant for two reasons: Either there is no underlying true difference in the value being examined in the population, so that any differences noted are simply the result of sampling error, or the sample size makes it impossible to detect

significant differences.[13] (For more information about how we calculate statistical significance, see Appendix A.) Finally, it is important to note that our data may not be representative for all Asians in Los Angeles County because LAFANS interviewed only in English or Spanish, thus Asians (or others) who spoke only other languages were not interviewed.

As has been found elsewhere, we found that Hispanic adults were significantly less likely than white adults to have insurance coverage of any kind. Hispanic and black adults were both significantly less likely than whites to have private insurance.[14]

We see similar patterns for insurance coverage among children in Los Angeles County, shown in Figure 3.2. However, all groups of children were more likely than the corresponding groups of adults to be insured. Even for the group of children with the largest rate of uninsurance—Hispanic children—only about 24 percent were uninsured, compared to 38 percent of Hispanic adults. Both Hispanic and black children were more likely than white children to have public coverage.

Hispanics, Immigration Status, and Insurance Coverage

So far, we have noted some substantial racial and ethnic differences in insurance coverage, particularly between Hispanics and whites. However, the Hispanic population is quite diverse, as we have pointed out, not only in terms of ethnicity and nativity but also in terms of immigration status. Here, we concentrate on the relationship among immigration status, Hispanic ethnicity, and insurance coverage. To find

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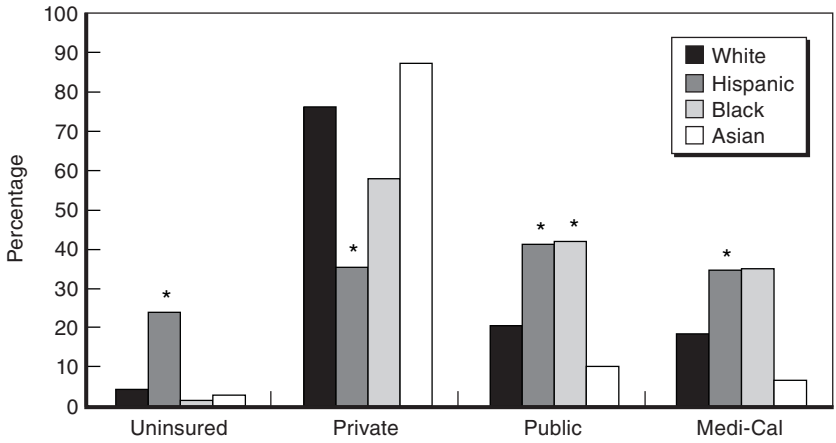
[13]Also note that a difference is significant at the 5 percent level (or below) if there is a 95 percent chance that such a difference would not be obtained randomly (and a 5% chance that it would).

[14]There are other differences as well, but we do not discuss them, since we suspect that they may be driven by other factors correlated with race and ethnicity. Note also that here and in the rest of the report, we mention differences only when they are statistically significant. Because some groups, such as blacks, have smaller sample sizes in the LAFANS data (reflecting in part that they are a smaller share of the Los Angeles County population), it may be more difficult to detect significant differences of a given size between those groups and whites than to detect the same difference between Hispanics and whites, both of which have larger sample sizes.



SOURCE: Authors' calculations from LAFANS.

NOTES: Insurance status is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

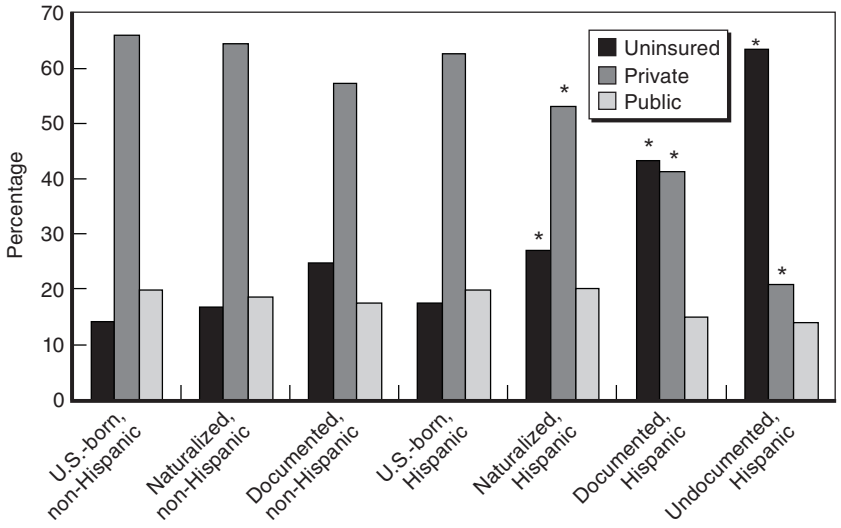
*Significantly different from the value for whites at the 5 percent level of significance or below.

Figure 3.2—Health Insurance Coverage of Children in Los Angeles County, by Race and Ethnicity

out if the relative lack of insurance coverage among Hispanic adults and children is concentrated in certain groups, we compare coverage for Hispanics and non-Hispanics, broken down according to immigration status and place of birth (Figure 3.3 for adults and Figure 3.4 for children).[15] Because we look at groups among whom a large share may have forms of public insurance other than Medi-Cal (e.g., Medicare for adults age 65 and over, Healthy Families for children) and for the sake of graphic simplicity, in this and successive comparisons we do not look separately at Medi-Cal coverage.

For adults, coverage among naturalized and documented non-Hispanic immigrants, as well as U.S.-born Hispanics, was very similar to that of U.S.-born non-Hispanics (Figure 3.3). In contrast, naturalized

[15]We present differences by Hispanic ethnicity because all but two undocumented adults in LAFANS are Hispanic, and there are also large groups of documented and naturalized Hispanics. We also want to see if the differences in Figure 3.1 for Hispanics are mainly concentrated in certain Hispanic subgroups.



SOURCE: Authors' calculations from LAFANS.

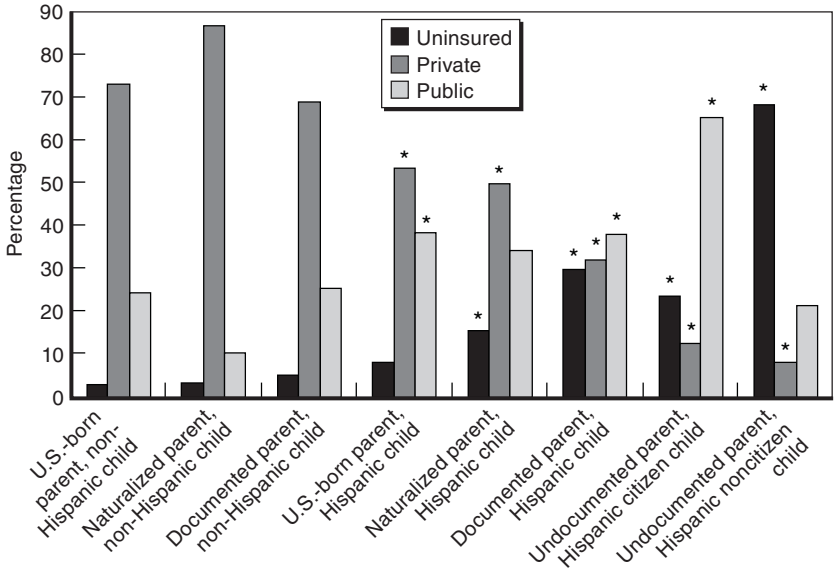
NOTES: Insurance coverage is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted.

*Significantly different from the value for U.S.-born non-Hispanics at the 5 percent level of statistical significance or below.

Figure 3.3—Health Insurance Coverage of Adults in Los Angeles County, by Immigration Status and Whether Adult Is Hispanic

Hispanic immigrants were more likely and documented Hispanic immigrants much more likely than U.S.-born non-Hispanics to be uninsured. Both Hispanic immigrant groups were also less likely to have private coverage. However, the really striking difference is between undocumented Hispanics and U.S.-born non-Hispanics. At the time of the LAFANS interview, 63 percent of undocumented adults lacked insurance coverage, compared to 14–18 percent of the U.S.-born. The undocumented were also much less likely than other groups to have private insurance.

We performed a similar analysis of coverage for Hispanic and non-Hispanic children (Figure 3.4). Because children may (and many in our sample do) have a different immigration status from their parents, we have highlighted both the parent's and the child's immigration status and



SOURCE: Authors' calculations from LAFANS.

NOTES: Insurance coverage is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. Statistics are reported according to the Hispanic ethnicity of the child and the immigration status of the parent who is the child's primary caregiver and for the last two categories of children, by whether the child is a citizen.

*Significantly different from the value for non-Hispanic children with a U.S.-born parent at the 5 percent level of statistical significance or below.

Figure 3.4—Health Insurance Coverage of Children in Los Angeles County, by Parent's and Child's Immigration Status and Whether Child Is Hispanic

place of birth.[16] Here, the group of Hispanic children with an undocumented parent is split into two: citizens (either U.S.-born or naturalized) and noncitizens. Children who are citizens may be eligible for public health insurance if their family income is low enough, but the

[16]The information about "parent" is really for the child's primary caregiver, which is usually the mother if she is present and almost always the father otherwise. Thus, we refer to the primary caregiver as the parent. Unfortunately, LAFANS did not collect information on the immigration status of all the other adults in the household. So, in some cases, the primary caregiver may be undocumented and the spouse of the primary caregiver a U.S. citizen.

bulk of noncitizen children would not be (at least not for "no cost sharing" full-benefit Medi-Cal or Healthy Families).[17]

Most groups of non-Hispanic children were very likely to have some source of insurance. But Hispanic children of any group—except those of a U.S.-born parent—were more likely than non-Hispanic children of a U.S.-born parent to lack insurance coverage. The differences only become more striking as one looks across the figure. Between 24 and 68 percent of Hispanic children with a parent who was not a citizen were uninsured. However, these percentages suggest that at least some eligible Hispanic citizen children of an undocumented parent were covered by public insurance—and, in fact, 66 percent had public coverage and 61 percent were covered by Medi-Cal.[18] Still, among Hispanic children, all those with a noncitizen parent were more likely than those with a U.S.-born parent to be uninsured, and noncitizen children were the least likely to have coverage.

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[17]Some of the noncitizen children are documented and some are undocumented. Undocumented children, like the undocumented adults, constitute a residual category (the child is neither born in the United States, a U.S. citizen, a permanent resident, or on a valid visa). Some of these children have no papers, are visiting while others are applying for permanent residency, or have applications with the U.S. Citizenship and Immigration Services. The rest of the noncitizen children are documented. There are several possible explanations why some of these noncitizen children report public coverage. California has a state-only funded program to cover documented immigrants under Medi-Cal. Refugees and those given asylum can be eligible for benefits, as can documented immigrants who have been in the United States at least five years. Some individuals may misreport their children's source of coverage. Even immigrants who are ineligible for no-cost, full-benefit Medi-Cal are eligible for emergency services Medi-Cal.

[18]The bulk of documented immigrants (and most likely their children) are eligible for public insurance if they satisfy the other eligibility requirements. However, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act, which reshaped the cash assistance system in the United States, also introduced a five-year waiting period for most immigrants before they become eligible for Medicaid coverage. Thus, some documented immigrants and possibly their children may be ineligible for public insurance. The bulk of documented adults and documented parents of children in our data have been in the United States at least five years, suggesting that this categorically ineligible group is small. Among documented parents, 5 percent of Hispanics and 15 percent of non-Hispanics last came to the United States less than five years ago. Hispanic documented parents make up only 15 percent of all parents, and non-Hispanic documented parents make up only 5 percent of all parents, so the total share of parents who came within the last five years is quite small.

Concern about children being uninsured has led to the relatively new Healthy Kids program in Los Angeles County (not in effect at the time of LAFANS). Funded by a combination of Proposition 10 money and a coalition of local agencies, Healthy Kids offers insurance to children in families with incomes up to 300 percent of the federal poverty guideline ($52,950 for a family of four in February 2001), when the children do not have access to other forms of insurance.[19]

Using LAFANS data (collected before Healthy Kids), we found that only about three-quarters of citizen children of the undocumented were covered with some form of insurance. This fact suggests one of three things for the remaining one-quarter of citizen children with an undocumented parent who have no coverage: (1) These children live in families with incomes above Medi-Cal and Healthy Families eligibility cutoffs, (2) in the case of children whose family income would make them eligible for Healthy Families, even if their parents have access to employer-provided insurance, the children are in the three-month period of uninsurance required before gaining eligibility for Healthy Families, or (3) their parents have chosen not to allow their children to participate in public programs, possibly because of stigma or because of concerns about the parent becoming a public charge[20]—despite the fact that the U.S. Immigration and Naturalization Service clarified in 1999 that use of in-kind services such as Medicaid (except for long-term care) would not adversely affect an individual's ability to become a legal permanent

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[19]Healthy Kids was implemented in July 2003 (for coverage of children ages 0–5) and expanded in July 2004 to cover older children. According to a recent Urban Institute report (Hill, Courtot, and Wada, 2005), although Healthy Kids had funding from First 5 LA for children ages 0–5, Healthy Kids did not have enough funding to cover all uninsured children ages 6–18 in Los Angeles County with family income less than 300 percent of the federal poverty guideline. Thus, an enrollment cap was instituted as of June 2005.

[20]An alien who is likely to be or has been a public charge is ineligible for admission to the Unites States if outside the United States and ineligible for conversion to a lawful permanent resident and eligible for deportation if already within the United States. A public charge is someone who depends on the government for subsistence, through receipt of cash assistance (Temporary Assistance for Needy Families (TANF) cash payments, state or local cash assistance payments for income maintenance, or Supplemental Security Income), or is institutionalized for long-term care paid for by Medicaid (U.S. Department of Housing and Urban Development, 2006).

resident. Undocumented parents may also be concerned about being identified and deported, although statistics suggest that deportations for most causes, in particular for being a public charge, are rare (U.S. Department of Homeland Security, 2005).

The differences in coverage across immigrant groups are quite large, but these groups differ in a number of other ways, many of which are themselves associated with being uninsured. For example, relative to other Hispanics or non-Hispanics, undocumented Hispanics are younger; more likely to be male; have less education; have lower family income, earnings, or transfer payments (TANF, food assistance, or other public assistance payments); are less likely to own their homes; and are more likely to rent. Documented Hispanics have mean characteristics that fall between those of the undocumented and the other groups. For example, as a group, they have completed more education than undocumented Hispanics but less than members of other groups. In the next section, we adjust our findings to take into account a number of characteristics known to be associated with health insurance coverage differences.

Accounting for Individual and Neighborhood Characteristics

How are the substantial racial, ethnic, and immigration group differences in insurance coverage that we have looked at so far related to other factors? Research suggests that insurance coverage may differ according to a number of individual and environmental characteristics. For example, people with low socioeconomic status (whether measured by education, income, or assets/net worth) are less likely than other groups to be insured or to have private insurance (for example, see Institute of Medicine, 2002). The uninsured are younger than the general population (although children are a smaller share of the uninsured than of the general population), and a majority of the uninsured are working or have working parents (Office of the Assistant Secretary for Planning and Evaluation, 2005). The bulk of the uninsured do not have access to employer provided insurance, because either they do not work for employers that offer health insurance, they

are ineligible for health insurance offered by their employers, or they are not working.[21]

The use or take-up of public insurance among those eligible for it may also be associated with particular individual and environmental factors. Is the individual knowledgeable or able to navigate the eligibility determination system for Medi-Cal? Does the individual's social network (relatives, neighbors, etc.) have accurate information about public insurance? Are there sites nearby where he or she can enroll in Medi-Cal? All these issues may play a role in determining a person's insurance status. For example, Yu et al. (2002) found that noncitizen parents are the most likely to be unaware of health and other community resources. Allison (2003), using administrative data from Kansas, found that children's premature disenrollment from the Kansas State Children's Health Insurance Program was strongly correlated with practices at local social services offices. Such research provides some idea of the range of characteristics that may affect public insurance coverage.

How might our findings so far be affected by controlling for these other characteristics? Recall that our results so far take into account only age and gender. To the extent that such factors as income are highly correlated with race/ethnicity or immigration status, the differences we have seen so far may be due to these other variables and not to race/ethnicity or immigration status. Are racial and ethnic differences reduced when we take into account additional individual and neighborhood characteristics?[22]

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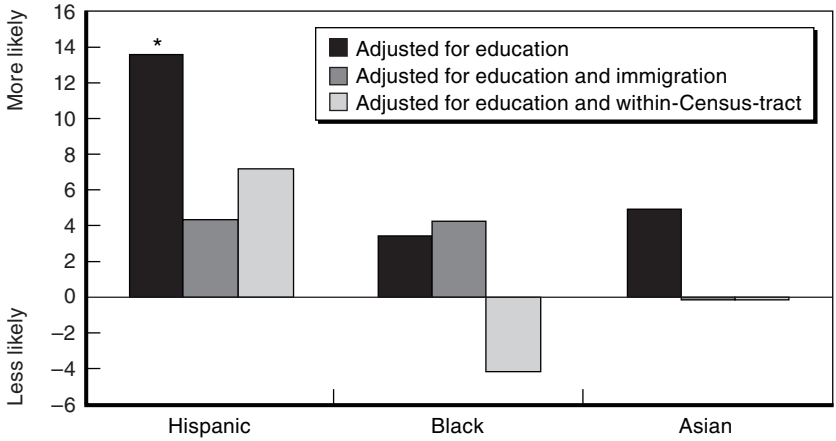
[21]Garrett (2004) found that among the uninsured who are currently employed (not self-employed), 64 percent worked for an employer that did not offer health insurance, and another 17 percent were not eligible for the employer's plan. The U.S. Department of Health and Human Services recently noted that among working adults, the long-term uninsured are much less likely than other workers to have been offered insurance if working (Stewart and Rhoades, 2004). An issue brief from the Assistant Secretary for Planning and Evaluation in DHHS cites findings that in 2001, 54 percent of the uninsured either were workers and were ineligible for coverage or were workers and their employer did not offer coverage (Office of the Assistant Secretary for Planning and Evaluation, 2005).

[22]We have explored the effect of many more characteristics than we will discuss here. See Appendix A for a full list of the neighborhood characteristics we have considered.

Individual Characteristics

Figure 3.5 shows the answer to these questions for three sets of individual characteristics, broken out across racial and ethnic groups.[23] We do not distinguish between public and private coverage here but instead analyze the difference between the probability of Hispanic, black, and Asian adults being uninsured and the probability of white adults being uninsured. To give a concrete example, when we adjust for education as well as age and gender, we get the following rates of being uninsured by race and ethnicity for adults: 17.2 percent of whites, 30.7 percent of Hispanics, 20.6 percent of blacks, and 22.1 percent of Asians. The difference between the value for each nonwhite group and that for



SOURCE: Authors' calculations from LAFANS.

NOTES: Uninsured status is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

Figure 3.5—Percentage by Which Hispanic, Black, and Asian Adults in Los Angeles County Are More or Less Likely Than Non-Hispanic White Adults in Los Angeles County to Be Uninsured

[23]Note that our findings for adult's and children's racial/ethnic differences and differences across immigration status in insurance coverage are quite similar if estimated using the 2001 CHIS (see Appendix A for more details).

whites is the value reported in the black bar for each racial/ethnic group in Figure 3.5. The difference in the probability of being uninsured for Hispanic adults and white adults in the first black bar in Figure 3.5 is about 14 percentage points, which is the difference between the Hispanic adult and white adult uninsurance rates above (31 – 17 = 14).

The first bar for each racial group shows the differences adjusted for education. The second bar shows the differences adjusted for immigration status and education, and the third bar presents results, adjusted for education, that compare people to others in their neighborhood. Here we see that accounting for education shrinks the Hispanic-white gap from 24 percentage points to 14 percentage points. Despite this drop, the difference is still statistically significant.[24] The black-white difference also shrinks somewhat (from 5 percentage points to 3 percentage points) and the Asian-white difference goes from 4 to 5 percentage points; both remain statistically insignificant. Once we consider immigration status along with education, the Hispanic-white difference is no longer statistically significant, as was suggested by Figure 3.3. (Below we will look at the direct effect of immigration status on coverage.)

The third bar compares people living in the same Census tract. Hispanic, black, and Asian adults were all equally likely as white adults to be uninsured when compared to individuals within their own neighborhoods, despite the large gap we saw when we merely adjusted for education but compared people to all other Los Angeles County residents. However, this finding is not particularly surprising, since we know that in general people tend to group themselves according to a variety of characteristics, including income and education, as we will see below. We also discuss below what happens to coverage differences when we control for specific characteristics of neighborhoods rather than restricting our comparison to individuals within the same neighborhoods.

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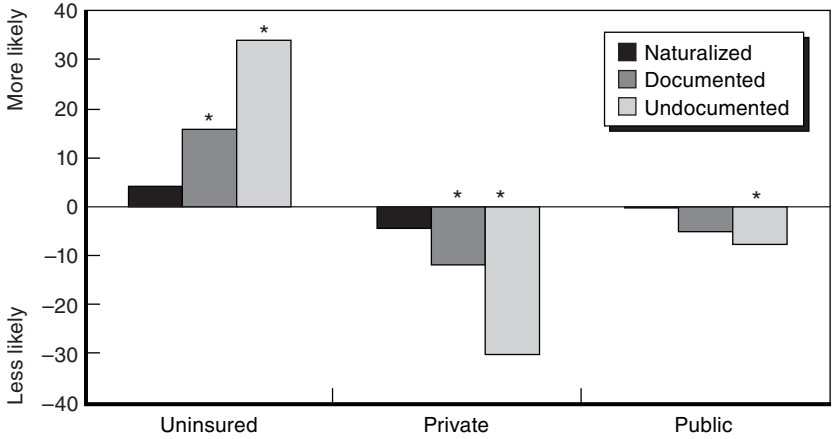
[24]We will not generally discuss insignificant differences in the main text. Also recall that our results for Asians are likely representative only of Asians who speak English or Spanish well enough to complete the interview.

Our research points to many of the socioeconomic disparities in Los Angeles County noted by others. What does this mean in terms of insurance coverage and individual characteristics? We found strong evidence of education, income, and asset/net worth differences in insurance coverage, with private insurance more likely for the more highly educated, those with higher family income, and those with higher net worth or more housing assets.

In addition, when we looked at the direct effect of immigrant status on insurance coverage (also controlling for age, gender, and education), we found that it is a strong predictor. Figure 3.6 shows the rate of different types of insurance coverage for immigrant adults relative to U.S.-born adults, controlling for race/ethnicity, education, age, and gender (these results are from the same analysis referred to in the second set of bars in Figure 3.5). As we can see, documented and, in particular, undocumented adults were much less likely than the U.S.-born or the



SOURCE: Authors' calculations from LAFANS.

NOTES: Insurance coverage is as of the time of the LAFANS interview. Data have been adjusted for gender, age, race/ethnicity, and education and are weighted.

*Significantly different from the value for U.S.-born adults at the 5 percent level of statistical significance or below.

Figure 3.6—Percentage by Which Foreign-Born Adults in Los Angeles County Are More or Less Likely Than U.S.-Born Adults in Los Angeles County to Be Insured, by Documentation Status

naturalized to have insurance.[25] The documented were 16 percentage points more likely than the U.S.-born to be uninsured—the undocumented were 34 percentage points more likely. Similarly, documented adults were 12 percentage points less likely and undocumented adults 30 percentage points less likely than the U.S.-born to have private coverage. Not surprisingly, given that they are generally ineligible for it, the undocumented were also less likely than the U.S.-born to have public insurance (8 percentage points) or Medi-Cal (6 percentage points, not shown, significant only at the 10 percent level of significance).[26]

The differences in insurance coverage for children, by parental immigration status (for the child's primary caregiver) and child citizen status, are also quite large (Figure 3.7), and in some respects, this finding is rather novel.[27] These numbers are adjusted for race/ethnicity, a parent's education, age, and gender. Noncitizen children with an undocumented parent were 44 percentage points more likely to lack insurance. Noncitizen children of an undocumented parent were less likely than the children of a U.S.-born parent to have private insurance

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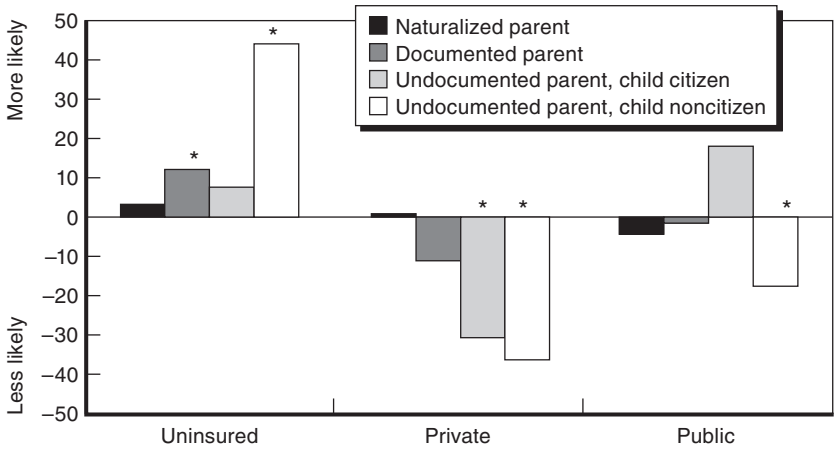
[25]Others have published similar findings: Goldman, Smith, and Sood (2005) and Brown et al. (2002, 2005). Goldman, Smith, and Sood have used the same LAFANS data as we do, whereas the other authors have used the California Health Insurance Study data.

[26]Unlike our findings, Marcelli (2004) found that unauthorized Latino immigrants are more likely than others to rely on public insurance. However, he used predictors of legal residency status (equivalent to our "documented" measure) from one dataset and applied it to insurance coverage measures from another dataset. Thus, his measure of unauthorized is a predicted rather than a reported measure. Halfon et al. (1997) also found that parents' legal residency status does not affect Medi-Cal coverage for children, counter to what we find below. However, these researchers used data from 1992, before recent policy changes related to welfare reform, which made the undocumented and many recent immigrants ineligible for most forms of public health insurance.

[27]Kincheloe, Frates, and Brown (forthcoming) found that children with one parent who is a green card holder and no other parent or another parent who is also not a citizen are less likely than children of citizens to be enrolled in Medi-Cal. They used the 2001 California Health Interview Survey, which does not collect the same degree of detail on immigration status as does LAFANS. The CHIS does not distinguish noncitizens with valid visas or work permits who are not permanent residents from other noncitizens. We have also estimated regressions using the CHIS measures of immigration status, and the results are qualitatively similar across the two datasets as are the levels of significance.



SOURCE: Authors' calculations from LAFANS.

NOTES: Insurance status is as of the time of the LAFANS interview. Data have been adjusted for gender, age, race/ethnicity, and education and are weighted.

*Significantly different from the value for children with a U.S.-born parent at the 5 percent level of statistical significance or below.

Figure 3.7—Percentage by Which Children in Los Angeles County with a Foreign-Born Parent Are More or Less Likely Than Those with a U.S.-Born Parent to Be Insured, by Parent's and Child's Immigration Status

(36 percentage points), as were citizen children whose parent was undocumented (31 percentage points). As might be expected from the results shown in Figure 3.3, citizen children of an undocumented parent were 18 percentage points more likely than children of a U.S.-born parent to have public insurance (significant only at the 10 percent level). In addition, noncitizen children of an undocumented parent were 18 percentage points less likely than children of a U.S.-born parent to have public insurance and 14 percentage points less likely to be covered by Medi-Cal (not shown).

Overall, we see large differences in insurance coverage by immigration status (Figures 3.3 and 3.4) and that these differences persist when we control for age, gender, education, and race/ethnicity (Figures 3.6 and 3.7). Controlling for immigration status eliminates significant racial/ethnic differences that persisted when only education, gender, and age were controlled for. We also see that the undocumented

and their children are much less likely to be covered.[28] Since most undocumented adults and their noncitizen children are likely ineligible for most forms of public coverage, this finding suggests that Los Angeles County cannot resolve the problem of the uninsured by outreach alone (as noted by Goldman, Smith, and Sood, 2005, for adults). Finally, with these new data on immigration status, we can also see that, within mixed-status families (undocumented parent, citizen child), children were about equally likely as those with a U.S.-born parent to have some form of insurance, controlling for race/ethnicity, age, gender, and family income. They were slightly more likely to be uninsured controlling for these factors but without controlling for family income (significant at the 10 percent level).

Neighborhood Characteristics

Neighborhoods may affect insurance coverage in several ways. First, we know that people self-select into neighborhoods, and immigrants are frequently drawn to enclaves of people born in their home country. Thus, information (correct or incorrect) about eligibility for public insurance may be transmitted more easily within one's neighborhood than elsewhere. Neighborhoods also differ in their physical environments, not only in the type and condition of their buildings but also in terms of the number or density of buildings (e.g., offices where one can apply for public programs, condition of other homes and offices). Finally, neighborhoods may differ in terms of how much cohesion or social capital there is. Some neighborhoods may have active inhabitants who are able to obtain more resources from their local governments. In addition, many people live near their jobs, and employers may also matter for insurance coverage. All this suggests that neighborhoods may matter for insurance coverage (as well as for health care use and health status, where the rationale for their importance may be stronger).

Above, we saw that once we restricted the racial/ethnicity comparisons to people within an individual's own Census tract (our

[28]This is also true if, in addition to controlling for race/ethnicity, age, gender, and education, we control for family income (estimates not reported).

approximation for neighborhood), there were no longer significant differences in being uninsured. This finding raises an obvious question: Who lives in which neighborhoods? We found a considerable amount of racial and ethnic segregation in Los Angeles County by tract, despite the fact that, on average, all adults and children live in Census tracts that contain members of every racial and ethnic group.[29] We also found a great deal of variation in the proximity of health and other kinds of facilities according to race and ethnicity.[30] For example, on average, nonwhites live in neighborhoods with fewer doctors' or dentists' offices, fewer clinics, fewer hospitals, and fewer pharmacies. Whites live in neighborhoods with more hospitals, more hospital beds, more emergency room stations, and even more free clinics than do other racial and ethnic groups. Blacks and Hispanics live in neighborhoods with the fewest such facilities.[31] This variation in neighborhood characteristics looked similar even when we used more comprehensive measures to determine

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[29]If each neighborhood were fully segregated, we would be unable to compare across race and ethnicity within neighborhoods. At the same time, if there were complete segregation and some other neighborhood characteristic determined insurance coverage, it would mean that the observed racial/ethnic differences were due to some other factor highly correlated with race and ethnicity in our data. The degree of segregation confirms there is some amount of sorting by race and ethnicity.

[30]Our data on neighborhood characteristics come from a variety of sources including the Decennial Census, ZIP Code Business Patterns (ZBP), Office of Statewide Health Planning and Development (OSHPD) Hospital and Clinic data, and information on county-operated and Public-Private Partnership clinics. Appendix Tables A.3 through A.11 provide detailed summary statistics on neighborhood characteristics for 2000 by race and ethnicity for adults and children, where neighborhood is defined as the Census tract.

[31]It may seem puzzling that the average white in our data lives in a neighborhood with more facilities of various types including bars and social service agencies than do members of other racial/ethnic groups. However, comparisons of the presence of facilities across race/ethnicity for all tracts in Los Angeles County also show that the average white lives in a neighborhood with more of almost all types of facilities. Some differences for Asians may also be counterintuitive, but this is likely because Asians who could not complete the interview in English or Spanish were ineligible for the LAFANS interview. Thus, the LAFANS data are not representative of all Asians in Los Angeles County.

neighborhood size.[32] Thus, such variation may simply reflect the self-selection, according to various traits, mentioned above.

Despite considerable variation in our measures of neighborhood characteristics, we found that such characteristics have little effect on the insurance coverage differences we have seen across racial and ethnic groups. We have one hypothesis for these findings but cannot test it with the LAFANS data because we do not know the name of the survey participants' insurance providers (unless they have public insurance), nor do we know the type of insurance accepted by various doctors, clinics, or hospitals in respondents' neighborhoods. However, we offer an interpretation consistent with the observed findings nonetheless.

A number of our neighborhood measures account for health facilities. The only natural direct link between their presence and having a particular type of insurance coverage is with having public coverage. However, in Los Angeles County, enrollment for Medi-Cal is permitted not only at Medi-Cal offices but also at schools, clinics, and a wide variety of other sites that are likely to be present in nearly every tract. Furthermore, although we have made considerable effort to get appropriate measures of the presence of health facilities, we do not have measures of providers that accept various sorts of coverage, which might offer more relevant information. The link between the presence of health facilities and having public insurance is further obscured by complex eligibility rules (Halfon, Inkelas, and Wood, 1995), varied

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[32]Our main measure of neighborhoods is the Census tract; this choice is mandated by data constraints. A tract could be too large (in which case we cannot remedy the problem) or too small. We used two alternative measures of neighborhoods to construct contextual measures. The first is tracts within a three-mile radius of the tract of residence. This may not be as large as the catchment area for a hospital, for example, but is larger than one's own tract. However, using a measure of fixed distance does not account for density. In densely populated areas, a much shorter distance might define the relevant measure of nearby facilities. Our second alternative measure, then, is the tract of residence plus the set of adjacent tracts and their immediate neighbors. Since Census tracts are based on population, this will automatically be a larger area for less densely populated areas and a smaller area for more densely populated areas. One might also wonder whether current neighborhood is a good proxy for environment (since people move and, in particular, our immigrants may have faced very different environments outside the United States and have entered at various points in time). Kunz, Page, and Solon (2003) found evidence that point-in-time measures are highly correlated with longer-term averages of neighborhood characteristics.

practices at local social services offices (Allison, 2003), and unevenly placed outreach efforts (Adler and Newman, 2002), none of which could be measured easily using available data. Given these data constraints, it is perhaps not so surprising that we found no clear correlation between public insurance coverage and neighborhood characteristics.[33]

Gaps in Insurance Coverage and Other Coverage Spells

Health insurance coverage is often discontinuous, and both adults and children experience gaps in their coverage—that is, they have periods during which they lack insurance. Therefore, looking only at who is uninsured at a particular point in time might be misleading in understanding the overall dynamic pattern of insurance coverage. For example, someone who was uninsured for two years but got insurance yesterday may have quite different health care use than someone who has been continuously insured, yet both will have coverage today. In this section, we analyze insurance gaps (periods with no coverage) as well as the presence of other types of spells of coverage (periods with coverage from a specific source). These periods would have taken place over the two years preceding the LAFANS interview. We will see that differences in the probability of being uninsured are larger when looking at the presence of any uninsurance over a two-year period than when we consider uninsurance at a point in time. By contrast, the probability of having coverage from a specific source (e.g., private coverage, public coverage) is fairly similar whether we look at coverage from a particular source at the time of the LAFANS interview or the presence of any spell of such coverage over the two years before the LAFANS interview.

Gaps in health insurance coverage (periods of being uninsured) are associated with worse health outcomes (although it is not clear whether the relationship is causal). For example, both the loss of health insurance and changes in coverage have been found to be related to fewer check-

[33]Our ZBP data should provide a comprehensive measure of the number of doctors' offices, yet there is no association between that measure and health care use. Our OSHPD clinic measure (especially when combined with PPP clinics and county-operated clinics) should also be relatively comprehensive.

ups (Burstin et al., 1998–1999). In addition, access to care is much worse for children who experience gaps in coverage (Olson, Tang, and Newacheck, 2005). Parents of children who periodically lack insurance coverage are more likely than parents of the fully insured to report delayed care, unmet medical needs, and unfilled prescriptions. Having gaps in coverage is associated strongly with not having or not using a regular source of care (Kogan et al., 1995; Halfon et al., 1997; Starfield and Shi, 2004).

Looking at spells of coverage (or no coverage) over a period of time also provides a better longitudinal measure of insurance coverage. To the extent that health status, for example, is determined by health care use over a long period of time, looking at spells may be more informative for understanding the role of coverage in affecting health. This underscores the importance of documenting both gaps in coverage and other spells of coverage; here, we mostly present results about gaps in coverage.

We found that the probability of having any gap in coverage at any time over the two years before the LANFANS interview was higher than the rate of being uninsured at the time the interview took place. For example, 19 percent of white adults, 47 percent of Hispanic adults, 25 percent of black adults, and 26 percent of Asian adults experienced a gap in coverage (were uninsured) at some point over the two-year period before the interview. In comparison, the rate of uninsurance at the time of the interview was lower, at 13 percent for white adults, 38 percent for Hispanic adults, 18 percent for black adults, and 17 percent for Asian adults.

Although fewer children than adults were uninsured at the time of the interview, as with adults, the probability of having had some gap in coverage over a two-year period was higher than the probability of being uninsured when the interview took place, and the difference was larger for Hispanic children. Six percent of white children, 34 percent of Hispanic children, 4 percent of black children, and 12 percent of Asian children had experienced a gap in coverage during the two years before the LAFANS interview. The rate of uninsurance at the time of the interview, in contrast, was 4 percent for white children, 24 percent for

Hispanic children, 1 percent for black children,[34] and 3 percent for Asian children. These findings match those of Halfon et al. (1997), who found that a large share of Hispanic children in inner-city Los Angeles had episodic coverage in 1992.

In terms of other types of spells of coverage, our findings were similar for both adults and children. Rates of having any period of public or private coverage over a two-year period before the interview were much closer to the rates of public or private coverage at the time of the interview for adults and children.

For each immigrant group, the number of those lacking insurance coverage was higher when measured over a two-year period than during a single point in time. For example, among undocumented Hispanics, adjusting only for age and gender, 76 percent had experienced a coverage gap, compared to 63 percent who were uninsured at the time of the LAFANS interview. Among U.S.-born Hispanics, 27 percent had experienced a coverage gap, compared to 18 percent who were uninsured.

This analysis suggests that any accounting of the number of uninsured can differ greatly depending on whether we look at coverage rates at a single point in time or over a period of time. As we saw above, without controlling for education, income, or immigration status, Hispanics were more likely than other racial/ethnic groups to have a gap in coverage. There are also big differences by immigration status (again controlling only for age and gender). This finding applies both to adults and to children, and rates are especially high among the undocumented.

What factors in addition to race and immigration status might be associated with gaps in insurance coverage? Differences for adults (not shown) suggest that taking into account immigration status and education, Hispanic adults are 8 percentage points more likely than

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[34]One might wonder why rates of uninsurance are so low for black children. The 2001 CHIS found that 4 percent of black children were uninsured in Los Angeles County, as compared to 5 percent of white children. The Los Angeles County Health Survey also found quite low rates of uninsurance for black children (7% of black children in the 1999–2000 survey were uninsured, as compared to 8% of white children; Los Angeles County Department of Health Services, 2000). The means for the CHIS and Los Angeles County Health Survey do not exactly match our gender and age-adjusted means, but sampling frames, mode of interview, and timing of the surveys also differed.

white adults to have experienced a coverage gap over a two-year period, although this finding is significant only at the 10 percent level. By contrast, controlling for immigration status and education left insignificant differences in coverage at the time of the interview across race and ethnicity. Thus, although not always significant, the difference in the probability of being uninsured over the two years before the interview between Hispanics and whites, and between the undocumented and the U.S.-born (not shown), are larger than might be expected from the point-in-time comparisons.[35]

Our results for children are rather different. Table 3.2 presents differences in the probability of having coverage gaps (the probability of having been uninsured during the two years before the interview) and in the probability of being uninsured for children, by race and ethnicity, accounting for such factors as parent's education and family income. Each panel shows the difference in the probability of experiencing a coverage gap or in being uninsured among one group of children (Hispanics, blacks, and Asians) compared to non-Hispanic white children. We compare being uninsured at a single point in time (odd rows) and at any time over a period of two years (even rows). Each column represents differences controlling for a different set of factors, as indicated in the column head. Numbers are marked with a single asterisk if they are significantly different from the value for whites at the 5 percent level of significance or below. Numbers are followed by a dagger if they are significantly different from that for whites at the 10 percent level—a finding that is more likely to have occurred by chance than one that is significant at the 5 percent level.

After accounting for gender, age, and parent's education, Hispanic children were 15 percentage points more likely than white children to lack insurance at the time of the LAFANS interview and 23 percentage points more likely than whites to have had a gap in coverage over the two-year period preceding the interview. Looking at insurance coverage

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[35]Using survival method analysis, Prentice, Pebley, and Sastry (2005) found that, among adults, the undocumented and documented are more likely than the U.S.-born to lose coverage and less likely to gain it. Goldman, Smith, and Sood (2005) also found large differences in having had any spell of no insurance coverage between adults of varying immigration status, with the undocumented being the worst off.

Table 3.2

Percentage by Which Hispanic, Black, and Asian Children in Los Angeles County Are More or Less Likely Than Non-Hispanic White Children to Be Uninsured or to Have Had a Gap in Coverage

	Adjustment Characteristic				
	Age and Gender	Age, Gender, and Parent's Education	Age, Gender, Parent's Education, and Parent's Immigration Status	Age, Gender, Parent's Education, and Family Income	Age, Gender, Parent's Education, and Within-Census-Tract
Percentage difference between Hispanic children and white children					
Uninsured	20*	15*	9*	13*	14*
Gap in coverage	28*	23*	16*	20*	21*
Percentage difference between black children and white children					
Uninsured	–2	–3	–4	–4	–7†
Gap in coverage	–2	–2	–2	–4	–7†
Percentage difference between Asian children and white children					
Uninsured	–1	–1	–4	–1	–4
Gap in coverage	6	9†	5	11†	7

SOURCE: Authors' calculations from LAFANS.

NOTES: Uninsured status is as of the time of the LAFANS interview. Gaps in insurance coverage are any occurring during the two years before the LAFANS interview. Data are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

†Significantly different from the value for whites at the 10 percent level of significance or below

over time suggests that Hispanic children were more likely than white or black children to have been uninsured (the comparison to black children is not shown) than is suggested by the measure taken at the time of the interview. When immigration status is taken into account as well, Hispanic children were 9 percentage points more likely than white children to lack insurance and 16 percentage points more likely to have had a gap in coverage. For Hispanic children, the difference between lacking coverage at the time of the interview and lacking it at any time over the two-year period is about 7 percentage points—again after accounting for family income or making comparisons among those in

the same Census tract. Thus, although controlling for various factors shrinks the differences between Hispanic and white children, the longitudinal measure suggests a larger difference than the point-in-time measure.

These findings again suggest that Hispanics—both adults and children—lag behind whites not only in rates of insurance coverage but also in the continuity of that coverage, which, as we have discussed, may be associated with worse health or less health care use.[36]

Summing Up

Both clinical and social science research shows that having insurance coverage is associated to some extent with obtaining more health care and with having better health, although there are debates about the strength of this relationship and how applicable it is universally. Our findings show striking differences in coverage rates according to race, ethnicity, and, especially, immigration status among both adults and children in Los Angeles County. The prominent differences in coverage between immigrants and the U.S.-born suggest that it is primarily foreign-born Hispanics who lack coverage and that the group with the highest propensity to be uninsured is the undocumented. Because the undocumented are generally ineligible for most forms of public insurance, outreach related to eligibility for public insurance is unlikely to address at least some of these differences in insurance coverage.

Knowing more about the ways that health care use differs by immigration status (for example, whether use is lower among the undocumented and others who are foreign-born) or how health varies by immigration status (are the undocumented healthier?) may be important for assessing these findings on health care coverage. In the next chapter, we examine the determinants of having a usual source of care, of the use of preventive health care, and of the use of other sources of care, particularly emergency room and hospital care.

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[36]Note that an alternative explanation could be that Hispanics are healthier and choose to not be covered by health insurance.

4. Health Care Use and Access to a Usual Source of Care

Interest in health care use and access to care stems in part from the belief that increases in use and access lead to better health. A number of studies have explored the relationship between use and health, finding, for example, that having a regular source of care or sustained continuity of care is linked to fewer hospitalizations, fewer visits to the emergency room, and more use of preventive care (Cabana and Jee, 2004; Sox et al., 1998; Petersen et al., 1998; Gill, Mainous, and Nsereko, 2000). In addition, Ettner (1996) presents evidence that having a usual source of care leads to greater use of preventive services, after accounting for possible selection among those who have a usual source of care. Starfield and Shi (2004) summarize evidence that having a usual source of care, using care repeatedly over time, having comprehensive care, and experiencing coordination of care lead to fewer health disparities by race/ethnicity or income. Nonpreventive medical care is thought to explain a modest fraction of the variation in population health (e.g., McGinnis, Williams-Russo, and Knickman, 2002). It is also important to note that like much of the research on insurance and health, many of the health effects of use and access to care may be in part due to unobserved differences between those with and without access to care.

Partly because of findings linking medical care (preventive or other) to health, increasing the use of regular preventive care is one of the federal government's Healthy People 2010 objectives. The appropriate use of preventive care is associated with prevention or detection of disease at early stages.[1] Consequently, several medical associations

[1]Note that more preventive care is not always better. Many economists note possible inefficiencies with a fee-for-service model of medical care delivery, where individuals do not pay the full cost of additional services but are instead reimbursed for some or all of their expenses by their insurance. Such a fee-for-service model with

provide guidelines for how often adults and children should receive periodic examinations. For example, the American Academy of Pediatrics recommends that children be regularly screened for specific conditions and have at least an annual physical exam (American Academy of Pediatrics, 2000). Similarly, the American Academy of Pediatric Dentistry recommends at least annual visits for children, with the first visit to occur by the age of 12 months (American Academy of Pediatric Dentistry, 2004–2005).[2] Although annual physicals are no longer recommended for asymptomatic adults, a schedule of recommended screenings for important conditions for adults is also available.[3] For example, the recommendations for women over age 40 include a screening for breast cancer once every one or two years. Another common condition present in adults (which we will examine below) is hypertension. Current guidelines recommend that all adults not already diagnosed with hypertension should have their blood pressure checked at least every two years.[4]

In this chapter, we look at several measures of the use of care for both adults and children as well as access to a usual source of care.[5] We consider differences across race and ethnicity, and across immigration

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employer-provided insurance was widespread before the introduction of managed care, with health insurance being subsidized by the tax system. If individuals do not pay the full cost of medical care they receive (as can occur in such a system), they may end up buying more services (because the services are subsidized) and spending more than is socially optimal. Individuals do not, in general, have enough information to weigh the pluses and minuses of each decision but must rely on their agent, the physician, who may have an incentive to spend more than might be socially optimal (for several reasons, including possible protection against malpractice suits as well as increased revenues).

[2]Note that usual practice recommends that adults also see the dentist every six months, although evidence about whether six months is the right interval is not overwhelming (Davenport et al., 2003).

[3]See the American Academy of Family Practice (2005).

[4]Note that there are other screening procedures about which there is considerable controversy (e.g., Sox, 1994). The American Academy of Family Practice guidelines conclude that there is insufficient evidence to make a recommendation for or against routine screening for prostate cancer. In evaluating the evidence for and against screening tests, there is a tradeoff between the burden of the disease overall, the outcomes for asymptomatic individuals who have had the disease detected early, and the rate at which false negatives and positives occur with the test.

[5]Our definition of a having a usual source of care is answering yes when asked if one has a place to go when sick or needing medical advice.

status, and then examine the effect of other factors on these differences. We examine whether adults and children went to a doctor for any reason during the year preceding the LAFANS interview. Although we cannot know whether such a visit was preventive, this measure gives us some idea of the rate of health care use among different groups. It is important to keep in mind that differences across groups could mean different things; for instance, seeing a doctor could be less likely for some groups because they lack access to medical care or it could be less likely because they are in better health than other groups.[6]

We also look at whether adults and children have a regular source of care (a place to go when they are ill or need medical advice) and whether they saw a dentist in the year preceding the interview.[7] Finally, we track whether children received a checkup or had a well-child care visit in the year preceding the interview. As we will see, although the differences are not as stark as those we saw in Chapter 3, there is considerable variation in health care use across race and ethnicity, immigration status, and other dimensions.

In addition to these measures of health care use and preventive care, we examine an area of health care use that has raised a certain amount of public debate—the unnecessary use of certain kinds of care. This perceived problem has become a growing concern in a time of rapidly rising medical costs, particularly costs borne by the state.[8] Much discussion in the media concerns the perception that certain groups—the

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[6]There is an important ongoing debate about quality of care, pay for performance, and performance indicators in health services research. We cannot measure quality of care and thus do not discuss this literature.

[7]Unfortunately, our measure of any dentist visit during the last year is not exclusively any visit for a checkup and likely includes some visits for dental problems.

[8]Concerns about the rising costs of providing emergency room care to undocumented immigrants led Congress to include a provision in the Medicare Modernization Act of 2003 to reimburse hospitals and other emergency care providers for providing services under the Emergency Medical Treatment and Labor Act (EMTALA) to undocumented immigrants and Mexican citizens permitted temporary entry to the United States. EMTALA requires Medicare-participating hospitals with emergency departments to provide screening to individuals who request treatment to see if an emergency condition exists and, if so, to stabilize the condition. California was slated to receive $70.8 million in fiscal year 2005 from this fund (Centers for Medicare and Medicaid Services, 2005b).

undocumented, in particular, as well as other noncitizens—are overusing or inappropriately using such resources as emergency rooms (ERs). Public opinion is divided on what constitutes overuse of such resources, but most discussions of the issue consider the use of the ER as unnecessary when one could see a doctor for an outpatient visit instead. Preventable or avoidable hospitalizations would be another example of unnecessary use of hospital care at the level of the local health care system, since there is a presumption that they can be avoided.[9] There is also general concern about inappropriate use of hospitals and emergency rooms in particular, as well as about who pays for such care.

Although we cannot measure unnecessary hospitalizations directly, we are able to look at whether adults stayed overnight in the hospital any time in the two years preceding the LAFANS interview.[10] We also know whether children visited the ER any time in the year before the interview. These measures may be higher for groups that are in worse health. Alternatively, use of the ER may be high either because some individuals view it as a source of regular outpatient care or because preventive care was overlooked. Our data do not permit us to assess whether a visit was for normal ambulatory care, although we can differentiate one kind of visit that likely could not be avoided (overnight stays related to pregnancy).[11] Looking at who relies on these resources provides some framework for understanding differences in the use of hospital and ER care by various groups. As we shall see, although we cannot test whether the overnight visits or ER visits could have been avoided, our evidence suggests that concerns about specific groups such

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[9]Preventable/avoidable hospitalizations are defined as hospitalizations involving "ambulatory care sensitive conditions, for which access to timely and effective ambulatory care can help prevent the need for inpatient care" (Billings and Weinick, 2003). These are measured in hospital discharge datasets. Examples of chronic conditions that are sensitive to receipt of ambulatory care include pediatric and adult asthma, congestive heart failure, hypertension, and uncontrolled diabetes. Examples of acute conditions sensitive to receipt of such care include perforated appendix and bacterial pneumonia.

[10]LAFANS collects some information about the reasons for hospitalizations. However, they do not map easily into standard measures of preventable/avoidable hospitalizations.

[11]We also do not know if a visit was paid for by insurance or the respondent or was uncompensated.

as the undocumented using the hospital or ER more intensely overall may well be overstated.

Table 4.1 provides a general overview of our measures of health care use, presenting summary statistics for doctor and dentist visits, checkups for children, having a usual source of care, and overnight hospital stays (for adults) and emergency room use (for children). These numbers are simple means, unadjusted for age and gender differences, unlike the numbers presented in the rest of the chapter. As we can see, having visited a doctor during the year preceding the interview was fairly common for both adults and children, but slightly more than half of children had a checkup or visited a dentist in the year before the interview took place. Almost all children had a usual source of care (93%); about three-quarters of adults did. In contrast to these measures, we found that the use of hospitals was fairly rare. Only about 15 percent of adults spent a night in the hospital in the two years preceding the interview, and about the same share of children visited the emergency room in the year before the interview.

The rest of this chapter will first consider visits to a doctor or dentist and one measure of access to care—having a usual source of care. The

Table 4.1

Health Care Use for Adults and Children in Los Angeles County

	Adults	Children
During the year before the interview		
Any doctor visit	70%	87%
Any dentist visit	53	56
Any checkup (children only)	—	58
Any emergency room visit (children only)	—	14
During the two years before the interview		
Any overnight hospital stay (adults only)	15	—
At time of interview, had		
A usual source of care	74	93

SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor or dentist visit, any checkup, or any emergency room visit is any visit occurring during the year before the LAFANS interview. Any overnight hospital stay is any stay occurring during the two years before the LAFANS interview. Having a usual source of care is as of the time of the LAFANS interview. Data are weighted.

discussion will then turn to hospital use, either overnight (for adults) or emergency room (for children). For each set of outcomes, we will show means by race and ethnicity and then by immigration status, adjusting in each case for age and gender. We will then present differences by race and ethnicity adjusting for various other factors and discuss which factors are influential in predicting use or having a usual source of care.[12] Within each set of use or access measures we consider, we present findings for adults and then for children.

Racial and Ethnic Differences in Doctor and Dentist Visits and Having a Usual Source of Care

Table 4.2 shows the percentage of adults by race and ethnicity with any type of visit to a doctor or dentist during the year preceding the

Table 4.2

Any Doctor or Dentist Visit During the Year Before the Interview, and Having a Usual Source of Care at the Time of the Interview, for Adults in Los Angeles County, by Race and Ethnicity

	White	Hispanic	Black	Asian
During the year before the interview				
Any doctor visit	77%	64%*	85%	59%*
Any dentist visit	65	40*	55	59
At the time of the interview, had				
A usual source of care	80	65*	84	79

SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor or dentist visit is any visit occurring during the year before the LAFANS interview. Having a usual source of care is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

[12]We have also estimated similar regressions in another dataset, the 2001 CHIS, with each set of individual controls. Results are quite robust across the two datasets; more detail is provided in Appendix A.

LAFANS interview; it also shows the percentage having a usual source of care, after adjusting for age and gender.

Here we note that Hispanic adults were less likely than white adults to have seen a doctor (as were Asian adults). This finding could reflect differences in access related to cost or differences in underlying health. Note that the Hispanic-black differences in visits to a doctor are even larger (and statistically significant). Hispanics were much less likely than whites to have had a usual source of care at the time of the interview[13] and much less likely than whites to have seen a dentist in the year preceding the interview, neither of which may be as closely related to health status as seeing a doctor during the last year. It is also possible that Hispanics do not see a dentist as frequently because their dental health is better than that of other groups. These differences for Hispanics may also be the result of other factors, which we will examine below. Nonetheless, given the presumed value of preventive dental visits, the large gap in Hispanic dental visits may still be important.

Table 4.3 shows the percentage of children in each racial/ethnic group with any doctor visit, any checkup, or any dentist visit during the year preceding the interview. It also shows the share of children with a usual source of care (that is, those children whose parent or caregiver reported that he or she had a place to take the child when the child was sick or when he or she needed medical advice about the child). Unlike adults, there were no significant differences between Hispanic children

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[13]A follow-up question asks whether the usual source of care is a clinic or health maintenance organization (HMO), a doctor, the emergency room of a hospital, or a hospital outpatient clinic. The vast bulk of children and adults with a usual source of care went to a clinic or HMO or a doctor. Thirty-eight percent of adults or 51 percent of adults who have a usual source of care and 56 percent of children or 60 percent of children with a usual source of care went to a clinic or HMO. Thirty percent of adults or 41 percent of adults with a usual source of care and 35 percent of children or 37 percent of children with a usual source of care saw a doctor. Only a small share reported going to a hospital emergency room, a hospital outpatient clinic, or some other place when they were sick or needed medical advice. About 4 percent of adults with a usual source of care and 2 percent of children with a usual source of care went to a hospital outpatient facility, about 3 percent of adults and 1 percent of children with a usual source of care went to the ER, and about 1 percent of adults and 0.1 percent of children with a usual source of care went somewhere else.

Table 4.3

Any Doctor or Dentist Visit or Any Checkup During the Year Before the Interview, and Having a Usual Source of Care at the Time of the Interview, for Children in Los Angeles County, by Race and Ethnicity

	White	Hispanic	Black	Asian
During the year before the interview				
Any doctor visit	86%	87%	88%	93%*
Any checkup	70	74	83*	84*
Any dentist visit	62	52*	60	64
At the time of the interview, had				
A usual source of care	95	91*	100*	97

SOURCE: Authors' calculations from LAFANS.

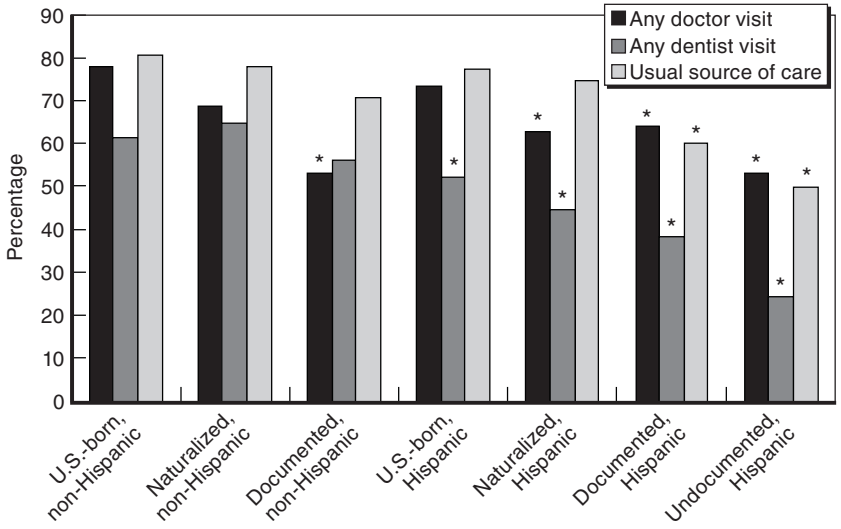
NOTES: Any doctor or dentist visit or checkup is any visit occurring during the year before the LAFANS interview. Having a usual source of care is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

and white children in having had at least one visit to a doctor or a checkup during the year before the interview. Black and Asian children were more likely than white children to have had a checkup during the year before the interview, and Asian children were more likely than white children to have had a doctor's visit during the year before the interview.[14] However, similar to Hispanic adults, Hispanic children were 10 percentage points less likely than white children to have visited a dentist during the year before the interview, and they were also less likely than whites to have a usual source of care.

Next, we turn to differences in the same measures by immigration status and Hispanic ethnicity. Figure 4.1 shows the percentage of adults with any doctor or dentist visit during the year before the interview, and

[14]Black-Hispanic differences in children's checkups and having a usual source of care were also significant.



SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor or dentist visit is any visit occurring during the year before the LAFANS interview. Having a usual source of care is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted.

*Significantly different from the value for non-Hispanic adults born in the United States at the 5 percent level of statistical significance or below.

Figure 4.1—Any Doctor or Dentist Visit, or Having a Usual Source of Care, for Adults in Los Angeles County, by Immigration Status and Whether Adult Is Hispanic

with a usual source of care at the time of the interview, again adjusting only for age and gender. The three large non-Hispanic groups are the U.S.-born, foreign-born naturalized citizens, and the documented. There are a large number of undocumented Hispanic adults in our data, so there are four Hispanic groups for which we show means—the U.S.-born, foreign-born naturalized citizens, the documented, and the undocumented.

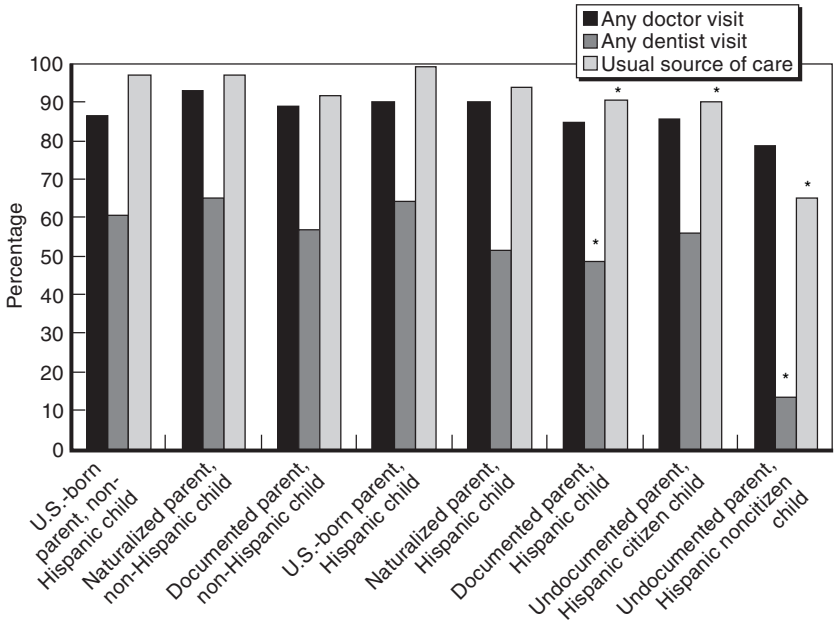
Here we notice that all immigrant Hispanics and documented non-Hispanics are less likely than U.S.-born non-Hispanics to have seen a doctor during the year before the interview. In terms of visits to a dentist, we see that all Hispanic groups are less likely than the non-Hispanic U.S.-born to have seen a dentist during the previous year and that undocumented Hispanics are the least likely of all groups to have

seen a dentist. Only 24 percent of undocumented Hispanic adults and 38 percent of documented Hispanic adults saw a dentist during the year before the interview, as compared to 61 percent of non-Hispanic adults born in the United States. Although these cross-sectional differences may reflect differences in other characteristics (as we will see below), this figure clearly shows that many noncitizen Hispanic adults are forgoing recommended dental care.

Finally, the figure's third bar shows the percentage of adults with a usual source of care in each group. Again, we see that undocumented and documented Hispanics were less likely than non-Hispanic U.S.-born adults to report a usual source of care. Only 50 percent of undocumented Hispanic adults and 60 percent of documented Hispanic adults had a usual source of care, as opposed to 81 percent of non-Hispanic U.S.-born adults.

Next, we turn to our results for children according to immigration status and Hispanic ethnicity. Figure 4.2 shows the percentage of children with any doctor or dentist visit during the year before the interview; it also shows the percentage of those with a usual source of care at the time of the interview. We can see that there is less variation among groups of children than among groups of adults in having seen a doctor in the year before the interview, with no differences being significant. We also measured checkups during the year before the interview (not shown in the figure). There were generally fewer checkups than doctor visits for each group. For example, 79 percent of noncitizen children with undocumented parents saw a doctor during the year before the interview, but only 71 percent had a checkup in the same time period. As with doctor visits, there are no significant differences across groups in the share obtaining checkups, although 18–29 percent of children, depending on group, are failing to obtain the annual checkups recommended by the American Academy of Pediatrics.

Turning to the second bar for each group in Figure 4.2, we see considerably more variation in frequency of dental visits during the year before the interview than in doctor visits or checkups in the same time period. Only 13 percent of noncitizen Hispanic children with an undocumented parent, 49 percent of Hispanic children with a documented parent, and 52 percent of Hispanic children with a



SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor or dentist visit is any visit occurring during the year before the LAFANS interview. A usual source of care is as of the time of the LAFANS interview. Data have been adjusted for gender and age and are weighted. Statistics are reported according to the Hispanic ethnicity of the child and the immigration status of the parent who is the child's primary caregiver and for the last two categories of children, by whether the child is a citizen.

*Significantly different from the value for non-Hispanic children with a U.S.-born parent at the 5 percent level of significance or below.

Figure 4.2—Any Doctor or Dentist Visit, or Having a Usual Source of Care, by Parent's and Child's Immigration Status and Whether Child Is Hispanic, in Los Angeles County

naturalized parent saw a dentist the year before the interview (significant only at the 10 percent level), compared to 61 percent of non-Hispanic children with a U.S.-born parent. Recall that annual dental visits are recommended for children. Although these findings may be explained by other characteristics common to these children, this figure suggests that there are likely large differences in preventive dental care.

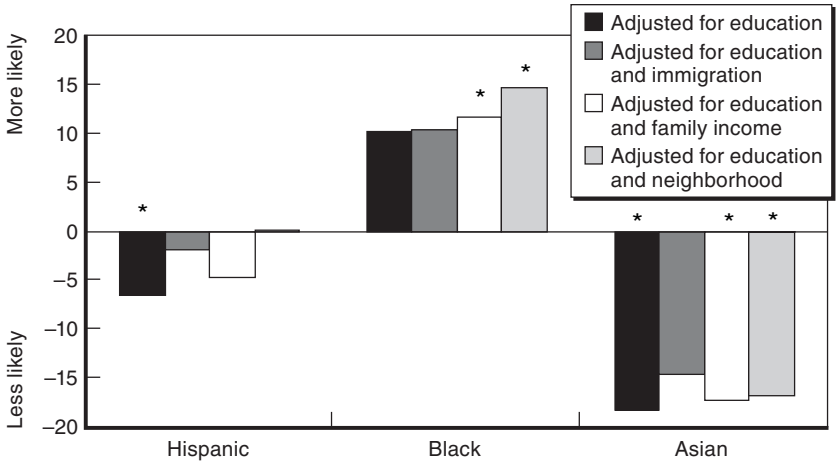
Finally, the third bar in Figure 4.2 shows the percentage of children in each group with a usual source of care. Again, noncitizen Hispanic children with an undocumented parent seem to be the worst off, with

the lowest share reporting a usual source of care (65%). Two other groups of Hispanic children—citizen children with an undocumented parent and children with a documented parent (regardless of child's citizenship status)—were also less likely than non-Hispanic children with a U.S.-born parent to have a usual source of care (91% for both Hispanic groups versus 97% for non-Hispanic children with a U.S.-born parent).

Individual and Neighborhood Characteristics

Just as existing research suggests factors that influence health insurance coverage, we also know that individual and neighborhood characteristics are correlated with health care use and with having a usual source of care. For example, Aizer and Currie (2004) found evidence that, for women within the same networks (as defined by location and racial/ethnic group), the use of public maternity services is highly correlated. (Other results of Aizer and Currie's, however, cast doubt on whether network-provided information is the source of this correlation.) Previous work has shown that nonwhite children and children with less-educated parents are less likely to obtain sufficient well-child care. Similarly, black children, low-income children, and children with less-educated parents are less likely to obtain adequate dental care (Yu et al., 2002). In this section, we explore the role of both individual and neighborhood factors in explaining existing racial and ethnic disparities in health care use.

Figure 4.3 shows differences in having had a doctor visit during the year before the interview, for Hispanic, black, and Asian adults, compared to whites, adjusting for various factors. First we see that, as with insurance coverage, adjusting for level of completed education reduces the differences between whites and Hispanics considerably. For example, when we adjusted only for age and gender, Hispanic adults were 13 percentage points less likely than whites to have seen a doctor during the year before the interview, but after we adjust for education, they are only 7 percentage points less likely to have seen a doctor. Adjusting for immigration reduces the gap between Hispanics and whites to 2 percentage points, and it is no longer significant. Controlling for family income or family housing assets and nonhousing net worth also leaves the difference between Hispanics and whites small and



SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor visit is any visit occurring during the year before the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

Figure 4.3—Percentage by Which Hispanic, Black, and Asian Adults in Los Angeles County Are More or Less Likely Than White Adults to Have Had Any Doctor Visit During the Year Before the Interview, by Race and Ethnicity

insignificant. By contrast, with any of our detailed controls, blacks were more likely than whites to have seen a doctor during the year before the interview, although adjusting for education or education and immigration leaves the difference significant only at the 10 percent level. Asians were always less likely than whites to have seen a doctor during the year before the interview, and the various controls have little effect on this finding (the difference adjusted for immigration and education is significant only at the 10 percent level).

Finally, taking into account average neighborhood characteristics from the Census, ZBP, and OSHPD also made the gap in doctor visits for Hispanic adults quite small and statistically insignificant, while having little effect on the black-white or Asian-white differences. However, just controlling for the presence of health facilities (whether from the ZBP or OSHPD) does not entirely eradicate the gap for

Hispanics. For example, controlling for the ZBP health facility measures shrank the gap from 7 percentage points (when adjusted only for education) to 6 percentage points (significant only at the 10 percent level). Similarly, controlling for the OSHPD hospital measures shrinks the gap only from 7 percentage points (the gap controlling only for education) to 6 percentage points, and controlling for numbers of clinics of various types from OSHPD leaves the gap at about 6 percentage points (significant only at the 10 percent level). However, controlling for the demographic characteristics of the neighborhood alone does make the gap insignificant (it shrinks to about an insignificant 1 percentage point, depending on which Census characteristics are adjusted for). These findings suggest that the presence or absence of medical facilities in a neighborhood is not associated with a higher or lower probability of having seen a doctor.

The pattern for Hispanic-white differences in dental visits is quite similar. Controlling for education shrinks the gap from 25 percentage points to 9 percentage points, and controlling for immigration, family income, assets/net worth, or neighborhood characteristics makes the gap smaller and insignificant (although the immigration results are still significant at the 10 percent level). Asians were always less likely than white adults to have had any dentist visit and blacks generally less likely to have had any dentist visit, although none of the differences is significant once age and gender are controlled for.

Our last outcome for adults is having a usual source of care. Here we see the same pattern for Hispanics. Although Hispanics were less likely than whites to have a usual source of care, once we control for education, this gap is significant only at the 10 percent level. Controlling for immigration, family income, assets/net worth, or all our neighborhood characteristics makes the Hispanic-white gap insignificant. In contrast to doctor visits, when it comes to having a usual source of care, controlling for a wide array of health facilities (doctors' offices, dentists' offices, local hospitals, and clinics) does make the Hispanic-white gap insignificant. Controlling only for the presence of local hospitals or clinics, however, leaves the gap significant at the 10 percent level. Blacks were again more likely than whites to have a usual source of care and the difference is significant at the 10 percent level, after

controlling for family income or assets/net worth. Asians were about as likely as whites to have a usual source of care.

What happens when we perform these same adjustments on our measures for children? Table 4.4 shows the differences for Hispanic, black, and Asian children relative to white children in the share who saw a doctor or dentist during the year before the interview, controlling for various factors. We found essentially no differences between white children and black or Hispanic children in having seen a doctor. Asian children were more likely than whites to have seen a doctor during the year before the interview, except when controlling for neighborhood characteristics. However, controlling for immigration, family income, or assets/net worth left the Asian-white gap significant at only the 10 percent level.

Table 4.4

Percentage by Which Hispanic, Black, and Asian Children in Los Angeles County Are More or Less Likely Than White Children to Have Had Any Doctor or Dentist Visit

	Hispanic	Black	Asian
Any doctor visit, adjusted for			
Education	1.7	1.6	6.9*
Education and immigration status	2.9	1.4	7.2†
Education and family income	2.3	1.9	6.6†
Education and assets/net worth	1.9	3.0	6.5†
Education and neighborhood characteristics	–0.2	1.0	3.6
Any dentist visit, adjusted for			
Education	–2.4	1.4	–0.8
Education and immigration status	2.4	0.3	3.6
Education and family income	0.5	3.7	–0.9
Education and assets/net worth	3.1	9.8†	–0.6
Education and neighborhood characteristics	8.8*	11.7*	5.1

SOURCE: Authors' calculations from LAFANS.

NOTES: Any doctor or dentist visit is any visit occurring during the year before the LAFANS interview. Data have also been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of significance or below.

†Significantly different from the value for whites at the 10 percent level of significance or below.

In terms of dentist visits, the difference between Hispanic and white children was 10 percentage points without controlling for education but only an insignificant 2 percentage points once parent's education is controlled for. Controlling for parent's and child's immigration status, family income, or housing assets and net worth in addition to parental education all left the Hispanic-white children differences insignificant. However, after controlling for all neighborhood characteristics, Hispanic children were more likely than white children to see a dentist. The same is true for black children, who were about as likely as white children to see a dentist, except when controlling for neighborhood characteristics, which left them more likely to have seen a dentist. Controlling for assets and net worth left them more likely to have seen a dentist (significant only at the 10 percent level). Asian children were never significantly more or less likely than white children to have seen a dentist during the year before the interview with any of the other controls.

We also looked at having had a checkup during the year before the interview and at having a usual source of care at the time of the interview. There are no Hispanic-white differences for children in having obtained a checkup. Black and Asian children were more likely than white children to have gotten checkups, either when the findings were adjusted only for age and gender or when additionally controlling for any of the factors we looked at (parent's education, education and family income, education and assets/net worth, education and neighborhood).

Finally, we consider differences in having a usual source of care. Hispanic and Asian children were about as likely as white children to have a usual source of care. Black children were more likely than white children to have a usual source, although this difference is significant only at the 10 percent level when controlling for education alone or immigration and education, family income and education, or assets/net worth and education. The sole exception is that the black-white difference becomes insignificant after controlling for neighborhood characteristics. Black-Hispanic differences in children's checkups and having a usual source of care are also generally significant, with blacks more likely to have had a checkup or have a usual source of care.

Overall, these findings suggest that, unlike our findings for insurance, many of the racial and ethnic differences in health care use or having a usual source of care for adults shrink or become insignificant after controlling for education, immigration, assets/net worth, family income, or a full set of neighborhood characteristics. At the same time, many of the differences for children are unaffected by these controls. These findings make it of interest to examine the role of each control in explaining both use of care and access to a usual source of care.

As other researchers have done, we found that less education, lower family income, and being a renter or having lower nonhousing net worth are all negatively associated with some measures of health care use or access for adults. Less-educated adults are less likely than more highly educated adults to have seen a doctor or dentist during the year before the interview or to have a usual source of care at the time of the interview. Lower family income is also associated, for adults, with being less likely to have seen a dentist during the year before the interview and with being less likely to have a usual source of care. In addition, for adults, having lower net worth is associated with being less likely to have seen a dentist and with being less likely to have a usual source of care. For children, parent's education, family income, and assets/net worth are less strongly associated with use and access than they are for adults. However, children with a more educated parent or with higher family income are much more likely to have seen a dentist in the year before the interview. But for children, there are no other strong relationships between a parent's education, family income, or assets/net worth and doctor visits, checkups, or having a usual source of care.

As with insurance coverage, immigration status for adults, and a parent's immigration status for children, both play a strong role in explaining patterns of use, controlling for age, gender, and education. Undocumented adults were significantly less likely than U.S.-born adults to have seen a doctor (the gap is 16 percentage points) or dentist (the gap is 15 percentage points) in the year before the interview or to have a usual source of care at the time of the interview (the gap is 20 percentage points). Documented adults were less likely than U.S.-born adults to have a usual source of care (the gap is 11 percentage points and it is significant at the 10 percent level). Noncitizen children of an

undocumented parent were much less likely than children of the U.S.-born (the gap is 45 percentage points) to have seen a dentist during the year before the interview[15] and less likely to have had a usual source of care at the time of the interview (but this finding is significant only at the 10 percent level). Children of a documented parent were also less likely than children of a U.S.-born parent to have seen a dentist in the year before the interview (the gap is 10 percentage points). To the extent that dentist visits serve as a proxy for preventive visits, these differences for children, in particular, are striking.[16]

Location, Access, and Use of Care

One may wonder why our direct measures of provider supply, such as the number of doctors' or dentists' offices in an individual's Census tract, are generally not tied to having seen a doctor or dentist or to having gotten a checkup during the year before the interview. One hypothesis is that our measure of neighborhoods is not large enough in area to capture the extent to which proximity affects use. However, our findings are quite similar when we use a measure of neighborhood spanning Census tracts within a three-mile radius or when we use a measure of an individual's own tract along with adjacent tracts and their immediate neighbors.

To further explore these findings, we take advantage of the fact that for those individuals with a usual source of care, we know the Census

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[15]The CHIS also asks if children visited the dentist for preventive care. Noncitizen children of an undocumented parent were also considerably less likely than the U.S.-born to have visited a dentist for preventive care, controlling for race/ethnicity, a parent's education, age, and gender. The result holds in both datasets additionally controlling for family income.

[16]A recent Surgeon General report notes that the presence of dental caries (tooth decay) is the most common chronic childhood disease, five times more prevalent than asthma, and that its treatment consumed about 5 percent of total health expenditures in 1998 (U.S. Department of Health and Human Services, 2000). Poor children are much more likely to suffer tooth decay than children in higher-income families, and their disease is less likely to be treated. Insurance status is also an important predictor of use of dental care. Although Medicaid covers dental care for children, it is covered for adults in only some states (including California). Evidence suggests that many individuals eligible for Medicaid-covered dental care do not obtain it (U.S. Department of Health and Human Services, 2000).

tract of this source of care for most of the sample (some people gave insufficient address information to permit coding the Census tract of their source of care).[17] Of the 74 percent of adults with a place to go when sick, about 83 percent gave enough address information for us to determine whether their usual source of care was within their home Census tract. As it turns out, only 5 percent of adults with a usual source of care, and with the relevant geographic information, went to a provider within their Census tract. We also looked at the relationship of workplace to provider location. We know what tract most people worked in, if they worked. Of the 74 percent of adults with a usual source of care, 41 percent were working and provided enough address information for both their place of work and their usual source of care to tell whether their usual source of care was in the same tract as where they worked. In this case, only 3 percent of adults who had a usual source of care, and provided enough relevant geographic information, went to a provider within the tract they worked in.

We performed a similar exercise for children, looking at whether their usual source of care was in their home or school Census tract. For the 93 percent of children with a usual source of care who also reported the relevant geographic information, only 10 percent went to a provider within the tract they lived in, and only 8 percent went to a provider within the tract where their school was located. (The school comparison is only for school-aged children.) Although these numbers for both adults and children may seem low, considering the fact that for individuals with insurance, a provider's acceptance of that insurance is an important determinant of the doctor one sees, our findings are not so surprising.

Williams (1990) pointed out other possible reasons that access to nearby health facilities need not translate into increased health care use. Facilities in low-income neighborhoods tend to have a higher turnover of health care professionals, possibly disrupting continuity of care. Limited health literacy is also a potential barrier to seeking care, even when care is available. An alternative explanation for our findings could be that

[17]Of 1,818 adults with a usual source of care, 275 did not give sufficient geographic information to determine the Census tract of this source.

certain types of use may not be particularly sensitive to how close the relevant facility is to an individual's place of residence.[18] Another possibility is that even our expanded measures of proximity (being in a Census tract within three miles of one's own tract) are too small or our measures of facilities are not the right types of facilities to capture a relationship.

As was touched on in Chapter 3, neighborhoods may affect health outcomes through either of two channels, one representing physical resources and the other representing social resources (e.g., social efficacy or social capital). We have found little evidence that the physical presence of health care resources in one's own neighborhood explains use. However, use of care may also be affected by neighborhood social capital, that is, social norms and social sanctions that act as resources for individuals via their membership in communities. Prentice (forthcoming) used LAFANS data to look at the effect of neighborhoods on primary care access. She found evidence that measures of social capital (for instance, the degree of neighborhood cohesion and the degree to which neighbors are a resource for each other) are associated with having a usual source of care.[19] This work is consistent with our findings here.

Use of Hospitals and Emergency Rooms

Much public debate about use of the emergency room (particularly by the uninsured or the undocumented, who are presumed to be uninsured) is about people who visit the ER for care that could be obtained from a family doctor. Other aspects of the debate focus on the use of ERs or on hospitalizations related to such conditions as asthma or hypertension, which, if well controlled, might not require such care. As

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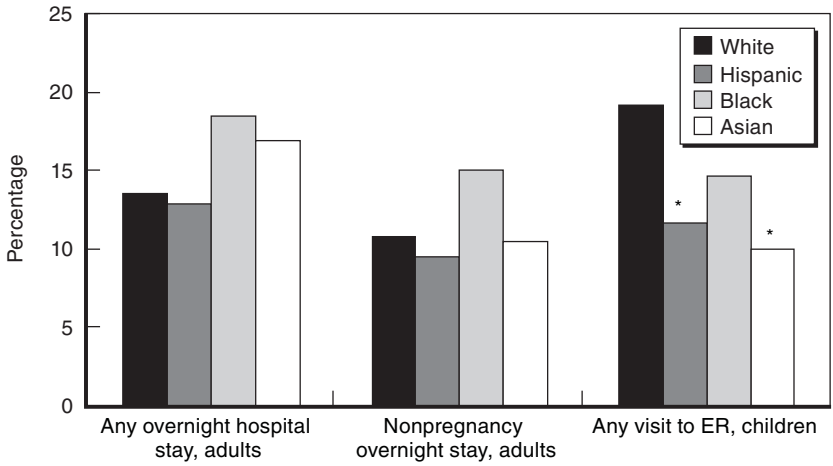
[18]Buchmueller, Jacobson, and Wold (2006) found evidence that changes in the location of facilities—hospital closures in Los Angeles County over the late 1990s and early 2000s—had little effect on outpatient use and actually increased the probability of reporting a usual source of care.

[19]Her neighborhood measures include specific measures of social capital—such as whether most people in the neighborhood agreed that neighbors were willing to help one another, agreed that the neighborhood was close-knit, or had friends living in the neighborhood—as well as a measure of neighborhood stability, the share living in the same house as five years ago.

discussed in the introduction to this chapter, our data contain two measures that may offer some insight into avoidable hospitalizations. The first is the share of adults with an overnight hospital stay any time during the two years before the interview, and the second is the share of children with any visit to an emergency room during the year before the interview. Unfortunately, we do not have enough detail on the cause of visits to tell if the adult hospital visits or child ER visits were for ambulatory care sensitive hospitalizations (ones for conditions that if, well-controlled, would not result in hospitalizations). Nor can we tell if they were for care that could be obtained at a clinic or doctor's office. (The one exception is that we can tell if the overnight hospital stay was related to a pregnancy. Although some pregnancy-related hospitalizations are avoidable, many are not.) Furthermore, we do not know how these visits were paid for, and both types of visits could have been the result of bad health rather than avoidable use of care. However, our measures of such visits provide a glimpse into use patterns of hospitals and ERs, and our data allow us to look at these patterns in terms of racial, ethnic, and immigration status differences.

Figure 4.4 shows the percentage of adults with any hospital stay or any stay not related to a pregnancy that took place during the two years before the interview; it also shows the percentage of children with any ER visit during the year before the interview. Both comparisons control only for age and gender. There are no differences between Hispanic and white adults in either type of overnight hospital stay, and Hispanic children are less likely than white children to have visited the ER during the year before the interview. Black adults and children did not differ significantly from whites in their rates of overnight hospital stays or ER visits, and neither did Asian adults. Asian children were less likely than white children to have visited the ER.

We also looked at differences across immigration status in these types of use (not shown in the figure). We found no differences in overnight hospital stays by Hispanic ethnicity and immigration status, with one exception. Documented non-Hispanic adults were less likely than U.S.-born non-Hispanic adults to have had an overnight hospital stay or a stay unrelated to pregnancy. In addition, undocumented



SOURCE: Authors' calculations from LAFANS.

NOTES: Any overnight hospital stay and nonpregnancy-related overnight hospital stay is any stay occurring during the two years before the LAFANS interview. Any ER visit is any visit occurring during the year before the LAFANS interview. Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

Figure 4.4—Adults with Any Overnight Hospital Stay or Any Nonpregnancy-Related Overnight Hospital Stay and Children with Any Visit to an Emergency Room in Los Angeles County, by Race and Ethnicity

Hispanics were less likely than U.S.-born non-Hispanics to have had an overnight stay not related to a pregnancy. However, we did find significant differences across the board in children's ER visits. All Hispanic children with a foreign-born parent were less likely than non-Hispanic children with a U.S.-born parent to have had any ER visits. (The difference between Hispanic children with a documented parent and non-Hispanic children with a U.S.-born parent was significant only at the 10 percent level.)

We also examined the role of other factors in explaining these use patterns. Controlling for any of our factors (education, immigration status, family income, assets/net worth, and neighborhood) did not change our finding that there were no differences between Hispanic adults and white adults or between black adults and white adults in hospital stays overnight during the two years before the interview. Asian

adults were more likely than white adults to have stayed overnight, after controlling for immigration and education and also for education and neighborhood characteristics (the latter difference is significant only at the 10 percent level).[20]

In Figure 4.4, we see that Hispanic children were about 8 percentage points less likely than white children to have visited an ER during the year before the interview. Controlling for education or education and various factors shrank this difference to between 2 and 4 percentage points and left it insignificant. Black children were about as likely as white children to have visited the ER. Asian children were still significantly less likely to have visited the ER controlling for education, education and family income, and education and assets/net worth (the last being significant only at the 10 percent level).

We examined the other factors tied to use of the hospital overnight (for adults) or the emergency room (for children). Education, family income, and housing assets and nonhousing net worth were not significantly related to overnight stays for adults or emergency room visits for children, and neither were our neighborhood measures.

We also examined the role of immigration status in explaining overnight stays or ER visits, controlling for age, gender, education, and race/ethnicity.[21] These comparisons are shown in Figure 4.5. Documented adults were 8.5 percentage points less likely than U.S.-born adults to have stayed overnight in the hospital (significant at the 5 percent level). Both naturalized adults and undocumented adults were less likely than U.S.-born adults to have stayed overnight, although these differences were significant only at the 10 percent level. When we considered nonpregnancy-related stays, all immigrant groups were less likely than the U.S.-born to have stayed overnight in the hospital, controlling for the same factors (race/ethnicity, age, gender, and

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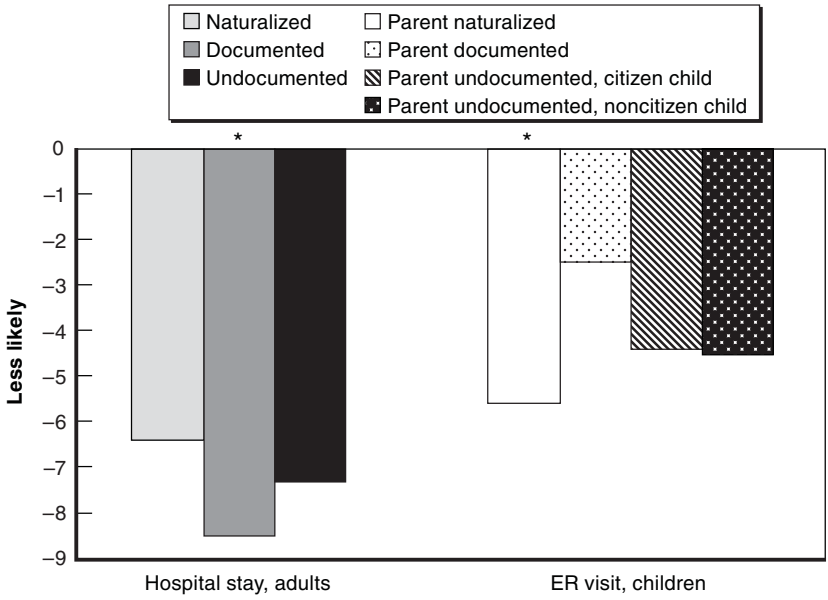
[20]Asians in LAFANS may not be representative of all Asians in Los Angeles County because persons who could not complete the interview in English or Spanish were considered out of scope.

[21]These findings about the foreign-born being no more likely than (and in some cases less likely than) the U.S.-born to have visited the hospital overnight during the two years before the interview also hold controlling additionally for family income.



SOURCE: Authors' calculations from LAFANS.

NOTES: Hospital stays are any stay occurring during the two years before the LAFANS interview. ER visits are any visit occurring during the year before the LAFANS interview. Data have been adjusted for gender, age, race/ethnicity, and parent's or adult's education and are weighted. Statistics for ER visits are reported according to the Hispanic ethnicity of the child and the immigration status of the parent who is the child's primary caregiver and for children of an undocumented parent, by whether the child is a citizen.

*Significantly different from the value for U.S.-born adults or children with a U.S.-born parent at the 5 percent level of significance or below.

Figure 4.5—Percentage by Which Foreign-Born Adults in Los Angeles County Are Less Likely Than U.S.-Born Adults to Have Had Any Overnight Hospital Stays and by Which Children with a Foreign-Born Parent Are Less Likely Than Children with a U.S.-Born Parent to Have Had Any ER Visits

education), although the finding for naturalized citizens is significant only at the 10 percent level.

After controlling for parental education, age, gender, and race/ethnicity, or any of a variety of other factors for children, we found that children with a parent born abroad were no more likely and that children with a naturalized parent were significantly less likely than those

whose parent was U.S.-born to have visited the ER during the year before the interview.[22]

Recent research by Weber et al. (2005) suggests that, in population data, individuals with a regular source of care (which is not the emergency room) are more rather than less likely to visit the emergency room. Although there may be concerns about unobserved factors affecting the coefficients on a usual source of care in such a regression, we found no significant relationship between having a (nonemergency room) usual source of care and having gone to the emergency room during the last year. (A very small share of people reported using an emergency room as a usual source of care—about 2 percent of adults and 1 percent of children.) Similar concerns apply to looking at who is uninsured as a determinant of using the emergency room. That said, descriptive regressions imply that the uninsured are a significant 10–14 percentage points less likely to have gone to the emergency room during the year before the interview, after controlling only for race/ethnicity, age, and gender, and also after additionally controlling for parental education (significant only at the 10 percent level), parent's immigration status, and neighborhood characteristics.

Ideally, we would like to know more about the type of emergency room visit or overnight hospital stays from information recorded in the LAFANS data. In particular, it would be of interest to look separately at admissions for conditions considered to be responsive to outpatient treatment.[23] Unfortunately, we do not have complete diagnosis information in LAFANS. However, we can look separately at emergency room visits for all Census tracts in Los Angeles County in the OSHPD hospital data (described in detail in Appendix A), by whether or not these visits resulted in a hospital admission. We tested whether emergency room visits that did or did not result in a hospital admission

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[22]Results from the CHIS also suggest that children of a foreign-born parent are no more likely than children of a U.S.-born parent to have visited an ER during the year before the interview, controlling for race/ethnicity, age, gender, and a parent's education. These findings about ER visits and immigration status are robust in both datasets when controlling additionally for family income.

[23]Defined by Billings et al. (1993) as diagnoses in which "timely and effective outpatient care can help to reduce the risks of hospitalization" (p. 163).

varied by demographic characteristics (a tract's racial/ethnic breakdown, age distribution, share of foreign-born citizens, and share of noncitizens) as well as by other neighborhood characteristics. In doing so, we found that emergency room visits that resulted in a hospital admission were not related to the racial/ethnic breakdown of the tract, nor were they related to age or education distributions. Such visits were also less common the larger the share of foreign-born noncitizens in the tract. None of these same factors were associated with the number of emergency room visits that did not result in a hospital admission (our weak proxy for "unnecessary" emergency room visits). Overall, neither the number of visits resulting in admission nor the number not resulting in an admission was significantly related to our tract-level measures of race/ethnicity, and both were negatively related to the share of foreign-born noncitizens. These findings are consistent with our findings using LAFANS data about the use of emergency rooms not varying much by race/ethnicity and not being positively related to being foreign-born.

Summing Up

We began our examination of the use of preventive care and other forms of care by noting the links that research has established between the use of various types of care and better health outcomes. Here, we found that even after controlling for education, Hispanic adults were less likely than white adults to have seen a doctor or dentist during the year before the LAFANS interview. To the extent that these dental visits are preventive, this suggests that Hispanic adults have been missing recommended care. In addition, there is some evidence that Hispanic adults may also be less likely than white adults to have a usual source of health care. Black adults, like Hispanic adults, on average have a lower socioeconomic status than whites in Los Angeles County. However, black adults were more likely than Hispanics or whites to have seen a doctor in the year before the interview and, in some cases, to have a usual source of care, after adjusting for education and immigration status, income, and other characteristics.

Although Hispanic children were also less likely than white children to have seen a dentist, this difference goes away after we control for parental education, either by itself or along with the parent's

immigration status, family income, or family assets/net worth. In fact, this Hispanic-white difference is sometimes reversed when we control for parental education and neighborhood characteristics. Black and Asian children were about as likely as white children to have seen a dentist, black children were about as likely and Asian children more likely than whites to have seen a doctor, and black and Asian children were more likely to have gotten a checkup. These differences were mostly unchanged after controlling for the immigration status of a parent, family income, assets/net worth, or neighborhood characteristics.

We also found that average characteristics of people's Census tracts are associated with health care use but that the presence of health facilities alone is not. We show that use of hospitals and emergency rooms does not vary much by race and ethnicity or by immigrant status once we control for education, perhaps suggesting that concerns about particular groups overusing these sources of care may not be well founded for Los Angeles County.

5. Health Status

So far we have looked at health insurance coverage and health care use, both of which are the targets of considerable public spending. The ultimate goal of this spending is to affect overall health status, the topic of this chapter. In previous chapters, we discussed research findings linking both insurance coverage and the use of health care to health status, although much of the variation in health status cannot be explained by insurance coverage or use alone. In fact, some research suggests that the relationships are reciprocal, that is, that health can affect insurance and use in addition to insurance and use affecting health.

Here, we look at whether the racial and ethnic differences in coverage and use that we have observed also appear in health status—and given the extensive research on such differences, we expect to find them. However, the strength of the relationship between our detailed measures of immigration status—which differentiate the documented and the undocumented from citizens—and health remains an open question. Some have argued that if no relationship exists between health and these factors, then concerns about differences in use and insurance are overstated. For example, if all immigrants were healthier and were therefore less likely to be insured or to see a doctor, then differences in insurance coverage or use of care might not be of great concern. In contrast, if the reverse is true—that is, immigrants were less healthy *and* less likely to be insured or to see a doctor—then these differences might be troubling. In any case, our research suggests that immigration status may bear some relation to health status, although not in a uniform fashion.

In this chapter, we examine health status by looking at a number of doctor-diagnosed chronic conditions for both adults and children.[1] Although there are both advantages and disadvantages to looking at doctor-diagnosed conditions (for example, not everyone sees a doctor at the same rate), these conditions are commonly collected in most health datasets. For adults in our data, we look at hypertension (or high blood pressure), diabetes, coronary heart disease, and asthma. We chose these conditions for two major reasons. First, hypertension, diabetes, and asthma are all conditions considered to be sensitive to the receipt of appropriate ambulatory care (e.g., doctor or clinic visits). Effective management of these conditions can help prevent flare-ups that result in hospital admission. In fact, the Agency for Healthcare Research and Quality (2005) has set benchmark levels for the number of per capita hospitalizations for these conditions (among others), calling them "Prevention Quality Indicators." These indicators are used to assess whether a community has adequate primary care access or outpatient services by using hospital discharge data to see if the community's preventable hospitalizations are below the appropriate benchmarks. A second, more practical reason for looking at these conditions is that they are relatively common both in the LAFANS data and in the population at large.

Both generally and in our data, children tend to be healthier than adults. Our measures of children's health are less extensive—we look only at one condition for children, whether a child has been doctor-diagnosed with asthma. We also know whether a child has had an asthma attack any time in the year preceding the LAFANS interview, a measure we use to assess whether this chronic health condition is being well managed.

In addition to looking at health conditions, we also examine self-rated general health (for adults) and parent-rated general health (for children). General health is rated on a five-point scale—excellent, very

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[1]One disadvantage to looking at conditions diagnosed by physicians is that people who obtain care less frequently may be less likely to have been diagnosed with a specific condition. In addition, previous research has found that asthma diagnosis in children may be related to parental education, parents' ability to advocate, and physician quality (Akinbami, Rhodes, and Lara, 2005; Yeatts et al., 2003).

good, good, fair, or poor. For adults and children, we look at the share who reported that their general health falls below excellent or very good. For children, this assessment was made by the parent who acted as the primary caregiver. We look at self-rated health for several reasons. First, research has shown that low levels of self-rated health are predictive of mortality, even conditioning on other factors (Idler and Benyamini, 1997).[2] Second, as noted above, to report having a doctor-diagnosed condition, one needs to have seen a doctor. This is not the case (obviously) for self-rated health. Thus, it is possible that differences in the prevalence of some doctor-diagnosed conditions may be partially due to differences in having seen a doctor and gotten a diagnosis. It is important to note that self-rated or parent-rated health does not depend on having seen a doctor.[3]

Looking at health status—especially health status measured at a particular point in time—presents certain challenges. Most of the health status measures we examine in this chapter may be shaped over a lifetime of experiences and through a variety of health-related behaviors. Thus, a measure of health at any given time is a function of current and past use of medical care, health behavior, and the ability to adhere to treatment (which may itself also be tied to education).[4] These factors not only remind us that past health can influence current health, but they also

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[2]Kapteyn, Smith, and Von Soest (2004) show evidence that response levels for self-rated health differ for individuals from the United States and The Netherlands. Other research found that native Spanish speakers may answer questions about general health differently from English speakers. We try to account for such possible differences for some immigrants by controlling for whether the interview was done in Spanish (more likely for less-assimilated immigrants). For more discussion, see the next footnote and Appendix A.

[3]One complication with using self-rated general health for foreign-born unacculturated Hispanics is that they are known to conflate their personal situation with their health status in answering this question (Finch et al., 2002). This is discussed more in Appendix A. We adjust for this by including a control for whether Hispanic respondents completed the interview in Spanish (as a measure of acculturation) in all estimates for general health. We also adjust for it by including years in the United States as an additional measure. Of course, acculturation itself may be correlated negatively with health status (as discussed below in the section on immigrant selection), which would make this strategy problematic.

[4]Grossman (1972) was the first to develop this view of health as a stock variable affected by the flow of medical inputs.

point to an interpretive challenge in understanding health disparities. That is, we cannot assume that such characteristics as poverty cause health disparities—it may be that health disparities cause such characteristics (Smith, 1999; Smith and Kington, 1997). Despite these challenges in interpreting health status data, providing some analysis of the health status measures from the LAFANS data helps us assess the degree to which some of our findings may be the result of immigrant selection or of immigrants being systematically different from natives. We discuss the issues surrounding immigrant health in more detail below, but first we will examine our findings on health status among adults and children in Los Angeles County.

Table 5.1 contains means for our doctor-diagnosed conditions and for self-rated or parent-rated general health. (These numbers are simple means, unadjusted for age and gender difference, unlike the numbers presented in the rest of the chapter.) As we can see, almost one-quarter of adults had high blood pressure, whereas only 6–8 percent had doctor-diagnosed diabetes, coronary heart disease, or asthma. A slightly larger share of children than adults had asthma (11% versus 8%). Among children with asthma, a little less than half had had an attack during the

Table 5.1

Health Status Measures for Adults and Children in Los Angeles County

	Adults	Children
Doctor-diagnosed conditions		
High blood pressure	22%	—
Diabetes	7	—
Coronary heart disease	6	—
Asthma	8	11%
During the 12 months before the interview		
Asthma attack (child only)	—	5
General health is neither excellent nor very good		
Self-rated health	47	—
Parent-rated health	—	24

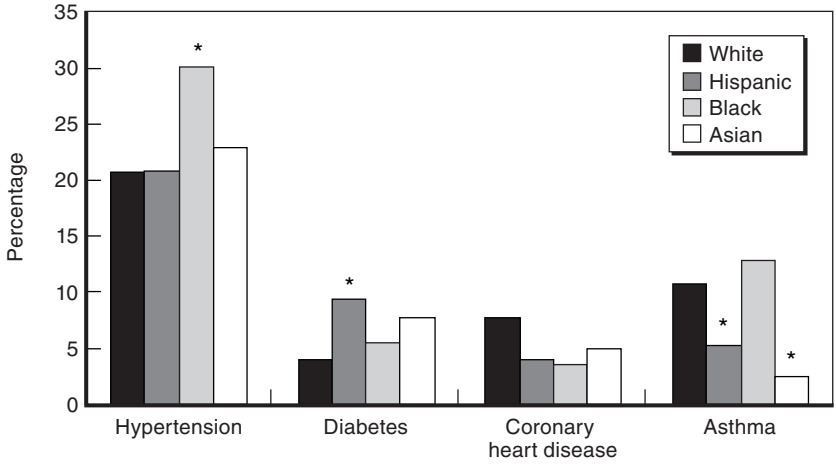
SOURCE: Authors' calculations from LAFANS.

NOTES: Doctor-diagnosed conditions are as of the time of the LAFANS interview, as is self-rated or parent-rated health. Asthma attacks are any occurring during the year before the LAFANS interview. Data are weighted.

last year (5% of all children). Finally, most children's parents reported that their health was excellent or very good (76%) so only 24 percent of the children's health was reported to be worse than excellent or very good (100 – 76 = 24). About half of adults reported that their own health was excellent or very good.

Differences in Health Status, by Race and Ethnicity

How do our health measures differ across racial and ethnic groups? Figure 5.1 presents racial and ethnic differences in our four doctor-diagnosed conditions for adults. As in previous chapters, these and all other calculations are adjusted for age and gender differences. As previously, bars for nonwhite groups are marked with an asterisk if the mean for that group is statistically significantly different from that for whites at the 5 percent level or below. We discuss differences that are significant at the 10 percent level or below, but they are not designated on the figures, as they are more likely than those that are significant at



SOURCE: Authors' calculations from LAFANS.

NOTES: Data have been adjusted for gender and age and are weighted. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

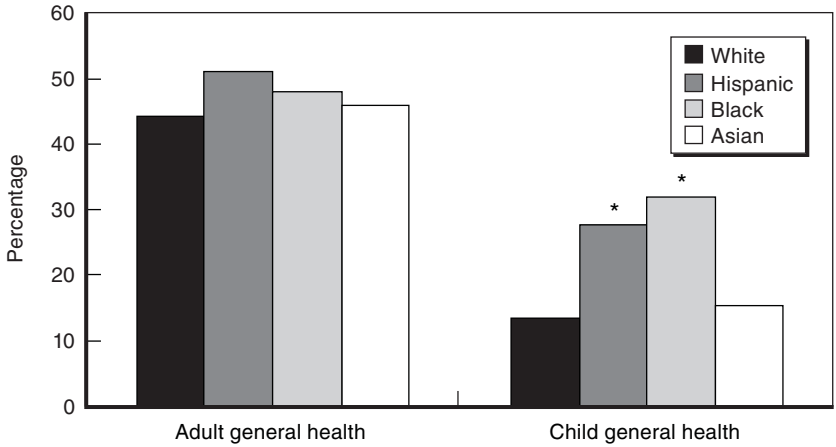
Figure 5.1—Prevalence of Various Doctor-Diagnosed Conditions Among Adults in Los Angeles County, by Race and Ethnicity

the 5 percent level or below to have occurred by chance. Recall that differences between two groups may not be not statistically significant for two reasons: There may not be any true differences or, if there are a small number of respondents in one of the groups, differences may not be detectable with the current data.

Here, we see that differences by race and ethnicity—or lack thereof—are not uniform across conditions. For example, although hypertension is the most common doctor-diagnosed health condition noted here, it affects blacks more than any other group. In contrast, coronary heart disease appears in rather low levels among most groups—except for white adults, who have significantly higher levels than Hispanics and blacks, but only at the 10 percent level. We also see that although Hispanic adults are more likely than whites to have diabetes, they either are less likely than whites to have other conditions (asthma) or we cannot distinguish their levels from those of whites (hypertension, coronary heart disease). In addition, Hispanics are less likely than blacks to have hypertension or asthma (significance not indicated on the figure) and their levels of coronary heart disease and diabetes cannot be distinguished from those of blacks. These patterns of Hispanic-white differences differ for diabetes and the other conditions. However, given that Hispanics in Los Angeles County are on average of lower socioeconomic status than whites but of similar socioeconomic status to blacks, this finding, common to the literature and known as the Hispanic Paradox, may seem somewhat puzzling. We discuss this paradox in more detail below.

In contrast to our findings for adults, our calculations for children revealed no significant differences in the prevalence of asthma across racial and ethnic groups. However, when we looked at asthma attacks, we found that black children were more likely than white children to have had an attack in the year preceding the LAFANS interview, although this finding is significant only at the 10 percent level.

Our final measure, for self-rated general health, revealed interesting differences in perceptions of adult and child health. Figure 5.2 shows the percentage of adults and children with health reported to be less than excellent or very good. Note that these differences also control for



SOURCE: Authors' calculations from LAFANS.

NOTES: Adult measures are self-rated; child measures are parent-rated. Other choices for health status besides excellent or very good are health is good, fair, or poor. Data have been adjusted for gender, age, and whether the language of the interview was Spanish and are weighted. All groups but Hispanics are non-Hispanics.

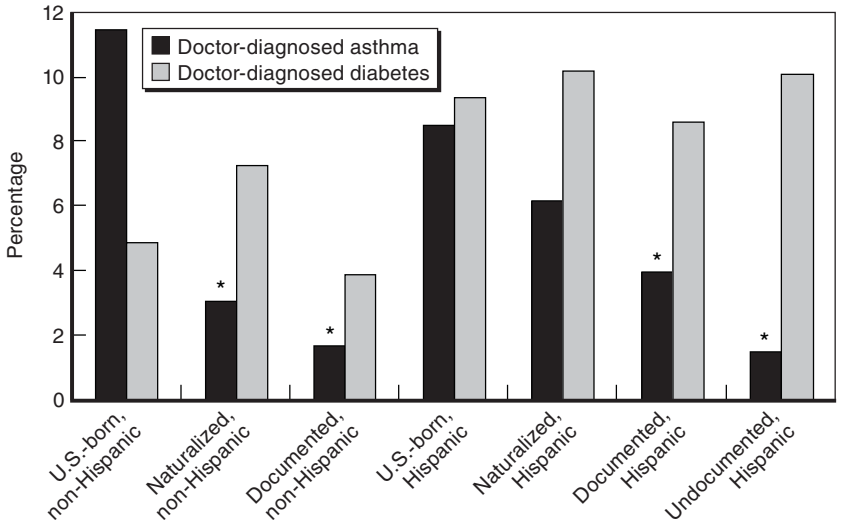
*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

Figure 5.2—Adults and Children in Los Angeles County with General Health Worse Than Excellent or Very Good, by Race and Ethnicity

whether the language of the interview was Spanish to take into account issues of acculturation. Despite the racial and ethnic disparities we found in various health conditions for adults, when it came to adult self-rated general health, we saw no significant differences across race and ethnicity. That is, adults tended to rate their health as being worse than excellent or very good at similar rates, close to 50 percent no matter their race or ethnicity. However, parent-rated health for children differed significantly according to race and ethnicity. Parent-rated health of black and Hispanic children was significantly worse than that for white children.

Differences in Health Status, by Immigration Status

Patterns in our health status measures look somewhat different when we examine them in relation to immigration status. First, we turn to rates of doctor-diagnosed conditions in adults. Figure 5.3 presents



SOURCE: Authors' calculations from LAFANS.

NOTE: Data have been adjusted for gender and age and are weighted.

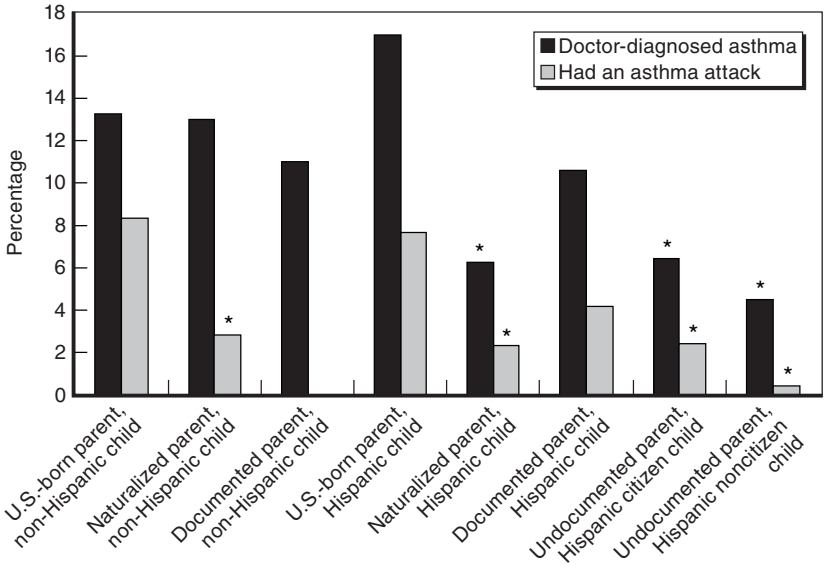
*Significantly different from the value for U.S.-born, non-Hispanic adults at the 5 percent level of statistical significance or below.

Figure 5.3—Prevalence of Doctor-Diagnosed Asthma and Diabetes Among Adults in Los Angeles County, by Immigration Status and Whether Adult Is Hispanic

prevalence rates for asthma and diabetes, the two conditions that differed most between whites and Hispanics. (Again, the asterisks indicate the statistically significant differences between the prevalence levels for the rest of the groups and that for non-Hispanics born in the United States.) Clearly, one of the largest differences here is between undocumented Hispanics and U.S.-born non-Hispanics, with the undocumented reporting much lower rates of asthma. Documented Hispanics also had lower rates of asthma than the non-Hispanic U.S.-born, while having slightly higher rates of asthma than the undocumented (however, the difference between the documented and undocumented is not statistically significant). Naturalized and documented non-Hispanics also reported significantly lower rates of asthma diagnosis than the non-Hispanic U.S.-born.

In contrast to the results for asthma prevalence, the differences in prevalence of doctor-diagnosed diabetes are not as large and not significant. Although all Hispanic groups reported higher prevalence levels than U.S.-born non-Hispanics, none of these differences are significant at the 5 percent level. Even at the 10 percent level of significance, only naturalized Hispanics had a significantly higher level of doctor-diagnosed diabetes than U.S.-born non-Hispanics.

Does children's health differ according to immigration status? Figure 5.4 shows the percentage of children who had doctor-diagnosed



SOURCE: Authors' calculations from LAFANS.

NOTES: Asthma attacks are any attack during the year before the LAFANS interview. Data have been adjusted for gender and age and are weighted. No value is presented for asthma attacks for documented, non-Hispanic children because this value perfectly predicted not having an attack during the last year in the underlying probit regression. Statistics are reported according to the Hispanic ethnicity of the child and the immigration status of the parent who is the child's primary caregiver and for the last two categories of children, by whether the child is a citizen.

*Significantly different from the value for U.S.-born, non-Hispanic children at the 5 percent level of statistical significance or below.

Figure 5.4—Doctor-Diagnosed Asthma and Having Had an Asthma Attack During the Year Before the Interview Among Children in Los Angeles County, by Parent's and Child's Immigration Status and Whether Child Is Hispanic

asthma and the percentage who had an asthma attack in the year preceding the LAFANS survey. As we have done elsewhere in the report, we break these findings down by parental immigration status and, for children with undocumented parents, by child citizenship status.[5] Here we see that Hispanic children of an immigrant parent were less likely than non-Hispanic children of a U.S. native to have doctor-diagnosed asthma (the exception being Hispanic children of a documented parent). In principle, this finding could be a function of undiagnosed asthma. But when we restricted the sample to children who saw a doctor in the year before the interview, the differences between groups were about the same.

Reports of an asthma attack in the year before the interview followed a pattern similar to that of asthma prevalence, with Hispanic children of an immigrant parent less likely than non-Hispanic children of a U.S.-born parent to have had an attack (again with the exception of Hispanic children of a documented parent). Here, non-Hispanic children of a naturalized parent were also less likely than U.S.-born non-Hispanic children to have had an attack. These results suggest that asthma may be less prevalent among children of immigrants and that they were less likely to have had an asthma attack during the year before the interview.[6] However, these differences are not adjusted for other characteristics that may be associated with both asthma and immigrant status and may not hold once we consider the role of other factors.

Our last health measures are self- or parent-rated general health. We found that for both adults and children, Hispanic immigrant groups reported worse general health than the U.S.-born. Both documented and undocumented Hispanic adults reported worse self-rated health than did U.S.-born non-Hispanics. Undocumented Hispanics reported that

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[5]Recall that we only systematically know the detailed immigration status of the child's primary caregiver (almost always a parent). Thus, the other parent, if such a parent is present, may be of any immigration status.

[6]As noted above, lower prevalence levels could also be a result of being less likely to have been diagnosed, because these children have seen the doctor less often than other children, although we did not see significant differences in having seen a doctor or having had a checkup for these groups relative to non-Hispanic children with a U.S.-born parent.

their general health was worse than excellent or very good at rates 20 percentage points higher than U.S.-born non-Hispanics; for documented Hispanics, the corresponding number was 15 percentage points. Comparing instead to U.S.-born Hispanics, the undocumented were 16 percentage points more likely to report that their health was worse than excellent or very good.

Parent-rated general child health was worse for most Hispanic children, except for those with a foreign-born naturalized parent; these children had about the same parent-rated health as non-Hispanic children with a U.S.-born parent. Hispanic children with a U.S.-born parent had worse parent-rated health than non-Hispanic U.S.-born children by 8 percentage points, but the difference was significant only at the 10 percent level. Citizen Hispanic children with an undocumented parent had rates of health worse than excellent or very good that were 19 percentage points higher than those of non-Hispanic children with a U.S.-born parent. We found similar numbers for Hispanic children with a documented parent (14 percentage points) and noncitizen children with an undocumented parent (17 percentage points), although these differences were statistically significant only at the 10 percent level. These numbers, like all estimates of general health, account for the language of the interview.

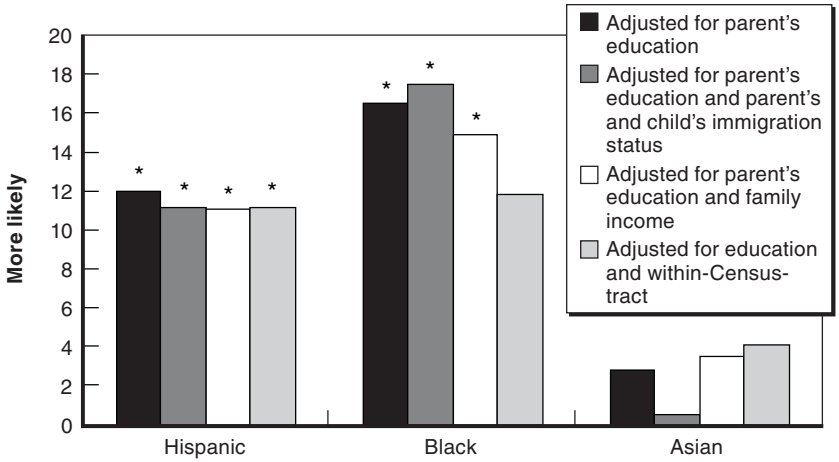
Even after additionally controlling for the number of years the parent has spent in the United States, differences in parent-rated child health among these groups remain very similar. It is possible that if we were able to account for acculturation more completely, no group of children of immigrants would be seen by a parent to be any worse off than non-Hispanic children of the U.S.-born. An alternative explanation is that this finding is a result of other factors that either we have not yet accounted for or are unobservable, and which are associated with the immigrant status of parents and parent-rated child health.

Accounting for Individual and Neighborhood Characteristics

As in our analyses of insurance coverage and use of care, we examined a number of individual and neighborhood factors to determine

what relationship, if any, they might have to health status differences across racial, ethnic, and immigrant status groups. For adults, we found that accounting for such individual and neighborhood characteristics as education, income, or neighborhood characteristics seemed to have little effect on racial and ethnic differences, perhaps not surprising given the lack of variation in outcomes. Similarly, we found that for children there were no significant racial and ethnic differences in doctor-diagnosed asthma, after accounting for education, education and family income, or education and neighborhood. As we might expect given Figure 5.4, controlling for the immigration status of a parent does matter for explaining children's health. Taking into account parental immigration status, Hispanic and Asian children had higher levels of asthma—but these differences compared to white children are statistically significant only at the 10 percent level. Hispanic and Asian children were about as likely as white children to have had asthma attacks and, in some case, blacks were more likely than whites to have had them (significant only at the 10 percent level).

What about self- and parent-reported general health? Even after accounting for a variety of individual and neighborhood characteristics including immigrant status, adult self-rated health was about the same for all racial and ethnic groups. However, the outcomes for children differed strikingly across race and ethnicity. Figure 5.5 shows comparisons of child general health, controlling for such factors as parental education (bar 1), parental education and parental immigration status (bar 2), and parental education and family income (bar 3), and education and comparison within neighborhoods (bar 4). As in previous figures, this figure shows the differences between values for the racial groups shown and non-Hispanic whites, accounting for various factors. As we can see, Hispanic and black children were reported to be in worse health by their parent than were the children of non-Hispanic whites, even after accounting for a wide array of parental and child characteristics. Controlling for education, income, and the immigration status of a parent or comparing the children to others living within the same neighborhood does not change the fact that Hispanic children's parents report them to be in worse health. Controlling for some of these factors reduces the differences between black and white children, but



SOURCE: Authors' calculations from LAFANS.

NOTES: Data have been adjusted for gender, age, education, and whether the interview was in Spanish, and are weighted. Other choices for health status besides excellent and very good are health is good, fair, or poor. All groups but Hispanics are non-Hispanics.

*Significantly different from the value for whites at the 5 percent level of statistical significance or below.

Figure 5.5—Percentage by Which Hispanic, Black, and Asian Children in Los Angeles County Are More Likely Than White Children to Have General Health That Is Worse Than Excellent or Very Good

even when black children are compared to white children in their own neighborhoods, the difference is still significant at the 10 percent level. One might wonder why we observe these large differences across race and ethnicity in parent-rated health but not in asthma or the presence of an asthma attack during the last year. Clearly, the difference for blacks cannot be a result of acculturation or immigrant selection, since almost all black children in our data were born in the United States. We can offer only possible explanations, which we cannot test for. One is that children's health may be worse, objectively, but along dimensions not measured in the data or along dimensions not diagnosed. An alternative is that parent-rated health may not be a good measure of objective health for children.[7]

[7]We are not aware of research correlating parent-rated child health with child mortality or morbidity.

Immigration Status and Other Influential Factors

As we have seen, few individual or neighborhood factors affect racial and ethnic differences in chronic health conditions or in general self- and parent-rated health. However, a number of factors themselves are associated with health conditions and self- or parent-rated health. We found that immigration status is an important factor, both in explaining health conditions and in our one measure of whether a condition is well-managed (the child having had an asthma attack during the year before the interview) as well as in explaining self-rated health. Naturalized and documented adults were less likely than the U.S.-born to have hypertension (the finding for the documented is significant only at the 10 percent level), and both documented and undocumented Hispanics were less likely than the U.S.-born to have asthma. Undocumented adults report worse self-rated health than the U.S.-born. The immigration status of a parent is an important factor for children as well. Asthma is less common for children of an undocumented parent or a naturalized parent than for children of a U.S.-born parent. Having had an asthma attack during the year preceding the LAFANS interview was less common for all children of a foreign-born parent (results for citizen children of an undocumented parent and for children of a documented parent were significant only at the 10 percent level).

As found in the existing literature, other factors are important as well. For adults, we found a strong relation between education and both hypertension and self-rated general health, with better health much more common for the more educated and hypertension less common. Adults with some college were 7 percentage points less likely than those with a GED or a high school diploma to report doctor-diagnosed hypertension. Individuals with at least a four-year college degree were 19 percentage points less likely than high school graduates to report their general health as being worse than excellent or very good.

In addition, there is a strong relationship for adults between income and self-rated general health; the higher one's family income, the better one's self-reported health. We found little consistent effect on adult health of such neighborhood characteristics as the number of health or other facilities in one's Census tract, the number of hospitals or clinics in

one's Census tract, or other demographics from the U.S. Census for one's Census tract.[8] However, the relationship between some of these factors and child health is somewhat different. For example, children with a more educated parent were actually more likely to have their parents report that they had asthma (the difference for a college-educated parent relative to a parent who is a high school graduate is 6 percentage points but significant only at the 10 percent level). Children of a high school dropout were more likely than children of a high school graduate to have a parent report that they were in bad health (significant only at the 10 percent level).

The Hispanic Health Paradox and Immigrant Selection

In contrast to our findings in other areas of health—insurance coverage and health care use—interpreting our findings about differences in health status is especially challenging, in part because health status is the result of a lifetime of experiences. The effects of immigration status, in particular, are difficult to assess. To some extent, this difficulty may have to do with what is known as the Hispanic Paradox (also known as the epidemiological paradox), which points to the fact that despite low socioeconomic status, Hispanics often have the same health status as non-Hispanic whites, who are often of higher socioeconomic status, or have better health status than non-Hispanic blacks or other groups of similar socioeconomic status.[9] The health conditions in question range from infant and child mortality to adult mortality to adult health status.

This so-called paradox is tied to the general issue of how immigrants' health might differ from that of natives.[10] Immigrants are a special

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[8]This is consistent with the findings of Sastry and Pebley (2003b) that neighborhoods have little effect on child health status, once other characteristics are controlled for, and in some contrast to the findings of Cagney and Browning (2004), who found that collective efficacy (a measure of the neighborhood level of trust and shared expectations, which affects the capacity for community action) is associated with reduced asthma prevalence in neighborhoods in Chicago.

[9]For example, see Markides and Coreil (1986) or Forbes and Frisbie (1991).

[10]See Jasso et al. (2002) for a detailed discussion of how immigrants may have systematically different health from natives.

demographic group. By definition, they have left their country of birth, trading one environment for another. They may be more likely than the native-born to be healthy, since only relatively healthy individuals would be able to migrate from their home country. This health selection among immigrants may also vary by age and country of origin, because older, possibly less-healthy immigrants may return home.

This latter factor may be quite important among Hispanic immigrants, who have substantial emigration back to their home countries, and might be particularly relevant for the Mexican-born. This fact may mean that older and potentially less-healthy Hispanic immigrants are not represented in the U.S. immigrant population, making that population appear healthier than it might otherwise be. Both immigration and emigration, then, could contribute to the paradox, particularly if the least healthy Hispanic immigrants return to their home countries.

Another key difference between some immigrants (particularly Hispanics) and the U.S.-born is that many immigrants retain the culture and norms of their country of origin. Some posit that it is precisely because Hispanic immigrants retain healthier behaviors from home that first-generation immigrant health outcomes are better than those for U.S. natives. Health outcomes would then gradually worsen over generations, as more acculturation leads to adoption of unhealthy or "bad" native behaviors.[11]

Finally, immigration itself involves certain contradictions that could affect the health of immigrants. On the one hand, the act of immigration is generally viewed as stressful, creating possible negative health effects. On the other hand, immigration is often associated with higher income in the new country, and we know that income is often positively associated with health. Although it is not possible to resolve such contradictions, it is important to note that any or all of these elements may be at play when assessing immigrant health status.

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[11]For a review of relevant literature about acculturation and Hispanic health in the United States, see Lara et al. (2005). They summarize their review of public health literature by saying that acculturation is associated with negative effects on health behaviors among Hipanics (substance abuse, diet, and birth outcomes) but with improved access to care and use of preventive services.

How, then, do the Hispanic Paradox and immigrant selection square with our findings on health conditions and self- and parent-rated health among Hispanics and non-Hispanics and immigrants and the native-born? Some of the evidence that we have presented is consistent with a model of immigrants being in better health (that is, positive health selection among immigrants). For example, naturalized and documented adults were less likely than the U.S.-born to report hypertension, and children of an undocumented parent and of a naturalized parent were less likely to be reported as having had an asthma attack during the year before the interview, accounting for education, race/ethnicity, age, and gender.

However, some of the evidence is not consistent with the health selection model, particularly measures of self-rated health. Undocumented adults report worse self-rated health than do the U.S.-born.[12] Although this measure is subjective, rather than doctor-diagnosed, it still presents a significant complication in our understanding of heath status among Hispanics and Hispanic immigrants.

Summing Up

As we point out at the beginning of the chapter, affecting health status is the ultimate goal of public policy related to health. Having a broad sense of the health status of the population is therefore necessary for considering effective policies. Our findings in this chapter contribute to the growing body of research on health differences among racial groups and extend that research to include immigration status as an important category in understanding such differences. We have examined the prevalence of various chronic conditions for adults and children and looked at levels of self-rated health for adults and parent-rated health for children. The outcomes differ in comparisons that do not adjust for education, immigration status, income, or neighborhood characteristics. There are some significant racial and ethnic differences in asthma prevalence, diabetes prevalence for adults, and parent-rated general health.

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[12]This could, of course, also be because our measure of acculturation (whether the interview was completed in Spanish) does not fully account for the degree of asssimilation among the undocumented.

6. Conclusion

Ultimately, the goal of the government with regard to health is to improve the health status of everyone and, particularly, that of vulnerable populations. The public sector is involved directly in provision of public health insurance and of subsidized or publicly provided care. As we discussed above, there is evidence linking health insurance and health care use to health, although there is some ambiguity about the strength of the relationship. Given this and the considerable cost of government provision of health insurance and health care, it is important for policymakers to have accurate information on the insurance coverage, use of care, and health status of different population groups to inform the development, funding, and targeting of public programs.

Government involvement in the health care system is extensive. A large share of the population has public health insurance. In 2003, the federal government paid for 32 percent of health care spending in the United States, and state and local governments paid for an additional 13 percent (Centers for Medicare and Medicaid Services et al., 2005). In California, health care spending is a pressing concern in part because the state has one of the lowest coverage rates for employer-provided insurance and one of the highest rates of uninsurance in the country (The Henry J. Kaiser Family Foundation, 2004). The situation is particularly acute in Los Angeles County. Public programs therefore play a crucial role in providing both public insurance and care of last resort in Los Angeles County, perhaps even larger than the role they play in other locations.[1] Spending on health programs also accounts for substantial portions of both state and local budgets in California.

In this report, we have examined differences in insurance coverage, use of care, and health status in Los Angeles County, using data from the

[1]Note that health care can be subsidized in other ways not discussed in detail here. For example, employer-provided insurance is subsidized by being a pre-tax fringe benefit.

Los Angeles Family and Neighborhood Survey. Our findings point to large racial and ethnic differences in health insurance coverage and the use of some forms of medical care, with Hispanics being less likely than other groups to be insured and less likely than others to use certain forms of medical care. These racial and ethnic differences tend to shrink, but do not disappear, when we control for such characteristics as education, income, assets/net worth, immigration status, and neighborhood features. In addition, we found that these differences among Hispanics differ by immigration status and that this finding is fairly robust when controlling for a variety of other factors. The undocumented and their noncitizen children are less likely to have any insurance coverage, less likely to use dental care, and less likely to have a usual source of care than are U.S.-born adults or their children. Undocumented adults are also less likely than the U.S.-born to use doctor care.

We also found that undocumented adults and noncitizen children of an undocumented parent are less likely than U.S.-born adults and children to have public insurance. This finding is not unexpected, given that many members of these immigrant groups are likely ineligible for most types of public insurance, but it does suggest that simply doing more outreach for public programs such as Medi-Cal or Healthy Families cannot entirely solve the uninsurance problem in Los Angeles County.

Recent efforts have been made to expand public insurance coverage for children. In June 2001, throughout California some 2.7 million children were enrolled in Medi-Cal and an additional 460,000 children were enrolled in the Healthy Families program; another 656,000 children were uninsured and potentially eligible for one of these programs (California Managed Risk Medical Insurance Board, 2003). The Healthy Kids program, launched in Los Angeles in July 2003, was aimed at covering a share of this uninsured child population: all uninsured children ages 0–5, without regard to immigration status, living in families under 300 percent of the federal poverty guideline. The expansion in May 2004 of Healthy Kids eligibility to all uninsured children up to age 18—again without regard to immigration status and living in families under 300 percent of the federal poverty guideline—might lead one to believe that insurance eligibility would no

longer be an issue for most children.[2] However, in June 2005, Los Angeles County was forced to suspend further enrollment of children ages 6–18 because of a lack of funds, suggesting that even for children, lack of insurance will remain an issue for the time being.

In the area of health care use, one issue in particular has garnered a certain amount of public attention: the expense of treating undocumented immigrants and other noncitizens. The Emergency Medical Treatment and Labor Act of 1986 mandated that for hospitals with Medicare funding, every person with an emergency medical condition must be screened, treated, and stabilized, without regard to ability to pay. The Medicare Modernization Act of 2003 set aside about $250 million a year to reimburse hospitals for uncompensated emergency care to undocumented patients.[3] California was slated to receive $70.8 million from this fund in fiscal year 2005. A recent General Accounting Office (GAO) study reported that federal and state emergency Medi-Cal expenditures for the undocumented in California were around $776 million in fiscal year 2002 (General Accounting Office, 2004). However, the GAO's efforts to estimate the total amount of uncompensated care provided by hospitals for the undocumented were unsuccessful.

Concerns about expense are tied to concerns about the overuse or inappropriate use of emergency facilities. We found that, contrary to common speculation, children of an undocumented immigrant parent and children of a documented immigrant parent were no more likely than children of a U.S.-born parent to have used the emergency room in the year preceding the LAFANS interview. In addition, documented adults were less likely than U.S.-born adults, and the undocumented about as likely as U.S.-born adults, to have visited the hospital overnight

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[2]The expansion was funded by the Children's Health Initiative Coalition of Greater Los Angeles. Funding for coverage of children ages 0–5 continued to be provided from Proposition 10 revenues.

[3]The Medicare Modernization Act established funds to reimburse hospitals, physicians, and ambulance services for emergency care required under EMTALA. EMTALA requires that Medicare-participating hospitals with ERs screen for emergency treatment any person who requests examination and stabilize persons with an emergency medical condition.

at any time in the two years before the interview. These findings suggest that at least some of the concern about the disproportionate use of hospitals by the foreign-born may be misplaced,[4] although they do not speak to the debate about how this use is paid for.

Much has been written about health status disparities across racial and ethnic groups, and our findings are generally consistent with that body of research. We examined health status in part because good health is the ultimate goal of government health expenditures. In addition, health status measures help us interpret some of the large differences we have found across race, ethnicity, and immigration status for both health care use and health insurance coverage. We have seen that health insurance coverage and health care use are less common for Hispanics than for whites and for the documented and the undocumented than for the U.S.-born. If we had found uniformly worse health status among Hispanics, the documented, or the undocumented relative to other groups, this would have suggested that health insurance and health care use differences among these groups are of major concern. Alternatively, if we had found that Hispanics, the documented, or the undocumented were in uniformly better health than other groups, this might suggest that the differences in insurance coverage and some forms of health care use are not of great concern.

As it is, our findings on health status measures are somewhat mixed. On the one hand, our findings for adults suggest that in some comparisons, Hispanics are less likely than whites to have asthma and about as likely as whites to have hypertension or coronary heart disease. This is consistent with the Hispanic Paradox, discussed in Chapter 5, which refers to the fact that some groups of Hispanics are as healthy or healthier than whites (along some dimensions) or healthier than others of similar socioeconomic status (along other dimensions). On the other hand, our findings also suggest that Hispanic adults are more likely than white adults to have doctor-diagnosed diabetes after controlling for

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[4]To fully assess whether use is inappropriate or unnecessary would require data on hospital use and emergency room visits by cause at a level of detail unavailable in most survey sample datasets, including the LAFANS data. Hospital discharge data, which have information about diagnoses and conditions, generally fail to record information about citizenship.

education alone, education and immigration, or education and other factors, although this relationship is only marginally significant in certain comparisons. We also found a tie between immigration status and health for adults. For example, the documented and the undocumented are both less likely than the U.S.-born to report doctor-diagnosed asthma, and naturalized citizens are less likely than the U.S.-born to report doctor-diagnosed hypertension, after controlling for age, gender, education, and race/ethnicity.[5]

We found that Hispanic children were about equally likely as or slightly more likely than white children to be reported by their parents as having doctor-diagnosed asthma, depending on which factors are controlled for. However, asthma and asthma attacks were less common for children of an undocumented parent. In terms of parent-rated health, both Hispanic and black children's parents report worse health for their children than do the parents of white children. The mixed nature of these findings suggests that further study is warranted, particularly for Hispanics and for immigrant groups.

Ongoing state demographic trends suggest that Hispanics will be a majority by 2040 (California Department of Finance, 2004). At the same time, recent trends suggest that noncitizens will continue to make up a large share of the state's residents (Myers, Pitkin, and Park, 2005). If population trends in the state follow the current patterns in Los Angeles County, and the underlying determinants of health insurance coverage and health care use are the same across the state, it is possible that the differences we have seen for Los Angeles County may also hold for the state in the future. Either way, Los Angeles County is home to a large share of Californians and thus is important in its own right. Although this report cannot address that possibility, such trends are worth noting and it may be useful to policymakers and other health

[5]Recall that these differences in doctor-diagnosed conditions may reflect differences in having seen a doctor to be diagnosed rather than differences in true prevalence. These findings for health status are consistent with the hypothesis of positive immigrant selection, which states that immigrants are likely to be healthier than one might otherwise expect given their other characteristics, because healthy people are more likely than unhealthy people to emigrate from their home country in the first place.

officials to keep our findings and these trends in mind as health policies continue to draw reform efforts.

Such efforts may be on the increase. Recent changes to Medicaid law mean that states are free to experiment with changes to their Medicaid programs with much less federal oversight. Medicaid expenditures are a large and growing part of many state budgets, and a number of states have taken advantage of this new flexibility to try to reduce costs. At the same time, some states, and even some cities, are experimenting with steps toward universal coverage. For example, the San Francisco Health Access Plan, an effort to provide universal coverage in San Francisco, is slated to start in July 2007. In addition, the California Legislature recently passed a universal health care plan, which was vetoed by Governor Schwarzenegger in September 2005. At around the same time, however, the governor signed a number of bills aimed at streamlining or easing children's enrollment and continued participation in Medi-Cal and Healthy Families. As these developments suggest, the tension between expanding the health care safety net (whether through more publicly subsidized care or expanded public insurance) and reducing expenditures remains unresolved and is likely to lead to much debate in years to come.

Appendix A

Notes on Data and Methods

We used a number of data sources and methods to conduct the analysis for this report. This appendix discusses the data and methods in detail. First, we touch on the micro data we used to look at individual health outcomes, the Los Angeles Family and Neighborhood Survey. We then discuss the construction of our neighborhood control variables and detail the challenges involved in aggregating these data sources to a level where we could match them to our individual-level data. Finally, we discuss our methodology.

Data on Health Outcomes

We use LAFANS to study the health outcomes of residents of Los Angeles County. The LAFANS data we use are from the first wave of what is planned as a panel study of people within neighborhoods in Los Angeles County. The first wave collected information on representative adults and children within 65 1990 Decennial Census tracts in Los Angeles County. In-person interviewing was completed during 2000–2001. Respondents are being tracked and are being reinterviewed starting in 2006.

Poor neighborhoods were oversampled. Within each neighborhood, people from approximately 40 households were interviewed. For each household, interviewers constructed a roster of persons living there. The roster respondent was asked about the age, gender, marital status, parent identification, ethnicity, and education of household members. A knowledgeable adult was asked about various sources of household income, housing assets and possession of other assets (and total nonhousing net worth), and participation in public assistance programs. For a randomly selected adult from each household, information was collected about education, employment, income, migration and immigration, marital history, children ever born, health status, health care use, family background, and welfare use. Interviewers also collected

an event history for each adult interviewed, tracking the timing of important or salient events such as marriages or children's birthdates for the previous two years as well as residences, employment, unemployment, public assistance use, and health insurance coverage (for the adult and for children).[1] If the household contained children under age 18, one child was selected to be interviewed (the randomly selected child). If the randomly selected child had siblings, one sibling was also interviewed. The primary caregiver for the randomly selected child (usually a parent, and referred to as a parent for ease of discussion) was also interviewed about the child's living arrangements, residential history, place of birth and immigration status, schooling, child care, education, child support, and health. Computer-assisted interview modules were administered in person. Only the relevant person for each interview was asked about the relevant topic.[2]

The overall cooperation rate in LAFANS for adults was 85 percent and that for primary caregivers was 89 percent. Using methods suggested by the American Association for Public Opinion and assuming that cases with unknown eligibility had the same rate of eligibility as cases where the household roster was successfully completed led to a response rate of 61 percent for adults and 63 percent for primary caregivers. After the data were cleaned, weights were calculated to make the completed interviews representative of Los Angeles County, matching totals from the 2000 Census.

The advantages of using LAFANS for our analysis are several. First, it has extensive information on health status, health care use, and health insurance combined with information on documentation status (including whether respondents have valid visas or are undocumented), detailed nonhousing net worth, housing assets, income (collected with the interview technique known as unfolding brackets), and migration

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[1]These important events help the respondent date the timing of the other events of interest (employment, welfare use, etc.). The goal was to obtain one such important event for each six-month period during the two years before the interview. Dates and brief descriptions of the important (or landmark) events were recorded, and they were used to help prompt the respondent when dating other events.

[2]For more information about LAFANS, see Sastry et al. (2003) or Sastry and Pebley (2003a).

history. Although other datasets such as the California Health Interview Survey do ask noncitizens whether they have a valid green card or are a permanent resident, we are aware of no other dataset that collects information about other types of valid documentation help by noncitizens in conjunction with information about health outcomes. Second, LAFANS has a clustered design, which ensures that many individuals share the same access to local neighborhood facilities. Finally, there are restricted-use versions of the LAFANS data with extremely detailed geographic data on where people live, work, go to school, and receive care when sick. We use the geographic data to link people with characteristics of their neighborhoods, as discussed below.

One disadvantage of using LAFANS for this study has to do with language. LAFANS interviews were conducted only in Spanish and English. Those who could not speak Spanish or English were considered out of scope. Thus, the data may not be representative of persons not speaking English or Spanish (e.g., some Asians).[3] Tables A.1 and A.2 present weighted mean characteristics and total sample sizes by race/ethnicity for adults and children from LAFANS.

Health Outcomes of Interest

Our health outcomes cover three broad areas: health insurance coverage, health care use, and health status.

Our health insurance coverage variables are constructed from a retrospective event history calendar completed by adults (by the primary caregiver for children). This event history calendar covers the previous two years and asks about important or landmark events (to anchor time recollection); spells of employment, unemployment, layoffs, and times when the respondent was not in the labor force; location of work; salary and occupation; usual hours; residential moves; and health insurance coverage (as well as the reason for not having coverage), starting from the most recent spell. Parents were asked separately about their own and their children's insurance coverage. From these measures, we calculate both measures of coverage at the time of the interview and measures of

[3]Goldman, Smith, and Sood (2006) report that such individuals make up only 3.5 percent of the population of Los Angeles County.

Table A.1

Summary Statistics for Adults in Los Angeles County, by Race/Ethnicity

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Percentage					
Younger than age 25	9	20	15	15	12
At least age 45 but younger than age 65	35	20	35	25	42
At least age 65	18	7	9	16	11
Female	51	50	55	55	42
High school dropout	6	48	10	6	17
Some college but no four-year degree	32	19	43	36	15
College graduate	46	11	27	43	47
Education unknown	0	1	0	2	0
Naturalized citizen	7	16	7	51	14
Documented	5	27	3	21	29
Undocumented/visa expired	0	24	0	1	0
Immigration status unknown	0	3	0	3	0
Completing interview in Spanish	0	59	0	0	1
Renters	35	61	53	50	57
House value is in lowest category (of 4)	11	6	8	4	7
House value is in second-lowest category	12	18	28	14	14
House value is in next-to-highest category	20	13	3	25	16
Years in United States (if not native)	21	17	25	18	31
Family earnings ($)	58,495	25,750	31,424	44,743	34,608
Income from transfers ($)	7,177	2,085	5,567	5,379	1,299
Family income ($)	83,102	29,198	38,569	58,082	37,889
Number	638	1,432	239	169	42

SOURCE: Authors' calculations from LAFANS.

NOTES: Statistics are weighted to be representative of adults age 18 and older in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics. Dollar amounts are in nominal terms. Note that breakdowns are for sample in column. Numbers do not add to 100 percent because the means for the omitted categories are not included. The omitted category for age is ages 25–44, the omitted category for education is high school graduate with no college, the omitted category for immigration status is U.S.-born, and the omitted category for housing value is house value in highest category.

Table A.2

Summary Statistics for Children in Los Angeles County, by Race/Ethnicity

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Percentage					
Younger than age 6	26	29	23	26	25
At least age 12 but younger than age 18	35	28	34	32	34
Female	49	50	51	47	44
Parent is high school dropout	8	50	15	6	12
Parent has some college but no four-year degree	30	18	49	25	43
Parent is college graduate	44	8	19	61	33
Parent's education unknown	0	2	0	0	0
Naturalized citizen	3	0	0	6	0
Documented	3	3	1	13	8
Undocumented/visa expired	0	8	0	0	0
Immigration status unknown	5	3	3	5	5
Parent completing interview in Spanish	0	61	0	0	0
Parent's years in United States (if not born there)	15	15	15	15	17
Parent is renter	30	65	68	38	43
House value is in lowest category (of 4)	19	8	6	5	3
House value is in second-lowest category	3	15	19	10	6
House value is in second-highest category	24	8	4	28	43
Number	362	1,185	174	127	23
Family earnings ($)	80,835	28,259	34,219	77,520	54,872
Income from transfers ($)	2,777	2,708	6,439	1,774	1,515
Family income ($)	104,794	32,360	42,270	97,245	57,815

SOURCE: Authors' calculations from LAFANS.

NOTES: Statistics are weighted to be representative of children age 17 and younger in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics. Dollar amounts are in nominal terms. Note that breakdowns are for sample in column. Numbers do not add to 100 percent because the means for the omitted categories are not included. The omitted category for age is ages 6–11, the omitted category for parental education is high school graduate with no college, the omitted category for immigration status is U.S.-born, and the omitted category for housing value is house value in highest category.

having had any spells of coverage of a particular type or of no coverage over the two years preceding the interview. We are interested in the latter measure because it addresses continuity of coverage.

We have aggregated the coverage measures to four terms each for current coverage and coverage over the previous two years: no insurance coverage, private insurance coverage (including employer-provided and privately purchased, and CHAMPUS, TRICARE, or other military health insurance), public insurance coverage (including Medi-Cal, California's Medicaid program; Medicare; Healthy Families; and other government-provided insurance), and Medi-Cal coverage (including Medi-Cal only and joint Medi-Cal and Medicare).[4] Our measures of having any spell of a particular type of insurance coverage or of no coverage over the two years preceding the interview are set to one if the person ever had a spell of that type over those two years. Thus, although the three measures of current coverage (no coverage, public coverage, and private coverage) sum to one, this is not the case for the measures "any spell of coverage from a source" or "no coverage over the two years before the interview."

Our health care use measures encompass two main types: (1) use of preventive care/having a usual source of care, and (2) use over the year or two years preceding the interview. Measures of use of preventive care include having seen a dentist in the year before the interview (for adults and children) and having had a checkup in the year before the interview (for children).[5] Our measure of dental visits may include nonpreventive

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[4]CHAMPUS, TRICARE, and other forms of military health insurance are typically included as public insurance in tabulations from the *Current Population Survey*. We have chosen to include these as private insurance to ensure that our measure of public health insurance includes only programs associated with age, disability, income, and lack of employer-provided insurance. Thus our public measure includes persons reporting coverage from Medicaid, Medicare, Healthy Families, "other government health insurance," and "insurance through AFDC" (Aid to Families with Dependent Children, superseded by Temporary Assistance for Needy Families).

[5]The American Academy of Pediatrics recommends that children have a physical examination annually and certain screenings at regular intervals (American Academy of Pediatrics, 2000). In a recent policy statement, the American Academy of Pediatrics also noted that recent increases in the prevalence of dental caries (or tooth decay) among young children has led them to advise that children begin to receive regular oral risk assessments by six months of age and that children have a specialized primary dental care

care visits and thus may overstate how many children are obtaining the recommended care if some children saw a dentist during the year before the interview but not for preventive care. We also have a measure of whether the person has a regular source of care. (The question is phrased, "Is there a place that you usually go to when you are sick or need advice about your health?" for adults and phrased similarly for adult caregivers about their children.) The other outcomes we examine are use measures that are less likely to be preventive than the measures we discuss above. For adults, we examine whether they had an overnight hospital stay in the two years preceding the interview and whether they saw a doctor during the year preceding the interview. For children, we examine whether they visited an emergency room (whether or not they were admitted to the hospital) and whether they saw a doctor during the year preceding the interview.

Our measures of health status include whether the adult or child has one of a number of chronic conditions; for children, whether they had an asthma attack during the year before the interview; and self-rated or parent-rated general health. The chronic conditions we look at for adults are all ones that are long term and difficult to manage and include doctor-diagnosed hypertension, diabetes, coronary heart disease, and asthma. Asthma is the only child chronic condition we examine.[6] We also have a measure of whether children's asthma is not being well-managed, namely, whether they had an asthma attack during the year preceding the interview. Our general health measures include self-rated general health being neither excellent nor very good (for adults) or parent-rated child general health being neither excellent nor very good (for children). Self-rated general health being bad is highly correlated with subsequent mortality for adults (Idler and Benyamini, 1997). The

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provider by six months after the first tooth erupts or by age 12 months (American Academy of Pediatrics, 2003). The American Academy of Pediatric Dentistry clinical guidelines suggest that children (including infants after their first visit) be examined every six months or as appropriate for their risk status and susceptibility to disease (American Academy of Pediatric Dentistry, 2004–2005). However, a recent review suggested little evidence to support or refute the idea that the six-month frequency is optimal (Davenport et al., 2003).

[6]Other adult and child chronic conditions were either less frequently reported or, for children, were developmental difficulties.

advantage of these general health outcomes is that they are not dependent on having seen a doctor to receive a diagnosis of a condition. Unfortunately, there are also disadvantages associated with using general health to compare outcomes for persons with different countries of origin or demographic characteristics. For example, it is well understood that for unacculturated Hispanic adults, having poor self-rated general health is less strongly associated with mortality than it is for other adults (Finch et al., 2002).[7]

We have compared means for adults and children by race/ethnicity for our outcomes of interest for Los Angeles County from LAFANS and one or both of two alternative sources—printed reports from the Los Angeles County Health Survey (LACHS) for 1999–2000 and the AskCHIS web site for the 2001 wave of the California Health Interview Survey (CHIS), also for Los Angeles County. LACHS is a telephone survey conducted by the Los Angeles County Department of Health Services, Public Health, Health Assessment Unit of adults and children in Los Angeles County.[8] CHIS is a telephone survey that collected information on adults and children for California, which in 2001 was a collaborative project of the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute. Generally, the means for our key outcomes from LAFANS and CHIS or LACHS, or in a few cases both, were quite similar for adults and for children (although not identical). In the few cases where all three datasets had the relevant measures, the LAFANS values tended to be closer to the CHIS values than to the LACHS values. One would not expect those values to be identical because LACHS and CHIS are both telephone surveys and because CHIS conducted interviews in a number

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[7]As a result, we control for acculturation of the adult or parent in the regressions predicting general health by including an indicator for whether the interview was conducted in Spanish and in some specifications, controlling for years in the United States. All of our comparisons also control for age and gender of the adult or child; thus, differences in characterizations of self-rated health by age and gender are controlled to the extent that they cause only shifts in the levels of self-rated health.

[8]See http://www.lapublichealth.org/phcommon/public/reports/rptsbygroup.cfm?ou=ph&prog=hae&unit=ha&categoryid=96 and http://www.chis.ucla.edu/main/default.asp, respectively.

of Asian languages, whereas LAFANS conducted interviews only in English and Spanish.

Data on Neighborhood Characteristics

We used several sources to obtain data about neighborhoods. First, we used 2000 Decennial Census data from the Summary Tape File 3. These data are at the Census tract level and include information on each tract's racial/ethnic composition, share of persons foreign-born by citizenship status, completed education for persons age 25 or older, other languages spoken for persons ages 18–64, percentage of persons ages 16–64 who have a sensory impairment or long-lasting condition limiting physical activity, male and female unemployment rates, average commute times, median family income, and the share of persons under the federal poverty threshold or receiving public assistance. We converted these data to data for 1990 tracts by allocating 2000 tract values proportionately to the share of the 2000 population in each area where a 1990 and 2000 tract intersect, and then summing these numbers within each 1990 tract.[9] These data are constructed from the underlying 2000 Census long-form data and are representative of persons not in group quarters or the active armed forces. We merged these data to our micro data for Los Angeles County by 1990 tract. Tables A.3 and A.4 contain means for our neighborhood characteristics of interest from the 2000 Census for the representative adults and children in LAFANS.

Our second source of information on neighborhood characteristics is ZBP data for 2000. The Census Bureau, in the ZBP data, produces counts of (mostly private) establishments by employment size class and North American Industry Classification System (NAICS) codes. An establishment is a single physical location at which business is conducted or services or industrial operations are performed. A firm, company, or enterprise can have many establishments. Size classes are determined by paid employment in the mid-March pay period. Counts represent the

[9]Note that LAFANS was completed in 2000–2001, so these 2000 values are the correct values for the person's neighborhood, and using the share of the 2000 population in each 1990 tract ensures that the weighted averages are accurate for the person's 2000 values. Of 2,520 adults, 926 lived in a 1990 tract where the corresponding 2000 tract was not identical to the 1990 tract. Of 1,871 children, 656 lived in such 1990 tracts.

Table A.3

Summary Statistics from 2000 Decennial Census Data for Census Tracts of Adults in Los Angeles County, by Race/Ethnicity

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Percentage					
White	51	16	25	30	29
Hispanic	27	66	46	34	41
Black	6	6	15	7	7
Asian	12	10	10	25	19
Other race or more than one race	4	2	3	4	3
Foreign-born, naturalized U.S. citizen	13	13	12	17	15
Foreign-born, not naturalized U.S. citizen	14	30	22	21	16
High school dropout, adults age 25 and older	19	46	36	24	24
High school graduate but no college, adults age 25 and older	19	20	19	20	20
Some college but no four-year degree, adults age 25 and older	29	21	25	29	30
Four-year college degree, adults age 25 and older	34	12	20	27	25
Adults ages 18–64 speaking only English	59	29	47	45	47
Adults ages 18–64 speaking Spanish	23	59	40	28	33
Adults ages 18–64 speaking Indo-European language	7	2	3	5	3
Adults ages 18–64 speaking Asian/Pacific Islander language	10	9	9	21	17
Adults ages 18–64 speaking other language	1	1	1	1	1
Persons ages 16–64 with a sensory impairment	2	2	2	2	2
Persons ages 16–64 with condition limiting physical activity	5	5	6	5	5

Table A.3 (continued)

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Male unemployment rate	7	10	12	8	8
Female unemployment rate	8	12	13	8	7
Under federal poverty threshold	11	23	23	14	12
Households receiving public assistance	4	9	10	5	4
Average commute (minutes)	52.0	59.8	52.8	42.4	38.7
Median family income ($)	102,847	68,393	64,736	66,058	71,472

SOURCES: Authors' calculations from LAFANS and Census STF-3 for Census tracts in LAFANS.

NOTES: Statistics shown are Census tract characteristics in adults' Census tracts. Statistics are weighted to be representative of adults age 18 and older in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics. Median family income in tract is topcoded at $200,000. Unemployment rates are reported as percentages.

number of locations with paid employees any time during the year (the one-to-four-employee-size class includes establishments without paid employees in mid-March). Industry and geographic classifications are created by the Census Bureau from a combination of sources including the Economic Censuses (conducted in years ending in 7 and 2), the Annual Survey of Manufactures, and other sources. Industry classification also makes use of data from other sources. Information is recorded for the physical location address reported to the Census Bureau. We selected all establishments in California in selected six-digit NAICS codes. Then, within a ZIP code, we aggregated our specific NAICS codes to create categories. Table A.5 shows the original 6-digit NAICS codes and what eventual categories we aggregated these measures to.

As with the Census data, once we had the ZBP data at the 2000 Census tract level (the ZIP code to 2000 tract match is discussed below), we had to allocate the data to 1990 tracts. As above, this was done by

Table A.4

Summary Statistics from 2000 Decennial Census Data for Census Tracts of Children in Los Angeles County, by Race/Ethnicity

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Percentage					
White	51	16	23	35	35
Hispanic	28	65	46	30	39
Black	7	6	15	6	8
Asian	10	9	13	25	13
Other race or more than one race	4	2	3	4	4
Foreign-born, naturalized U.S. citizen	12	13	13	18	12
Foreign-born, not naturalized U.S. citizen	15	29	22	18	18
High school dropout, adults age 25 and older	20	47	36	19	25
High school graduate but no college, adults age 25 and older	21	21	21	19	20
Some college but no four-year degree, adults age 25 and older	29	21	27	29	31
Four-year college degree, adults age 25 and older	29	12	17	32	24
Adults ages 18–64 speaking only English	59	30	45	47	53
Adults ages 18–64 speaking Spanish	23	58	40	24	32
Adults ages 18–64 speaking Indo-European language	8	2	3	6	3
Adults ages 18–64 speaking Asian/Pacific Islander language	8	9	11	21	11
Adults ages 18–64 speaking other language	1	1	1	1	1
Persons ages 16–64 with a sensory impairment	2	2	2	2	2
Persons ages 16–64 with condition limiting physical activity	5	6	6	5	5

Table A.4 (continued)

	White	Hispanic	Black	Asian	Other Race or Race Unknown
Male unemployment rate	8	10	11	8	8
Female unemployment rate	9	13	12	7	8
Under federal poverty threshold	13	24	22	11	13
Households receiving public assistance	5	10	10	4	5
Average commute (minutes)	66.1	61.2	63.5	34.8	50.6
Median family income ($)	118,110	68,331	72,827	68,451	98,724

SOURCES: Authors' calculations from LAFANS and Census STF-3 for Census tracts in LAFANS.

NOTES: Statistics shown are Census tract characteristics in children's Census tracts. Statistics are weighted to be representative of children age 17 and younger in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics. Median family income in tract is topcoded at $200,000. Unemployment rates reported as percentage.

allocating 2000 tract values proportionately to the share of the 2000 population in each area where a 1990 and 2000 tract intersected and then summing these numbers within each 1990 tract. We merged these data to our micro data for Los Angeles County by 1990 tract. Tables A.6 and A.7 show means for the LAFANS sample for ZBP data in these aggregate categories.

The third source of data on neighborhood characteristics is the Office of Statewide Health Planning and Development's annual utilization and financial reports for hospitals and primary care clinics. Section 127285 of the California Health and Safety Code requires that every non-federally owned licensed hospital file with OSHPD an annual utilization report for the calendar year. (Thus, in practice, Veteran's Administration and other military hospitals are excluded.) Hospitals that are taken over or reopened after closing may file more than one report. These administrative data have been filed electronically since 2002. We have aggregated these reports for specific hospitals and clinics by ZIP code. For general acute care hospitals and for all hospitals, we constructed the licensed bed-weighted number of nonprofit, for-profit,

Table A.5

NAICS Codes from ZBP Data Used to Construct Neighborhood Characteristics

Aggregate Category	NAICS Description	NAICS
Doctors	Doctors' offices (except mental health specialists)	621111
Dentists	Dentists' offices	621210
Ambulatory care	Family planning centers	621410
	HMO medical centers	621491
	Freestanding ambulatory surgical and emergency centers	621493
	All other outpatient care centers	621498
Pharmacies	Pharmacies and drug stores	446110
Other health facilities and providers (not mental health)	Kidney dialysis centers	621492
	Chiropractors' offices	621310
	Optometrists' offices	621320
	Physical, occupational, and speech therapists, and audiologists' offices	621340
	Podiatrists' offices	621391
	All other miscellaneous health practitioners' offices	621399
	Medical laboratories	621511
	Diagnostic imaging centers	621512
	Home health care services	621610
	Ambulance services	621910
	Blood and organ banks	621991
	All other miscellaneous ambulatory health care services	621399
Mental health care	Physicians' and mental health specialists' offices	621112
	Mental health practitioners' offices (except physicians)	621330
	Outpatient mental health and substance abuse centers	621420
	Psychiatric and substance abuse hospitals	622210
Hospitals	General medical and surgical hospitals	62211
	Specialty hospitals (except psychiatric and substance abuse)	62211

Table A.5 (continued)

Aggregate Category	NAICS Description	NAICS
Residential health or other services	Nursing care facilities	622310
	Residential mental retardation facilities	623210
	Residential mental health and substance abuse facilities	623220
	Continuing care retirement communities	623311
	Homes for the elderly	623312
	Other residential care facilities	623990
Social services	Child and youth services	624110
	Services for the elderly and persons with disabilities	624120
	Other individual and family services	624190
	Community food services	624210
	Temporary shelters	623221
	Other community housing services	624229
	Emergency and other relief services	624230
	Vocational rehabilitation services	624310
	Child day care services	624410
Religious institutions	Religious organizations	813110
Outdoor recreation	Zoos and botanical gardens	712130
	Nature parks and other similar institutions	712190
	Fitness and recreational sports centers	713940
	All other amusement and recreation industries	713990
Liquor stores	Beer, wine, and liquor stores	445310
Tobacco stores	Tobacco stores	452991
Convenience stores	Convenience stores	445120
	Gasoline stations with convenience stores	447110
Groceries	Supermarket and other grocery (except convenience stores)	445110
Superstores	Warehouse clubs and superstores	452910
Other food stores	Meat markets	445210
	Fish and seafood markets	445220
	Fruit and vegetable markets	445230
	Baked goods stores	445291
	Confectionary and nut stores	445292
	All other specialty food stores	445299

Table A.5 (continued)

Aggregate Category	NAICS Description	NAICS
Restaurants and other eating places	Full-service restaurants	722110
	Limited-service eating places	722211
	Cafeterias	722212
	Snacks and nonalcoholic beverage bars	722213
	Mobile food services	722330

NOTES: This table presents the specific six-digit NAICS codes from the ZBP that we used. Column 1 depicts the categories within which specific six-digit NAICS code totals were aggregated. Column 3 lists six-digit NAICS codes. Column 2 lists the ZBP descriptor for the NAICS codes in Column 3.

government-owned, and overall hospitals; the share of births that were low birth weight; the total and long-term-care patient censuses on December 31; the number of emergency medical treatment stations (a specific place in the emergency room to treat a single patient); total emergency room visits; total emergency room visits resulting in admissions; and total emergency room visits that were urgent or critical. In 2000, 145 hospitals in Los Angeles County reported health care use data.[10] Of these Los Angeles County hospitals, 109 were general hospitals. The data for these 109 hospitals are those that we use in the regressions.[11] Again, once the data were at the 2000 Census tract level, they were allocated to 1990 tracts as above and merged to the LAFANS data. Tables A.8 and A.9 show means for our sample from LAFANS of the hospital variables for adults and children, respectively.

We also constructed measures for emergency room visits that resulted or did not result in a hospital admission at the tract level for all

[10]Personal communication with staff at OSHPD suggests that zero entries are often missing values, thus we have dropped five hospitals with no beds in 2000.

[11]Non-general hospitals are specialty hospitals such as the hospital unit of an institution such as a prison (none in Los Angeles County), long-term care facilities (three in Los Angeles County), psychiatric facilities (17 in Los Angeles County), tuberculosis and other respiratory disease facilities (none in Los Angeles County), chemical dependency facilities (seven in Los Angeles County), facilities devoted to chronic disease (none in Los Angeles County), pediatric facilities (two in Los Angeles County), (physical) rehabilitation facilities (one in Los Angeles County), orthopedic or pediatric orthopedic facilities (two in Los Angeles County), facilities for the developmentally disabled (one in Los Angeles County), and an other category (two in Los Angeles County).

Table A.6

Summary Statistics from ZBP Data for Census Tracts of Adults in Los Angeles County, by Race/Ethnicity

Number in Tract	White	Hispanic	Black	Asian	Other Race or Race Unknown
Doctors' offices	6.54	3.03	2.91	4.26	4.78
Dentists' offices	3.73	2.34	2.08	3.65	3.04
Clinics, HMOs, and other ambulatory care facilities	0.28	0.16	0.14	0.24	0.23
Hospitals	0.06	0.04	0.02	0.03	0.07
Pharmacies	1.49	0.75	0.58	0.89	1.01
Other health facilities and providers (excluding mental health)	3.67	1.50	1.42	2.42	2.68
Mental health providers and facilities	1.13	0.30	0.48	0.46	0.43
Grocery stores	2.08	1.57	1.38	1.31	1.29
Convenience stores	1.49	1.02	0.81	0.81	1.16
Other food stores	1.21	0.80	0.73	0.52	0.71
Restaurants	13.87	7.49	6.14	7.85	9.48
Human service agencies	3.23	1.85	2.04	2.07	2.09
Religious institutions	3.04	1.71	1.89	1.96	2.00
Outdoor recreation facilities	1.04	0.32	0.29	0.31	0.59
Liquor stores	1.04	0.90	0.91	0.83	0.58
Bars	1.22	0.67	0.52	0.60	0.70
Tobacco stores	0.23	0.09	0.10	0.09	0.08

SOURCE: Authors' calculations from LAFANS and ZBP.

NOTES: Statistics are weighted to be representative of adults age 18 and older in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

of Los Angeles County. We used these measures in regressions to further explore the use of emergency rooms by race and ethnicity, controlling for immigration, age, education, and other characteristics (using tract-level measures from the Census), as well as for the presence of doctors' offices and churches (from the ZBP data), and Federally Qualified Health Centers (FQHC)-like free or sliding-scale clinics (from OSHPD clinic data discussed immediately below).

OSHPD also requires that all primary care clinics licensed as community or free clinics report annual utilization and financial

Table A.7

Summary Statistics from ZBP Data for Census Tracts of Children in Los Angeles County, by Race/Ethnicity, LAFANS

Number in Tract	White	Hispanic	Black	Asian	Other Race or Race Unknown
Doctors' offices	7.37	3.02	2.65	3.98	7.19
Dentists' offices	3.84	2.22	2.09	3.65	3.33
Clinics, HMOs, and other ambulatory care facilities	0.34	0.15	0.16	0.20	0.38
Hospitals	0.09	0.04	0.02	0.03	0.10
Pharmacies	1.62	0.73	0.66	0.83	1.27
Other health facilities and providers in tract (excluding mental health)	3.93	1.42	1.36	2.48	3.59
Mental health providers and facilities	1.05	0.30	0.39	0.57	0.65
Grocery stores	2.26	1.58	1.32	1.17	1.81
Convenience stores	2.03	1.04	0.82	0.78	1.81
Other food stores	1.41	0.79	0.66	0.61	1.00
Restaurants	15.36	7.20	6.06	8.63	13.48
Number of human service agencies in tract	3.68	1.84	1.87	1.73	2.96
Religious institutions	3.55	1.74	1.69	2.25	2.70
Outdoor recreation facilities	1.10	0.30	0.26	0.44	0.89
Liquor stores	1.08	0.91	0.90	0.67	0.77
Bars	1.26	0.67	0.48	0.48	0.98
Tobacco stores	0.29	0.10	0.09	0.14	0.11

SOURCE: Authors' calculations from LAFANS and ZBP.

NOTES: Statistics are weighted to be representative of children age 17 and younger in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

numbers. Note that only primary care clinics operated by nonprofit corporations are required to be licensed by the state (Saviano and Powers, 2005). Thus, we supplement our OSHPD clinic data with data on other clinics (run by the county or otherwise contracted with by the county and offering free or reduced-fee services), as discussed below. For all OSHPD clinics and for free or sliding-scale OSHPD clinics, we construct a ZIP code total number of clinics by type, number of patients, number of physicians, and physician's assistants. Here we focus on

Table A.8

Summary Statistics from OSHPD Hospital Data for Census Tracts of Adults in Los Angeles County, by Race/Ethnicity

Number in Tract	White	Hispanic	Black	Asian	Other Race or Race Unknown
General hospitals	0.07	0.04	0.01	0.05	0.1
Nonprofit hospitals	0.05	0.02	0.01	0.02	0.04
State-owned hospitals	0.01	0.01	0.00	0.01	0.03
Hospital beds	18.1	8.7	4	16.5	31.5
Patients on December 31	9.1	3.7	1.9	7	15.6
Long-term-care beds	2.5	0.8	0.4	0.7	2.5
Long-term-care census on December 31	1.2	0.4	0.2	0.5	1.4
Emergency room care stations	1	0.4	0.2	0.7	2
Emergency room visits	2,024	712	433	1,124	3,518
Emergency room visits leading to admission	383	142	72	257	755

SOURCE: Authors' calculations from LAFANS and OSHPD hospital data.

NOTE: Statistics are weighted to be representative of adults age 18 and older in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

results for free or sliding-scale clinics receiving federal funds under the Public Health Services Act (FQHC Look-Alikes, or rural 95210 clinics). The numbers for 2000 represent 189 clinics for Los Angeles County, of which 52 were free or sliding-scale clinics.[12] Again, once the data were at the 2000 Census tract level, they were allocated to 1990 tracts as above and merged to the LAFANS data. Tables A.10 and A.11 show means for our sample from LAFANS of the hospital variables for adults and children, respectively.

[12]We chose to focus on free or sliding-scale clinics because of their disproportionate role in providing safety net services. Results were qualitatively and quantitatively similar if we used a measure of all clinics. The free or sliding-scale clinics on average see about twice as many patients as the other clinics. Other clinics will also be captured by our measure of clinics, HMOs, and other ambulatory care facilities from the ZBP data. Other free or sliding scale clinics (such as PPP clinics) will be captured in our alternative measure of free or sliding-scale clinics that includes PPP clinics not in OSHPD and county-run clinics.

Table A.9

Summary Statistics from OSHPD Hospital Data for Census Tracts of Children in Los Angeles County, by Race/Ethnicity

Tract Feature	White	Hispanic	Black	Asian	Other Race or Race Unknown
General hospitals	0.09	0.04	0.02	0.06	0.12
Nonprofit hospitals	0.07	0.02	0.01	0.01	0.09
State-owned hospitals	0.00	0.01	0.00	0.01	0.02
Hospital beds	19.4	8.9	5.4	14.6	32.4
Patient census on December 31	10	3.8	2.4	7.1	16
Long-term-care beds	3.7	0.8	0.3	0.6	4.6
Long-term-care patients on December 31	1.7	0.4	0.2	0.4	2.3
Emergency room care stations	1	0.4	0.3	0.8	1.9
Emergency room visits	2,398	695	511	1,217	3,787
Emergency room visits leading to admission	411	145	104	287	760

SOURCE: Authors' calculations from LAFANS and OSHPD hospital data.

NOTE: Statistics are weighted to be representative of children age 17 and younger in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

In 2000, there was also a public-private partnership in effect between Los Angeles County's Department of Health Services (DHS) and private, community-based partners as part of the 1115 Medicaid waiver discussed in Appendix B. The federal waiver provided DHS with fiscal relief to increase access to primary, dental, and specialty care services while helping to pay for development of the PPP program. DHS contracted with these partner clinics. The goal of the PPP program was "to ensure provision of dental and medical services to the medically indigent in a way that is complementary to the DHS safety net system of care." These providers are referred to as PPP providers. We obtained a list of the PPP provider clinics for fiscal year 2000–2001. Most were also licensed clinics and already appeared in the OSHPD clinic data above. Out of 109 such PPP clinics, 76 provided primary care (and 20 did not appear in the OSHPD data), one provided dental care and was not in the OSHPD data, and 14 provided other services (most were general relief clinics) and four of these were not in the OSHPD data. We excluded

Table A.10

Summary Statistics from OSHPD Clinic Data for Census Tracts of Adults in Los Angeles County, by Race/Ethnicity

Number in Tract	White	Hispanic	Black	Asian	Other Race or Race Unknown
Federal Qualified Health Center (330 grantees)	0.04	0.04	0.02	0	0.04
Federal Qualified Health Center Look-Alike	0.01	0.02	0	0.01	0.02
Federal rural clinic (category 95-210)	0	0	0	0	0
Doctors at FQHC-like clinics	0.08	0.1	0.02	0.04	0.1
Dentists at FQHC-like clinics	0	0	0	0.01	0
Patients seen by FQHC-like clinics last year	231	292	76	106	309
Patient visits to FQHC-like clinics last year	695	1120	319	351	982
Doctor visits to FQHC-like clinics, patients under age 20	197	154	19	61	171
Doctor visits to FQHC-like clinics, patients age 20 and older	225	352	77	140	315

SOURCE: Authors' calculations from LAFANS and OSHPD clinic data.

NOTE: Statistics are weighted to be representative of adults age 18 and older in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

specialty-only clinics as we had in constructing our OSHPD clinic measures. For clinics that did not appear in OSHPD, we created a measure of PPP non-OSHPD clinics at the tract level in the same fashion as our free or sliding-scale and total clinic measures from the OSHPD data.

The Los Angeles County Department of Health Services also operates clinics providing primary care and others providing public health services (immunizations, sexually transmitted disease testing, and tuberculosis care). We obtained data from Los Angeles County on the 16 primary care clinics for 2000. These were also matched to Census tract.

In addition to the regressions estimated controlling for the number of FQHC-like free or sliding-scale OSHPD clinics we also tested the

Table A.11

Summary Statistics from OSHPD Clinic Data for Census Tracts of Children in Los Angeles County, by Race/Ethnicity

Number in Tract	White	Hispanic	Black	Asian	Other Race or Race Unknown
Federal Qualified Health Center (330 grantee)	0.06	0.03	0	0	0.07
Federal Qualified Health Center Look-Alike	0.01	0.02	0.01	0.02	0.02
Federal rural clinic (category 95-210)	0	0	0	0	0
Doctors at FQHC-like clinics	0.12	0.09	0.01	0.04	0.17
Dentists at FQHC-like clinics	0	0	0	0	0
Patients seen by FQHC-like clinics last year	299	268	54	170	503
Patient visits to FQHC-like clinics last year	866	992	170	558	1,445
Doctor visits to FQHC-like clinics, patients under age 20	298	131	20	70	368
Doctor visits to FQHC-like clinics, patients age 20 and older	281	314	54	190	480

SOURCE: Authors' calculations from LAFANS and OSHPD clinic data.

NOTE: Statistics are weighted to be representative of children age 17 and younger in Los Angeles County. Columns 1, 3, 4, and 5 are for non-Hispanics.

robustness of our findings to including the total number of licensed clinics and to including a measure of free or sliding-scale clinics that adds the PPP and county-run clinics to our measure of free or sliding-scale OSHPD clinics. Using these alternative measures of clinics made no substantive difference to our findings.

Methodology for Linking Individual Observations to Neighborhood Characteristics and Calculating Distances

To link some of our neighborhood characteristics to the LAFANS data, we needed to link ZIP codes to Census tracts. Unfortunately, ZIP codes are created for the convenience of the U.S. Postal Service and do

not neatly correspond to Census geographic concepts. They can change over time in a less than systematic fashion, and thus in the absence of other address information, it can be challenging to link them to physical locations. In 2000, the Census Bureau created ZIP Code Tabulation Areas (ZCTAs) for use with the 2000 and later Census data collection efforts. These ZCTAs are generalized area representations of U.S. Postal Service ZIP code service areas and were created by aggregating Census 2000 blocks with addresses with a specific ZIP code. That aggregation then usually gets that ZIP code as its ZCTA. There were 33,178 ZCTAs for the whole United States and 32,038 ended up with a full five-digit numeric ZIP code as the ZCTA number. The rest have a coding ending in "HH" or "XX," where "HH" represents ZCTAs with water features, and "XX" represents large land areas with insufficient information to determine the five-digit ZIP code, usually rural areas with little settlement. If a Census block corresponds to more than one ZIP code, then the block is assigned the ZIP code with the most addresses. ZIP codes associated with single buildings or business entities (representing 2,523 ZIP codes) or Post Office boxes or general delivery addresses in areas otherwise served by rural route or city-style mail delivery (representing 6,419 ZIP codes) have no ZCTA. In such cases, the ZCTA for the surrounding area is given to that ZIP code, and it is possible for an address to have a ZCTA that is not a ZIP. ZCTAs correspond to ZIP codes from 2000. Thus, in linking later or earlier year's ZIP codes to ZCTAs, it is possible to mismatch the ZIP code if the ZIP code has changed.

We created a link between ZIP codes and ZCTAs using ESRI's ArcView software (geographic information mapping software system). We downloaded shape files for the 2000 ZCTA boundaries and used ESRI data on the post office location of each ZIP code in 2000 to link each ZIP code to a unique ZCTA. Here, it is possible that some part of the ZIP code resides in an alternative ZCTA, because we do not know the boundaries for the ZIP codes themselves. This ZIP code to a ZCTA crosswalk was then used to link the ZBP, OSHPD, and DHS data (at the ZIP code level) to ZCTAs.

All 9,513 ZIP code–establishment pairs in our selected NAICS codes in the 2000 ZBP file for Los Angeles County matched to a ZCTA in Los

Angeles County. Similarly, all of the general hospitals and free or sliding-scale clinics from OSHPD matched to ZCTAs. We then used information from a crosswalk between ZCTA and Census tracts from the Missouri Census Data Center to allocate our ZCTA totals to tracts, weighting by land area.[13]

We also explored the robustness of our findings by creating larger "neighborhoods," by averaging characteristics for areas within a specified distance of the tract centroids for the LAFANS data. We constructed a matrix of distances between 1990 Census tracts using the great circle formula, along with longitudes and latitudes of the 1990 Census tracts. The coordinates correspond to the centroids of the tracts, which we calculated using the boundary shape files of the tracts and the ArcView software. To illustrate the great circle distance formula, we first calculate the angular distance between two points as:

$$\Delta\sigma = 2\arcsin\left(\sqrt{\sin\left(\frac{\phi_2-\phi_1}{2}\right)^2 + \cos\phi_1\cos\phi_2\sin\left(\frac{\lambda_2-\lambda_1}{2}\right)^2}\right)$$

where $\phi_1, \lambda_1; \phi_2, \lambda_2$ are the latitude and longitude of the two points, respectively, in radians. Multiplying $\Delta\sigma$ by 6,372.795 km (the mean radius of earth) yields the great circle distance (in kilometers) between the two points (Sinnott, 1984). (This measure for great circle distance is preferred in cases where distances are small, because it minimizes rounding error in the calculation.)

Then, we created alternative measures of our neighborhood variables for tracts whose centroids were within three miles of the respondent's own tract's centroid. Each neighborhood measure at the tract level was averaged (using population weights) over all tracts within three miles. These alternative "neighborhood" measures may be a better measure of access to health care facilities. In general, these more comprehensive neighborhood measures were positively correlated with the tract

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[13]We chose to weight by land area rather than population for this step because it is not clear that the types of facilities and establishments in our neighborhood characteristics data would be distributed evenly by population. For example, hospitals have a large footprint and are unlikely to have many people in their tracts.

numbers, but the maximum and minimum values (for the 0-1 indicators) were smaller, as would be expected when averaging over a larger sample. We reestimated all of our regressions controlling for neighborhood characteristics using the three-mile-average measures. Generally, this made no difference to our findings.

Given concerns that distances in rural areas are not analogous to distances in more populated areas, we also explored another alternative neighborhood measure. This one relied on population-weighted averages across the tract of residence and the neighboring tracts and their neighbors. Tracts are based on population, so this first and second adjacent tract measure should control for density in a fashion that the three-mile-radius measure does not. Using this alternative measure also made little or no substantive difference to our findings.

Methodology for Comparisons of Health Outcomes

Our comparisons of health outcomes are all adjusted for age and gender, with the exception of the raw means reported in Chapters 3, 4, and 5 and this appendix. Regressions for adults include indicators for being ages 18–44 or 65 and older. Regressions for children include indicators for being ages 0–4 or 12–17. Estimates are weighted with nonresponse-adjusted weights raked to 2000 Census totals that also account for the stratified sampling in LAFANS and make values representative of Los Angeles County.[14] All standard errors are permitted to be arbitrarily correlated within 1990 Census tracts to ensure that tests of significance take into account the clustered nature of the sampling. Indicator variables are included for all missing control variables.

Means

The mean comparisons by race and ethnicity and by immigration status and Hispanic origin are calculated using probit regressions (to

[14]Raking is an iterative procedure for adjusting survey weights to match target totals from other sources. It is commonly used when aggregate totals are available for marginal distributions of characteristics such as age, race, and ethnicity, but the goal is to also match characteristics of joint distributions (e.g., see Singh and Mohl, 1996).

ensure that relevant probabilities are contained within [0, 1]). These probit regressions also control for age and gender. The means presented are then the probabilities averaged over the relevant sample, with age and gender evaluated at the observation's own values and all the race (or immigration status by Hispanic origin) variables but the one being examined set to zero. Statistical significance relative to whites (for the race and ethnicity comparisons) or to a U.S.-born non-Hispanic adult or non-Hispanic child with a U.S.-born parent (for the immigration status by Hispanic origin comparisons) is assessed by calculating the marginal effect of being in the relevant group relative to the baseline of white or U.S.-born non-Hispanic for all observations (having set the other race/ethnicity or immigration status variables to be 0), and then determining significance using the delta method.[15] Predicted probabilities for continuous variables are also averaged, with delta-method standard errors.

Mean comparisons by race and ethnicity reported in the text show values for non-Hispanic whites, Hispanics of any race, non-Hispanic blacks, and non-Hispanic Asians. The means for the category other race or race/ethnicity unknown are not shown in the main text but the variable was included in all comparisons (it consisted of 42 adults and 23 children). Mean comparisons by immigration status for adults reported in the text show values for U.S.-born non-Hispanics, naturalized non-Hispanics, documented non-Hispanics, U.S.-born Hispanics, naturalized Hispanics, documented Hispanics, and undocumented Hispanics. Statistics for the categories undocumented non-Hispanic or race/ethnicity unknown, documentation unknown and non-Hispanic or Hispanic ethnicity unknown, and documentation unknown and Hispanic are not presented in the main text (3% of adults did not report immigration status). Similarly, categories for parent undocumented or of unknown immigration status and the child being non-Hispanic, or unknown immigration status and the child being Hispanic are also

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[15]One might be concerned that averaging the predicted probabilities over all the *X*s would lead us to conclude that predicted probabilities were insignificant when the underlying probit coefficients were significant. We prefer to deal with the predicted probabilities. However, we also verified that the underlying probit coefficients were insignificant when the predicted probabilities were insignificant. This was true generally.

included in these comparisons but not reported in the text (3–5% of children, depending on race/ethnicity, did not report immigration status).

Regression-Adjusted Comparisons

Regression-adjusted comparisons of the probabilities of outcomes for Hispanics, blacks, and Asians (relative to whites) after controlling for various factors are presented for coefficients from probit models.

Educational attainment was controlled for in some specifications by including dummy variables for the respondent (in regressions involving adults) or the primary caregiver (in regressions involving children) being a high school dropout, having some college but no four-year degree, having at least a four-year college degree, and education being unknown. Respondents were asked about their education completed in the United States, and separately about education completed abroad if they did not complete any in the United States. Income and asset/net worth data in LAFANS were very comprehensive. Respondents from each family (sometimes more than one) were asked about a long list of types of income including own, spouse, and minor child wages or salary income; income from TANF or other public assistance; Food Stamps; child support; Supplemental Security Income; Social Security; Low Income Heating and Energy Assistance or housing assistance; worker's compensation; unemployment compensation; payments from the Veteran's Administration; foster care payments; alimony; or income from pension or trusts.

Data on nonhousing net worth were collected as were data on asset income for the year preceding the interview for a wide range of assets including real-estate holdings, own businesses or farms, retirement savings, stocks and mutual funds (and dividend income), savings and checking accounts, and money market accounts (and interest payments). The net value of vehicles and of other assets was also collected. Nonhousing asset net worth and income were collected with unfolding brackets as in the Health and Retirement Study. Estimated housing asset value was also collected but only in the ranges reported in the 2000 Census. Missing income, net worth, and housing data were fully imputed using the methodology used in the Health and Retirement

Study. We use these imputed values. Estimates that control for family income include the natural log of 1 plus total family income and a dummy for there being a family income of 0, a dummy for any component of family income being imputed, and a dummy for the family not having completed the income and asset module of the questionnaire. Estimates that control for nonhousing net worth include controls for the natural log of 1 plus total nonhousing net worth, a dummy for net worth being 0, and a dummy for net worth or housing having been imputed. Estimates that control for housing value include a dummy for being a renter, dummies for housing being any of the bottom three quartiles, a dummy for housing value having been imputed or housing ownership having been imputed, and a dummy for the family not having completed the income and asset module of the questionnaire.

We also explored controlling for the occupation of the adult or parent. Occupation has been linked to health status by previous research. This made little difference to our estimated racial/ethnic differences. It did make a large difference for estimated income gradients, which is not surprising, since our measures of occupation are correlated with income. Finally, we explored including all of our controls—education, immigration status, income, and neighborhood—at once. This generally made little difference to our estimated differences by race and ethnicity.

Robustness of Findings Concerning Immigration Status

We checked the robustness of our findings about immigration status in three additional ways: by comparing the LAFANS counts of immigrants of various status with numbers from the Census, the CHIS, and other sources by pooling persons whose immigration status cannot be determined with the relevant undocumented group, and by comparing these findings to findings from the 2001 California Health Interview Survey for their measures of immigration status. We discuss each in turn.

Given the lack of information about documentation status in standard U.S. government and other government data, we wanted to see

if the share of persons reporting being undocumented matched estimates of the Los Angeles County undocumented population obtained through other means. LAFANS data assess immigration status through a series of questions about whether individuals or their children were born in the United States, are naturalized citizens, or are permanent residents; have been granted asylum, refugee status, or temporary protected immigrant status; have a tourist visa, student visa, work visa or permit, or another document that permits them to stay in the United Status for a limited time; and whether the visa/work permit/other form of temporary permit is still valid. Those refusing or answering "don't know," along with those answering "yes," are skipped out of the rest of the questions.

The gold standard for estimating the legal and unauthorized foreign-born population is the so-called residual method. The residual method relies on government data to obtain a count of the foreign-born population, or, since questions about this have been added to large-scale survey sample datasets, of the foreign-born citizen and noncitizen populations (e.g., Passel, Van Hook, and Bean, 2004). Then, other data such as administrative counts of new legal immigrants, refugees and asylum-seekers, parolees, out-migrants, and deaths are used to create an estimate of the legal foreign-born noncitizen population. The unauthorized or undocumented population is the difference between the total number of noncitizen foreign-born and the legal noncitizen foreign-born (the residual).

Passel, Van Hook, and Bean (2004) report that the foreign-born population in the 2000 Census was about 30,996,000 and that about 20,776,000 of these were legal immigrants (naturalized or permanent residents/had valid green cards), with about 10,000,000 new green cards issued from 1990 to 2000. Their tabulations suggest that the total number of legal nonimmigrants (legally present but not permanent residents or green card holders) was about 1,047,400. This leaves a total unauthorized population in 2000 of about 8,000,000. California-specific totals for 2000 suggest that the unauthorized population was about 2,326,000. We do not have good estimates of the size of the unauthorized population for Los Angeles County, but we can compare the number of U.S. born persons, U.S. citizens, and noncitizens from the 2000 Census and from LAFANS. The only other source we know of

with information about noncitizens breaking out their status for Los Angeles County is the California Health Interview Survey. Table A.12 presents the percentage of Los Angeles County population that is U.S.-born, a U.S. citizen if born abroad, and a noncitizen from the 2000 Census Summary Tape Files (STF), from pooled randomly sampled adult and child data from LAFANS, and from the 2001 CHIS (from its web site, "AskCHIS"). Note that this table suggests that the number of U.S.-born persons in Los Angeles County may be slightly overstated for LAFANS and CHIS 2001, and that LAFANS may slightly understate the number of naturalized citizens.

Our first robustness check on our findings regarding immigration status involves tests with LAFANS data. We pooled persons with unknown status with the relevant group of undocumented adults or children. This made no substantive difference to our key findings (more details available on request).

The second robustness check was to assess our Los Angeles County findings with data from another dataset, the 2001 California Health Interview Survey, which collected information on whether each individual (and for children, their parents) was born in the United States,

Table A.12

Share of Los Angeles County Population Born in the United States, Naturalized, or Noncitizen

		Foreign-Born	
Data Source	U.S.-Born	U.S. Citizen	Noncitizen
2000 Census, STF 3 files	0.64	0.14	0.22
LAFANS	0.69	0.10	0.21
2001 CHIS	0.66	0.14	0.20

SOURCES: Authors' calculations from LAFANS and the 2000 Census. 2001 CHIS numbers were downloaded from the "AskCHIS" web site for the same categories.

NOTES: Census numbers are weighted with persons in tract, and LAFANS numbers are weighted with child or adult weights for randomly sampled children or adults, to be population representative. "AskCHIS" estimates are weighted to be population representative according to the web site. LAFANS noncitizen includes persons who are not naturalized citizens, were not born in the United States, or have unknown citizenship or place of birth.

naturalized, a permanent resident, or none of the above. We ran specifications as close as possible to our results in the text, using the CHIS immigration status measures: U.S.-born; naturalized; permanent resident or has green card; or other; and the same controls as in our LAFANS regressions. The controls for race were very similar to those in LAFANS, as were age and gender. In lieu of the complete detailed family income measures in LAFANS (including a long list of sources of income, including wage and salary, transfers, social security, unemployment, alimony or child support, worker's compensation, pensions, and various forms of asset income), we include dummies for household income being under the federal poverty guideline, at least the federal poverty guideline but less than two times the federal poverty guideline, at least two times the federal poverty guideline but less than three times the federal poverty guideline, and at least three times the federal poverty guideline.

The CHIS household income variable comes from a question asking for total household income (which has a prompt listing a variety of sources of income) and a series of unfolding approximate bracket amounts for persons refusing or answering "don't know." In lieu of the detailed housing and nonhousing-related net worth variables in LAFANS (not collected in CHIS 2001), we include a dummy for nonhousing nonvehicle assets being less than $5,000 if the household had income under 300 percent of poverty or no poverty information (otherwise, this question was skipped), a dummy for this question being skipped (income 300 percent of poverty or higher), and a dummy for not having answered this question (omitted category assets of $5,000 or more but income under 300 percent of poverty or not known).

The CHIS does not ask about outstanding liabilities. Some of the key dependent variables also varied in CHIS. CHIS asked about dental visits only for children age two and older, whereas LAFANS asked about all children. CHIS asked about hospital stays during the last year rather than the last two years. CHIS asked about doctor visits during the previous year only for children ages 0–11, whereas LAFANS asked this about all children. CHIS asked whether dental visits were for a checkup, whereas LAFANS asked only about dental visits. CHIS asked about asthma symptoms, whereas LAFANS asked about asthma attacks.

Nonetheless, the outcomes match up relatively well. Regressions were weighted probits, with heteroskedasticity robust standard errors clustered at the ZIP code level. We calculated predicted probabilities as in LAFANS, with delta-method standard errors and *p*-values.

This robustness check required running regressions at the UCLA Center for Health Policy Research's Data Access Center, because the CHIS public-use data contain neither county nor ZIP code nor the detail on who among noncitizens is a green card holder or a permanent resident because these variables are considered sensitive. We found that in general, our adult and child results were quite robust to this with several exceptions. Results for Asians sometimes looked quite different in the CHIS data, likely because CHIS conducted interviews in a number of Asian languages. Our adult results were otherwise generally quite similar. The first exception is that blacks appeared more likely than whites to have diabetes in the CHIS data restricted to Los Angeles County, whereas the numbers were similar in LAFANS. The second exception is that members of all foreign-born adult groups were significantly less likely than the U.S.-born to have doctor-diagnosed asthma, controlling for race/ethnicity, education, age, and gender. After also controlling for family poverty status in CHIS, or detailed income in LAFANS, the asthma results were more similar for groups of the foreign-born and the U.S.-born, controlling for race/ethnicity, education, age, and gender. Our child results were fairly similar for all of our outcomes, although magnitudes did vary across the datasets.

Appendix B

Public Programs Related to Health Care in Los Angeles County and California

Various types of public programs are tied to health. In this appendix, we discuss two broad types of programs: publicly provided or subsidized health insurance and publicly provided or subsidized health care (also known as the safety net). Ultimately, there is public provision of these goods because of the belief—substantiated by research—that for at least some groups, insurance coverage and access to health care are associated with better health. These public programs are a large and growing share of the state and federal budget, as well as local budgets, and threaten to be even larger in an environment of rising health care costs, rising premiums, and growing numbers of the uninsured.[1] Here, we touch on the main public health insurance programs and publicly provided or subsidized care, with particular attention to programs in Los Angeles County.

Public Health Insurance Programs

We will briefly discuss eligibility rules, benefits, enrollment, and state costs for each main public health insurance program in California (Medi-Cal, Healthy Families, and Medicare). We will also mention other pertinent public programs available more broadly or only within Los Angeles County.

[1]For a comprehensive discussion of the actors and incentives involved in studying the causes and consequences of lack of health insurance, see Chernew and Hirth (2004). For a discussion of the health effects of health insurance, see Levy and Meltzer (2004). For a discussion of the effects of increased health care on health with experimental data, see Newhouse and the Insurance Experiment Group (1993).

Medi-Cal

Medi-Cal, California's Medicaid program, provides essential acute and long-term care coverage to low-income individuals and families (and other groups). Medi-Cal is a provider of coverage to a large share of Californians.[2] As of January 2005, 6.5 million Californians and more than 2.4 million residents of Los Angeles County were enrolled in Medi-Cal (California Department of Health Services, 2005a). The 2005–2006 state budget includes $34.4 billion in spending on Medi-Cal, of which about 55 percent comes from the federal government, 38 percent from the state's General Fund, and the rest from other state and local funds. To be eligible for Medi-Cal, one must satisfy a complex set of criteria related to age, medical need, income and assets, and citizenship and immigration status. Eligible groups include public assistance recipients (California Work Opportunity and Responsibility to Kids (CalWORKs)); aged, blind, and disabled persons eligible for SSI; recipients of foster care or some forms of adoption assistance; persons who would have been eligible for the former Aid to Families with Dependent Children in California on July 16, 1996, but are not participating in CalWORKs; certain refugees; low-income pregnant women and children; parents of low-income children; Medicare participants with sufficiently low income and assets; and persons with certain severe medical conditions such as tuberculosis and breast and cervical cancer who satisfy the income and asset rules (these are known as the medically needy).

Citizens and permanent residents are eligible for the full range of Medi-Cal services if they meet all the other program rules. Undocumented and other immigrants without "satisfactory immigration status" are eligible only for emergency care, state-funded pregnancy-related care, and nursing care under the provisions of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (known as the welfare reform bill). Legal resident aliens and other qualified aliens who entered the United States after August 22, 1996, are ineligible for Medi-Cal for five years. This law also affected some

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[2]For example, Medi-Cal paid for 42 percent of births in California in 2003 (The Henry J. Kaiser Family Foundation, 2004).

disabled children who lost SSI but had their eligibility restored by the Balanced Budget Act of 1997 (which also established the State Children's Health Insurance Program).

Federal poverty guideline levels (FPLs) published by the Social Security Administration are used to set income limits for Medi-Cal eligibility. These guidelines are set by the Social Security Administration and vary by family size. For 2005, the FPL was $9,570 for the first person and $3,260 for each additional person (or $19,350 for a family of four). Medi-Cal income eligibility cutoffs vary for different groups. Pregnant women and infants are eligible with family income up to 200 percent of the FPL, children ages 1–5 are eligible with family income up to 133 percent of the FPL, and children ages 6–19 are eligible with family income up to 100 percent of the FPL. Parents of children on Medi-Cal are eligible for Medi-Cal with family income up to 100 percent of the FPL. SSI recipients are eligible with income up to 74 percent of the FPL; and the aged, blind, and disabled are eligible with income up to 100 percent of the FPL. Medi-Cal also has asset limits for eligibility with the exception of certain programs for pregnant women and children. Assets include cars, second homes, and bank accounts. California eliminated the asset tests for children and pregnant women as of 2004. For adults, the asset limits are $2,000 for an individual or $3,000 for a couple. For families, asset limits range from $3,000 to $4,200 depending on family size. Some middle-income elderly become eligible for Medi-Cal (in addition to Medicare) by spending down their assets. Medi-Cal eligibility is administered at the local level by county welfare offices.

The federal government mandates that, for certain groups of beneficiaries, the state cover such services as inpatient and outpatient hospital care; physician and other medical providers; skilled nursing facility care; laboratory tests and X-rays; and early and periodic screening, diagnosis, and treatment for children under age 21.[3] Mandatory services

[3]Until recently, states had to provide these services to certain eligible groups unless they obtained a waiver from the federal government to test alternatives to the standard Medicaid rules. The recent budget bill signed by President Bush loosens this requirement and makes it much easier for states to alter eligibility requirements, charge co-payments or premiums for some services, and change covered services.

differ according to the eligibility criteria through which one participates in Medi-Cal. California also covers a set of optional services including prescription drugs, dental care, vision care, hospice care, inpatient psychiatric care, and rehabilitation and therapy services.

Medi-Cal services are delivered through a combination of traditional fee-for-service reimbursement and managed care. California has been enrolling Medi-Cal beneficiaries in managed care since the early 1970s, after passage of the Knox-Keene Health Care Service Plan Act. The Health Maintenance Organization Act of 1973 and the Health Maintenance Organization Amendments of 1976 encouraged the development of HMOs by providing federal funding ($190 million from 1974 through 1980) to help qualified HMOs through their start-up period (Lee, 1997). However, it was not until the mid-1990s that the state began shifting large numbers of beneficiaries into managed care. Around 52 percent of all Medi-Cal beneficiaries are enrolled in managed care. Medi-Cal managed care is the primary model for all but the elderly, blind, and disabled in 22 of California's 58 counties (California HealthCare Foundation, 2006). Managed care enrollment is mandatory for the aged, blind, and disabled in counties that adopted the County Organized Health System managed care model. The County Organized Health System, implemented in eight counties, is one of the three managed care delivery models in California counties (the other two are the Geographic Managed Care model (in two counties) and the Two-Plan model (in 12 counties)). Enrollment in managed care for the elderly, blind, and disabled is voluntary for counties with Geographic Managed Care and the Two-Plan model (California HealthCare Foundation, 2006). Los Angeles County has two Medi-Cal managed care plans: the LA Care Health Plan and Health Net. Both of these managed care plans contract with and are monitored by the California Department of Health Services.

Medi-Cal pays for more than just inpatient and outpatient services, prescription drugs, and managed care. Medi-Cal also pays for premiums, co-payments, and certain services that Medicare does not cover for some persons dually eligible for Medicare and Medi-Cal. It also pays for some long-term care. Medicaid rules also require that California pay disproportionate share payments to hospitals with a large share of Medi-

Cal and low-income patients (states gain matching funds from the federal government for these). States have broad discretion in setting the rules for and size of the Medicaid disproportionate share payments. However, states must designate hospitals as disproportionate share hospitals if they have a Medicaid inpatient health care use rate one standard deviation or more about the state mean or a low-income utilization rate exceeding 25 percent. Recently, the federal government has expressed concerns that states are manipulating the system via intergovernmental transfers to maximize the federal share of these payments. The size of these payments to hospitals shrank in the late 1990s as a result of cuts enacted in the Balanced Budget Act of 1997. These cutbacks reduced revenue for some safety net providers. Payments were then raised in 2000.

Medi-Cal, much like any other health care program in the nation, is in a constant state of change. In recent years, the escalating cost of Medi-Cal has put an increasing burden on the state budget (e.g., MaCurdy et al., 2005). Between fiscal years 1998–1999 and 2004–2005, General Fund expenditures for Medi-Cal grew by 60 percent or by approximately $4.5 billion (California Department of Health Services, 2005a) because of escalating drug costs and changes in eligibility rules leading to caseload increases. As is true in many other states, despite the fact that children are the majority of Medi-Cal participants, per enrollee expenditures are much higher for the elderly, blind, and disabled than for children and other adults (The Henry J. Kaiser Family Foundation, 2005). In the 2005–2006 state budget, Governor Schwarzenegger proposed a redesign of Medi-Cal over a 12- to 18-month period. The major elements of the proposed redesign included expanding managed care, reforming the financing of safety net hospitals, placing an annual limit on adult dental services, and introducing beneficiary cost sharing (California Department of Health Services, 2005b). Although not all aspects of the original reform plan were adopted, several were. SB 1100 established the Medi-Cal Hospital Care and Uninsured Hospital Care Demonstration Project Act, which implements a five-year 1115 federal waiver of Medicaid rules for California. Most of this waiver is focused on stabilizing funding for various safety net hospitals, but it also contains incentive payments for

the state if managed care is expanded. The waiver was signed into state law in 2005, although most elements regarding the managed care expansion were eventually dropped.

Los Angeles County had a waiver from federal Medicaid rules from 1995 through June 30, 2005. This 1115 waiver (granted under section 1115 of the Social Security Act), like other 1115 waivers, allows the U.S. Secretary of Health and Human Services to waive any provisions of Medicaid law.[4] This waiver was extended most recently in June 2000. The waiver was granted in fiscal year 1995–1996, when Los Angeles County faced a $655 million deficit in funding health services. The county said that without assistance, it would have had to close one or more public hospitals. In response to this crisis, Los Angeles County, in collaboration with state and federal officials, developed a five-year Medicaid Demonstration Project to allow the county to stabilize its health programs and move away from expensive hospital-based services toward community-based primary and preventive care services. The waiver was extended through 2005. Over that 10 years, Los Angeles County increased the number of ambulatory care sites, decreased inappropriate use of emergency rooms, and reduced inpatient capacity. The waiver was funded by the federal government, the State of California, and Los Angeles County. Federal support totaled $87 million dollars in 2004–2005, and the state reimbursed the County Department of Health Services via cost-based reimbursement in Medi-Cal for outpatient services.

Healthy Families

Healthy Families is the California version of SCHIP, established by the 1997 Balanced Budget Act. SCHIP was established to provide health insurance coverage to children whose families earn too much to qualify for traditional Medicaid yet cannot afford private insurance for the children. States had flexibility to expand their Medicaid programs, establish a separate SCHIP program, or do both. Healthy Families is a separate SCHIP program, initially established to cover children ineligible

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[4]Information about California's 1115 waiver for Los Angeles County came from Los Angeles County Department of Health Services (2005a, 2005b).

for Medi-Cal, whose families had income up to 200 percent of the FPL, and who lack another source of insurance. As of this writing, children are covered up to 250 percent of the FPL.[5] Healthy Families benefits match those provided to state employees in the California Public Employees Retirement System but also include comprehensive dental and vision coverage. The program is predominately delivered via managed care, with co-payments for some services. In some counties, care is delivered instead via exclusive provider organizations, which more closely resemble the fee-for-service model.

Approximately 770,000 persons were enrolled in Healthy Families in December 2004, a 7 percent increase from the previous December. Total expenditures on Healthy Families in fiscal year 2003 were about $870 million, of which the state paid about 35 percent and the federal government about 65 percent.

Medicare

Medicare is the federal government program providing health insurance coverage for ambulatory and hospital care for persons age 65 and older, some disabled persons under age 65, and people with end-stage renal disease.[6] All U.S. citizens and legal resident aliens who have been in the United States for at least five years are eligible if they are age 65 or older and if they or their spouse worked for at least 10 years in Medicare-covered employment. Enrollees can choose from the Original Medicare Plan (Medicare Part A and Medicare Part B coverage are provided by the government as fee-for-service plans), Medicare Advantage Plan (Medicare Part A and Medicare Part B coverage are provided through private plans and managed care), and, beginning in January 2006, an added outpatient prescription drug benefit (Medicare Part D). Medicare Part A covers inpatient hospital care and Medicare Part B covers outpatient hospital care and doctors' services. Most people pay a premium for Part B, and persons who did not work long enough at

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[5]Coverage expansions for parents of children up to 250 percent of the FPL were approved at the federal level but were never implemented by the state because of budget constraints.

[6]Information about eligibility and benefits in the Medicare program came from Centers for Medicare and Medicaid Services (2004, 2005a).

a job with Medicare-covered employment can pay a premium and receive Part A coverage if they are otherwise eligible. Many individuals in the Original Medicare Plan, which is fee-for-service, also buy private Medigap policies to cover benefits not included in the Original Medicare. Approximately four million Californians and one million Los Angeles County residents were enrolled in Medicare in July 2003. Medicare is funded by premiums and a payroll tax.

In addition to the inpatient and outpatient costs discussed above, Medicare also pays its own disproportionate share payments directly to some hospitals. These are hospitals with a large share of Medicare SSI inpatient days and Medicaid inpatient days for dual-eligibles (persons eligible for both Medicare and Medicaid), or large urban hospitals with more than 30 percent of their revenue coming from state and local governments for indigent care. Medicare also subsidizes graduate medical education both directly and indirectly, with this subsidy amounting to about 3 percent of total Medicare expenditures.[7]

Medicare affects access to health care in other ways. With implementation of the Emergency Medical Treatment and Labor Act of 1986 (EMTALA), hospitals that receive Medicare funds are required to evaluate and stabilize all patients who enter via the emergency room seeking treatment or an examination for a medical condition, regardless of their ability to pay. Concerns about the rising costs of providing emergency room care to undocumented immigrants led Congress to include a provision in the Medicare Modernization Act of 2003 to reimburse hospitals and other emergency care providers for providing services under EMTALA to undocumented immigrants and Mexican citizens permitted temporary entry to the United States. California was slated to receive $70.8 million in fiscal year 2005 from this fund (Centers for Medicare and Medicaid Services, 2005b). Of that $250 million appropriated for fiscal year 2005, about $58 million was spent and the rest rolled over to fiscal year 2006.

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[7]Secondary to Medicare, Medicaid also funds graduate medical education. In addition to direct payments, Medicare provides indirect medical education payments to teaching hospitals to reimburse them for the more expensive tests and diagnostics they provide. Discussion of these indirect payments often suggests that they are in part to reimburse teaching hospitals for the high levels of uncompensated care they provide.

Other Public Insurance Programs

California has other public insurance programs to cover persons ineligible for Medi-Cal or Healthy Families. One rather small program is the Access for Infants and Mothers (AIM) program which covers women with income between 200 percent and 250 percent of the FPL (current funding for AIM for mothers comes from the state, and the federal government now funds the infant portion). The state also runs the Major Risk Medical Insurance Program, which provides health insurance benefits for residents of California who cannot purchase private health insurance because of preexisting conditions. Both of these programs include premiums. The state also underwrites programs such as the Pacific Health Advantage program, which offers affordable health coverage to small businesses with 2–50 employees.

Funded in some counties by Proposition 10 "First Five" tobacco tax payments, the Healthy Kids programs began as county-run programs to provide health insurance to uninsured low-income children ages 0–5 otherwise ineligible for public insurance. Since their inception in 2002, the Healthy Kids programs have been gaining momentum statewide. As of late 2005, Healthy Kids programs are either in place or in the works in 27 of the 58 counties (Lauer, 2005). In Los Angeles, Healthy Kids is part of First 5 LA, and was launched with $100 million allocated over five years. In 2004, the program expanded to cover children ages 6–18 through partnership with the Children's Health Initiative of Greater Los Angeles, a coalition of local agencies. Currently, Healthy Kids is an insurance program in Los Angeles offering coverage to all uninsured children through age 18 in families with income up to 300 percent of FPL and is subsidized by public and private funds. Hill, Courtot, and Wada (2005) report that although there was sufficient funding to cover all eligible children ages 0–5 who applied, funding was insufficient to cover all eligible children ages 6–18 and that an enrollment cap was introduced in 2005. They report that the program had enrolled 56 percent of eligible children ages 0–5 by summer 2005. The Healthy

Kids program in Los Angeles requires small co-payments for children in families with higher incomes.[8]

Publicly Provided Care

Here we will touch on publicly subsidized health care providers and county Indigent Care Programs and then discuss more completely the situation in Los Angeles County.

The Safety Net in California

The health care safety net in California (as we define it for this report) consists of several different actors. We follow Lewin and Altman (2000) and consider safety net providers to be those who "organize and deliver a significant level of health care and other related services to uninsured, Medicaid, and other vulnerable patients." Many private providers and facilities also pay for uncompensated care, but we will focus on core safety net providers, which we define as those that accept clients regardless of ability to pay and that have a large share of uninsured, Medicaid, and other vulnerable patients. Many of these core safety net providers are facing ongoing fiscal challenges because of a number of factors, including the rise in the numbers of uninsured and changes in federal reimbursement for provision of free care. When more people are uninsured, conditional on no changes in health status, financial pressures on providers offering free care increase. The Balanced Budget Act of 1997 made reimbursement less generous for clinics providing free care and reduced disproportionate share payments. Although some of these reductions have been restored, safety net care providers still face an increased financial burden. The recently implemented federal 1115 waiver for Medi-Cal is a five-year demonstration project that stabilizes federal payments to safety net hospitals in California.

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[8]Healthy Kids was not in existence at the time our primary dataset, LAFANS, was being collected. However, a second wave of LAFANS data began to be collected in 2006. We hope to use these longitudinal data to examine the effects of Healthy Kids.

Community Health Centers and Community and Teaching Hospitals

Community health centers and freestanding clinics typically offer primary care and preventive care and are located often in low-income areas. Analogous to the role disproportionate share payments play in helping hospitals to provide care to low-income uninsured populations, the federal government reimburses Federally Qualified Health Centers with grant money under the Public Health Services Act. The FQHC designation also allows clinics to be reimbursed based on costs under Medicare and Medicaid. To be designated as an FQHC, a clinic must serve the medically underserved or be in a medically underserved area; be publicly owned, not for profit, or tax exempt; provide services on a sliding scale; provide care without regard to income or insurance; and have a board of directors that reflects its patient base. FQHC Look-Alikes do not get grants from the Public Health Services Act but can get cost-based reimbursement for Medicare and Medicaid and receive private sources of funds.

Teaching hospitals and community hospitals also provide a substantial amount of uncompensated care (we discuss the role of publicly owned hospitals below). Teaching hospitals provide a substantial amount of care to the uninsured and are often the only locations where advanced procedures for specific conditions are performed. Community and teaching hospitals are reimbursed by Medicare and Medicaid disproportionate share payments for part of the uncompensated care they provide. In addition to these payments, they also rely on funds from Proposition 99, special local taxes, and cross-subsidies from other payers.

County Responsibilities for Indigent Care

In California, counties are mandated to provide health care for the indigent (low-income uninsured residents with specific health problems, mostly adults ages 21–64).[9] This program is now known as the Medically Indigent Adult program. Because of budget problems and a recessionary economy in the early 1980s, the state handed responsibility for indigent care to the counties by eliminating eligibility for indigent

[9]This section draws on Lewin and Altman (2000) and Kelch (2005a, 2005b).

adults for Medi-Cal.[10] Counties have discretion to determine who is eligible and how and what services to provide. Larger counties provide indigent care services at county-operated hospitals and outpatient clinics, by contracting with private or university hospitals and clinics, or through a combination of both direct provision and contracting. (Los Angeles County follows this latter model.) Smaller counties contract with the County Medical Services Program, which operates a fee-for-service program for the indigent that is similar to Medi-Cal. Funding for the Medically Indigent Adult program comes from health and welfare realignment funds and from county general funds. In addition to providing indigent care, counties are also responsible for local public health functions—such as tracking communicable diseases and conducting prevention activities—and for mental health programs.

County health systems are facing fiscal challenges. These are a result of both changes in financing and increases in the shares of uninsured. Recent state budget issues suggested potential pressure on a portion of realignment funds, although passage of Proposition 1A eliminated this concern for the present time.[11]

Los Angeles County's Indigent Care Program

In addition to state funds, Los Angeles also received federal matching funds for indigent care until June 30, 2005, through its 1115 waiver. The 1115 demonstration was somewhat unique in that it allowed Los Angeles County to receive federal funds for nonhospital services to indigent persons not enrolled in Medi-Cal. Over the course of 10 years, the waiver brought $2.1 billion in federal funds to the Los Angeles County Department of Health Services.

Los Angeles County is an extensive provider of health care for its indigent as well as for the rest of its residents. Los Angeles County operates a number of hospitals and clinics. It operates both

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[10]Technically speaking, counties have been mandated to provide indigent care for over one hundred years. More recently, however, the state provided care for the medically indigent within Medi-Cal from the mid-1970s through 1982.

[11]The portion of the realignment funds derived from vehicle licensing fees was in danger when the state cut the car tax and the General Fund backfill of lost revenue from the car tax was in question.

comprehensive care clinics and more limited Department of Health Services Health Centers, and certain county hospitals also run outpatient clinics. In the third quarter of 2004, the Los Angeles County Department of Health Services experienced about 500,000 ambulatory care visits (Los Angeles County Department of Health Services, 2005a) and the Department of Mental Health Services another 100,000 visits. Los Angeles County also contracts with private provider partnerships through the PPP-General Relief program to fund ambulatory care (this was begun as part of the 1115 waiver). Of patients with ambulatory care visits to hospitals operated by the county, between one-third and one-half were indigent.

We have discussed the main public programs relevant for health and have touched on fiscal pressures facing Los Angeles County's health care system. Like the health care system in general, Medi-Cal and Medicaid face significant fiscal challenges. In a period where the numbers of uninsured are rising, pressures on safety net providers are also increasing.

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