A Research Brief for the DC Primary Care Medical Homes project

Health Status and Access to Care among Low-Income Washington, DC Residents

By Nicole Lurie and Martha Ross[1]

"The high rates of chronic disease and potentially avoidable hospitalizations in parts of the city point to a clear need for better access to high-quality primary care."

Findings

As part of the DCPCA Medical Homes project, an analysis of health indicators, insurance status, and hospital admissions in the District of Columbia finds that:

- **Residents of low-income areas of Washington, DC consistently have worse health outcomes and less access to health care than those who live in more affluent areas of the city.** Residents in neighborhoods with medium to high poverty rates are more likely to have chronic diseases such as asthma, diabetes and hypertension and to be hospitalized for conditions that could be treated and managed in a primary care setting. They have lower insurance rates and are less likely to have a regular doctor or source of health care besides hospital emergency rooms.

- **There have been some improvements in the past few years, however, especially among youth and young adults.** Rates of potentially avoidable hospitalizations among youth declined between 2000–2004. (Potentially avoidable hospitalizations are hospitalizations for conditions that, with appropriate primary care, should not become serious enough to require admission to a hospital.) These trends were strongest among youth living in high- and moderate-poverty ZIP codes. There was also a decline in potentially avoidable hospitalizations among young adults (ages 18–39). The timing of these downward trends coincides with the expansion of the District's Medicaid program and the creation of the DC Health Care Alliance, suggesting that these programs may be improving health outcomes for low-income District residents by improving access to primary care.

- **Health planners need access to more and better data to monitor District residents' health status, access to care, and the performance of the health care system.** The lack of data is especially pronounced for children and youth, for whom the potentially avoidable hospitalization statistics are some of the only health data available. There is little information on children's insurance or health status. Without better data for residents of all ages on potentially avoidable hospitalizations by hospital, emergency department utilization, quality of care, insurance status, access to care, and chronic and acute diseases, the city and other health care leaders are hampered in their ability to improve the delivery of primary medical care to low-income and uninsured District residents.

The high rates of chronic disease and potentially avoidable hospitalizations in parts of the city point to a clear need for better access to high-quality primary care. Community health centers—nonprofit health centers with a mission to provide care regardless of ability to pay—provide critical services but do not have the capacity to serve all of the city's medically underserved residents. The Medical Homes DC project, launched by the DC Primary Care Association in partnership with the District government, Brookings Institution, RAND and numerous other partners, is in the early stages of a long-term initiative to strengthen the current network of community health centers and create a more effective system to deliver primary care to low-income and uninsured District residents.

I. Introduction

Low-income residents of Washington, DC have poorer health outcomes and less access to primary care than more affluent residents of the city. Residents in low-income areas of the city are less likely to have insurance and a regular doctor, are more likely to have chronic health problems, and are more likely to be hospitalized for conditions that should not result in hospitalization if treated early and effectively in a primary care setting.

These health problems persist in spite of the District government's expansive public insurance programs, which provide coverage to more than 160,000 residents, or almost 30 percent of the city's population. The city has phased in a number of insurance expansions for low-income residents over the past several years. The Medicaid program is by far the largest insurer of low-income residents, with about 136,000 individuals enrolled. Two-thirds of the Medicaid population (about 93,000) is in a managed care program. Almost 63,000 of the Medicaid managed care enrollees are children under 18, and another 30,000 are working-age adults between 19 and 64. Another 43,000 Medicaid enrollees are elderly or disabled and are enrolled in the fee-for-service program.

In 2001, the city created the DC Health Care Alliance when it closed DC General Hospital as an inpatient facility. The Alliance pays for health care services to uninsured District residents with annual incomes below 200 percent of the poverty line. It primarily serves low-income adults without children, about 31,000 enrollees. The city government spends about $1.2 billion per year on Medicaid in combined federal and local dollars (about $350 million in local dollars), and about $100 million in local dollars on the Alliance. Additionally, the city is home to an active and committed group of community health centers with a mission to serve low-income and uninsured residents.

But despite these significant assets, too many District residents are still suffering poor health outcomes. The high rates of chronic disease and potentially avoidable hospitalizations in parts of the city point to a clear need for better access to high-quality primary care. Community health centers provide critical services but do not have the capacity to serve all of the city's low-income and uninsured residents. They are modestly staffed and operate on thin financial margins. Relatively few are housed in well-designed facilities. Too many operate in substandard facilities that hurt their ability to provide high-quality care. And parts of the city simply don't have enough facilities. Additionally, Medicaid reimbursement rates for most providers are low, and the low reimbursement coupled with paperwork and administrative requirements discourages many private providers from accepting Medicaid patients. Access to specialty care and diagnostic services, even for Medicaid and Alliance enrollees, is a consistent problem.

Medical Homes DC

The delivery system for primary care needs major attention. The Medical Homes DC initiative is designed to address problems in the delivery system, by expanding the reach and improving the quality of primary health care services for low-income and uninsured District residents. Medical Homes DC is led by the DC Primary Care Association (DCPCA) in collaboration with a broad-based consortium which includes the District government, the Brookings Institution, RAND, community health centers, and others.

The goal of Medical Homes is to strengthen and grow the current network of community health centers, and dramatically increase the number of low-income and uninsured District residents who have and regularly use a medical home. A *medical home* is a primary care provider where a patient's health history is known, where he or she will be seen regardless of ability to pay, and where he or she routinely seeks non-emergency care. Medical homes are integrated with each other and with support services, and with hospital emergency departments and discharge systems.

Medical Homes DC was launched in 2003 with a $2.5 million federal grant to the DC Primary Care Association from the Health Resources and Services Administration within the U.S. Department of Health and Human Services. The District government has committed $15 million to the project over three years, and local and national foundations have also made major contributions. In 2005, the project completed the first round of grants to assist community health centers with facility improvements. The project is taking multiple approaches to strengthen the capacity of community health centers:

- **Assisting health centers in expanding, renovating, or building additional high-quality clinical space.** Medical Homes is identifying debt and equity sources to finance health center capital projects, assisting health centers in business and capital planning, and developing and implementing a financing and capital planning system.
- **Implementing the Medical Homes DC Performance Standards.** The Medical Homes DC standards were developed collaboratively by the health centers, the DC Department of Health, and other partners. The standards set clinical, financial, and management standards for health centers, and incorporate key federal components, such as JCAHO (Joint Commission on Accreditation of Healthcare Organizations) ambulatory care standards and primary

care effectiveness review requirements. Ultimately, the goal is to tie Medical Homes DC certification to increased reimbursement rates.

- **Creating the Institute for Primary Care Enhancement.** The Institute has four tracks: financial management, board development, performance improvement and clinical excellence. One vehicle of the Institute is learning collaboratives to help health centers improve their internal processes and performance.

Using data to inform policy

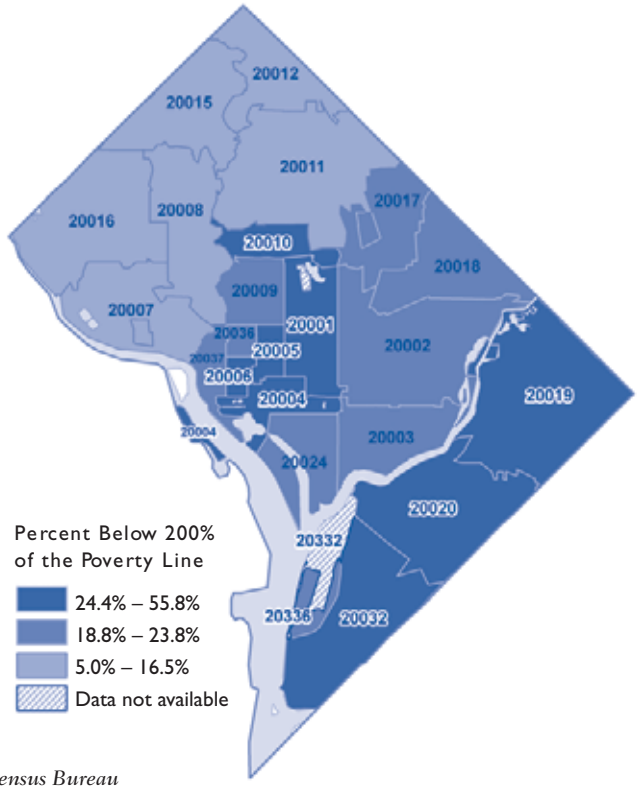
The research described in this report was conducted as part of Medical Homes DC, and as such reflects the project's commitment to ground its work in data and analysis. However, although the results do set a baseline regarding health status and access to care among low-income District residents, they also raise a number of questions relevant to public policy. Without access to more and better data, health planners will not be able to satisfactorily monitor the performance of the safety net in providing high-quality care to District residents.

Setting the context: poverty rates

Figure 1 shows the percentage of District residents living below 200 percent of the federal poverty threshold in 2000. For a single person, the poverty threshold was $8,794, and 200 percent of the threshold was $17,588. For a family of four, the poverty threshold was $17,603; 200 percent of the threshold was $35,216.[2]

Low-income residents live clustered in particular parts of the city. In the three large ZIP codes east of the Anacostia River (20032, 20020 and 20019), about half of the residents have incomes below 200 percent of the federal poverty line. Residents of these neighborhoods are almost entirely African-American. Other ZIP codes with high numbers of low-income residents are in the central portion of the city, and include primarily black and foreign-born residents. As will be seen later in the report, residents living in ZIP codes with moderate to high levels of poverty consistently have worse health outcomes than residents in low poverty ZIP codes. A large body of research has linked socioeconomic status (including income and education) with health. In general, the lower the socioeconomic status of a person or a family, the more likely they are to have negative health outcomes, and the more likely they are to report an unmet need for health care.[3]

Figure 1. Percent of District residents living below 200 percent of the federal poverty threshold by ZIP code, 2000



Source: U.S. Census Bureau

II. Methodology

This study is based on several data sources: the Behavioral Risk Factor Surveillance System and hospital discharge data obtained from the DC Hospital Association. Data on income and population demographics were derived from the U.S. Census.

Measures of chronic conditions, insurance status, and usual source of care are drawn from Behavioral Risk Factor Surveillance System (BRFSS) data from 2000 to 2004. The BRFSS is an annual, nationwide survey of adults aged 18 and over conducted by the Centers for Disease Control and Prevention (CDC) in conjunction with states. In the District of Columbia, the Department of Health, which conducts this survey with the CDC, made

recent BRFSS data available to the Medical Homes project for analysis. BRFSS data only includes adults. There are no comparable data on children and youth.

The analysis of ambulatory care sensitive admissions is based on data from the DC Hospital Association (DCHA) for the years 2000 to 2004. DCHA provided aggregate data on hospital discharges by diagnosis code among its member hospitals, and did not provide hospital-specific information.

Behavioral Risk Factor Surveillance System (BRFSS)

Several survey questions from the Behavioral Risk Factor Surveillance System for the years 2000–2004 were identified to measure access to care and health status. Figure 2 lists the questions from the survey used in this analysis.

Responses without verifiable DC ZIP codes were eliminated. A summary measure of chronic disease was created, including individuals with asthma, diabetes, hypertension and a history of acute myocardial infarction (AMI), heart disease or stroke. Regarding usual source of care, doctor's offices, public or community health centers, and hospital outpatient departments were classified as "regular" sources of care. Respondents who reported that they usually received care in an emergency department or urgent care center were considered not to have a usual source of care.

To obtain ZIP code level estimates of access and health status, and to increase the sample size for analysis, responses were combined over the survey years. This was challenging in part because the wording of some BRFSS questions varied slightly from year to year. When possible, to address this limitation, questions were pooled across years and analyzed. We estimated values and confidence intervals for each measure and each ZIP code.

Figure 2. BRFSS survey questions used to measure health status and access to care

Insurance status

- Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?

Regular source of care

- When you are sick or need advice about your health, to which one of the following places do you usually go? Doctor's office, public health center or community health center, hospital outpatient department, hospital emergency room, urgent care center, other.

Chronic disease burden

- Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?
- Have you ever been told by a doctor, nurse, or other health professional that you had asthma?
- Do you still have asthma?
- Have you ever been told by a doctor that you have diabetes?
- Has a doctor, nurse, or other health professional ever told you that you had any of the following? A heart attack (also called a myocardial infarction), angina or coronary heart disease, or a stroke.

Hospital discharge data

To identify hospitalizations that were potentially avoidable with proper primary care, RAND used the "ambulatory care sensitive" (ACS) algorithm developed by Dr. John Billings, associate professor of health policy and public service and director of the Center for Health and Public Service Research, and his colleagues at the Wagner School at New York University. RAND collaborated with Dr. Billings in conducting these analyses. This algorithm identifies potentially avoidable admissions by diagnosis code and creates rates per thousand population by age group and ZIP code. The data were divided into age groups that closely resemble age cohorts affected by different public policies: children (0–17 years old), young adults (18–39), and middle aged (40–64). Further discussions of the methods used to identify these admissions have been previously published.[4]

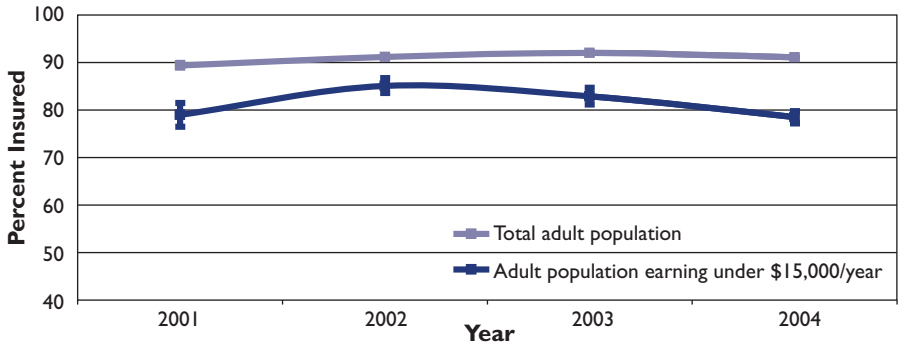
To examine trends in ACS rates over time, ZIP codes were combined into tertiles (high, medium and low income ZIPs) and changes were plotted over time. We also examined marker admission rates and plotted these points over the time period. Marker admissions are conditions for which hospitalization is virtually unavoidable, such as appendicitis, heart attack or hip fracture.

III. Findings

Health Insurance

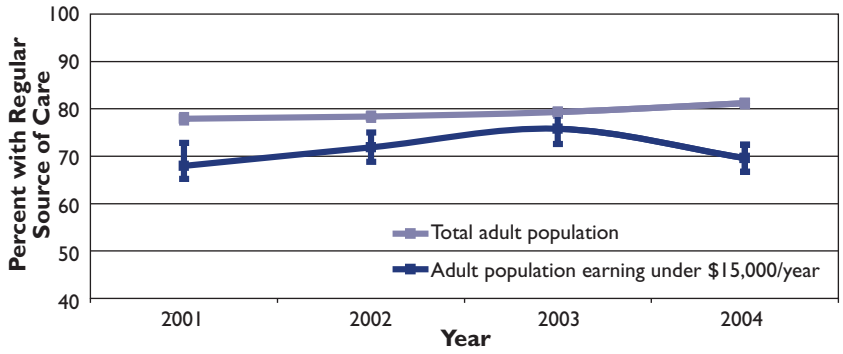
As shown in Figure 3, the percentage of all adults with health insurance in Washington, DC hovers around 90 percent. However, low-income adults earning less than $15,000 per year have lower rates of health insurance as well as greater year-to-year volatility in their insurance status. Between 2001 and 2004, 79 to 85 percent of low-income adults had health insurance.

Figure 3. Percent of adults with health insurance, Washington, DC, 2001–2004*



** shown as mean with 95 percent confidence interval*
All adults and adults earning less than $15,000 per year
Source: Behavioral Risk Factor Surveillance System

Figure 4. Percent of adults with a regular source of health care, Washington DC, 2001–2004*



** shown as mean with 95 percent confidence interval*
All adults and adults earning less than $15,000 per year
Source: Behavioral Risk Factor Surveillance System

The data probably reflect an undercount of residents enrolled in the DC Healthcare Alliance, so the actual number of residents with health insurance is probably higher than reflected in the chart.[5]

A lower percentage of District adults are uninsured than is the case nationally. In 2001, 15.6 percent of adults in the U.S. lacked insurance, compared to 10.6 in the District. The national figure increased to 17.3 in 2004, compared to 8.9 percent in the District.[6]

Regular Source of Care

Adults without a regular source of care are likely to have unmet needs for health care. A "regular source of care" includes doctors' offices, health centers, and outpatient hospital departments. It does not include emergency departments or urgent care centers. These are people who, by definition, are disconnected from the primary care system.

Delaying or not receiving health care can lead to negative health consequences and can result in the need for more intensive care if a person's health condition worsens. Nationally, the proportion of people reporting an unmet need for health care increases sharply as income declines.[7]

Figure 4 shows that about 78 percent of adults across all income levels had a regular source of care in 2001, a figure which increased slightly to 81 percent in 2004. Figures for adults earning less than $15,000 per year are substantially lower: 68 percent had a regular source of care in 2001, and 70 percent in 2004. Among lower-income adults, the figure with a regular source of care dropped in 2004, although the size of the confidence intervals makes it difficult to determine the size of the change with certainty. Since the year 2001, about 25 to 35 percent of low-income adults have lacked a regular source of care.

As shown in Figure 5, areas east of the Anacostia River, in Near Northeast (ZIP code 20002) and in downtown and near-downtown neighborhoods (20001, 20005) have the highest number of adult residents with no regular source of medical care. Residents of these areas are up to three times as likely NOT to have a regular doctor as residents living in the more affluent westernmost part of the city.

Adult chronic disease rates

Chronic diseases—such as cancer, asthma, diabetes, and heart disease—are among the most common, expensive and preventable of all health problems. Nationally, seventy percent of Americans who die each year, or more than 1.7 million people, die of a chronic disease. The major chronic disease killers are often related to behavior (tobacco use, lack of physical exercise, poor nutrition).[8]

People with chronic illnesses generally require ongoing primary care services to manage their health conditions. For this study, adults with chronic illness had one or more of the following conditions: asthma, hypertension, diabetes, heart disease, or stroke.

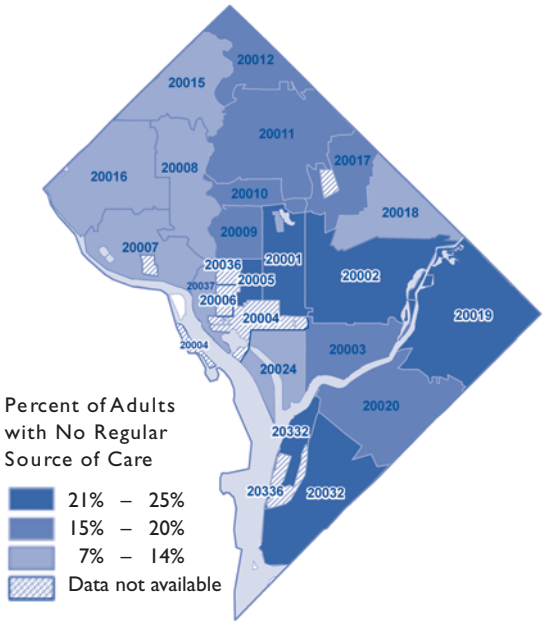
District residents on the eastern side of the city have high rates of chronic diseases. In ZIP codes 20011, 20017, 20018, 20019, and 20032, between 44 and 60 percent of adults have a chronic condition.

Both nationally and locally, heart disease is the leading cause of death among adults. In the District, it accounted for about 30 percent of deaths in 2001 (the most recent year for which data are available).[9]

Potentially Avoidable Hospitalizations

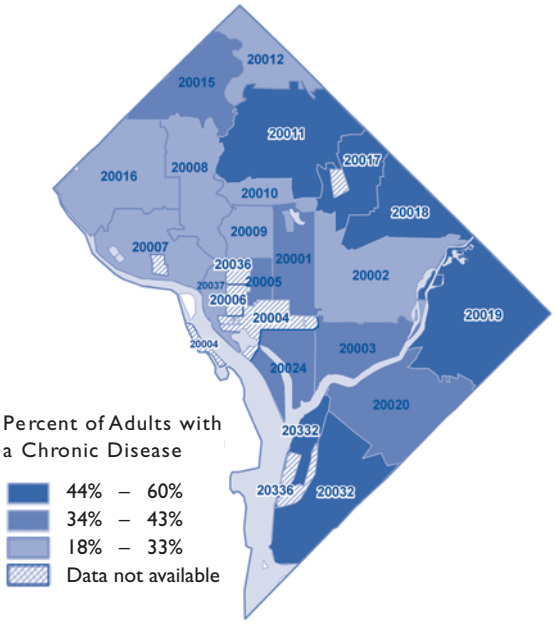
Potentially avoidable hospitalizations are hospitalizations for health conditions that, if treated early and effectively in the primary care setting, should rarely become serious enough to require hospitalization. Specifically, potentially avoidable hospitalizations are called "Ambulatory Care Sensitive" (ACS) admissions. ACS hospital admissions are a commonly used indicator of the overall effectiveness (including access and quality) of primary health care.[10] That is, better access to high quality primary health care should be associated with lower rates of ACS hospital admissions. Examples of ambulatory care sensitive admissions include asthma, dehydration, chronic obstructive pulmonary

Figure 5. Adults with no regular source of care by ZIP Code, Washington, DC, 2001–2002



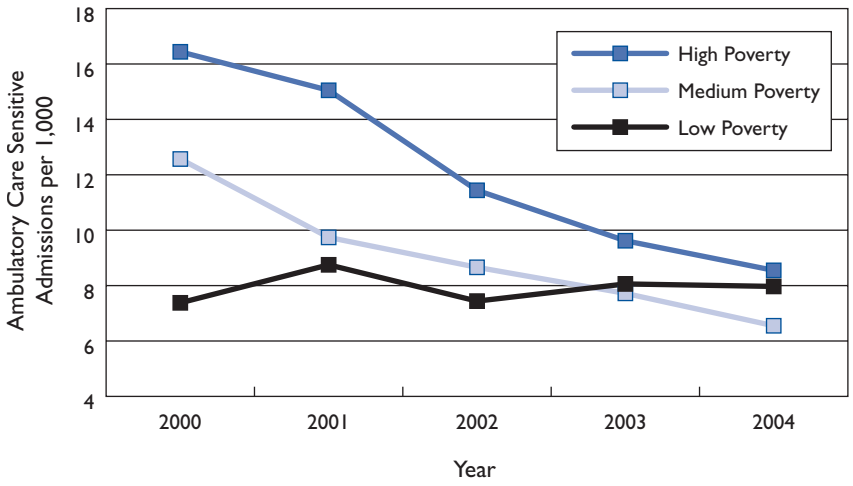
Source: Behavioral Risk Factor Surveillance System

Figure 6. Adult chronic disease burden, by ZIP Code, 2001–2002*



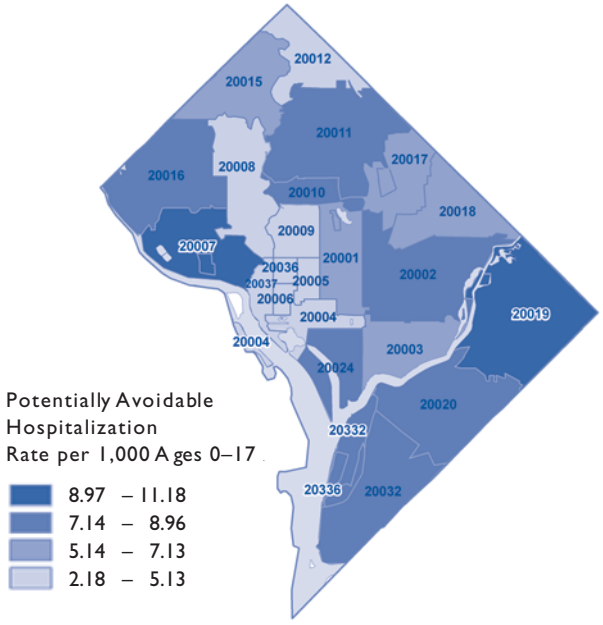
**Chronic diseases include asthma, hypertension, diabetes, heart disease, and stroke*
Source: Behavioral Risk Factor Surveillance System

Figure 7. Potentially avoidable hospitalization rates, ages 0–17, by ZIP code poverty status, 2000–2004



Source: DC Hospital Association, hospital discharge data

Figure 8. Potentially avoidable hospitalization rates, ages 0–17, by ZIP code, 2004



Source: DC Hospital Association, hospital discharge data

disease, congestive heart failure, hypertension, angina, diabetes, and hypoglycemia, among others. A full list of the ACS admission codes can be found at: **http://www.nyu.edu/wagner/chpsr/**.

Potentially avoidable hospitalizations are an inefficient way to deliver primary care. They are expensive and divert funds away from medical settings more appropriate to primary care. Nationally, the rate of potentially avoidable hospitalizations is higher among residents of low-income areas, and lower among residents of higher-income areas. In 1989–91, the potentially avoidable hospitalization rate among residents in areas with median incomes below $20,000 was 2.4 times greater than that for residents of areas with median incomes of $40,000 and above. Additionally, rates of potentially avoidable hospitalizations are higher among black residents than white residents within each income level.[11]

As shown in Figure 7, rates of potentially avoidable hospitalizations among children fell dramatically between 2000–2004. Among all children, the rate fell from 13 per thousand children in 2000 to 8 per thousand, a drop of 40 percent. The drop was most pronounced among children in high-poverty and medium-poverty ZIP codes. Among children in high-poverty ZIP codes, the rate fell from 16 per thousand in 2000 to nine per thousand, a 48 percent reduction.

This drop in potentially avoidable hospitalizations among children coincides with a period of expanded enrollment in Medicaid. Overall Medicaid enrollment increased from about 118,000 in 1999 to about 140,000 in 2004, with enrollment among children increasing from about 56,000 in 1999 to about 67,000 in 2004. Although not conclusive, the drop in potentially avoidable hospitalizations, especially among children living in medium- and high-poverty ZIP codes, suggests that increased coverage had a positive effect on health outcomes as enrollees

entered primary care.

Figure 8 shows that potentially avoidable hospitalizations among children are highest in ZIP codes 20019 (in Ward 7, east of the Anacostia River) and in 20007 (Georgetown). Other areas with high rates of potentially avoidable hospitalization include the other two ZIP codes east of the Anacostia River (20020 and 20032), in Southwest (20024), in parts of Northeast (20002), in the Columbia Heights/Petworth neighborhoods (20010 and 20011), and in the Foxhall neighborhood (20016). The reasons for the high rates in a few affluent ZIP codes are unclear. Overall, the top diagnoses for potentially avoidable hospitalizations among children and youth were asthma, dehydration, convulsions, and acute bronchitis. In the affluent ZIP codes, the most common diagnosis was dehydration, and in the lower-income ZIPs, the most common diagnosis was asthma.

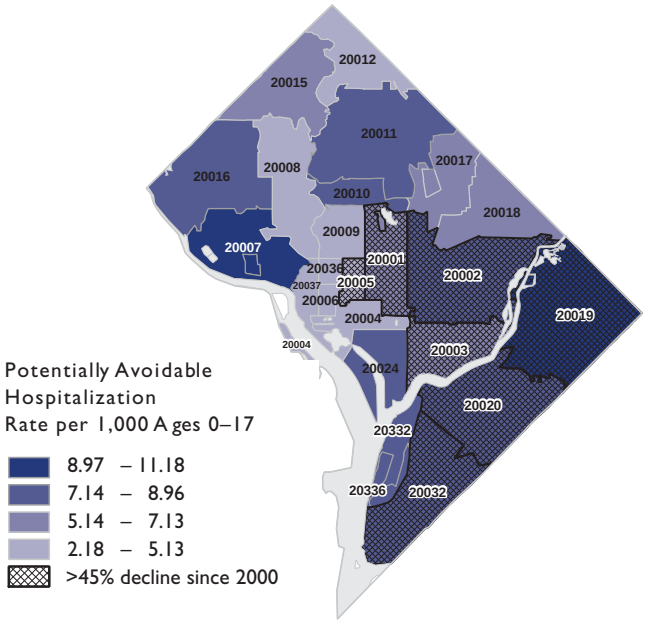
Asthma is the most common chronic disease among children, and disproportionately affects low-income populations, minorities, and children in urban areas.[12]

Figure 9 shows ZIP codes in which potentially avoidable hospitalization rates among children fell by more than 45 percent since 2000. All of the ZIP codes with large declines are ZIP codes with high- and moderate-poverty levels.

Increased development and rising housing prices in many low- and moderate-income parts of the city have raised concern that low-income District residents are leaving because they can't afford to live in the city. While this paper cannot measure population change at the neighborhood level, the drop in potentially avoidable hospitalizations among children is large enough that it is unlikely to be driven entirely by low- and moderate-income families leaving those neighborhoods.

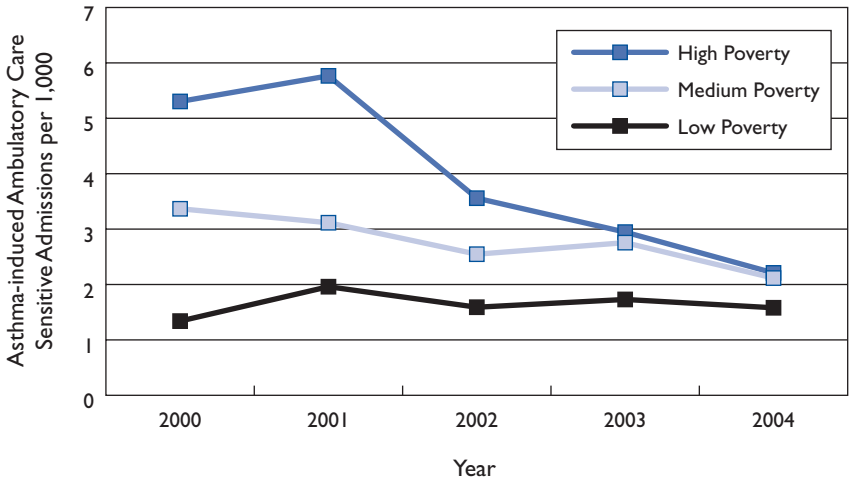
Figure 10 shows that potentially avoidable hospitalizations induced by asthma among children aged 0–17 in the District declined between

Figure 9. ZIP codes with large declines in potentially avoidable hospitalizations among children ages 0–17, 2000–2004



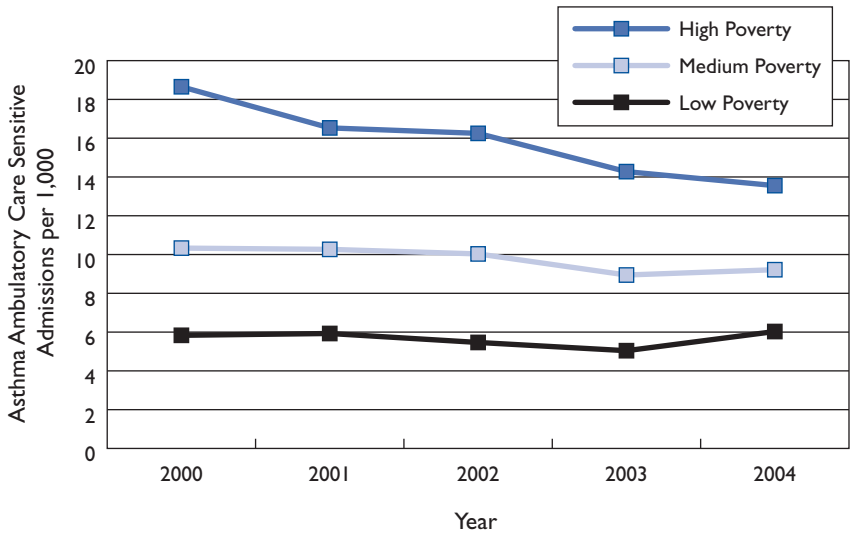
Source: DC Hospital Association, hospital discharge data

Figure 10. Rates of asthma-induced potentially avoidable hospitalizations for children ages 0–17, by ZIP code poverty status, Washington, DC, 2000–2004



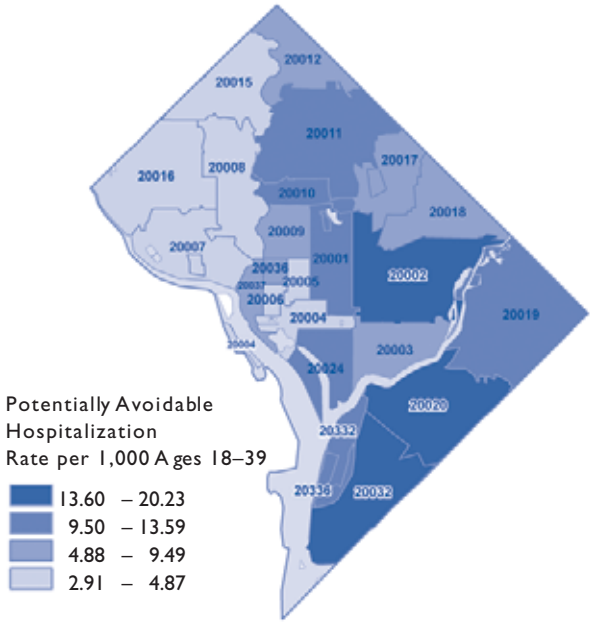
Source: DC Hospital Association, hospital discharge data

Figure 11. Potentially avoidable hospitalization rates, ages 18–39, by ZIP code poverty status, 2000–2004



Source: DC Hospital Association, hospital discharge data

Figure 12. Potentially avoidable hospitalization rates, ages 18–39, by ZIP code, 2004



Source: DC Hospital Association, hospital discharge data

2000–2004, with the largest decreases among residents of high-poverty ZIP codes. In 2000, 5.3 per 1,000 children in high-poverty ZIP codes were hospitalized because of asthma, compared to 3.4 children per thousand in medium-poverty ZIP codes and 1.3 children in low-poverty ZIP codes. In 2004, the rate of asthma-induced potentially avoidable hospitalizations for children in high and medium-poverty ZIP codes had both fallen to about 2.2 per thousand.

Potentially avoidable hospitalizations also fell among young adults aged 18–39, from 12 per thousand young adults to 10 per thousand. As with children, the drop was most striking in high-poverty ZIP codes, where the rate fell from 19 per thousand in 2000 to 14 per thousand in 2004, a decrease of 27 percent. This drop coincides with the expansion of Medicaid enrollment mentioned earlier. In 1999, about 62,000 adults were enrolled in Medicaid, a figure which increased to about 73,000 in 2004.

Another significant expansion in health insurance occurred in this time period, the creation of the DC Health Care Alliance. The Alliance pays for health care services to uninsured District residents with annual incomes below 200 percent of the federal poverty line and was launched in 2001. It primarily serves low-income adults without children and has about 31,000 enrollees. The drop in potentially avoidable hospitalizations coincides with the expansion of Medicaid and the creation of the Alliance and suggests, though not conclusively, that the increased coverage had a positive effect on health outcomes.

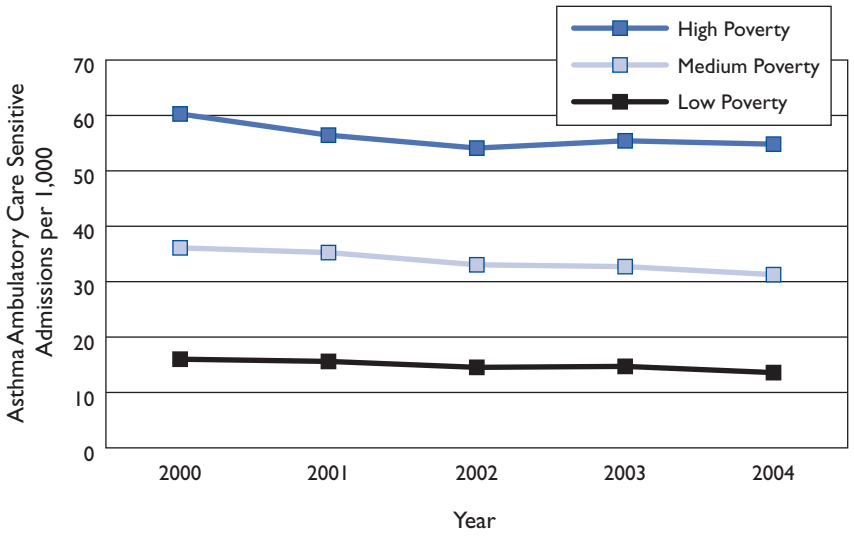
Potentially avoidable hospitalizations for young adults were highest in ZIP codes east of the Anacostia River (20020 and 20032) and in Northeast (20002). High rates were also found in the 20019 ZIP code east of the Anacostia River, in Southwest (20024), and in the ZIP codes in the central part of the city (20001, 20010, and

20011). The most common diagnoses among young adults with potentially avoidable hospitalizations were dehydration, bacterial pneumonia, cellulitis, and kidney infection.

Potentially avoidable hospitalizations among adults aged 40—64 fell more modestly than among children and young adults. Rates fell from 37 per thousand residents aged 40-64 in 2000 to 32 per thousand in 2004, a drop of 13 percent. Among residents in high poverty ZIP codes, potentially avoidable hospitalizations decreased by nine percent, from 60 per thousand to 55 per thousand, although the change is not statistically significant.

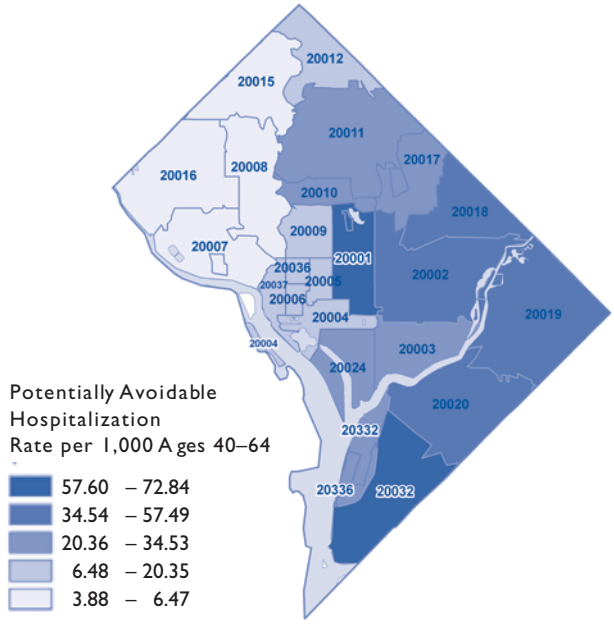
Potentially avoidable hospitalizations for adults 40–64 are concentrated heavily in the eastern part of the city. The highest rates are in the ZIP codes 20032 (Congress Heights, Washington Highlands) and 20001 (Logan Circle/Shaw/LeDroit Park). Among this age group, the most common causes of potentially avoidable hospitalizations are congestive heart failure, dehydration, bacterial pneumonia, and asthma.

Figure 13. Potentially avoidable hospitalization rates, ages 40–64, by ZIP code poverty status, 2000–2004



Source: DC Hospital Association, hospital discharge data

Figure 14. Potentially avoidable hospitalization rates, ages 40–64, by ZIP code, 2004



Source: DC Hospital Association, hospital discharge data

IV. Conclusion

This analysis suggests that the District faces a number of challenges in improving the health status and access to care of its low-income residents, although there are a few bright spots. In general, low-income residents are more likely than affluent residents to be uninsured, less likely to have a regular source of medical care, more likely to have a chronic disease, and are more likely to be hospitalized for a condition that could be more effectively treated and managed in a primary care setting.

But there are encouraging signs, especially among children. Potentially avoidable hospitalizations among children in high- and moderate-poverty ZIP codes fell sharply between 2000 and 2004. Similarly, young adults (aged 18–39) in high-poverty ZIP codes experienced a pronounced drop in potentially avoidable hospitalizations between 2000 and 2004. These positive changes in health outcomes occurred as the city was expanding coverage through Medicaid and the Alliance. Although not conclusive, the timing suggests that increased coverage improved access to primary care and thus improved health outcomes. However, the decline in potentially avoidable hospitalizations among older working-age adults (ages 40–64) was much smaller, suggesting that this age group has more problems accessing primary care than other age groups, or that they have more serious health problems and/or disabilities that are harder to address.

Remaining questions

The data in this paper provide a baseline regarding the health status and access to care among the District's low-income residents. However, the results also raise a number of questions about the performance of the medical safety net. Why have potentially avoidable hospitalizations for older working-age adults remained relatively flat over time, compared to the steeper declines among other age groups? Is the drop in hospitalizations offset by a higher number of visits to emergency departments? Where do people go (which hospitals) to be hospitalized for ambulatory care sensitive conditions? How much of the drop in ambulatory care sensitive admissions is due to increased access to care, and how much is due to increased quality of care? Do changes in the city's demographics explain some of the trends? What is the quality of care that uninsured, Medicaid, and Alliance patients receive?

Answering these questions depends on having access to more data. Some of the data should be relatively straightforward to obtain, while accessing other needed data has proven more challenging.

In the case of identifying where people go to be hospitalized for ambulatory care sensitive (ACS) conditions, what is needed is simple: hospital discharge data complete with hospital identification codes attached. Thus far, the DC Hospital Association has shared aggregate information on hospital discharges by diagnosis code from its member hospitals, without a hospital identifier. With hospital-specific information, it would be possible to identify the hospitals making ACS admissions and to detect any patterns. For instance, if a hospital has a disproportionate number of admissions from a particular ZIP code or ZIP codes, the hospital and primary care doctors in the "sending" ZIP code could work together to increase their outreach and health education efforts to bring more people into primary care. They could also develop compatible electronic medical record systems, so that treatment and diagnostic information on a patient is readily available to both the primary care team and hospital staff.

Regarding emergency department utilization by diagnosis, the issue is that the DC Hospital Association does not collect this information regularly from all of its member hospitals. With information from only a subset of all emergency departments, it is impossible to accurately identify citywide trends.

In other states, information on hospital discharges and emergency department utilization is much more readily available and is seen as a valuable resource for health policy planning. Reducing potentially avoidable hospitalizations and emergency department visits and redirecting patients to primary care settings is critical to improving the health of the city's residents, but without accurate data on the scope of the problem, it is difficult to address. As a major health care payer, the District government is in a position to require hospitals to provide ongoing information on hospital and emergency department discharges for public health planning purposes.

Additionally, there are other gaps in information that prevent District policy makers and health planners from most effectively monitoring the performance of the health care system serving low-income and uninsured residents:

- There is very little information on the insurance and health status of children.
- The city is only beginning to collect data on the quality of care provided to patients enrolled in Medicaid managed care and the Alliance.
- Hospitals and other health care facilities licensed by the Department of Health do not have any

requirements to directly report key financial data to the city, such as the amount of uncompensated care these facilities provide to people without insurance (distinguished from bad debt or uncollected bills).

Medical Homes DC and the city government have embarked on an ambitious – but achievable—program to strengthen the primary care delivery system for low-income District residents and to improve the health status of those residents. The success of the project depends on the ability to monitor the health of District residents, their access to and quality of care, and the overall functioning of the primary care system. Although there are important concerns about maintaining data confidentiality, these can be overcome with willing partners.

The Department of Health should be required to publicly report the following data on an annual basis. In some cases, before the Department can make the data public, it will need to collect it in the first place. Collecting and sharing the data will require the Department of Health to strengthen its own data analysis and policy capacity, and/or to work with outside organizations while the Department is building up its own internal resources. For public reporting purposes, the Department should aggregate data when necessary to protect privacy, but it should collect information at smallest unit possible (whether at the individual or institutional level).

- **Discharges from hospitals, emergency departments, and ambulatory surgery sites by individual organization, including data on patient demographics, insurance status, geographic area of residence, diagnosis (ICD-9), and procedure codes.** Information on potentially avoidable hospitalizations and emergency department visits provides a good indicator of the overall effectiveness and accessibility of primary health care. Better access to high-quality primary care should result in lower rates of potentially avoidable hospitalizations and emergency department visits.
- **Data on quality of care for health care paid for through Medicaid, the Alliance, and other publicly-funded programs.** The Medicaid program is planning to implement a Pay-for-Performance system with managed care insurance companies in the summer of 2007. Such a system provides incentive payments to health plans that meet certain standards for patient health outcomes and quality of care. The details are not final yet, but the system will probably be based upon measures of quality of care such as immunization, well-child visits, cervical cancer screens, breast cancer screens, and patient satisfaction surveys. As the District learns more about implementing a Pay-for-Performance system for its Medicaid managed care population, it should institute similar quality improvement initiatives in the Alliance and Medicaid Fee-for-Service programs.
- **Data on health status and access to care, both for children and adults.** The Behavioral Risk Factor Surveillance System (BRFSS) is a good source for some data, although it has some serious gaps. BRFSS is an annual national survey of adults 18 and over conducted by the Centers for Disease Control and Prevention (CDC) in conjunction with states and the District. Jurisdictions can pay the CDC to create larger samples of subpopulations or add more survey questions. The District Department of Health is planning to increase the sample size and to expand questions about insurance status. This plan should go forward. Other enhancements to BRFSS include adding more questions about

usual source of care and a component that surveys parents about children aged 17 and younger. In addition, the Department of Health needs data that is either collected yearly or biennially on other health issues, such as substance abuse and HIV risk. In addition to taking advantage of BRFSS, the District could conduct its own annual or biennial independent survey, though it is a more expensive option. A number of other cities, such as New York City, Los Angeles, and Minneapolis (Hennepin County) carry out their own independent health surveys.

- **Financial information from health care facilities licensed by the Department of Health (hospitals, nursing homes, outpatient ambulatory care clinics), specifically regarding uncompensated care.** The Department of Health should collect information including details about the patients' geographic area of residence, insurance status, and charity care, distinguished separately from bad debt. (Currently hospitals are not required to distinguish overall bad debt from charity care.) This information will allow the department to measure the cost of health care for District residents, better evaluate its own funding and reimbursement for health services, set certificate of need standards for all facilities and services, and to assess the degree to which nonprofit health care providers are fulfilling community benefit requirements.

Lastly, more detailed and up-to-date demographic data would allow health planners to estimate whether changes in the District population, such as the income, poverty, and race/ethnicity of District residents, are affecting health trends in the city. The gold standard for demographic data is the decennial Census carried out by the U.S. Census Bureau, which allows for analysis down to the Census tract level. Unfortunately, demographic data from the Census since 2000 is much less detailed since it relies on estimates and small national samples. However, in order to provide more detailed demographic information more often than every ten years, the Census Bureau developed the American Community Survey (ACS), which is now in the early stages of implementation. The ACS is an annual national survey that asks the same questions as on the decennial long form. Currently the sample size is too small to allow for analysis at the census tract level, but in several years such analysis should be possible, assuming that Congress maintains funding for the ACS. In the meantime, the city and other stakeholders could purchase data from commercial vendors who specialize in providing population estimates for small area geographies.

In sum, the District government allocates major resources to financing health care for its low-income residents: about $1.2 billion per year on Medicaid in combined federal and local dollars, and about $100 million on the Alliance. And it recently committed $15 million to the Medical Homes project. However, the city also needs to insure that it is purchasing high-quality medical care on behalf of its residents. Creating a more effective system to monitor the success of the primary care safety net in serving low-income District residents should be a major priority for the District government and leaders in the safety net system.

"Health planners need access to more and better data to monitor the health of District residents and the performance of the health care system."

Endnotes

1. Nicole Lurie is a senior natural scientist and Paul O'Neill Alcoa professor of policy analysis at the RAND Corporation. Martha Ross is a senior research manager at the Brookings Greater Washington Research Program.

2. U.S. Census Bureau, Poverty Thresholds 2000.

3. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Health, United, States, 1998 with Socioeconomic Status and Health Chartbook. 1998.

4. John Billings "Using Administrative Data to Monitor Access, Identify Disparities, and Assess Performance of the Safety Net" in *A Took Kit for Monitoring the Local Safety Net*, J. Billings and R. Weinick, eds. (Rockville, MD: Agency for Health Care Research and Quality July 2003).

5. The likely undercount of DC Health Care Alliance enrollees is due to several factors. First, the survey question in the Behavioral Risk Factor Surveillance System (BRFSS) did not specify the Alliance by name. Second, the data are based on the BRFSS from 2001-2004, when the Alliance was a new program and not necessarily well-known or well-understood, even among eligible people and enrollees.

6. National figures are from the U.S. Census Bureau: Income, poverty, and health insurance coverage in the United States: 2004, August 2005.

7. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. Health, United, States, 1998 with Socioeconomic Status and Health Chartbook. 1998.

8. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Chronic Diseases: The Leading Causes of Death: District of Columbia.* Undated.

9. *Ibid.*

10. John Billings "Using Administrative Data to Monitor Access, Identify Disparities, and Assess Performance of the Safety Net" in *A Took Kit for Monitoring the Local Safety Net*, J. Billings and R. Weinick, eds. (Rockville, MD: Agency for Health Care Research and Quality July 2003); Andrew Bindman et al, "Preventable Hospitalization and Access to Health Care," *Journal of the American Medical Association,* 274 (4):305-11, 1995; Institute of Medicine, *Access to Health Care in America,* M Millman, ed. (Washington, DC: National Academy Press, 1993); James Laditka et al, "Hospital Utilization for Ambulatory Care Sensitive Conditions: Health Outcome Disparities Associated with Race and Ethnicity." *Social Science and Medicine,* 57:1429-41, 2003.

11. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. *Health, United, States, 1998 with Socioeconomic Status and Health Chartbook.* 1998.

12. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Environmental Health. *Basic Facts about Asthma.* Undated; U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Environmental Health. National Asthma Control Program, *Asthma's Impact on Children and Adolescents.* Undated.

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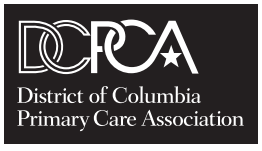

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