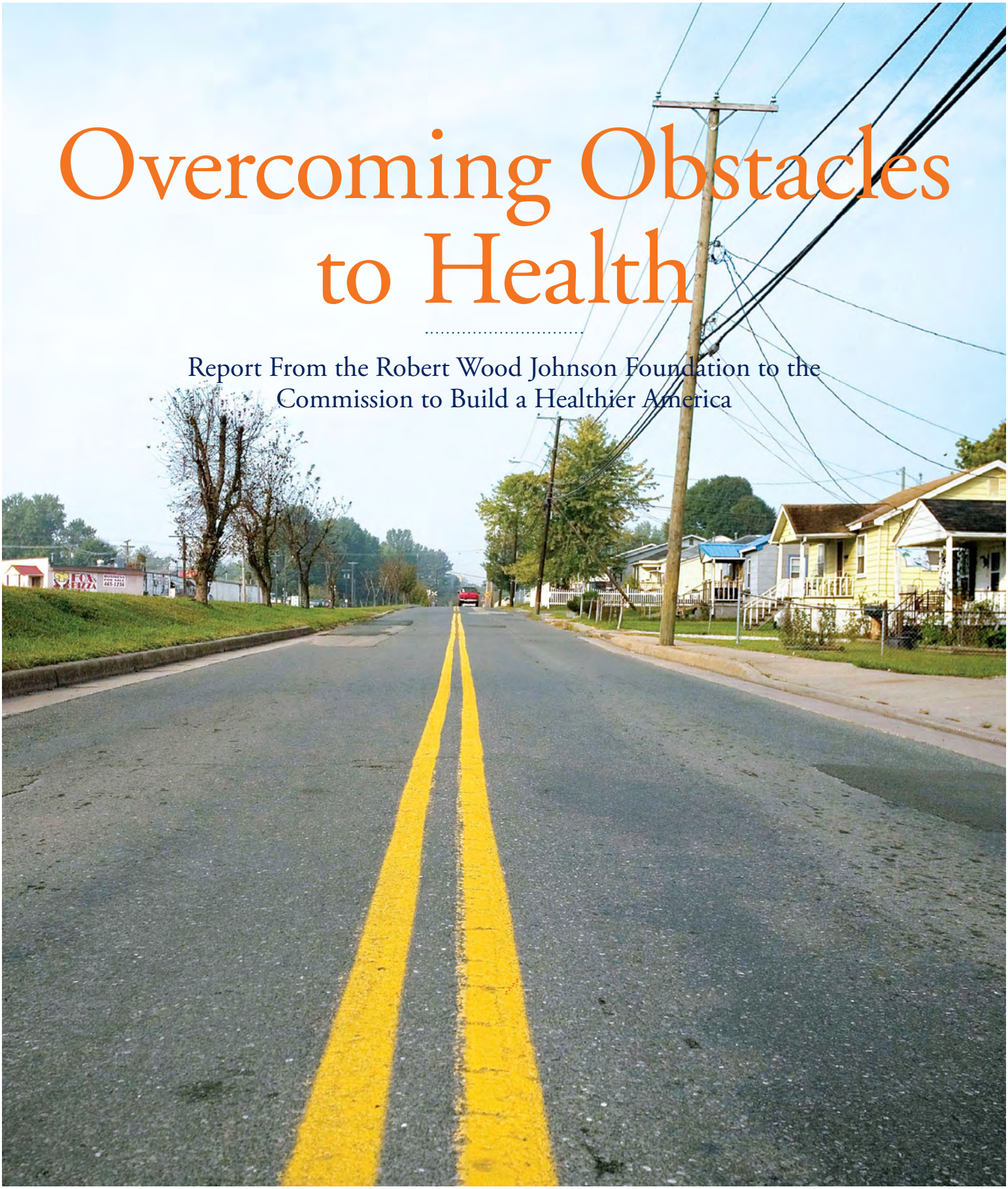

Overcoming Obstacles to Health

Report From the Robert Wood Johnson Foundation to the Commission to Build a Healthier America

February 2008

Robert Wood Johnson Foundation

Toward a Healthier, More Fair America

To Members of the **Commission to Build a Healthier America:**

America is a country founded in the pursuit of a vision, the realization of an ideal. In words that are built into our national DNA, all of us are created equal, endowed with the inherent and inalienable right to life, liberty and the pursuit of happiness.

None of that is possible without good health. Unfortunately, today, when it comes to health and health care, we are not all equal, are we?

The health of America depends on the health of all Americans. And when huge numbers of us are left behind, more of the nation's future is left behind as well.

What would the signers of the Declaration of Independence think of our country today if they knew that where you live predicts your life expectancy, your health is poorer if you are poorer, and your baby is much more likely to die if you haven't finished high school? Life isn't just better at the top, it's longer and healthier.

The problem is real. But in the United States, where disparities in health are enormous, the problem has been largely anonymous. America's public debate on "health" has mostly centered on access to and affordability of care, even though a large body of evidence tells us that whether or not a person gets sick in the first place in most cases has little to do with seeing a doctor.

A far greater determinant is the sometimes toxic relationship between how we live our lives and the economic, social and physical environments that surround us. Some of the factors affecting our health we certainly can influence on our own; many of the factors, however, are outside our individual control.

For more than a generation, the Robert Wood Johnson Foundation has pioneered the research and knowledge that brings us to this understanding. Now it's time to chart the way forward, identify workable solutions and motivate others to act.

To this physician and philanthropist, it starts with basic questions: Why are some Americans so much healthier than others and why aren't Americans the healthiest people in the world? Why do we rank near or at the bottom among industrialized nations on key health measures such as life expectancy? Is it okay for health care costs to consume one-sixth of the economy and deliver such disappointing returns? Why do we continue to accept a health care system with such great disparities in quality and equality of care?

The *Robert Wood Johnson Foundation Commission to Build a Healthier America* is our bridge to a healthier future, one in which how we protect, promote and preserve our health strengthens the health of all Americans and sets the standard for the world.

This Commission is a natural next step that builds on the Foundation's years of investment in ways to foster better and more equitable health outcomes. The Commission will knit together the Foundation's experience with that of others, address the large differences that make so many of us less healthy, and identify common ground for action.

This report describes in stark detail the scope of health disparities in this nation—how the poor and middle class are so much less healthy than those above them on the economic ladder, the factors in our society and communities that contribute to such disparities, and the areas that hold promise for improving the health of this country.

As you seek solutions through a process of inquiry that involves conducting research, holding nationwide field hearings and connecting with leaders across the country, I challenge you to look outside the health field, to go beyond your personal experience, and to embrace the difficult or controversial.

Our charge to you is to identify timely solutions that will work, partners to mobilize and actions to take now that will alter the trajectory of the health and well-being of the nation. We ask you to elevate what you learn into a vision and a blueprint for a healthier America.

All Americans would agree with Thomas Jefferson, that life is a fundamental human right. We also agree that the security of the nation's future depends on the good health of all our people. Making sure that every person in America has a fair chance for a healthy life is not a matter of ideology—it's a matter of national survival.

Members of the Commission, we've given you a place to start and we look to you to point the way. Thank you for your commitment to building a healthier America. We look forward to your leadership.

Risa Lavizzo-Mourey, M.D., M.B.A.
PRESIDENT AND CHIEF EXECUTIVE OFFICER
Robert Wood Johnson Foundation
Princeton, New Jersey


SEPTA

A nation's health is its most precious asset. And while America has seen great gains in improving health overall, some Americans face much poorer prospects for good health and long life than others. Despite what many believe, a person's health is not only a product of good medical care and genes. In fact, in many cases, these may only be small pieces of a much larger picture. As this report makes clear, a person's health and likelihood of becoming sick and dying prematurely are greatly influenced by powerful social factors such as levels of education and income and the quality of neighborhood environments.

Differences in health along social, economic and racial or ethnic lines are known as "health disparities" or "social disparities in health." New research presented in this report—and supported by previous studies—indicates that these differences are keeping America from reaching its potential. They represent preventable illness and loss of life and compromise Americans' quality of life and our productivity as a nation.

The conclusions of this report suggest that reducing America's large and persistent health disparities requires taking a broader, deeper look at how health is shaped across lifetimes and generations. Finding solutions to avoidable differences in health requires looking beyond the medical care system to acknowledge and address the many other factors that also can determine a person's health.

This report from the Robert Wood Johnson Foundation:

- Examines the roles of personal and societal responsibilities for health within the contexts in which people live, work and learn—which influence both the choices people have and their ability to make healthy choices.

- Reviews evidence of the lasting impact that physical and social environments have on a child's health and on his or her chances of becoming a healthy adult.

- Reveals new national evidence of differences in health across income and education groups, and how they relate to differences in health by race or ethnicity.

- Provides new evidence of the economic and human costs of social differences in health, including the life stories of three American families who are trying to make healthy choices but face major obstacles.

- Offers a framework for finding solutions by applying current knowledge about the underlying causes of social disparities in health.

While many questions remain, the existing evidence can be applied now to find ways to strengthen individuals' ability to make healthy choices and remove obstacles to choosing health. Although achieving fundamental change will not be easy, effective and efficient initiatives to address social differences in health exist and should be considered in terms of their potential for wider adoption. Reducing avoidable health differences is essential to America's future.

Introduction

Social differences in health can be reduced, but only if solutions can be identified to address their root causes. The greatest potential lies in solutions that will help people *choose health*. That means both strengthening individuals' ability to make healthy choices and removing obstacles to choosing health. It also means creating more opportunities to be healthy.

The human impact of health is clear: Health is essential to well-being and full participation in society, and ill health can mean suffering, disability and loss of life. The economic impacts of health have become increasingly apparent. If current trends continue, medical care costs, now about 16 percent of the Gross Domestic Product (GDP),[1] will reach 20 percent of GDP by 2015.[2] The costs of medical care and insurance are now out of reach for many households, pushing some into bankruptcy. These costs are draining employers' resources, threatening the bottom line of many American businesses. Federal, state and local health care spending is straining government budgets. Our society's aging and the obesity epidemic will further increase costs of care.

Despite spending more on health care than any other nation, the U.S. ranks at or near the bottom among industrialized countries on key health indicators like infant mortality and life expectancy. Health differences among Americans who differ by social or economic status are keeping America from being as healthy as it should be. Achieving America's health potential by reducing avoidable health differences will not only improve quality of life across the country but also offers great promise for bringing rapidly escalating medical care costs under control. In addition, research shows that reducing social and economic disparities in health will increase opportunities throughout life for America's children, because healthier children are more likely to grow up to be healthy adults.

Social differences in health can be reduced, but only if solutions can be identified to address their root causes. Along with medical care, genes, the physical environment and other factors, behaviors such as smoking, diet, exercise, and alcohol and drug use have powerful effects on health and contribute to gaps in health among different social groups. These behaviors reflect choices made by individuals, but, ultimately, the consequences of individuals' behaviors will be borne not only by themselves but also by their families and society. Ideally, everyone would make healthy choices all the time. Individuals do not act in a vacuum, however; the contexts in which they live and work influence both the choices available to them and their ability to choose paths leading to health. For example, children—who cannot choose their environments—are particularly vulnerable to the health-damaging effects of harmful physical and social environments, and childhood adversity often results in seriously diminished health in adulthood.

Although many questions remain unanswered, a wealth of knowledge can be applied now to find ways to reduce health disparities and their perpetuation across lifetimes and generations. The greatest potential lies in solutions that will help people *choose health*. That means both strengthening individuals' ability to make healthy choices and removing obstacles to choosing health. It also means creating more opportunities to be healthy, particularly for groups whose options have been severely constrained.

CHAPTER ONE

Social differences in health in the United States are large and persistent.

Health in the United States varies by income and education as well as by racial or ethnic group.

In the United States, where education and income are the most frequently used measures of socioeconomic status ("SES") or position, or "class," Americans who are poor and those who have not graduated from high school experience considerably worse health on average than more-affluent or educated Americans. Health differences across income and education groups are seen in a range of health conditions from the beginning of life to old age. Evidence of these differences is shown for selected conditions in Figures 1-6; these figures represent the most up-to-date national information on health disparities in the U.S. For most conditions featured here, evidence of differences is presented either by education or by income; the pattern of differences is generally similar for both markers of socioeconomic status. For some conditions we also show racial or ethnic differences.

- Infant mortality and life expectancy are important indicators of a population's health. Research shows that education and income make a substantial difference in these areas. For example, babies whose mothers have less than 12 years of schooling (and are unlikely to have completed high school) are nearly twice as likely to die before their first birthdays as babies born to mothers with 16 or more years of schooling (most of whom are college graduates) (Figure 1). More education is also linked with longer life: College graduates—men and women—may expect to live at least five years longer than people who have not completed high school (Figure 2a). A similar pattern in life expectancy is seen for income, with higher-income men and women living longer than people with lower incomes (Figure 2b).
- Individuals' reports of whether their health is poor, fair, good, very good or excellent are considered reliable indicators of their health status.[3] The percentage of individuals reporting being in poor or only fair (rather than good or better) health increases as levels of income and education decrease. For example, compared with affluent adults, poor adults are nearly five times as likely to report being in poor or only fair health (Figure 3a). A similar gradient is seen for education (Figure 3b). The patterns by income and education also are striking among children, whose health status is reported by their parents or guardians: Rates of poor or fair health are about seven times higher among children in poor families than among children in affluent families (Figure 3c). The same pattern occurs for education (Figure 3d).
- Individuals with lower family incomes are more likely to have a chronic disease that limits their activity. Poor adults are more than three times as likely as affluent adults to report activity limitation due to chronic illness; these individuals may, for example, be unable to work or limited in the kind of work they do, need help with personal care, or be unable to do activities usual for someone their age (Figure 4).
- Lower income means higher rates of diabetes. Poor adults are twice as likely as affluent adults to have diabetes—a major cause of severe illness, disability and premature death (Figure 5).
- Similar patterns are seen for coronary heart disease. The rate of coronary heart disease, the leading cause of death in the U.S., is nearly 50 percent higher among poor adults than among the most affluent adults (Figure 6).

The Federal Poverty Level (FPL) has been defined as the amount of income providing a bare minimum of food, clothing, transportation, shelter and other necessities. FPL is reported annually and varies by family size.[4] In 2006, the U.S. FPL was $16,079 for a family of three and $20,614 for a family of four.[5]

These examples—and other studies in the U.S. and other countries—show that socioeconomic differences in health do not affect only the poorest or least educated groups.[6] While people in the most disadvantaged groups typically experience the poorest health, even middle-class Americans are less healthy than Americans with greater advantages. This stepwise pattern is referred to as a *socioeconomic gradient in health.* The gradient does not necessarily follow a straight line.[7]

Money pressures course through most everyone's struggle for good health,

complicating every decision, spiking stress levels.

The Elkins Family

In the fall of 2004, Yvonne Dempsey suspected something was wrong.

She was dizzy, had a mysterious rash and just "felt really miserable."

Her niece Sheryl Elkins, offered to take her to a physician. But Dempsey, now 57, had been conditioned throughout her life not to spend money on doctors.

"I could never afford one," she explains. "And my mom never took me to the doctor much. We didn't have much money and we never seemed sick enough to go."

Still, she had never felt this bad before and it was getting worse. She was overcome with nausea and so exhausted she could not stand up at her job at the Value Plus grocery store. So Dempsey agreed to get checked out and the pair spent Elkins' 40th birthday in a clinic waiting room. There they learned that Dempsey's blood sugar level was a terrifying 414—more than double the acceptable level.

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Socioeconomic differences in health affect not only the poorest Americans. Middle-class Americans have worse health than higher-income Americans.

For example, differences in income often make the most difference for health at the lower end of the income scale, while further increases in income among very high-income individuals may not be associated with better health.[8]

Over the past few decades, research has also accumulated on the existence of large and avoidable differences in health according to race or ethnic group. U.S. initiatives to address health differences by race or ethnic group or by socioeconomic status, however, have focused primarily on medical care interventions and individual-level risk factors.

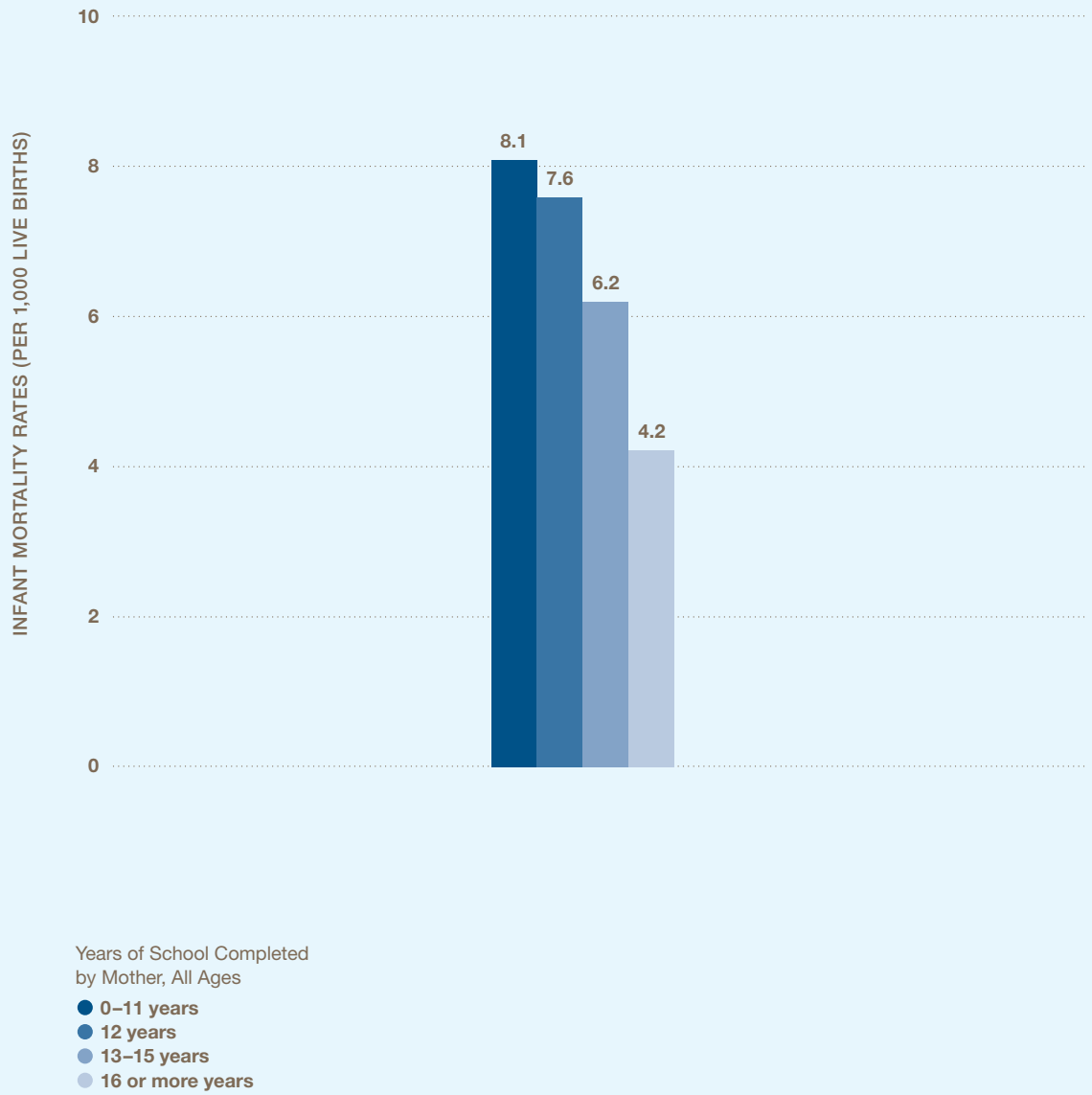
Socioeconomic and racial or ethnic differences are closely linked.

Blacks, American Indians, Hispanic Americans, Pacific Islanders and some Asian-American groups are disproportionately represented among the more socioeconomically disadvantaged groups in the U.S. This reflects a long history of racial inequality in which race or ethnic origin was legally used to exclude individuals from employment, educational opportunities and property ownership. Although most explicit uses of race to demean or exclude people from participation in society have been outlawed, racial residential segregation persists. In addition, the legacy of segregation, together with subtle institutional forms of racial bias that limit economic and social opportunities, continues to shape living and working conditions for many people of color.[9] Both race and social class, independently and in combination, contribute to health inequalities in the United States.

Although standard public health information in the United States generally has been reported by racial or ethnic group, that is less frequently the case for socioeconomic status. Without adequate socioeconomic information, racial or ethnic differences in health often are assumed to reflect genetic or entrenched "cultural" differences that are unlikely to be influenced by policy. In fact, modifiable social factors—including income, education, wealth, and childhood and neighborhood socioeconomic conditions—that have not been measured may be more important in explaining health differences by race or ethnicity.[10] In one study, researchers at the U.S. Centers for Disease Control and Prevention (CDC) estimated that 38 percent of the two-fold excess mortality among black adults compared with whites in the U.S. was related to differences in income.[11] The role of genetic differences in health disparities has been debated, but authoritative scientific sources have concluded that race is primarily a social, not biological, construct.[12]

A Mom's Education, A Baby's Chances of Survival

figure 1 Babies born to mothers who did not finish high school are nearly twice as likely to die before their first birthdays as babies born to college graduates.

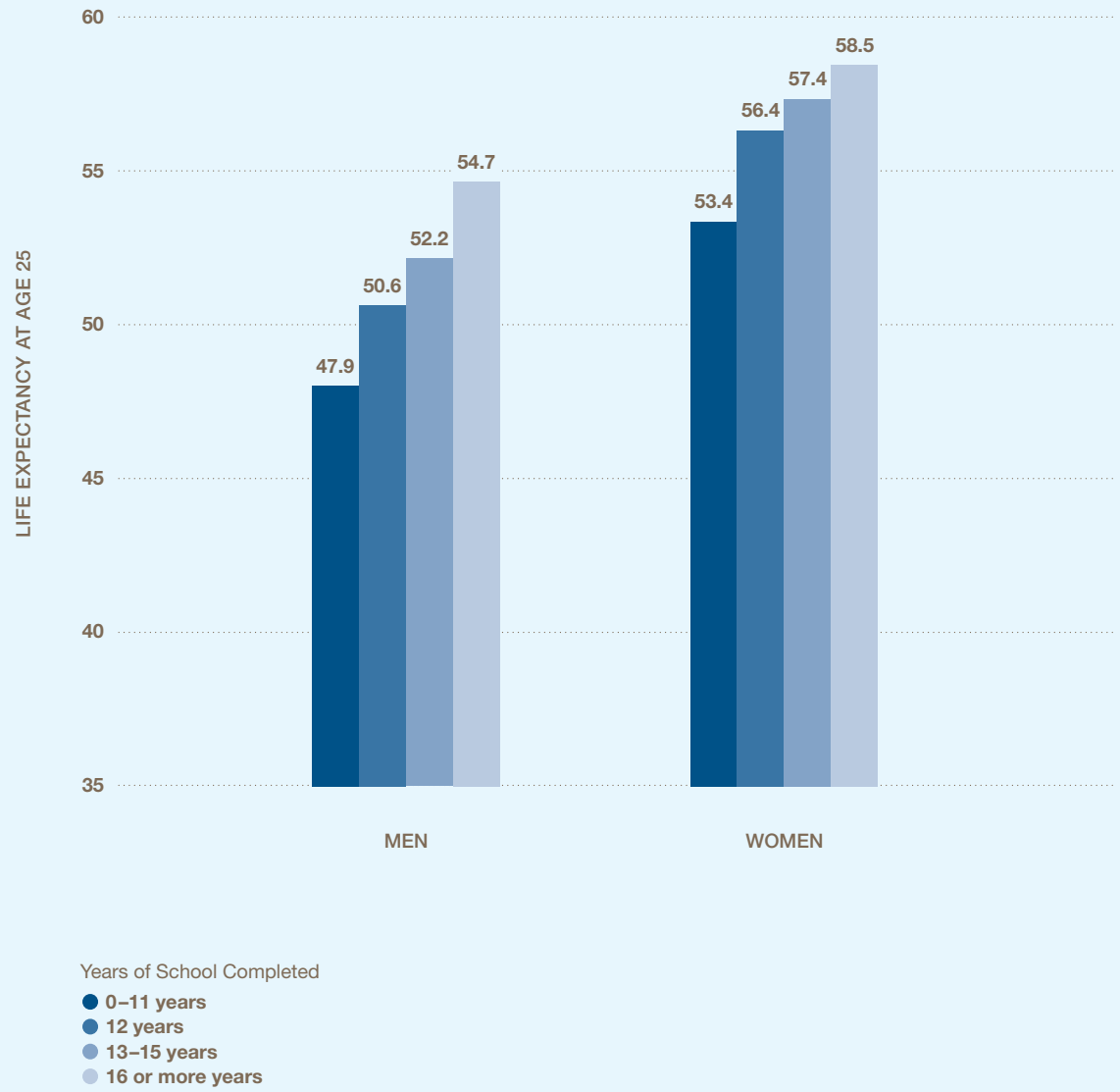


Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Source: Mathews TJ, MacDorman MF. Infant mortality statistics from the 2004 period linked birth/infant death dataset. National Vital Statistics Reports; vol 55 no 14. Hyattsville, MD: National Center for Health Statistics, 2007.

More Education, Longer Life

figure 2a For both men and women, more education often means longer life.* College graduates can expect to live at least five years longer than individuals who have not finished high school.



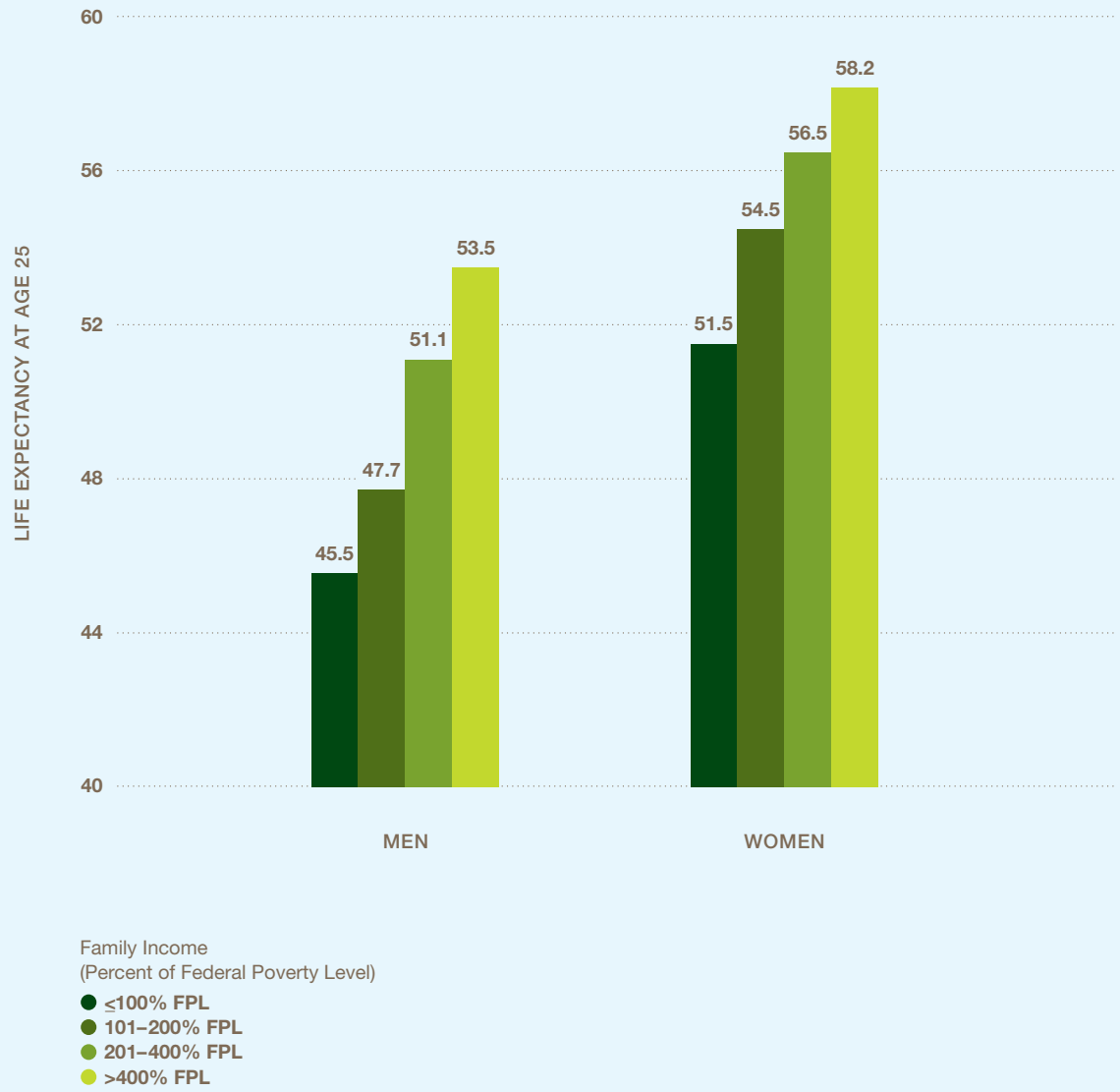
Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco; and Norman Johnson, U.S. Bureau of the Census.

Source: National Longitudinal Mortality Study, 1988–1998.

*This chart describes the number of years that adults in different education groups can expect to live *beyond age 25*. For example, a 25-year-old man with 12 years of schooling can expect to live 50.6 more years and reach an age of 75.6 years.

Higher Income, Longer Life

figure 2b Adult life expectancy* increases with increasing income. Men and women in the highest-income group can expect to live at least six and a half years longer than poor men and women.



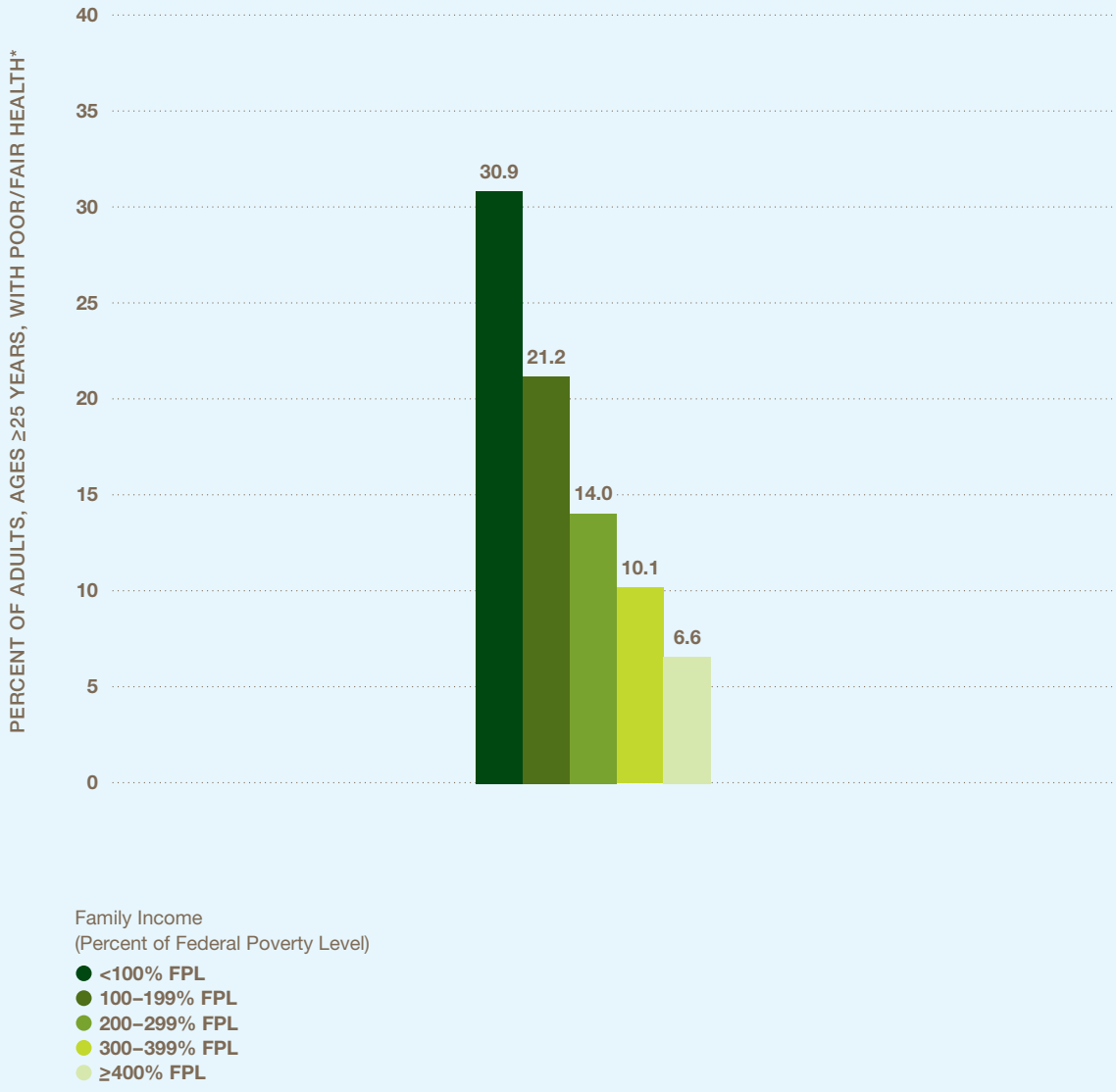
Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco; and Norman Johnson, U.S. Bureau of the Census.

Source: National Longitudinal Mortality Study, 1988–1998.

*This chart describes the number of years that adults in different income groups can expect to live *beyond age 25*. For example, a 25-year-old woman whose family income is at or below 100 percent of the Federal Poverty Level can expect to live 51.5 more years and reach an age of 76.5 years.

Lower Income, Worse Health

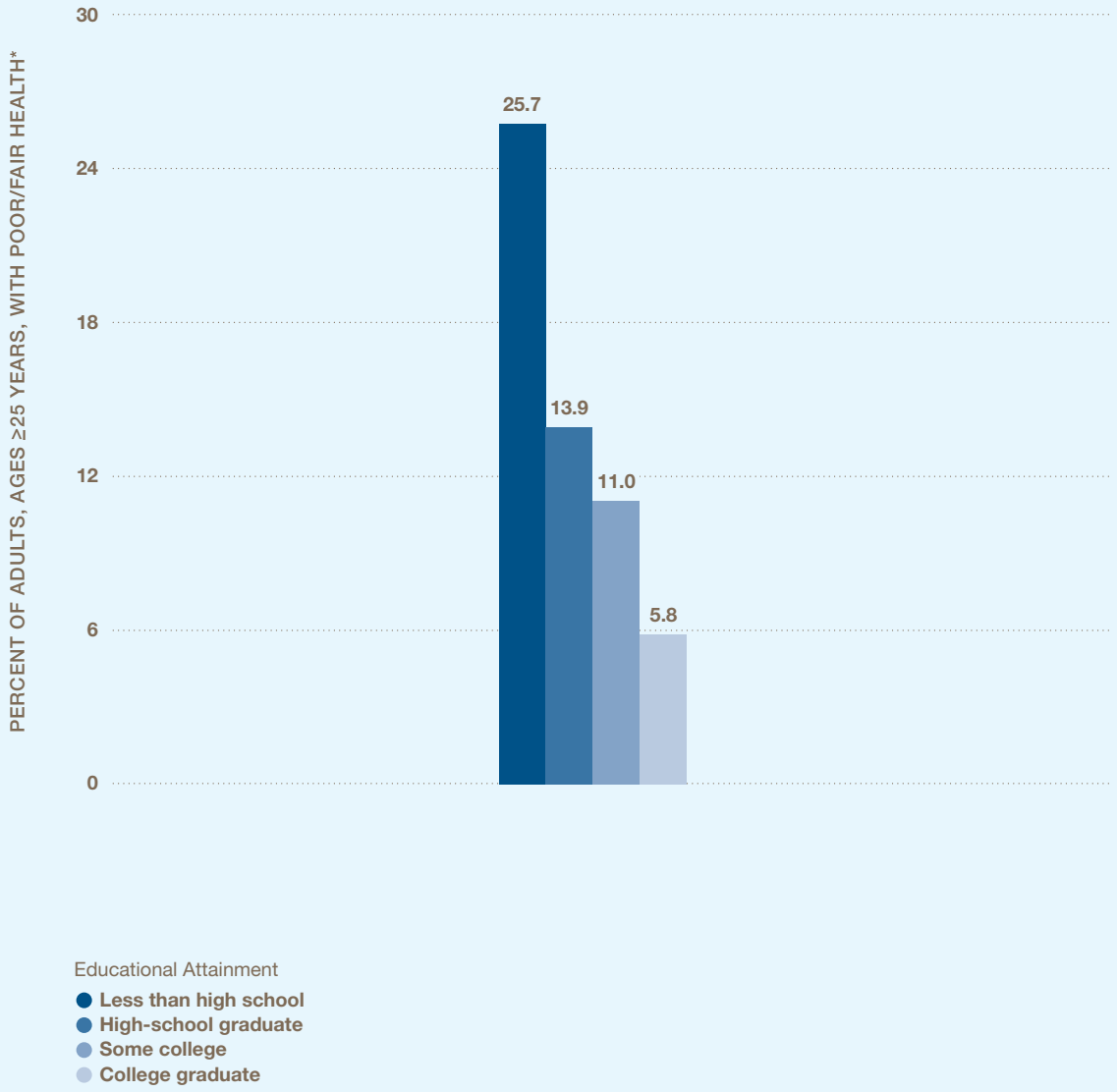
figure 3a Lower income is linked with worse health. Compared with adults in the highest-income group, poor adults are nearly five times as likely to be in poor or fair health.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Less Education, Worse Health

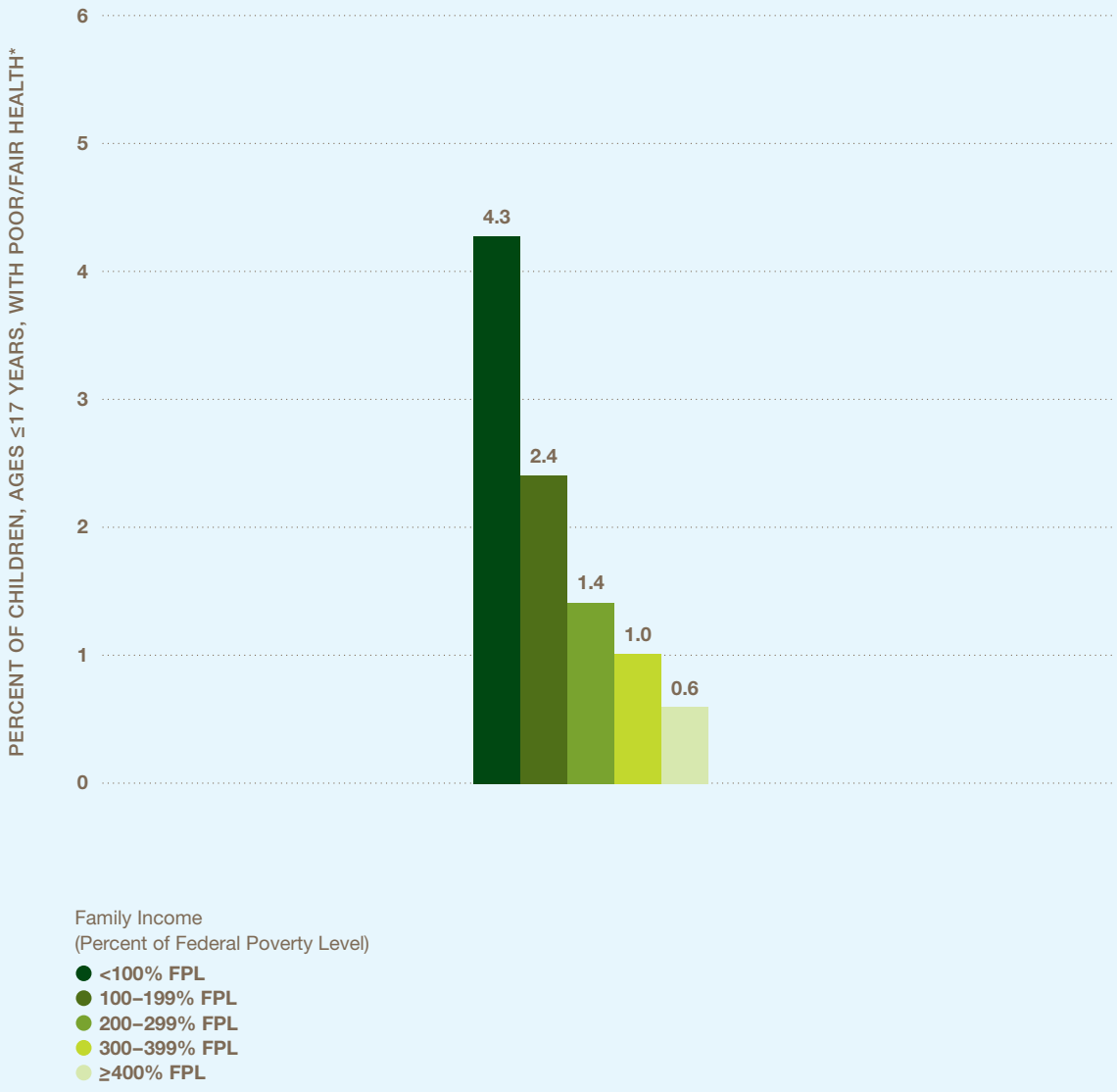
figure 3b Less education is linked with worse health. Compared with college graduates, adults who have not finished high school are more than four times as likely to be in poor or fair health.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Parents' Income, A Child's Chances for Health

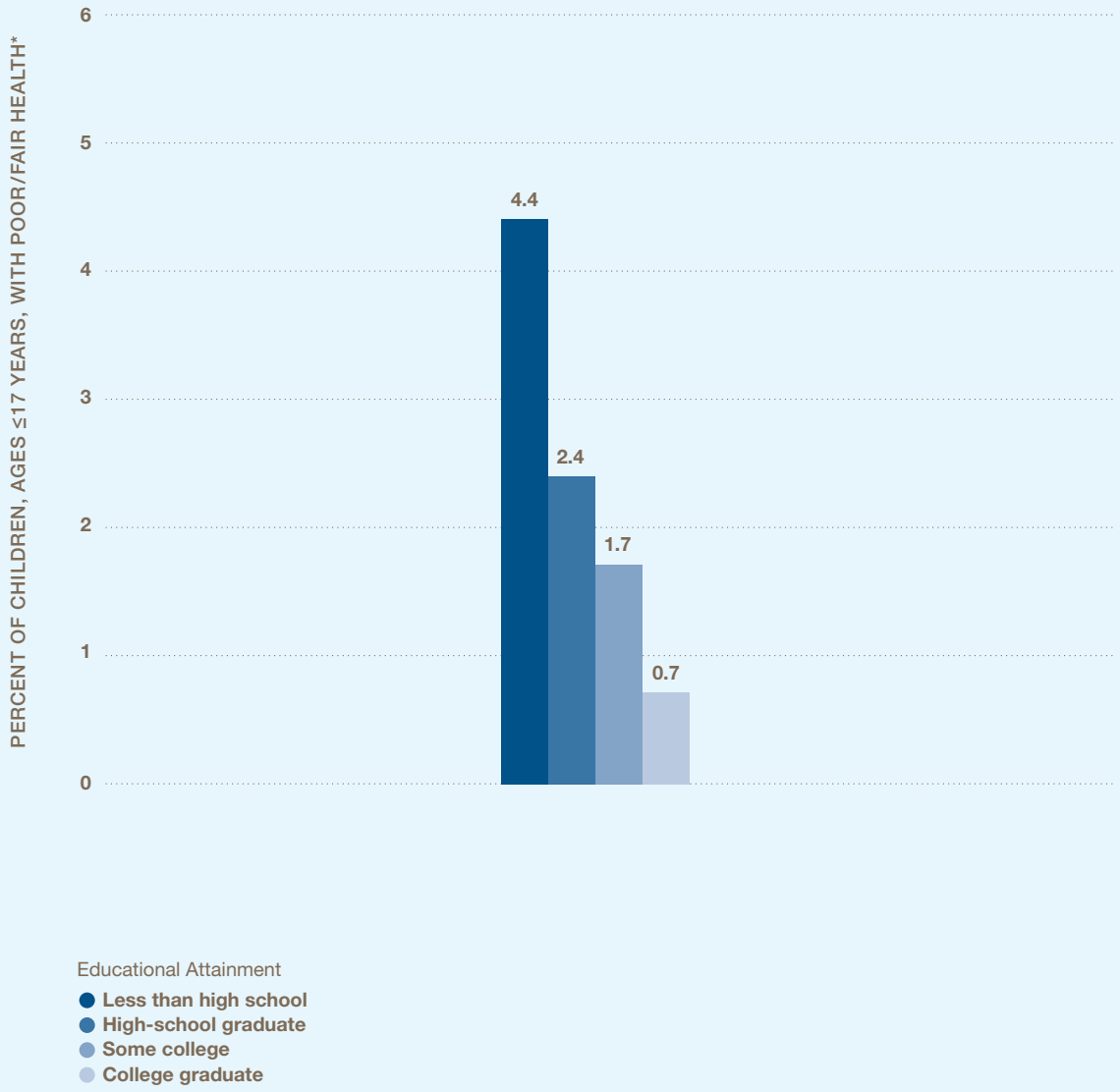
figure 3c Children in poor families are about seven times as likely to be in poor or fair health as children in the highest-income families.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Parents' Education, A Child's Chances for Health

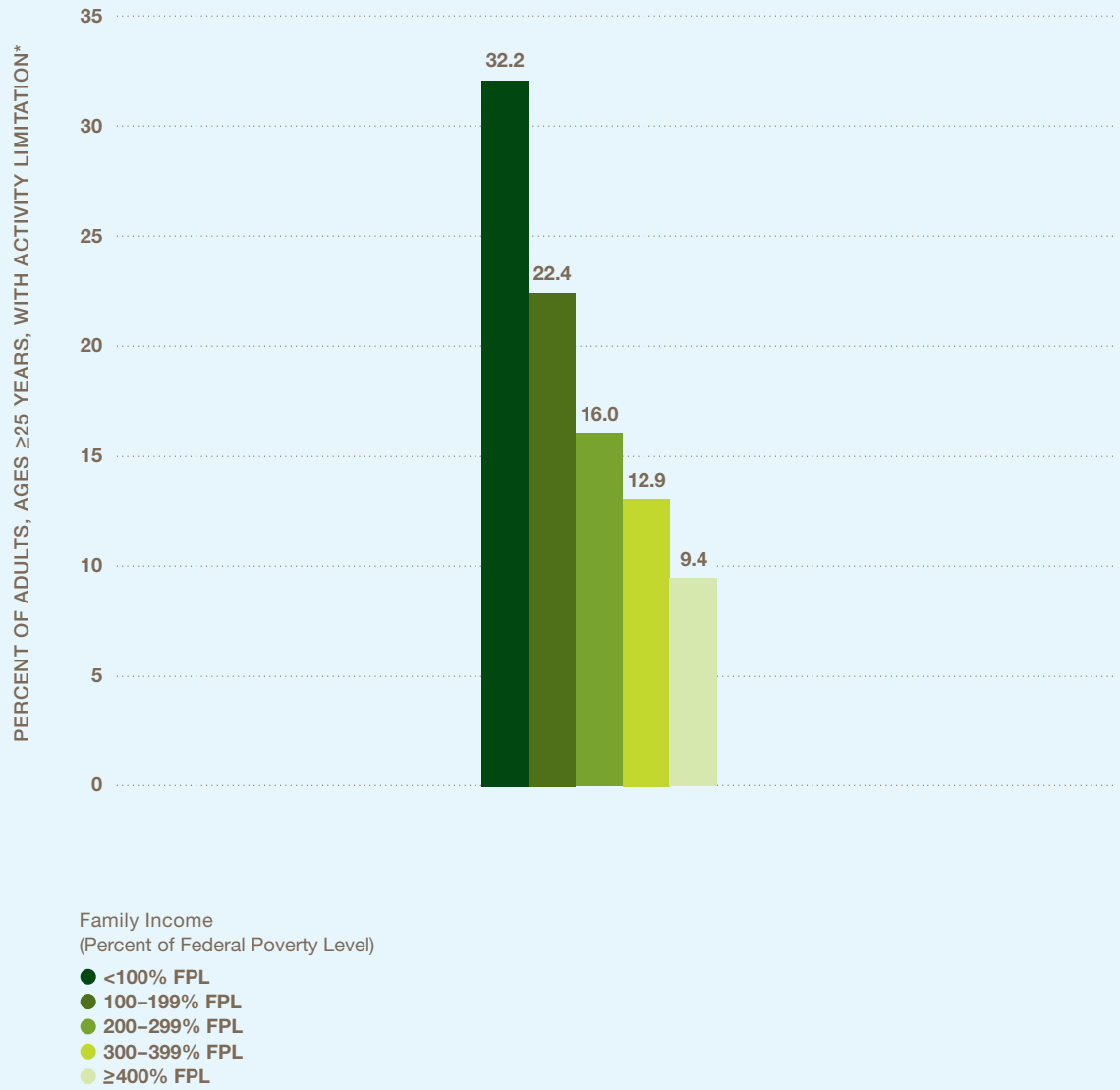
figure 3d Children whose parents have not finished high school are over six times as likely to be in poor or fair health as children whose parents are college graduates.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Lower Income, More Chronic Illness

figure 4 Nearly one in every three poor adults has their activity limited by chronic illness, compared with fewer than one in 10 adults in the highest-income group.

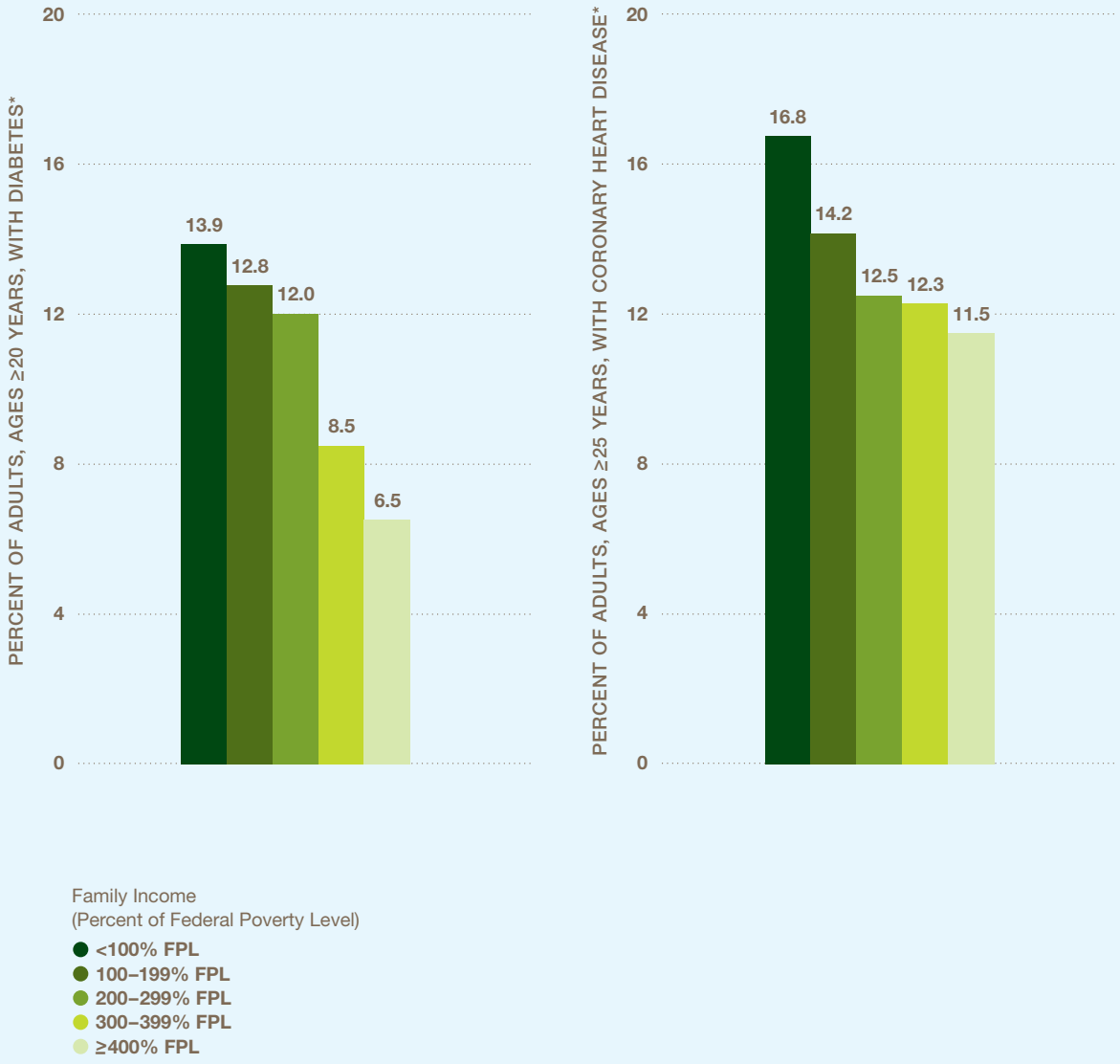


Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Lower Income Is Linked With Worse Health

figure 5 Diabetes decreases with increasing income. Diabetes is twice as common among poor adults as among those in the highest-income group.

figure 6 Lower-income adults are also more likely to have heart disease. The prevalence of heart disease is nearly 50 percent higher among poor adults than among adults in the highest-income group.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: [Left] National Health and Nutrition Examination Survey,1999–2004; [Right] National Health Interview Survey, 2001–2005.
*Age-adjusted

"That 414 was nothing to me," says Dempsey. "It was just a number—and I didn't realize it was a bad number."

Dempsey and Elkins are at the center of one typical American family's struggle for good health. It is a battle often complicated by their socioeconomic environment—a rural community with few services, limited education, workplace hazards and a tight economy.

Though she is in good health, Elkins is surrounded by the demands of poor health. Her mother, after beating uterine cancer in 2000, was diagnosed last February with colon cancer that had spread to her liver and lymph nodes. Elkins' son Keith has a mild form of autism, a mysterious illness that has left the 6-year-old unable to utter even the simplest phrases. And her husband, Dean, has a body battered by injuries received during 25 years of dangerous volunteer firefighting in the small town of Oak Hill, W.Va.

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Both socioeconomic and racial or ethnic disparities in health must be considered.

Figures 7a–7c illustrate the importance of considering health disparities across socioeconomic and racial or ethnic groups. For example, poor or fair health is more common both among adults with lower incomes and among black and Hispanic adults (Figure 7a). When income and racial or ethnic group are considered together:

- income gradients in fair or poor health are seen within each racial or ethnic group (Figure 7b); and
- racial or ethnic differences are seen at each level of income (Figure 7c).

These patterns—displayed here for health status but seen across a wide range of health conditions—tell us that *both* income and race are important for health and health disparities.

Geographic differences in health often mirror geographic differences in income, education and racial or ethnic composition.

Geographic variations in the income and education levels of Americans across the country can be dramatic, and these differences often correspond to striking geographic differences in health. As seen in Figures 8 and 9, for example, higher rates of death due to coronary heart disease are generally seen in areas where fewer adults have completed college.

A 1998 study revealed dramatic disparities in life expectancy across U.S. counties overall, and particularly when racial or ethnic differences were also considered. For example, black men in the county with the shortest life expectancy for blacks lived only 58 years (well below average life expectancy in many developing nations), while white men in the county with the longest life expectancy for whites could expect to live to age 78—two decades longer.[14] A more recent study showed that whites in Louisiana, where the median household income in 2005–2006 was $37,472, have an age-adjusted death rate that is 30 percent higher than that for whites in Minnesota, where the median household income was $56,102. The discrepancy between the two states is even greater for blacks, who in Louisiana have a death rate 37 percent higher than that for blacks in Minnesota.[15]

As the primary caregiver in the family, Sheryl Elkins has given her diabetic father insulin shots and changed her mother's colostomy bag. She shuttles everyone to doctor's appointments, hosts Sunday supper and drives Keith to speech therapy four times a week.

Money pressures course through the extended family's struggle to be healthy, complicating every decision, spiking stress levels. When Sheryl Elkins decided six years ago to stay home and raise Keith, the couple lost her bank salary and the good health insurance that went with it. Now they pay $540 a month for coverage that does not include preventive checks such as an annual screening mammogram. They spent $278 on a one-month's supply of nutritional supplements for Keith.

Over a recent six-month period, Sheryl Elkins, already slender, lost 17 pounds.

"I worry about Sheryl having her plate too full," says her mother Ester Hinte.

The sisters come from modest roots. As youngsters, Hinte and Dempsey were "dirt poor," they say. Both picked up bad habits from other family members and never visited the doctor. Their mother began smoking in second grade, Hinte says. She herself started at age 14. No one discussed healthy diets, though Hinte suspects it wouldn't have mattered.

"We were so poor growing up, we couldn't even afford eggs," she says. "We ate a lot of biscuits, or cabbage and corn bread, or pinto beans and corn bread."

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Oak Hill, W.Va. is a quiet town of front porches and volunteer firefighting. Competition from big chains has forced some Main Street businesses to close.

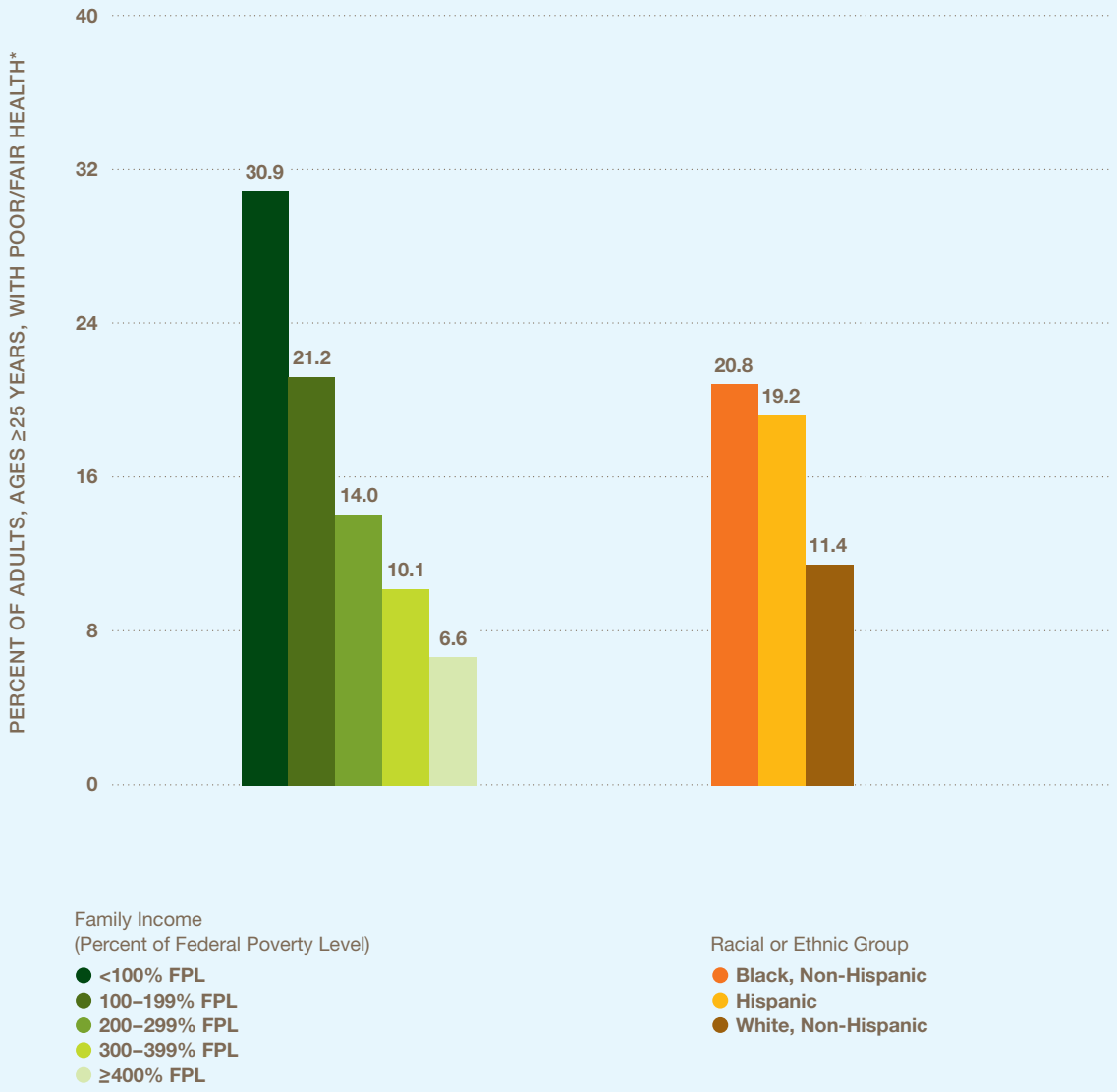
Yvonne Dempsey's rent and utilities at Morton's Trailer Court have increased by nearly $100 a month.

Socioeconomic and racial or ethnic differences in health have persisted in the United States over time.

Impressive gains have been made in recent decades in improving overall life expectancy and reducing overall rates of a number of chronic diseases and the factors that cause them, such as smoking, lack of exercise, and high-fat diets. However, socioeconomic and racial and ethnic inequalities generally have not narrowed. For example, Figure 10 shows persistent income gaps in activity limitation due to chronic disease. Some studies have shown widening gaps, such as socioeconomic gaps in childhood mortality and life expectancy.[16]

Health Varies by Income and Across Racial or Ethnic Groups

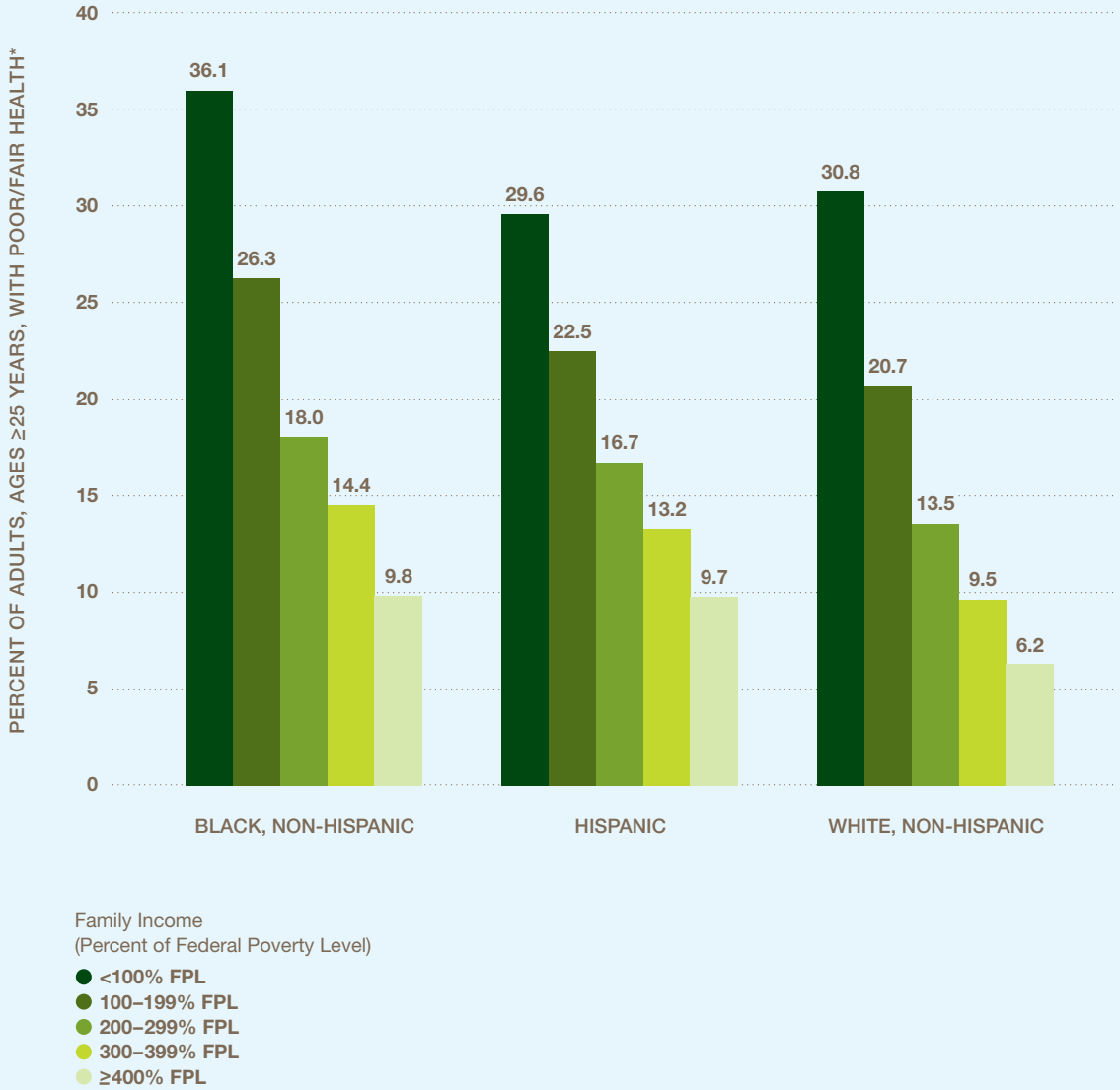
figure 7a Lower income generally means worse health. Racial or ethnic differences in health status are also evident: Poor or fair health is much more common among black and Hispanic adults than among white adults.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Income Is Linked With Health Regardless of Racial or Ethnic Group

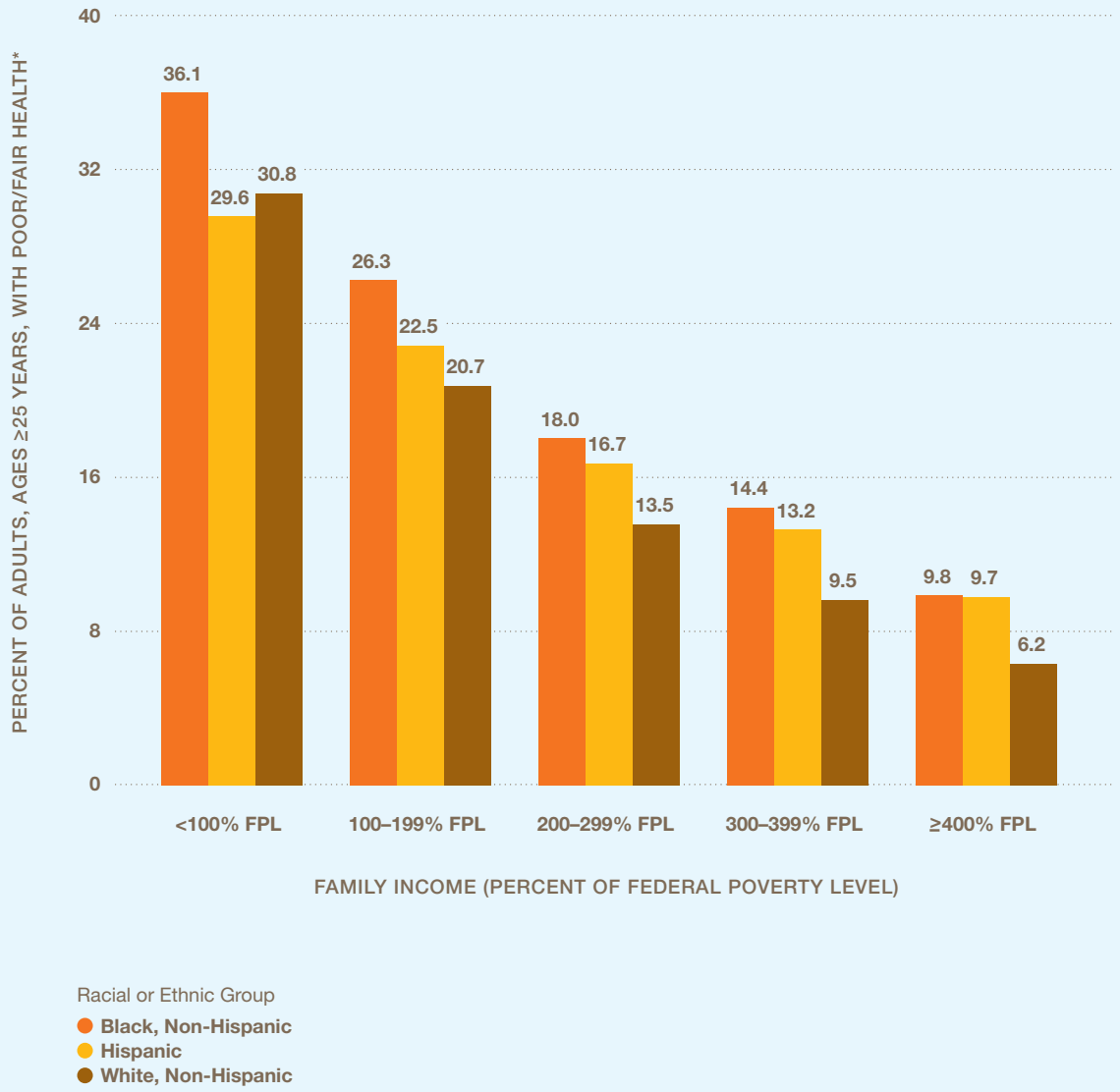
figure 7b Differences in health status by income do not simply reflect differences by race or ethnicity; differences in health can be seen within each racial or ethnic group. Both income and racial or ethnic group matter.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Racial or Ethnic Differences in Health Regardless of Income

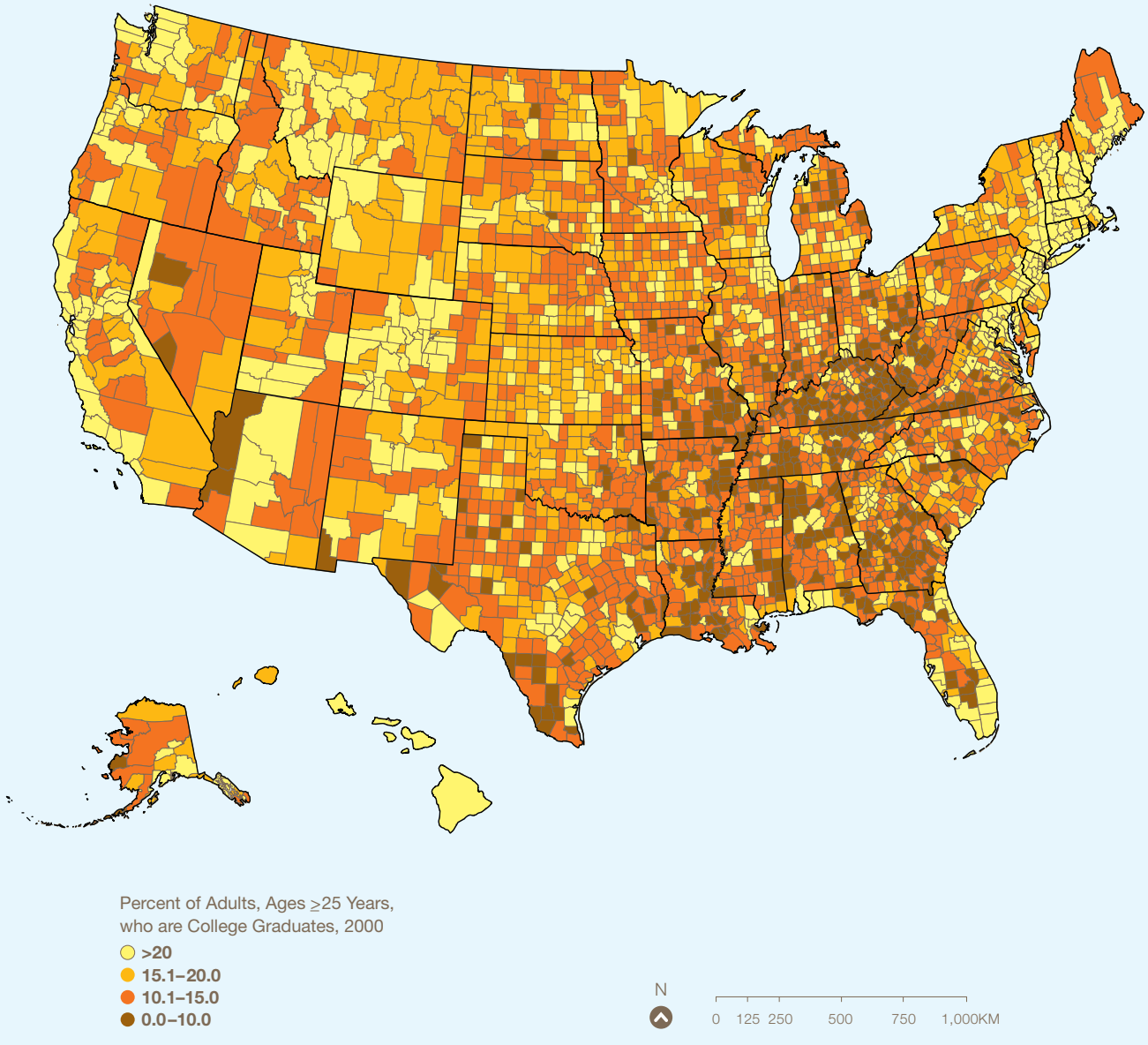
figure 7c Racial or ethnic disparities do not simply reflect differences in income. Racial or ethnic disparities in the likelihood of poor or fair health are seen within each income group. Both income and racial or ethnic group matter.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Mapping Education

figure 8 Educational attainment among adults varies markedly across different regions of the country.

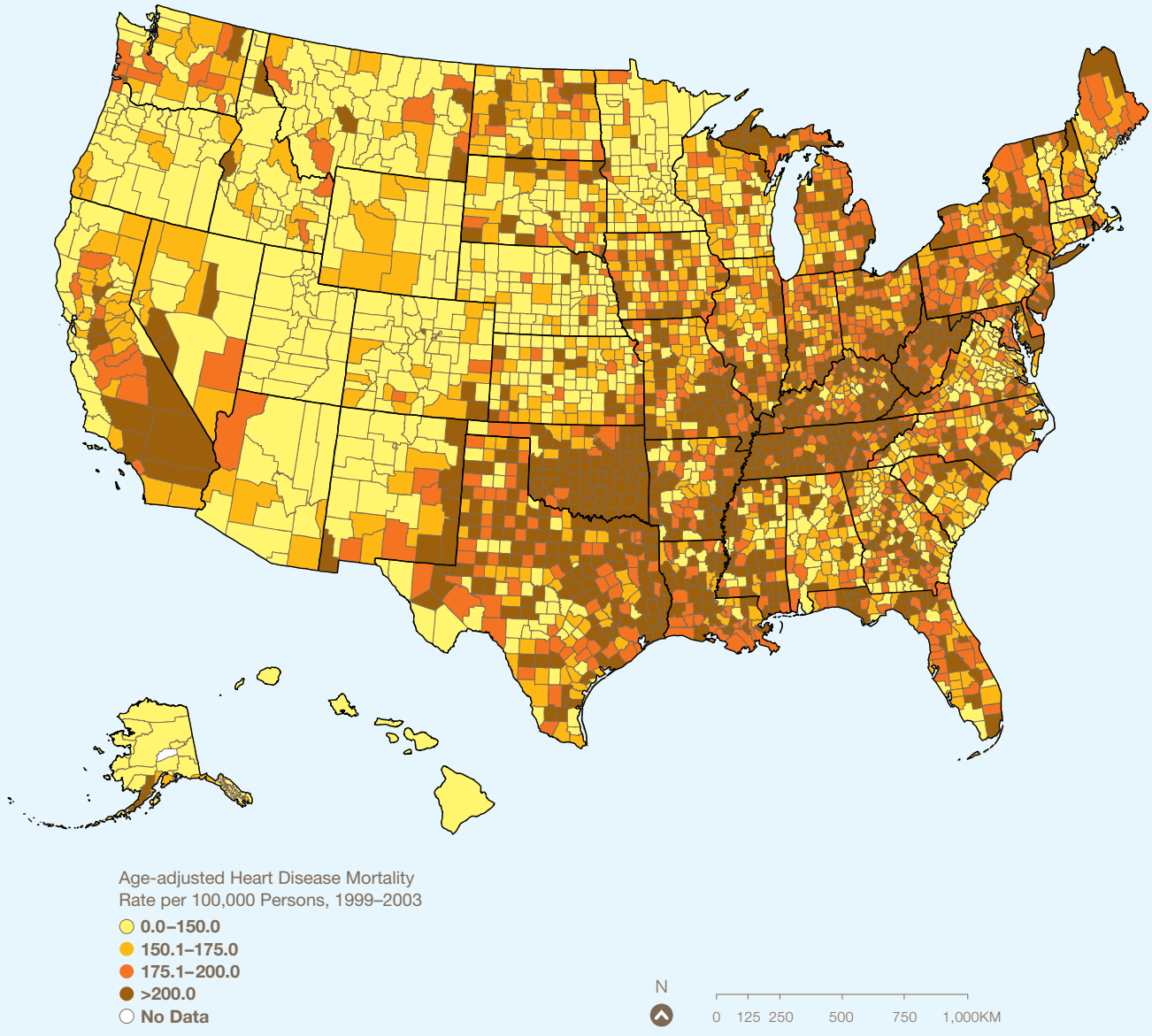


Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco; and Naomi Kawakami.

Source: Census Demographic Profile. 2000. U.S. Census Bureau, Washington, DC. From the Area Resource File (ARF) for U.S. counties, 2005. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Rockville, MD.

Mapping Disease

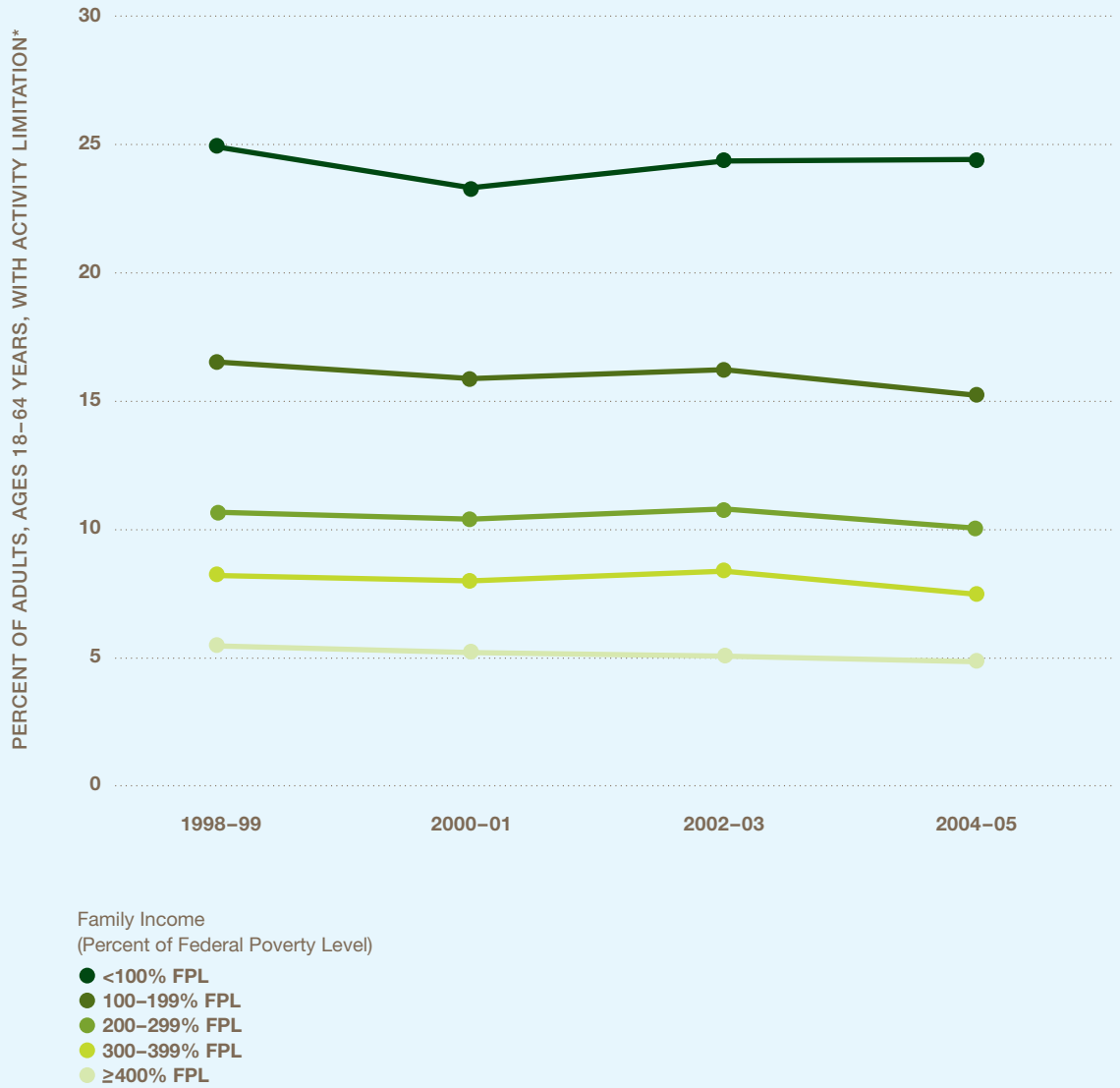
figure 9 Disease varies geographically. For example, higher rates of death due to heart disease are often seen in areas where fewer adults have college educations.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco; and Naomi Kawakami.
Source: Data for U.S. counties obtained from the Centers for Disease Control and Prevention, National Center for Health Statistics.
Compressed Mortality File 1999–2004. CDC WONDER Online Database, compiled from Compressed Mortality File 1999–2004 Series 20 No. 2J, 2007.

Persistent Gaps in Health by Income

figure 10 Income disparities in the percent of adults with limited activity due to chronic illness have not narrowed in recent years.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 1998–2005.
*Age-adjusted

CHAPTER TWO

Why be concerned about social differences in health? Who is affected? What are the costs?

Health disparities are an issue for the middle class as well as the poor, and for all racial or ethnic groups.

It is not difficult to understand why the poor would have worse health than people with greater means. For centuries, poverty has been linked to ill health.[17] The United States has a higher proportion of its population—and particularly of its children, as shown in Figure 11—living in poverty than most other affluent countries.[18] But health disparities are also an issue of concern for the middle class. Although the poor and near-poor are generally most affected, middle-class people frequently have poorer health than the most affluent. Reducing health inequalities can benefit middle-class Americans as well as those living in poverty.

In addition, Americans in every racial or ethnic group are affected by disparities. Although blacks and Hispanics have higher *rates* of poverty (Figure 12), there are large numbers of economically disadvantaged people in every racial or ethnic group, including non-Hispanic whites. In fact, nearly half of poor Americans are non-Hispanic whites (Figure 13).

The rest of this section explores the economic costs of social differences in health and the economic and social benefits that could accrue from eliminating these differences.

Americans are less healthy than people in many other countries.

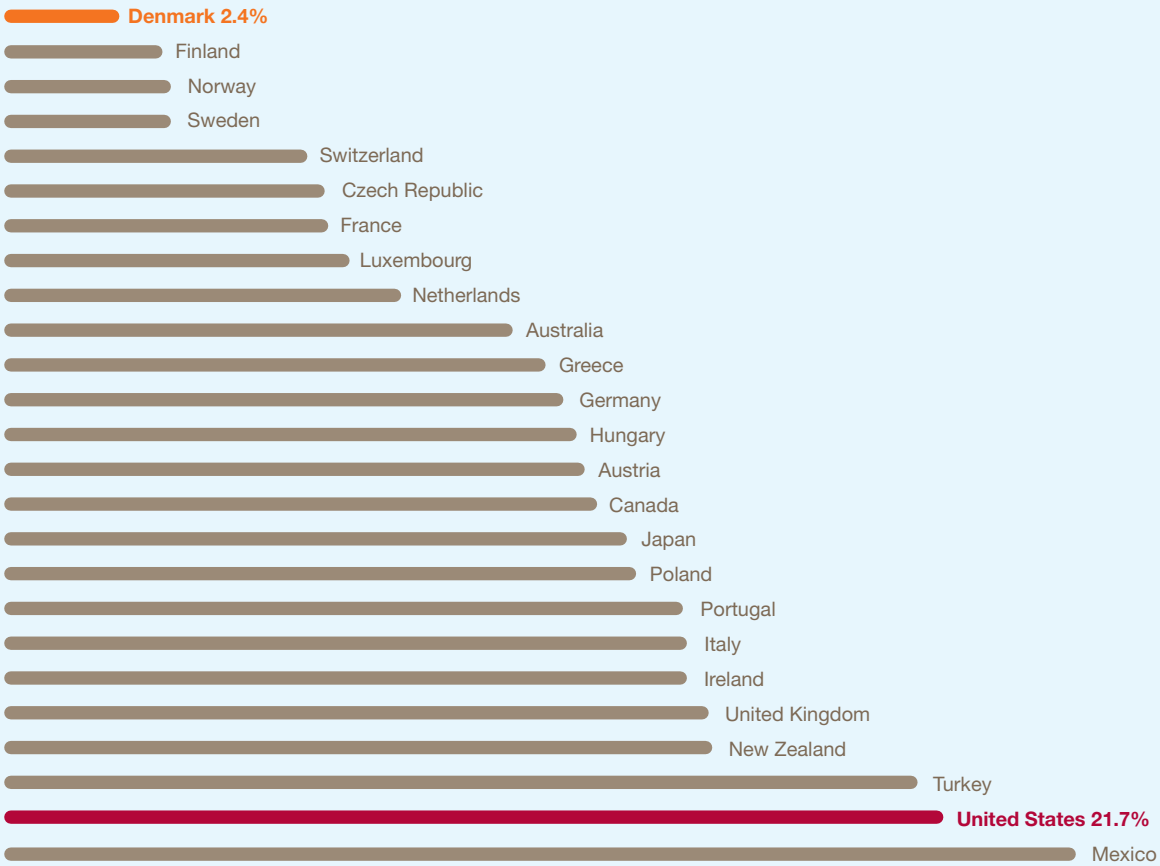
Despite its wealth and despite spending more on medical care than any other nation, the United States ranks below many countries on basic indicators of health:

- Despite improvements in both infant mortality and life expectancy over the last quarter-century, the U.S. has not had the same gains as other countries. The U.S. ranking on infant mortality slipped from 18th in 1980 to 25th in 2002 (Figure 14), while the ranking on life expectancy fell from 14th in 1980 to 23rd in 2003 (Figure 15).
- Based on per capita GDP, Americans should live nearly three years longer than they do. Instead, they have shorter lives than people in some countries with much lower per capita incomes. For example, although U.S. per capita income is nearly double that in Greece, U.S. life expectancy is lower (Figure 16).
- U.S. life expectancy is nearly four years less than expected based on national per capita *health expenditures*. On average, the U.S. spends more than two and a half times as much per person on health than Japan, but our life expectancy at birth is more than four years shorter (Figure 17). In 2003, the U.S. spent an average of $73.70 on health per year of life expectancy for each person, while Japan spent only $27.50.

Efforts to reduce social differences in health are crucial to helping improve our country's international standing in health. At the same time, improving our standing means improving the country's ability to compete globally and enhancing the country's productivity. It also means healthier Americans. For example, if the national infant mortality rate were reduced to that for babies born only to college-educated women, our international ranking on that indicator would increase from 25th to 10th.

More Child Poverty in America

figure 11 The U.S. has higher rates of child poverty* than many other countries. In 2000, one-fifth of American children were poor—a proportion that was nine times higher than in Denmark.



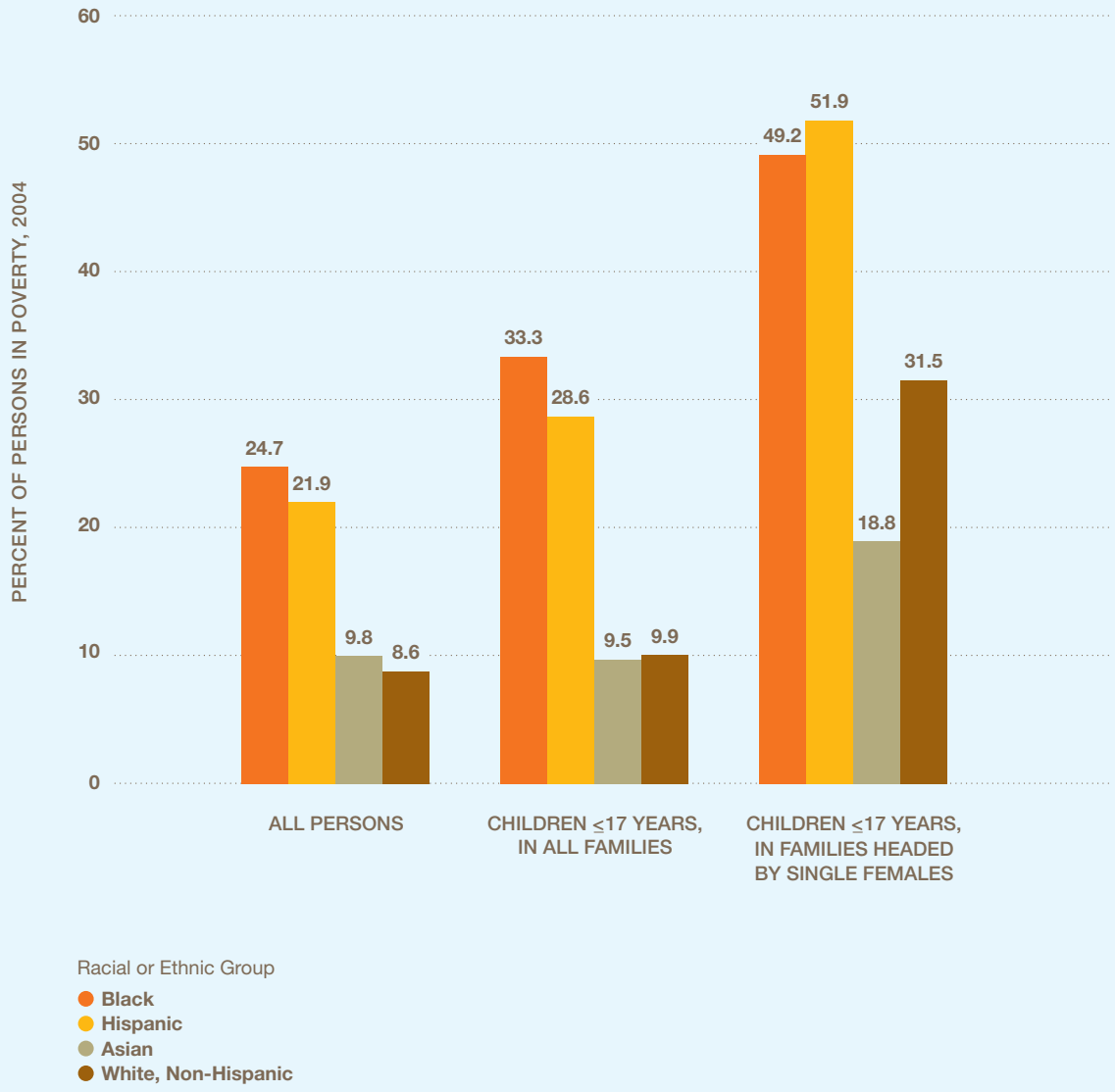
Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

*Percent of children 17 years and younger living in households with equivalised disposable income less than 50 percent of median income.

Source: Förster M and Mira d'Ercole M. *Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s*. OECD Social Employment and Migration Working Papers, No. 22. Paris: OECD Publishing, 2005.

Racial or Ethnic Differences in Poverty

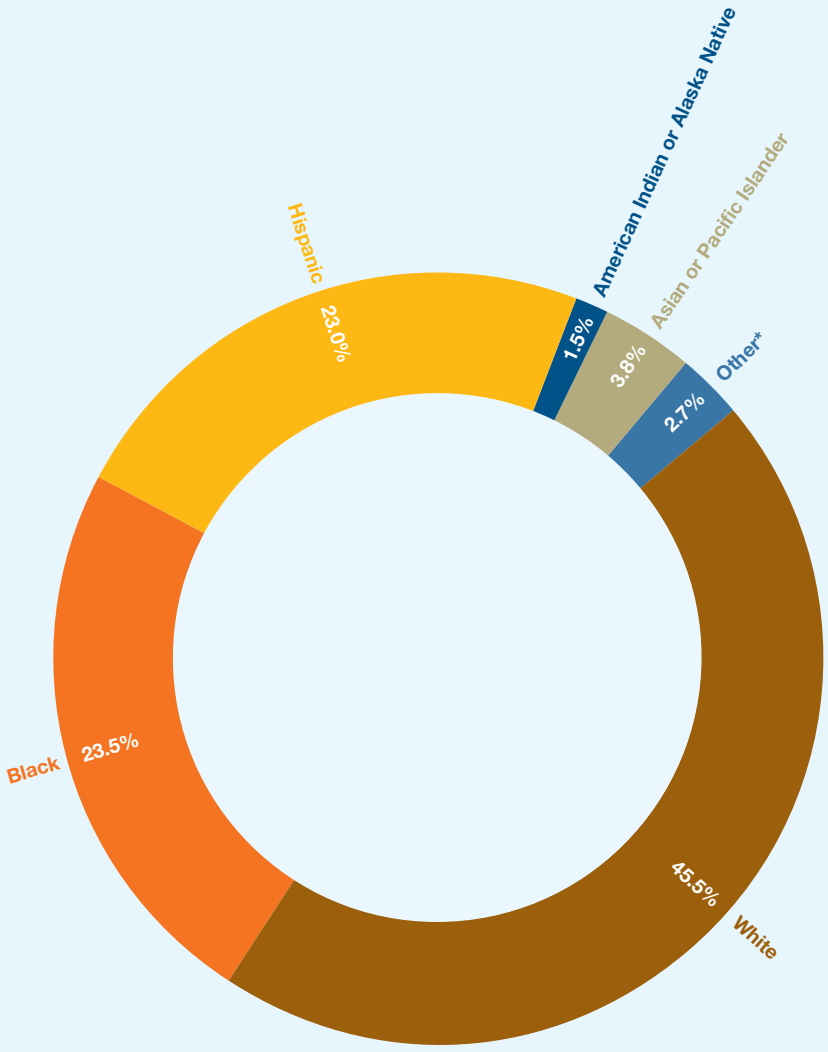
figure 12 Higher proportions of black and Hispanic Americans live in poverty. These patterns are particularly striking for children.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Center for Health Statistics. *Health, United States, 2006 with Chartbook on Trends in the Health of Americans*. Hyattsville, MD.

Whites Are the Largest Racial or Ethnic Group Among Poor Americans

figure 13 Although blacks and Hispanics have higher rates of poverty, whites are the largest racial or ethnic group among poor Americans.



RACIAL/ETHNIC COMPOSITION OF POOR PERSONS (ALL AGES), 1999

Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: Census 2000 Summary File 4 (SF4).
*'Other' includes people of two or more races. All racial groups exclude Hispanic.

Losing Ground in Health: Infant Mortality

figure 14 We are losing ground among industrialized countries with respect to important health indicators: Our ranking for infant mortality (IMR) has slipped from 18th in 1980 to 25th in 2002.

1980	Rank	2002
IMR = 6.9 Sweden	**1**	**Iceland IMR = 2.3**
Japan	**2**	Finland
Finland	**3**	Japan
Iceland	**4**	Sweden
Norway	**5**	Norway
Denmark	**6**	Austria
Netherlands	**7**	Czech Republic
Switzerland	**8**	France
France	**9**	Spain
Canada	**10**	Germany
Australia	**11**	Belgium
Ireland	**12**	Denmark
Luxembourg	**13**	Italy
Belgium	**14**	Australia
United Kingdom	**15**	Netherlands
Spain	**16**	Portugal
Germany	**17**	Switzerland
IMR = 12.6 United States	**18**	Greece
New Zealand	**19**	Ireland
Austria	**20**	Luxembourg
Italy	**21**	United Kingdom
Czech Republic	**22**	Korea
Korea	**23**	Canada
Greece	**24**	New Zealand
Slovak Republic	**25**	**United States IMR = 7.0**
Hungary	**26**	Hungary
Portugal	**27**	Poland
Poland	**28**	Slovak Republic
Mexico	**29**	Mexico
Turkey	**30**	Turkey

Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: OECD Health Data 2007.

Losing Ground in Health: Life Expectancy

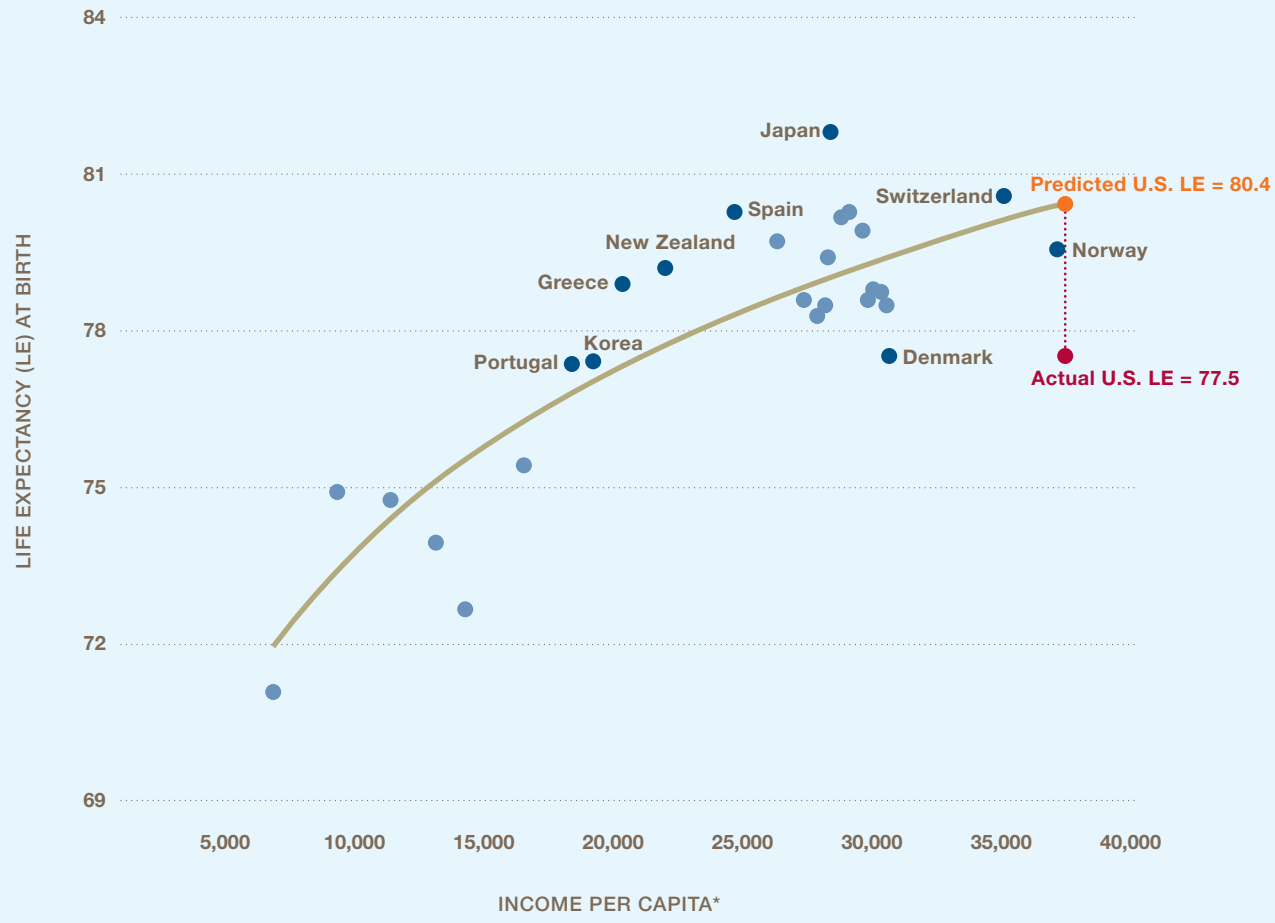
figure 15 In 1980, the U.S. ranked 14th among industrialized countries in life expectancy (LE) at birth. By 2003, we had slipped to 23rd place.

1980	Rank	2003
LE = 76.7 Iceland	**1**	**Japan LE = 81.8**
Switzerland	**2**	Iceland
Japan	**3**	Spain
Netherlands	**4**	Switzerland
Norway	**5**	Australia
Sweden	**6**	Sweden
Spain	**7**	Italy
Canada	**8**	Canada
Australia	**9**	Norway
Greece	**10**	France
Denmark	**11**	New Zealand
France	**12**	Austria
Italy	**13**	Netherlands
LE = 73.7 United States	**14**	Finland
Belgium	**15**	United Kingdom
Finland	**16**	Germany
New Zealand	**17**	Luxembourg
United Kingdom	**18**	Belgium
Germany	**19**	Greece
Ireland	**20**	Ireland
Austria	**21**	Portugal
Luxembourg	**22**	Denmark
Portugal	**23**	**United States LE = 77.2**
Slovak Republic	**24**	Korea
Czech Republic	**25**	Czech Republic
Poland	**26**	Mexico
Hungary	**27**	Poland
Mexico	**28**	Slovak Republic
Korea	**29**	Hungary
Turkey	**30**	Turkey

Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: OECD Health Data 2007.

Americans Have Shorter Lives Than Expected Based on Income

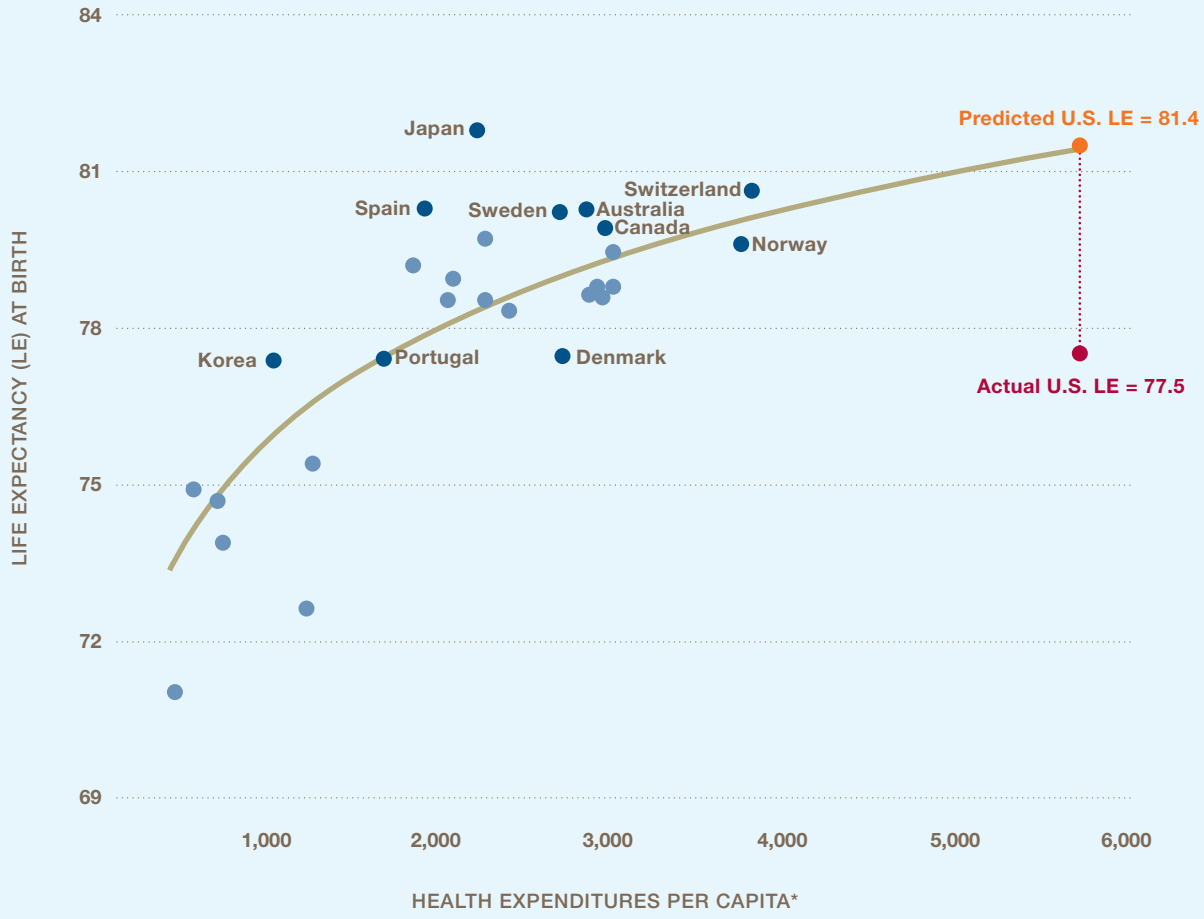
figure 16 Life expectancy is shorter in the U.S. than in some countries with per capita incomes half as large as ours. Based on per capita income, U.S. life expectancy at birth should be nearly three years longer.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Sources: OECD Health Data 2007; *OECD Factbook 2007: Economic, Environmental and Social Statistics*. Paris: OECD Publishing, 2007.
Does not include countries with populations smaller than 500,000. Data are for 2003.
*Per capita Gross Domestic Product in 2003 U.S. dollars, purchasing power parity

America Is Not Getting Good Value for Its Health Dollar

figure 17 The U.S. spends more money per person on health than any other country, but our lives are shorter—by nearly four years—than expected based on health expenditures.



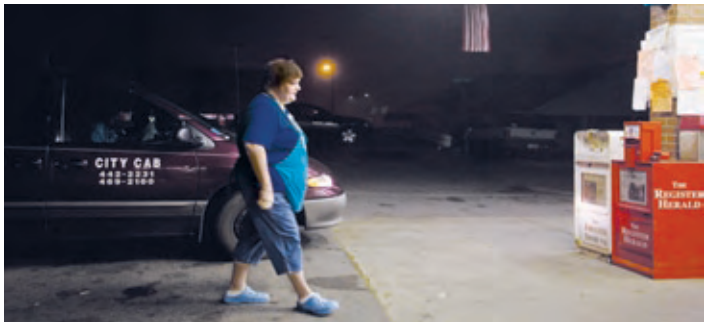
Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Source: OECD Health Data 2007.

Does not include countries with populations smaller than 500,000. Data are for 2003.

*Per capita health expenditures in 2003 U.S. dollars, purchasing power parity

Yvonne Dempsey, 57, has lost most of the feeling in her feet. She has to pay a cab to drive her to the Value Plus grocery store for her pre-dawn shift.



Social differences in health are costly in economic terms.

The most obvious costs result from ill health itself. The higher disease burden associated with social disparities increases the demand for medical care, thereby raising costs for employers, private insurers and government health programs such as Medicare and Medicaid. These higher costs ultimately are passed on to consumers in the form of higher health insurance premiums and out-of-pocket expenditures. Ill health also has broader economic consequences for society: An unhealthy workforce is less productive, which can lower economic growth rates and, over the long term, reduce the standard of living. The Commission on Macroeconomics and Health, convened by the World Health Organization in Geneva during 2000–2001 to investigate the economic consequences of ill health and the economic benefits of improved health, cited enormous hidden economic costs for a nation in which large segments of the population were unhealthy. For example, lost workforce productivity results in less economic development.

The social conditions that cause health disparities also have hidden costs, reflecting profound effects in other sectors beyond health (Figure 18). For example, inadequate education not only contributes to social differences in health, it also makes workers less competitive for employment. A recent report from the U.S. Government Accountability Office noted: "Regardless of whether poverty is a cause or an effect, the conditions associated with poverty limit the ability of low-income individuals to develop the skills, abilities, knowledge and habits necessary to fully participate in the labor force."[19] Social disadvantage affects not only access to health care but also to jobs, college scholarships, home loans and better neighborhoods. Indeed, the primary motivation for public investment in education and most other social and economic programs has been the benefits they generate to employment, earnings, income and other such outcomes. To date, the benefits to health per se have not been an important factor in these decisions.

Accordingly, a full accounting of the expected "payoff" from improving social conditions associated with health disparities requires an examination of all economic benefits, encompassing sectors outside health. As Figure 18 illustrates, improving educational attainment is not only likely to reduce society's health-related costs by lowering demands for medical care and health insurance claims, but is also likely to increase earnings for American workers, boost tax revenues for government treasuries, reduce welfare caseloads, and lower crime rates and incarceration. For example, one study that examined these larger societal benefits found that reducing class sizes in grade school would generate net cost savings estimated at $168,000 per high-school graduate.[20] A considerable nationwide investment to hire teachers and improve school operations would be offset by the larger economic benefits that flow from a more-educated population, including improved health.[21]

Measuring the full spectrum of benefits from social and economic change is beyond the scope of this report. Here we have focused only on differences in health by education, without considering differences by income or racial or ethnic group.

"A LOT of pinto beans," Dempsey chimes in. Both sisters have struggled with weight issues.

It was a major accomplishment for the pair to graduate high school, though Hinte is certain that with more education they both would have better jobs and healthier lives.

"Being educated, you're more aware of health issues; you read more and stay up to date," she says. "Without education you don't really understand how your body works, and if you don't understand how your body works, you don't really know how to take care of it."

In 1999, Hinte ignored vaginal bleeding for 13 months—the first signs of her endometrial cancer. She kept her symptoms secret because she was worried about her husband, who has been ill for many years.

"I just couldn't be sick," she says. "I needed to take care of him."

But Hinte is more worried about her sister, whose situation is particularly precarious.

With just a high-school diploma and no car, Dempsey's career options have been severely limited. For nearly 20 years, she has worked part time at Value Plus. When she was healthier, she walked the one mile from her home in the Bunker Hill neighborhood to Main Street. But with no public transportation she now pays a taxi $2.10 each way. Dempsey's trailer is falling apart and park managers recently raised her rent and utility bills by nearly $100 a month.

She struggles to pay the bills, purchase seven different medications each month and shop for healthier foods.

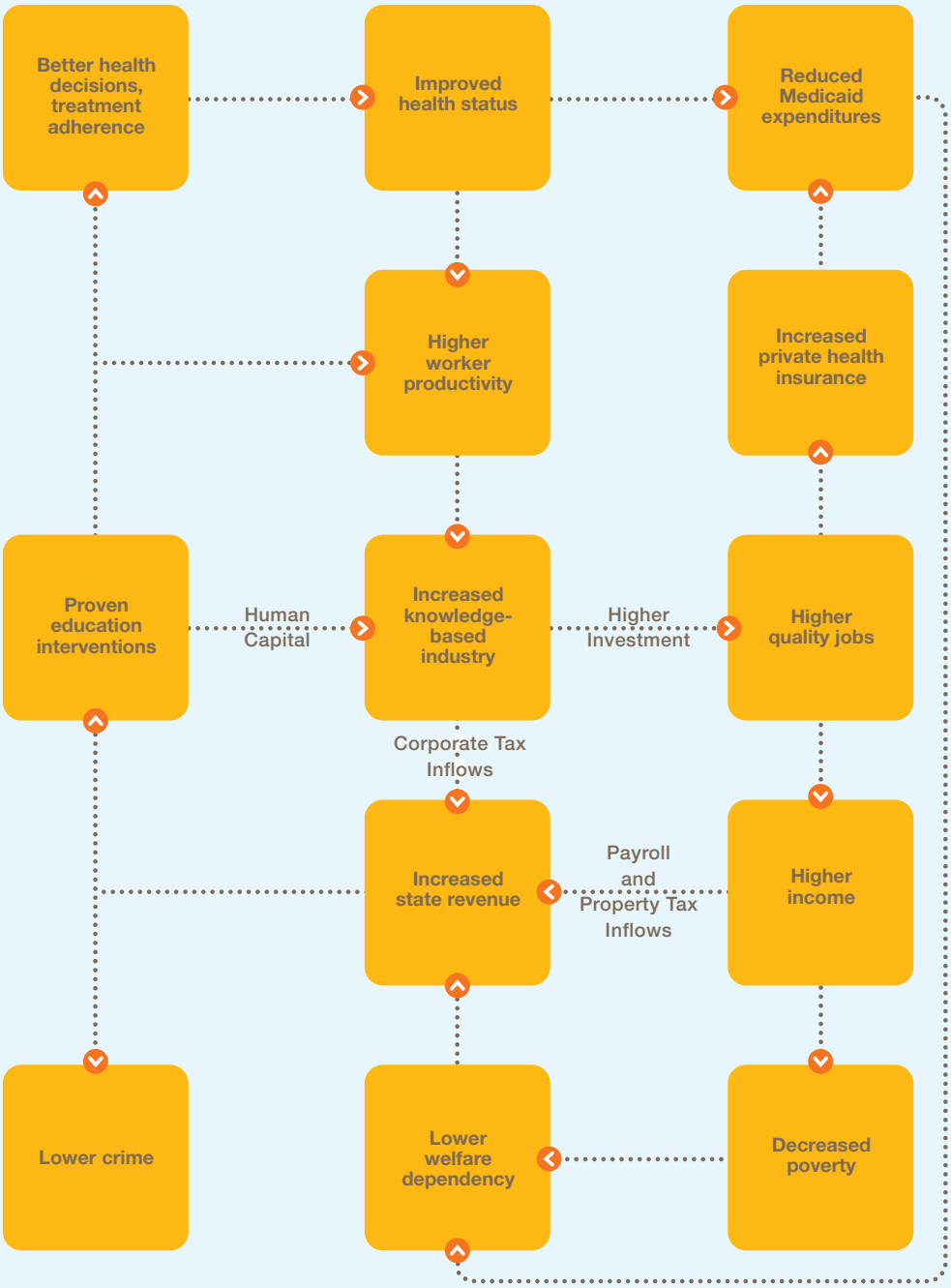
"When the minimum wage went up, prices went up," says Dempsey.

continued on page 44

From left, Yvonne Dempsey, Sheryl Elkins and Ester Hinte

Social Factors Have Effects Beyond Health

figure 18 The social conditions that cause differences in health also have profound effects in other sectors.



Courtesy of Peter Muennig, M.D., M.P.H.

If all adults with less education experienced the death rates and health status of college graduates, the benefit would amount to approximately $1.007 trillion each year.

How large are the expected economic gains from reducing social differences in health?

The benefits of raising the health of less-educated and lower-income Americans to that enjoyed by more-educated and higher-income citizens can be expressed in monetary terms. Of course, the full value placed on better health and longer life can be captured only in part by monetary estimates. Nevertheless, placing a dollar value on improved health and reduced risk of premature death provides important information for policy-makers as they make decisions about investing public resources to achieve better population health. The economic value to a healthy population accrues to individuals and society. Benefits to individuals include better employment and earnings, lower out-of-pocket health care spending, and higher quality of life. Societal benefits include those depicted in Figure 18, such as reductions in public expenditures on social programs and increases in tax revenues.

The economic implications of social differences in health are substantial. In an analysis commissioned for this report, economists estimated the economic value of the shorter lives and poorer health of disadvantaged Americans along the widely studied dimension of education.[22] If all adults with less education experienced the death rates and health status of college graduates, the benefit would amount to approximately $1.007 trillion each year.

This potential benefit from eliminating differences in health related to educational attainment is calculated as follows and illustrated in Figure 19. If adults who had not completed high school died at the same rate as college graduates, 190,000 fewer individuals would have died in 2006; these 190,000 individuals would have been expected to live for 20 more years on average. Translated into monetary terms, the value of the additional years of life that would have been gained is $217 billion. In addition to differences in mortality, health status also differs among adults with different levels of education. Poorer health among adults who have not completed high school relative to college graduates represents an estimated economic loss of $173 billion annually. Taking into account both their higher mortality and their worse health, the total value of potential health improvements among adults who have not completed high school would be $390 billion annually. Figure 19 also presents similar estimates of health losses among high-school graduates and others who have not completed college. If their mortality and health status experiences matched those of college graduates, the estimated economic benefits to adults in these education groups would total an additional $618 billion—$264 billion due to reduced death rates and $354 billion due to improved health status.

Estimating the economic value of health gaps. Putting an economic value on life and health helps to appreciate the potential economic consequences of public policies. The analysis presented here uses a widely employed estimate of the value of a life year: $100,000. This value is applied to the potential gains in life years among less-educated groups when benchmarked to the experience of college graduates. It is also used to calculate the economic value of improved health status among less-educated groups if raised to that of college graduates. (See Dow and Schoeni, 2008, for a complete description of the methodology and assumptions.[23])

"Being educated, you're more aware of health issues; you read more and stay up to date."
–Ester Hinte

A loaf of sugar-free bread costs $2.19, the same amount of money she spends on an entire TV dinner. She likes healthier options such as salad, but at a price of three dollars for two bags, she can't afford that very often, and it's difficult to chew raw vegetables with dentures.

"They want me to do fruits and vegetables," she explains. "I go and price these things and have to decide, what bill am I gonna pay? What medicines am I gonna buy?"

There are weeks when Dempsey skips some pills—too expensive. And she doesn't test her blood sugar regularly.

"I can't afford those little strips," she says. A month's supply can run as high as $50.

Still, Dempsey is grateful for her family and her faith.

"I don't want pity," she says, "but I would like people to know what it's like to try to work and make a home when you are sick." ■

Without saying that education *causes* people to live longer or in better health, this analysis illustrates how closing socioeconomic gaps in health—i.e., by reducing mortality and improving health status among people in less-educated groups—could have major economic impacts. Part of the $1.007 trillion in estimated gains from better health and longer lives would accrue to the United States economy as increases in productivity.

While these estimated benefits from eliminating health disparities are clearly substantial, they actually underestimate *total economic benefits*. First, the estimates do not reflect the broader economic benefits to families and society of reducing health disparities; they only represent the benefits that would accrue to the less-educated adults. Second, as noted earlier, the social conditions leading to health disparities are also the root causes for other social ills with economic ramifications extending beyond health. Alleviating the social conditions that underlie health disparities also can improve community development, economic prosperity, social and community cohesion, crime and safety, and the stability of society. These benefits need to be included on the balance sheet for social change, even if their dollar value is difficult to quantify. Third, the estimates do not include disparities in health status among people under 25, many of whom have not completed their education.

Offsetting these benefits are *public costs*. First, the policies and programs needed to achieve these benefits would incur costs. Second, additional public costs may accrue when people live longer lives. For example, improving the health status of a person who is alive today may reduce health care expenditures today, but that person will also live a longer life, increasing the number of years he or she will need health care.

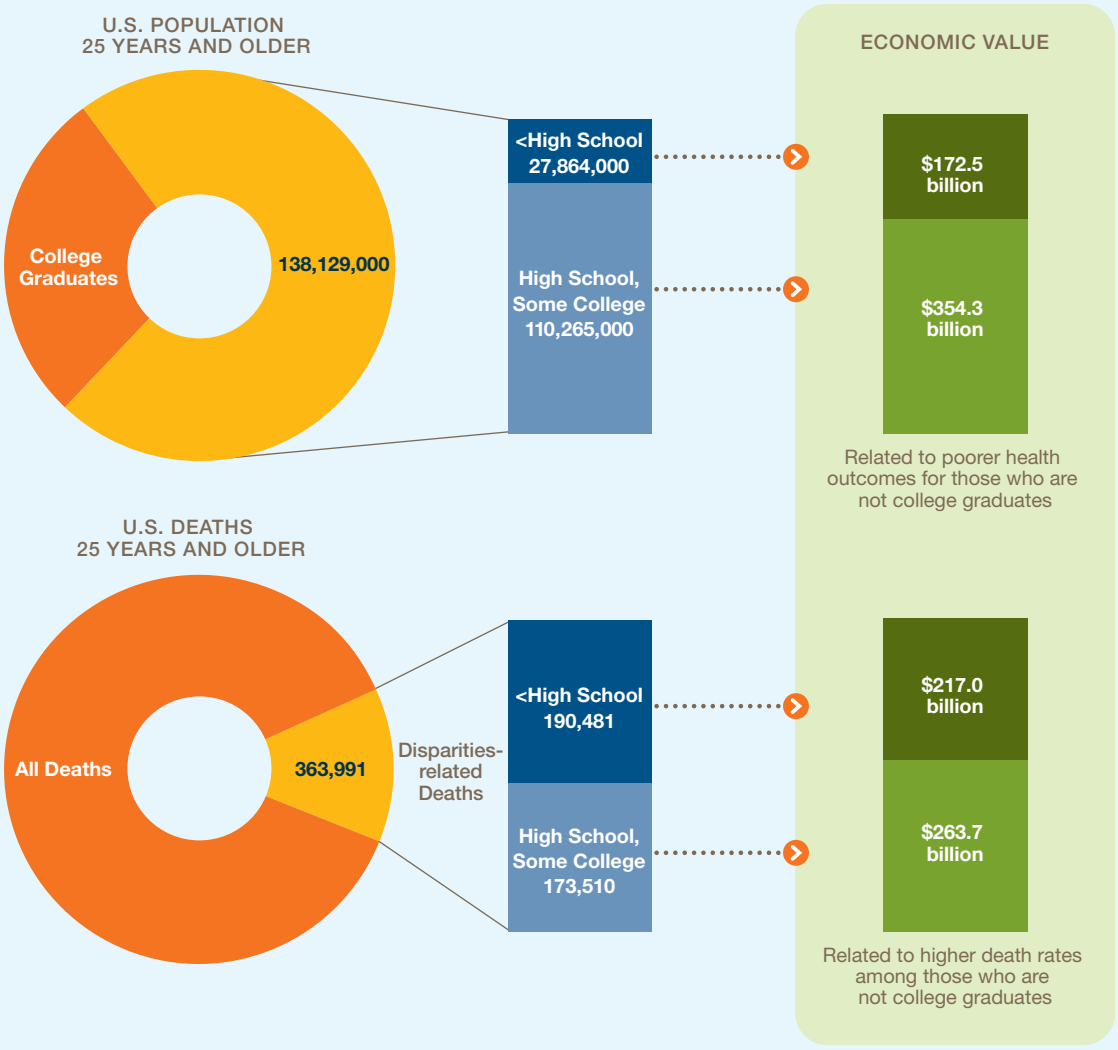
Clearly, both the benefits and the costs of policy options should be estimated. Moreover, such calculations should include the full set of benefits—health-related and non-health-related—as well as all costs.

The human face of social differences in health.

Health disparities in the United States also reflect significant human costs, illustrated by the stories accompanying this report.

The High Economic Stakes of Health Disparities

figure 19 If adult Americans who have not completed college experienced the lower death rates and better health status of college graduates, they would live longer and healthier lives. These improvements would translate into potential gains of $1.007 trillion annually.

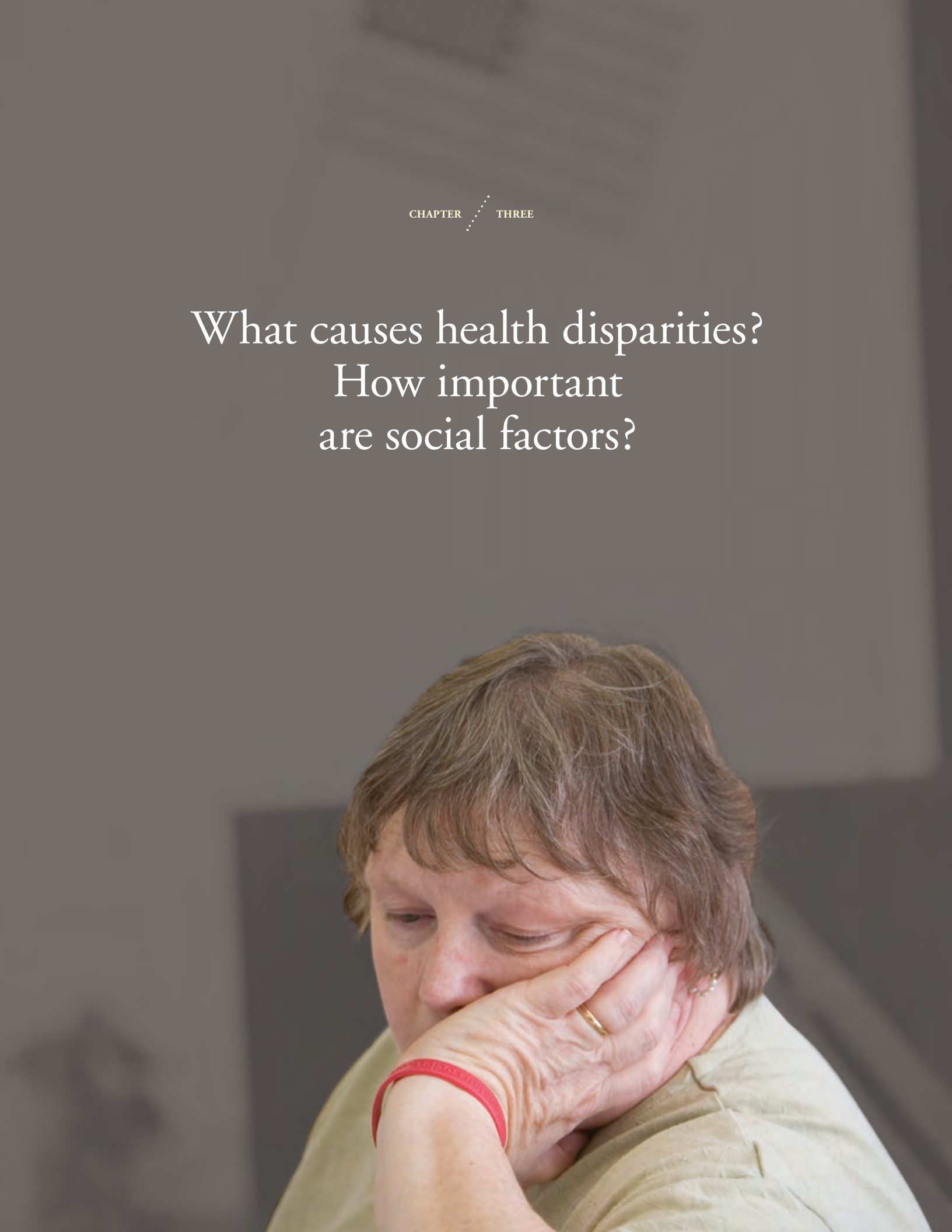


Economic Value: $1.007 trillion

Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: Data from new analyses by William Dow and Robert Schoeni, 2008.

CHAPTER THREE

What causes health disparities? How important are social factors?



Efforts to eliminate disparities in medical care are essential to reducing socioeconomic and racial or ethnic disparities in health, but are not sufficient.

What influences health?

Social factors are crucial determinants of health disparities. Accumulating evidence indicates that social factors such as education, child care, income, housing and neighborhood conditions play a central role in health and in health disparities. Social factors affect health directly and indirectly.[24] Although genes and medical care also are important, social factors probably play a greater role than either.[25] For example, one study estimated that the impact of poverty on death rates among whites and blacks in the U.S. is comparable to that of cigarette smoking.[26] Another study estimated that eliminating disparities in education would have saved eight times as many lives as were saved by medical advances during 1996–2002.[27] Fortunately, many social factors can be substantially influenced by social policies and programs.

Many factors influence health. Age clearly matters; people don't expect to be as healthy at 80 as at 20. Sex matters, too—for example, men don't experience complications of childbirth and rarely have breast cancer. Genes also can matter; some diseases occur more often among people with ancestors from certain parts of the world. But individuals have no control over their age or over the sex and genetic make-up with which they were born. When considering important influences on health that are modifiable on a large scale, most people think first of *medical care*. In fact, many people use the terms *health* and *health care* almost interchangeably. Authoritative sources have documented large and widespread socioeconomic and racial or ethnic disparities in access to care and in the quality of medical care for many serious health conditions such as heart disease and cancer.[28] Although reducing social disparities in medical care is essential, these efforts alone cannot adequately reduce socioeconomic and racial or ethnic disparities in health.

The importance of health-related behaviors.

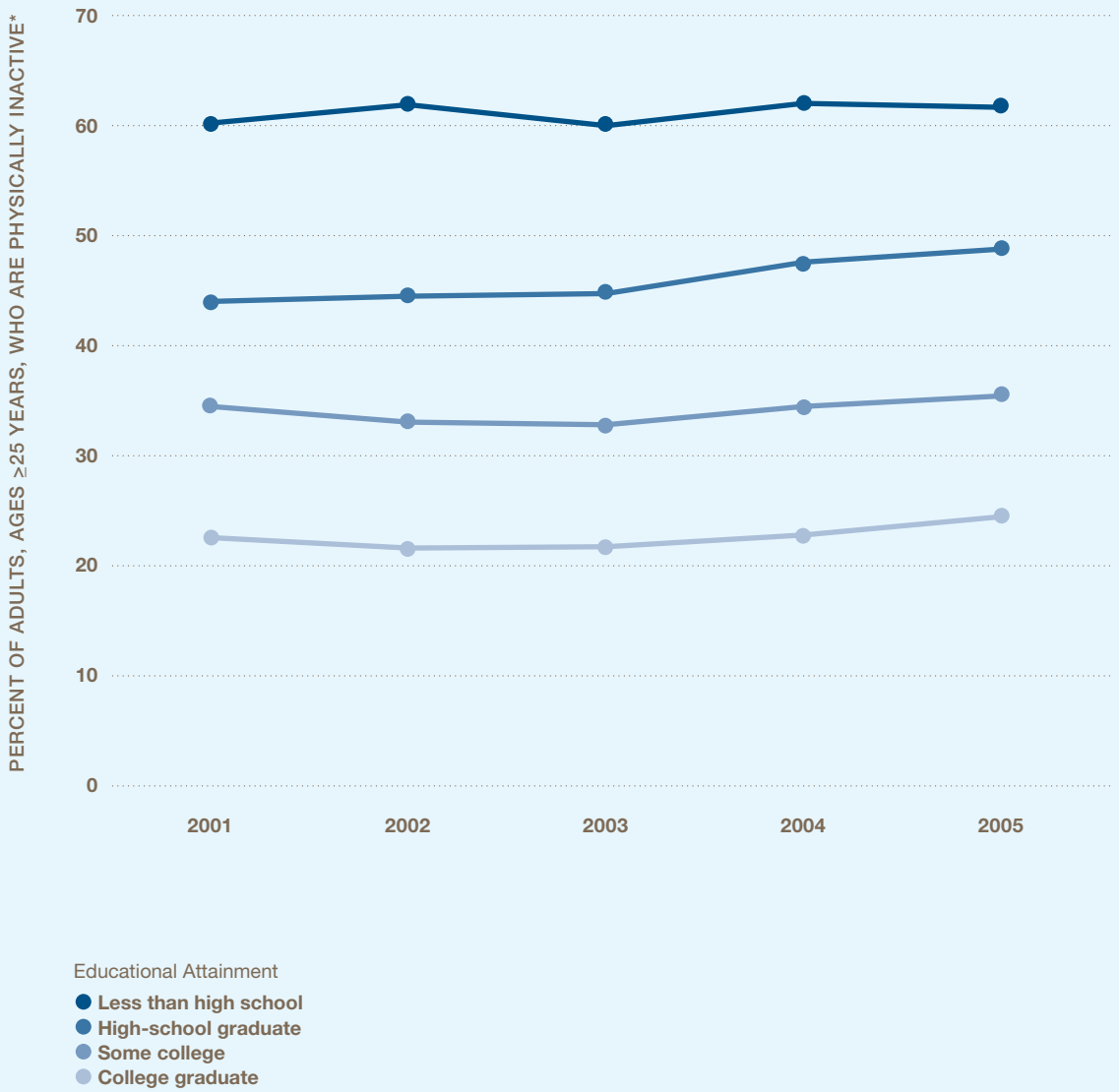
Medical care is important, particularly after diseases develop, but many major diseases develop largely as a result of health habits, such as smoking and physical inactivity. During the past few decades, the general public has become increasingly aware of the strong influence on health exerted by individuals' *health-related behaviors*—habits such as exercising regularly, eating a nutritious diet, not smoking, and limiting alcohol intake. Behaviors are major causes of preventable deaths.[29] Along with efforts to improve medical care access and quality, prevailing strategies for improving health in the U.S. often have focused on increasing individuals' awareness of how their personal behaviors affect health and on behavior change. Some of these strategies have provided tools and resources to support individuals' efforts.

Behaviors are a major cause of preventable disease and premature death in the U.S. In 1990, tobacco, diet, physical inactivity and alcohol accounted for approximately 38 percent of U.S. deaths overall.[34] In 2000, these behaviors, which are strongly influenced by social factors, were still the leading nonhereditary causes of death.[35]

Although these approaches have resulted in many improvements in health overall, as reflected in average national statistics, little or no progress has been made in reducing important differences in health among social groups.[30] Disparities in some key health-related behaviors have persisted and in some cases actually widened.[31] Although the prevalence of high cholesterol and smoking—two cardiovascular disease risk factors—decreased overall during the past three decades, the decrease was smallest among adults with lower family incomes.[32] Income disparities in diabetes, another important risk factor for cardiovascular disease, have widened in the past 30 years due to greater increases in prevalence among adults in lower-income groups.[33] Trends in education-based disparities in physical activity and smoking are depicted in Figures 20 and 21. These disappointing patterns indicate the need to reassess current behavior change strategies and the assumptions on which they are based.

Persistent Gaps in Health Behaviors: Physical Inactivity

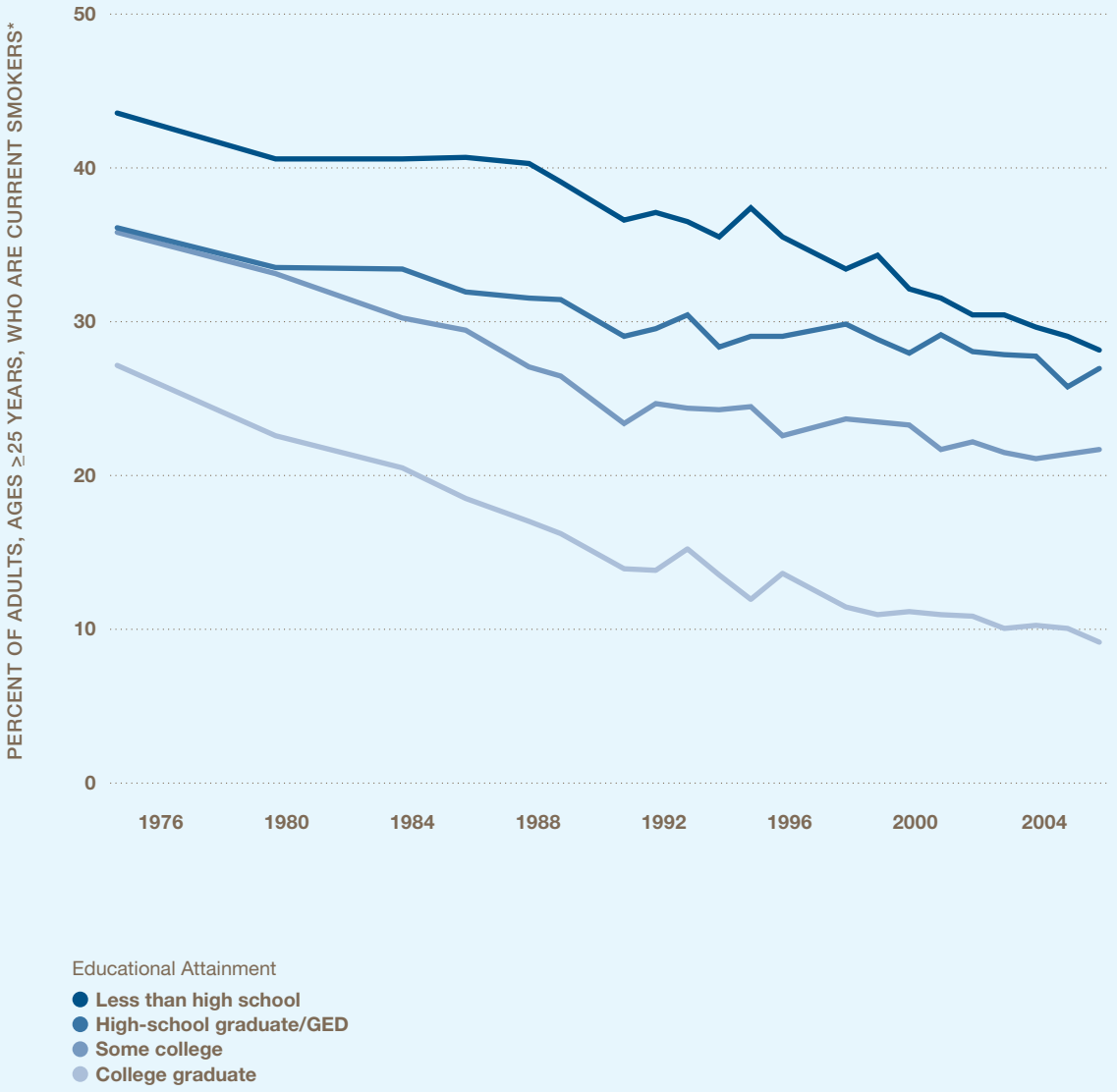
figure 20 Education disparities in physical inactivity among adults—with lower educational attainment corresponding to higher proportions of physical inactivity—have persisted over time. The gaps do not appear to be narrowing.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Health Interview Survey, 2001–2005.
*Age-adjusted

Persistent Gaps in Health Behaviors: Smoking

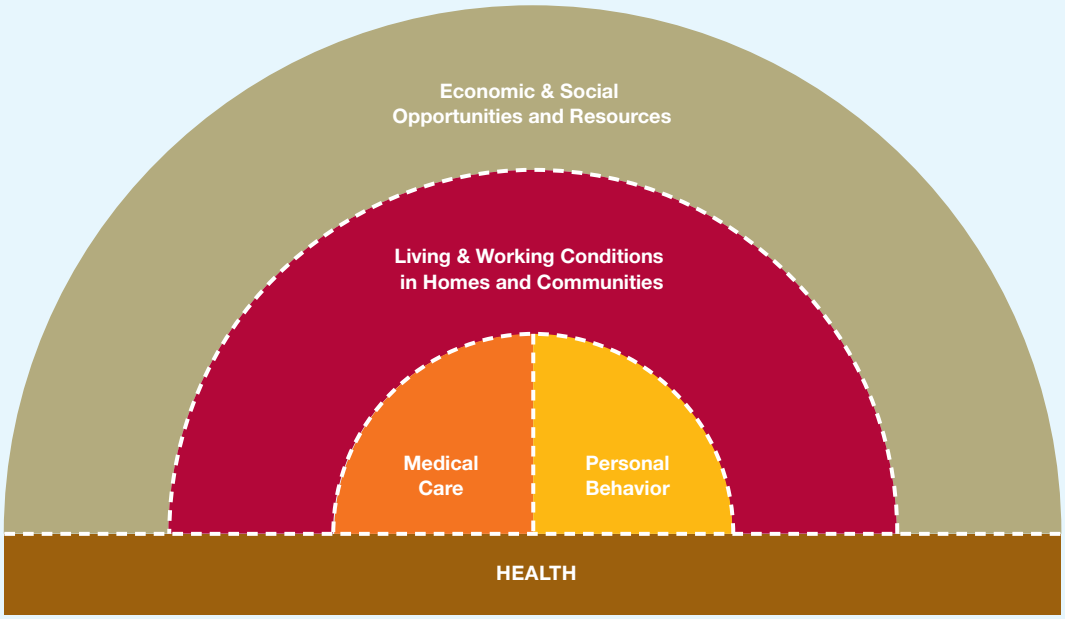
figure 21 Education disparities in cigarette smoking have persisted over decades, and the gaps between college graduates and those with less education appear to have widened.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.
Source: National Center for Health Statistics. *Health, United States, 2006 with Chartbook on Trends in the Health of Americans*. Hyattsville, MD.
*Age-adjusted

Influences on Health: Broadening the Focus

figure 22 Health is shaped by many influences, including age, sex, genetic make-up, medical care, individual behaviors and other factors not shown in this diagram. Behaviors, as well as receipt of medical care, are shaped by living and working conditions, which in turn are shaped by economic and social opportunities and resources.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Kenyon McGriff joined Students Run Philly Style almost two years ago

Kenyon McGriff, 17

"I told myself I was gonna stop being unhealthy."

Not everyone is born with perfect genes. Some families pass along genetic problems from one generation to the next. Kenyon McGriff is one of those unlucky ones who inherited genes that make him susceptible to several chronic illnesses—although until recently he didn't realize the built-in challenges of his heredity.

McGriff's mother, a smoker who is overweight, has high cholesterol and diabetes. His aunt and grandmother suffer from diabetes too. His grandfather died of heart disease.

McGriff, raised largely on soul food, was a pudgy adolescent who grew into an obese teen. By 10th grade, he weighed 270 pounds and had bouts of high blood pressure.

That's when a doctor at Children's Hospital of Philadelphia gave McGriff a terrifying lecture.

"You are overweight," she said during a routine checkup about two years ago. "You have diabetes and heart trouble in your family. Your neck is dark; that is a sign you are at risk for diabetes."

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What influences behaviors?

Positive changes in health-related behaviors require individuals to make choices that promote good health. This typically begins with an awareness of the benefits and risks of particular behaviors, but also requires that the environments in which people live, work and play support healthier choices. Efforts focused solely on informing or encouraging individuals to modify behaviors, without taking into account their physical and social environments, often fail to reduce health inequalities.[36] Making further improvements in health-related behaviors, and in particular reducing disparities in those behaviors, may require adopting a much broader perspective based on a deeper understanding of what shapes behaviors.[37]

Figure 22 illustrates relationships among some of the key factors that influence health and thus represent potential opportunities for reducing health inequalities. Although the relationships are far more complex than depicted in the diagram, this simplified framework highlights several important concepts. First, it shows that behaviors are shaped by *living and working conditions*—for example, living in a neighborhood where fresh produce is not sold or where tobacco and alcohol advertising on billboards are common, or having a workplace without breastfeeding accommodations. Similarly, receiving recommended medical care may depend on factors like living near medical offices and clinics, having access to transportation and child care, and being able to take time from work for medical appointments. The diagram also highlights how living and working conditions (and medical care and behaviors) are in turn shaped by a person's broader *economic and social opportunities* and *resources*. For example, people who grow up in affluent families with advantageous social connections and educational opportunities are more likely as adults to obtain higher-paying jobs with health insurance and paid sick leave. They can also afford housing in better neighborhoods. All of these things offer them healthier living and working conditions, and allow them to pass these advantages on to their children.

Coach Scott Baier gathers McGriff's running group for a training run.

All neighborhoods do not offer the same choices.

Living and working conditions include physical and social environments at home, in the neighborhood, at school, and at work.

Individual responsibility and opportunities to choose health. Individuals make choices for themselves and their children that have health consequences. Ultimately, not only individuals and their families but, in many cases, society will bear the consequences of some of those choices. That is why it is important to look for ways to help people **choose health**—by strengthening their ability to make healthy decisions, by removing obstacles to healthy choices, and by creating more opportunities to be healthy—particularly for those groups of people whose options have been most limited.

Many Americans are heeding the advice of public health and medical experts and trying to live healthier lives. They exercise regularly, purchase and prepare healthy food, and don't smoke. They make sure that family members get recommended medical checkups and receive timely medical attention when they are sick.

Imagine, however, what it is like to live in a neighborhood where there are no sidewalks or community playgrounds, where being outside may not be safe and joining a gym is not an option.

Living and working conditions shape individual behaviors and affect health in other important ways as well.

A large and growing body of research has shown how the contexts in which people live and work—their physical and social environments at home, in the neighborhood, at schools and work, and when traveling in between—appear to powerfully shape many behaviors with strong effects on health.[38] Physical and social environments can be overtly hazardous—for example, polluted or crime-infested. They also can severely limit choices and resources available to individuals. For example, an individual's ability—and motivation—to exercise and avoid smoking and excessive drinking can be diminished by living in neighborhoods that lack safe areas for exercise, where intensive tobacco and alcohol advertising target poorer and minority youth and liquor stores are plentiful, and where healthy role models are scarce. In addition, a neighborhood's socioeconomic conditions can affect whether its residents smoke,[39] drink alcohol,[40] have healthy diets,[41] and pursue protective reproductive health behaviors.[42] By the same token, aspects of living and work environments—such as the presence of sidewalks and playgrounds in neighborhoods, after-school physical activity programs for children and youth, nutritious food services in schools and workplaces, and on-site facilities for breastfeeding—can promote health by encouraging healthy behaviors and making it easier to adopt and maintain them. Similarly, people are more likely to receive recommended medical care when facilities are accessible from where they live, work or study.

What shapes living and working conditions? Economic and social opportunities and resources.

What determines the quality of our living and working conditions? People are not randomly distributed into healthy and unhealthy circumstances. Living and working conditions are shaped by many factors, including geography, climate, culture and individual choices. They also are powerfully shaped by factors that reflect the economic and social opportunities and resources people have, such as income or wealth, education and social standing (respect, prestige or acceptance in society).

McGriff couldn't do anything about his genes, the doctor acknowledged. But if he didn't change his eating habits and begin exercising, she predicted a lifetime of back pain, insulin shots and heart attacks.

"That was a wake-up call for me," says the affable teen. "I told myself I was gonna stop being unhealthy."

But as McGriff soon discovered, good health takes more than motivation or a wise doctor. It depends largely on environmental factors such as where a person lives, works and plays.

"There's a lot we're missing in this neighborhood," McGriff says of the West Philadelphia neighborhood where he grew up. "I can't find what I need for my diet."

In the two years since the doctor's warning, McGriff, now age 17, has dropped 30 pounds, become a food label reader, developed a fondness for sushi and begun his first year at Indiana University of Pennsylvania outside Pittsburgh.

He is on the path to good health. But it has been filled with obstacles—many not of his own making.

The streets of McGriff's urban neighborhood are dotted with fast food restaurants, Chinese takeout joints and corner stores that offer packaged foods, cheap liquor, lottery tickets and cigarettes. During his years at Sayre High School, McGriff often skipped lunch or survived on French fries because the other options were unappetizing, unhealthy or both.

"We have burnt pizza every day; hoagies, which are lunch meat slapped on a soggy roll, and then a hot food like chicken nuggets or meat subs," he says, describing the cafeteria fare. McGriff has high praise for the cafeteria's soul food offerings—buttered rolls, roast chicken with gravy and mashed potatoes—but he knows that tasty doesn't always equate with healthy.

Scott Baier, the coach for Sayre's Students Run Philly Style, tries to offer nutrition tips to students. But economics and a lack

Education, income and wealth make it easier to make healthier choices. More education can lead to greater knowledge about health and ability to apply that knowledge to change personal behavior in healthy ways. Education is tightly linked with income and wealth. Better education yields opportunities for more rewarding and higher-paying jobs, which in turn are associated both with greater economic security and ability to accumulate wealth and with healthier working conditions. Better jobs generally provide better benefits—including health insurance, which provides access to medical care and can protect families from exorbitant medical expenses, an important contributor to personal bankruptcy in the U.S.[43] Higher income and accumulated or inherited wealth make it easier for people to pay for insurance premiums, deductibles, co-payments and medicines; to purchase more nutritious foods; to obtain quality child care (which can affect a parent's ability to keep a job and can also reduce stress); and to buy a home and live in a neighborhood with resources to support good schools and recreational facilities. These advantages are likely to be passed on not only to the children of these more-affluent families but to future generations as well.

Conversely, limited economic means can make everyday life an all-consuming struggle, leaving little or no time or energy to adopt a healthier lifestyle and even crushing personal motivation. Pursuing health requires a desire to preserve and invest in life; a marginalized existence can rob even a resilient person of this desire.

Imagine that, because the nearest supermarket is beyond walking distance and you can't drive there because you don't have a car (or can't afford gas), you need to purchase most of your family's food at the neighborhood convenience store that sells over-priced and highly processed foods.

"Choosing health" may not be absolutely *impossible* in such an environment, but it certainly is far more difficult. Some people do make it against the odds, but it may take an extraordinary individual to overcome such obstacles.

What could be done to make it easier for the vast majority of ordinary human beings in these circumstances—and particularly for their children, who have no control over these conditions—to **choose health**?

Economic and social opportunities and resources—such as income or wealth and education—have important effects on the conditions in which people live and work.

Social standing can affect health: Consider racial segregation.

Although it is no longer legal to discriminate on the basis of race or ethnicity, the legacy of racial inequality and residential segregation has left members of disadvantaged racial or ethnic groups more heavily concentrated in resource-poor neighborhoods.[44] This uneven pattern of neighborhood disadvantage is not fully explained by differences in family income. For example, among families with similar incomes, blacks[45] and Hispanics live in neighborhoods with higher concentrations of poverty than whites.[46] These neighborhood differences can contribute to health disparities given disproportionate access to resources and exposures to harmful conditions. Living near toxic waste

of information hamper those efforts.

"Parents are not monitoring what they eat or how much they eat. Often the parents don't know what is healthy or they don't have the money," he says. "We got a salad bar in the cafeteria two days a week; everybody loved it. We only had it three weeks and it was canceled. They said it was too hard to do."

Prior to joining the running club, the only exercise McGriff got was working video game controls at a local arcade.

"The first two weeks were difficult" for McGriff, Baier recalls. "He'd run maybe a half-mile or a mile."

Even after losing 30 pounds, McGriff's bulky form still stands out in the group of runners, a collection of taut, young bodies gathered outside of Sayre High School. Others bend effortlessly at the waist, touching their palms to the ground, but McGriff, in baggy sweat pants, strains to reach the tops of his ankles.

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Education and income: resources for a healthy diet. Education is important for making the healthiest food choices among the available options, but income can severely constrain those options. For example, quality fresh produce and low-fat foods are generally far more costly than unhealthy, processed foods,[50] and lower-income neighborhoods generally have fewer supermarkets and grocery stores selling healthy foods.[51] Income can permit—or deny—participation in an effective commercial weight-loss program.

Education and income: resources for access to healthy work environments—such as workplaces that foster breastfeeding. The value of breastfeeding for infants and women has been well documented. Among mothers of children born in 2004, 55.8 percent of college graduates and only 32.2 percent of those with no formal schooling beyond high school were breastfeeding six months after their babies were born.[52] Breastfeeding rates have improved overall, even among lower-income women; however, lower-income women face greater obstacles. Better-educated and higher-income women are more likely to work at jobs that facilitate breastfeeding—for example, by permitting flexible hours (or even the ability to work at home) and maintaining clean, comfortable facilities to produce and store breast milk at work. Less-educated and lower-income women are more likely to work at jobs that do not provide such conditions,[53] making it much more difficult for them to continue breastfeeding their babies.

Although it is no longer legal to discriminate on the basis of race or ethnicity, the legacy of racial inequality and residential segregation has left members of disadvantaged racial or ethnic groups more heavily concentrated in resource-poor neighborhoods.

dumps, freeways and other sources of exposures that are harmful to health is highly correlated with race as well as socioeconomic status.[47] Racial segregation also has meant that blacks and Hispanics are more likely than whites to live in poor-quality housing,[48] posing a greater risk of exposure to conditions that can contribute to poor health, such as indoor allergens that can lead to and exacerbate asthma.[49]

Social factors tend to cluster. Escaping health-damaging physical and social environments is challenging, because these neighborhoods typically lack employment opportunities and services—including good schools—that can lead to upward mobility. There may also be fewer positive role models and fewer community members with sufficient resources themselves to provide a "leg up" to those who are most needy.


Doritos
Cool Ranch
Lay's
Cheddar & Sour Cream
your taste. your town.
Grandmas
B-B-Q

When Baier calls for a standard stretch that involves lifting and holding one foot tucked up against the back, McGriff grabs the shoulder of another boy to steady himself.

On weekends, Baier and the squad members board buses for one of Philadelphia's lush parks. There they prepare for the city marathon on tree-lined paths. But on weekdays, he sends them along the traffic-clogged streets of West Philadelphia.

Most of the youngsters sprint down busy Walnut Street, but McGriff takes his time. He lopes along, passing the high school and then his younger brother who is doing what Kenyon used to do every afternoon: standing on the corner with his friends munching potato chips.

McGriff turns left onto Cobbs Creek Parkway, passing a dimly lit bar, on his way to the corner of Pine, a busy intersection where he turns around. Baier and most of the others are so far ahead that they passed McGriff several blocks ago.

McGriff hardly notices. When he runs, "I am thinking about the next goal, the next corner, the next turn," he says. He wants to lose another 30 pounds, which could be difficult since many young people put on the "freshman 15" during their first year of college.

"When I started running, I lost some friends, some of the people I hang out with," he says. "I tried to get them involved, but some of them are just too cool for it."

But McGriff, now one of the veterans on the squad, has a certain confidence that comes from having already completed one marathon.

"I wasn't the fastest runner or the slowest," he says. "I had my own pace." ■

Income and health. Does income influence health—or does health influence income? Both are true. Does income really shape health? Or is it the other way around—with health determining labor market earnings and income? Some economists believe that the effects of income or wealth on health have been overstated by failure to consider "reverse causation." These economists believe that lower income is so consistently and strongly associated with worse health not because lower income causes people worse health but primarily because poor health can lead to lower income by limiting a person's options for education and employment.[54] Although the magnitudes of these associations are not well established, the evidence supports some degree of causation in both directions: from health to income and from income to health.[55]

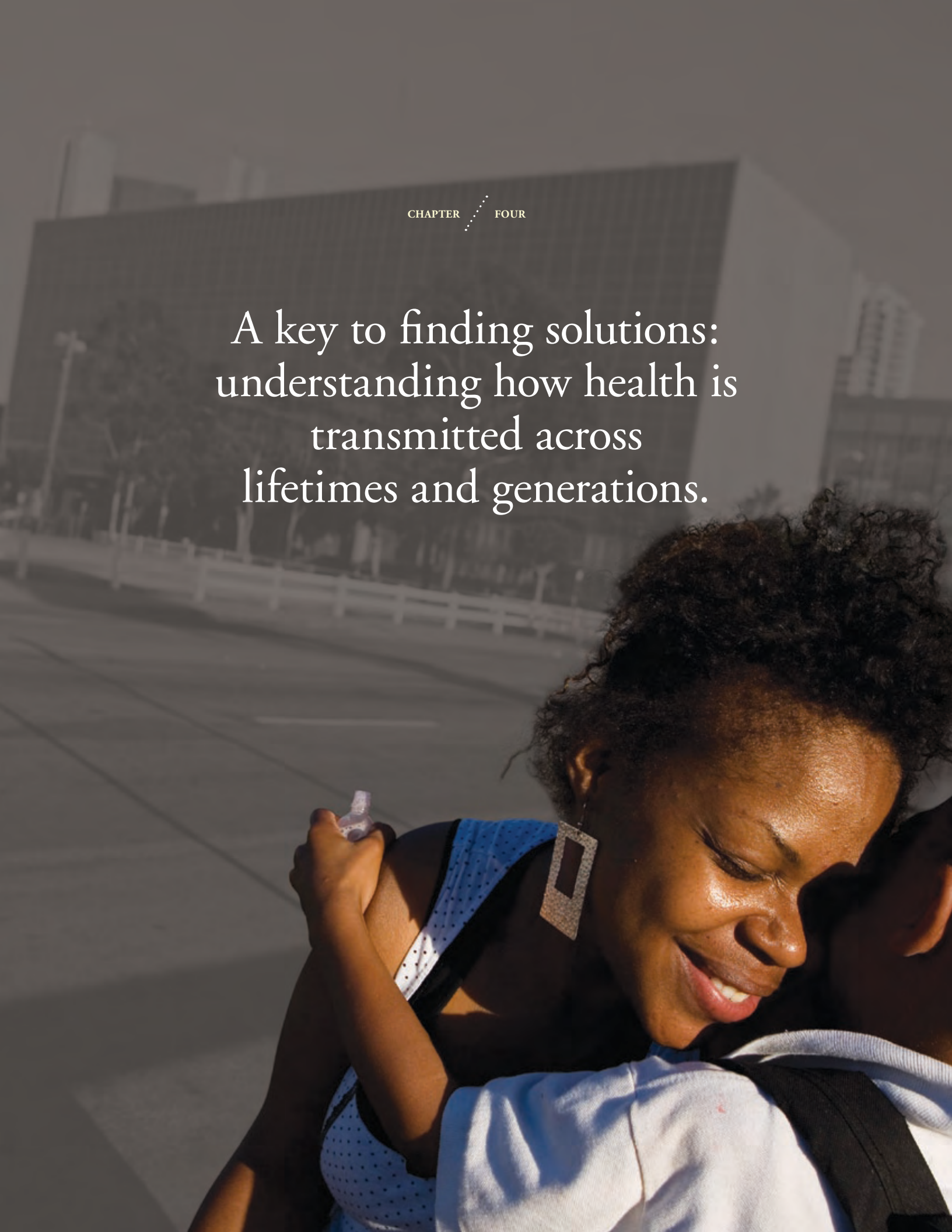
How do social factors influence health? The role of stress.

Living and working conditions can damage health through stress. The last decade has seen marked increases in scientific knowledge about causal pathways and physiological mechanisms that help explain the links between socioeconomic status and health. Important examples include physiological damage to multiple vital organ systems caused by chronic stress through neuroendocrine and immune pathways.[56] Stressful experiences—like those associated with lower socioeconomic status—can trigger the release of hormones and other substances which, particularly with repeated stresses over time, can damage immune defenses and vital organs.[57] This physiological chain of events can result in more rapid onset and progression of chronic illnesses, including cardiovascular disease,[58] and the bodily wear and tear associated with chronic stress may accelerate aging.[59]

There is widespread awareness that acutely traumatic events can adversely affect health. But increasing evidence shows that the accumulated strain from trying to cope with daily events may, over time, lead to far more physiological damage than a single stressful event, even if it is dramatic.[60] Daily hassles could include constant challenges posed by a person's neighborhood, such as noise, crime, negative influences on children; the work environment, where a person may feel disrespected or intimidated; or inadequate financial resources for decent housing, food, child care, transportation or medical care.

CHAPTER FOUR

A key to finding solutions: understanding how health is transmitted across lifetimes and generations.



Beverly Davis

Without a working car, Beverly Davis and her two children, Semaj and Alyla, spend hours each day walking and riding city buses.

Economists have shown how family income in one generation shapes family income in the next.[61] Socioeconomic disadvantage in childhood has been linked repeatedly with lower educational attainment[62] and lower income in adulthood;[63] poverty in early childhood may be particularly damaging.[64] Likewise, healthy children are more likely to become healthy adults who in turn have healthy children. Transmission of health across generations is shaped by both genetic and social factors.[65] Researchers are beginning to link these bodies of evidence—examining the interplay between economic and social resources (including income and education) and health, and its influence on the transmission of health across lifetimes and generations.[66]

Child health and development shape adult health.

Figures 1, 3c and 3d provide examples of how children in families with lower income or less education are at greater risk for ill health. A child's health also predicts his or her health in adulthood. For example, a baby born too small or too early is more likely to be cognitively, behaviorally and physically handicapped as a child, and to develop high blood pressure, heart disease and diabetes as an adult.[67] Obese children are more likely to be obese as adults,[68] placing them at risk for serious chronic diseases including diabetes, heart disease and stroke. Poor dental health in childhood can lead to painful, disabling or disfiguring dental problems in adulthood.[69] At the same time, poor childhood health can limit educational attainment, which then limits adult health.

Child health and development are powerfully affected by economic and social factors.

Socioeconomic adversity in early childhood leads to physical changes in brain development that can limit children's chances to succeed and be healthy.

Socioeconomic conditions—like family income, education and concentrated neighborhood poverty—affect health at every stage of life. The effects of socioeconomic adversity on young children, however, may be most dramatic. A body of research shows that children's nutrition varies with parents' income and education,[70] and that nutrition in childhood can have lasting effects on health throughout life.[71] Lead poisoning in childhood—commonly due to lead-based paint in substandard housing—can lead to irreversible neurological damage. Unsafe levels of lead have been found more frequently among lower-income children than among their high-income counterparts.[72]

Beverly Davis was beating the odds. Her mother had struggled with drug addiction and was unable to cope with raising four children, so Beverly and her younger brothers were brought up by her grandfather. While friends were jumping rope or going to the movies, Beverly was changing diapers, cooking meals and "busin' suds."

"I went to school to eat and get away from home," recalls Davis, now 27.

She also ran—fast and effortlessly, her lithe body whipping around the track at her southern California high school. "It felt so good; it was such a release," she says, a smile lighting her face.

Young Beverly also kept from getting pregnant—no small feat in a community where many classmates were parents by age 16.

After high-school graduation, Davis passed the military's rigorous entrance test and headed to an Army base in Germany. Good health and a bit of pluck were her ticket out of a dysfunctional family and poverty-stricken neighborhood.

"I thought I was the epitome of good health," says Davis, recounting a time not long ago when life was so full of promise. She had a steady paycheck, married a fellow soldier and was enjoying her adventure abroad.

Then her life took a U-turn. She gave birth to two children, was discharged from the Army and returned to California a single mother.

But that wasn't the worst of it.

Davis had developed a chronic intestinal illness that caused vomiting, diarrhea, chills and crippling stomach pain. In and out of hospitals over the next four years because of her condition, Beverly lost her job at a Long Beach, Calif. shoe store, depleted her meager savings and signed up for welfare.

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Socioeconomic adversity in childhood shapes child health and development in other ways as well. Parents with low educational attainment and/or low income face greater obstacles—such as lack of knowledge, skills, time, money or other resources—to creating healthy home environments and modeling healthy behaviors for their children.

Recent scientific advances have shed light on other ways in which economic and social conditions during the first few years of life affect brain development in infants and toddlers. Children in more favorable socioeconomic circumstances often receive more positive stimulation from parents and caregivers[73] and high levels of such stimulation are associated with increased brain, cognitive, behavioral and physical development. Thus, biological changes due to adverse socioeconomic conditions in infancy and toddler years become literally "embedded" in a child's body, limiting developmental capacity.[74] The first five years of life appear to be most crucial.[75]

Although social disadvantage can limit children's opportunities for health, scientists agree that the mental and behavioral development of children in less favorable socioeconomic circumstances can be markedly improved through high-quality early child care.[77] The evidence for the effectiveness of early childhood development programs is so strong that national business groups—including the Committee for Economic Development (CED), PNC Financial Services Group, and the Business Roundtable[78]—as well as Nobel Prize-winning economist James J. Heckman and economists Arthur Rolnick and Rob Grunewald of the Federal Reserve Bank of Minneapolis,[79] have called for universal early childhood development programs as a wise financial investment in the future U.S. workforce.

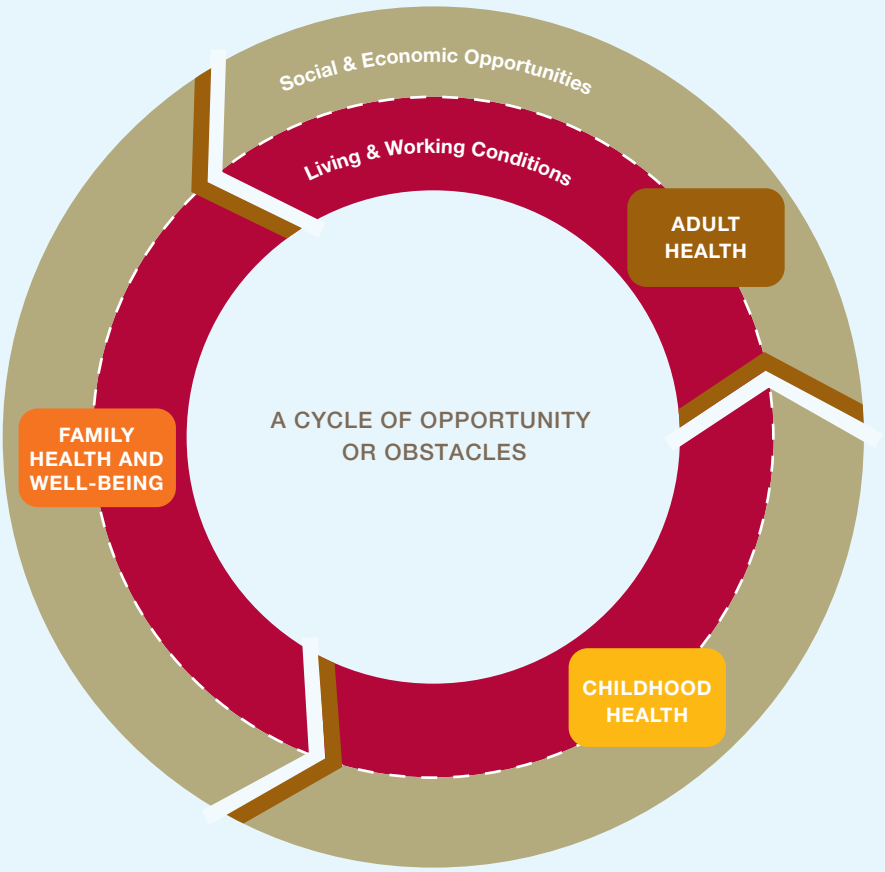
The economic and social environments of poor children. "Compared with their economically advantaged counterparts, [poor children] … are exposed to more family turmoil, violence, separation from their families, instability and chaotic households. Poor children experience less social support, and their parents are less responsive and more authoritarian. Low-income children are read to relatively infrequently, watch more TV, and have less access to books and computers. Low-income parents are less involved in their children's school activities. The air and water poor children consume are more polluted. Their homes are more crowded, noisier and of lower quality. Low-income neighborhoods are more dangerous, offer poorer municipal services, and suffer greater physical deterioration. Predominantly low-income schools and day care are inferior. The accumulation of multiple environmental risks rather than singular risk exposure may be an especially pathogenic aspect of childhood poverty." [76]

The 'vicious cycle' of social disadvantage and health across individual lifetimes and generations.

Socioeconomic disadvantage and health disadvantage accumulate over time, creating ever more daunting constraints on a person's ability to be healthy (Figure 23). These obstacles to health are transmitted across generations, as adults with limited socioeconomic resources and health are less able to provide healthy environments for their children.

Social Advantage and Health Across Lifetimes and Generations

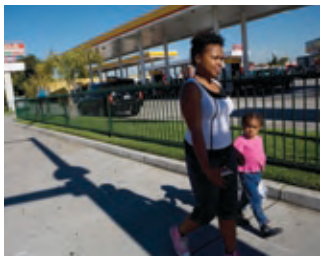
figure 23 Social disadvantage and health disadvantage accumulate over time, creating ever more daunting obstacles to health.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

CHAPTER FIVE

This is a timely moment to seek solutions.



If Beverly Davis can get back on her feet, she wants to enroll her daughter Alyla in dance class or gymnastics.

"I'm trying to get back on my feet," Davis says, seated on a short couch that until recently also doubled as her bed. "People say to me, 'Don't let the illness stop you.' I have the initiative, but then I end up in the hospital for two weeks. I'm stuck in a rut, depressed and broke."

Each morning she travels three hours by foot and city bus to deposit her children at their respective schools. The schools may not be the closest or most convenient, but they provide free meals, quality after-school care and a measure of stability for both youngsters. Each afternoon, she repeats the journey. On days when her pain is too extreme to make the entire trek, Davis keeps her 5-year-old daughter Alyla at home.

Now Davis' illness is costing society. California taxpayers underwrite virtually every aspect of her life. She and her children

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Solutions to the complex problem of health disparities will not be simple, but this is a uniquely opportune time to seek them. Widespread recognition—by business, government and the general public—that medical care costs must be brought under control creates a sense of urgency. Pervasive concerns about global economic competitiveness add to pressures not only to reduce medical care costs but to have a healthier and thus more economically productive workforce. The public and policy-makers should be made aware of the links between health disparities and economic costs, and of how disparities weaken our productivity as a nation.

The American public is more attuned to questions of fair opportunity and open to recognizing social inequalities than it has been in decades. Public awareness has been primed by coverage of poverty, social class and economic inequality in the media. The unequally distributed misery and death in the aftermath of Hurricane Katrina shocked many Americans, providing stark testimony of deep divides by class and race within our society. Television screens throughout the United States revealed levels of poverty—experienced by large segments of our population in Louisiana and elsewhere even before the storm wrought its havoc—that most Americans thought existed only in the Third World. Furthermore, poverty in America increasingly is not restricted to inner cities and rural areas; by 2005, 1 million more poor Americans lived in suburbs than lived in cities,[80] making poverty more visible to the middle class.

While public concern about poverty may create momentum for addressing disparities, middle-class Americans are increasingly concerned about their own economic security as well. Economic inequality has increased in the United States, and the middle class has lost ground. Information from the U.S. Census Bureau shows that the wealthiest 20 percent of Americans experienced dramatic increases in their incomes over the past 35 years, while the rest of the population experienced little improvement (Figure 24).[81] From 1970 to 2000, the percentage of middle-income neighborhoods decreased, while the percentage of both very high- and very low-income neighborhoods increased (Figure 25).[82] Both current Federal Reserve Chairman Bernanke and former Chairman Greenspan have called rising economic inequality a serious concern for the American economy.[83]

Financial security may be defined as the ability to weather a job loss or serious medical crisis. Over the past 25 years, the middle class has become increasingly insecure financially, in part because of rising costs of medical care, housing and education.[84] Many middle-class families have had to work longer hours to maintain their standard of living, leaving parents less time to spend with their children.[85]

live in a government subsidized apartment, receive food stamps and pay for doctors' visits with Medi-Cal insurance.

She has pursued job training options. But each time she was about to rejoin the ranks of wage-earning, tax-paying Americans, her health, poverty and limited education got in the way.

She was going to count out pills, filling little bottles with life-saving medications—but she was so ill she never finished the pharmacy technician program. She completed a nurse's assistant course—but realized her body could not handle lifting patients all day.

That's when she came up with the idea of driving a city bus. She passed the training program, but officials rejected her job application. Can't drive a bus taking all those medications, they said.

"It's hard to get a job that adapts to this illness," she says. "I'm scared to get a job. I'm scared I'll be too sick again."

Her physician wants Davis to come in for monthly checkups. But she cannot afford a phone and going in person just to make an appointment costs time, money and energy she rarely has.

In addition to her chronic stomach illness, which doctors say is exacerbated by stress, Davis now suffers bouts of depression and worries about the strain on her children.

"When I'm sick, they're sick and upset too," she observes. Semaj, her 7-year-old son, wets the bed and has asthma. On a medical questionnaire for the boy, Davis circles a frowny face.

She fears her children will be exposed to the dangers and poor attitudes that she says are common in low-income, black neighborhoods.

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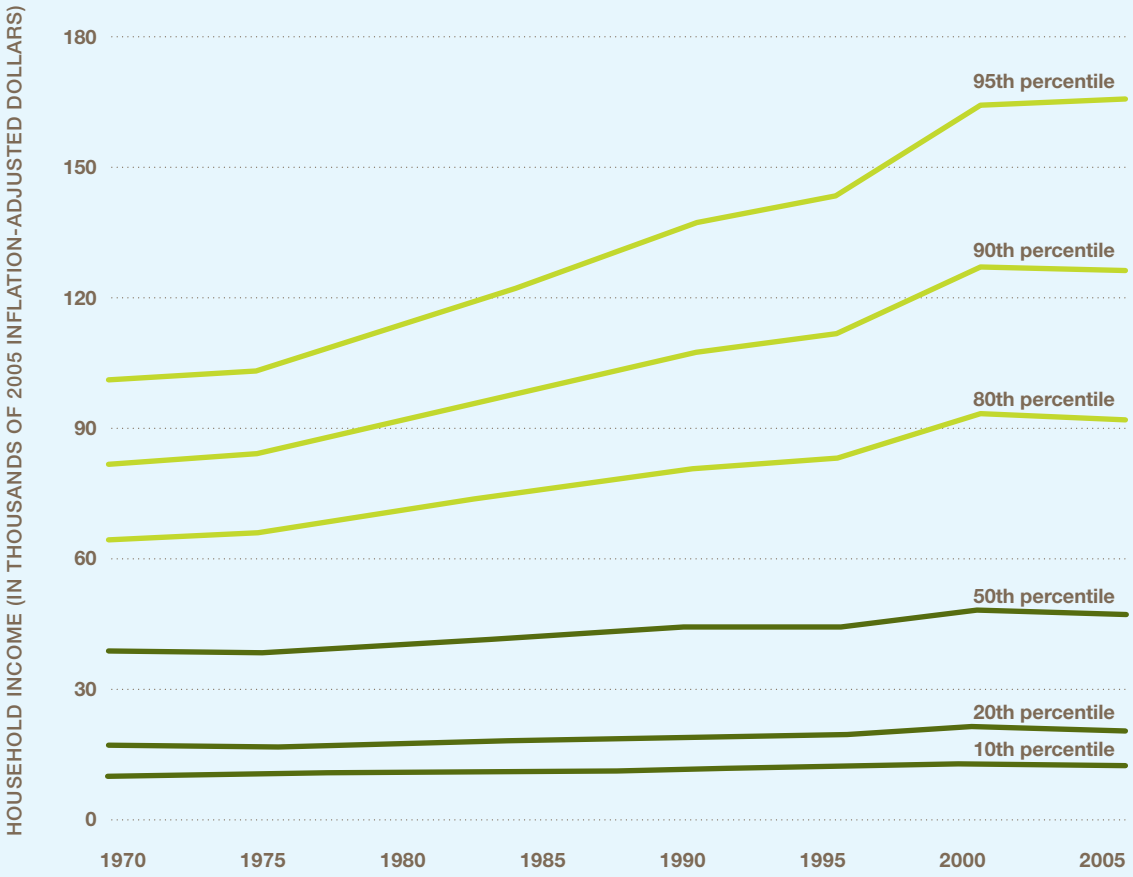
Increasing Income Inequality

figure 24 The incomes of the wealthiest 20 percent of Americans have increased dramatically, while the rest of the population has experienced little improvement in income.

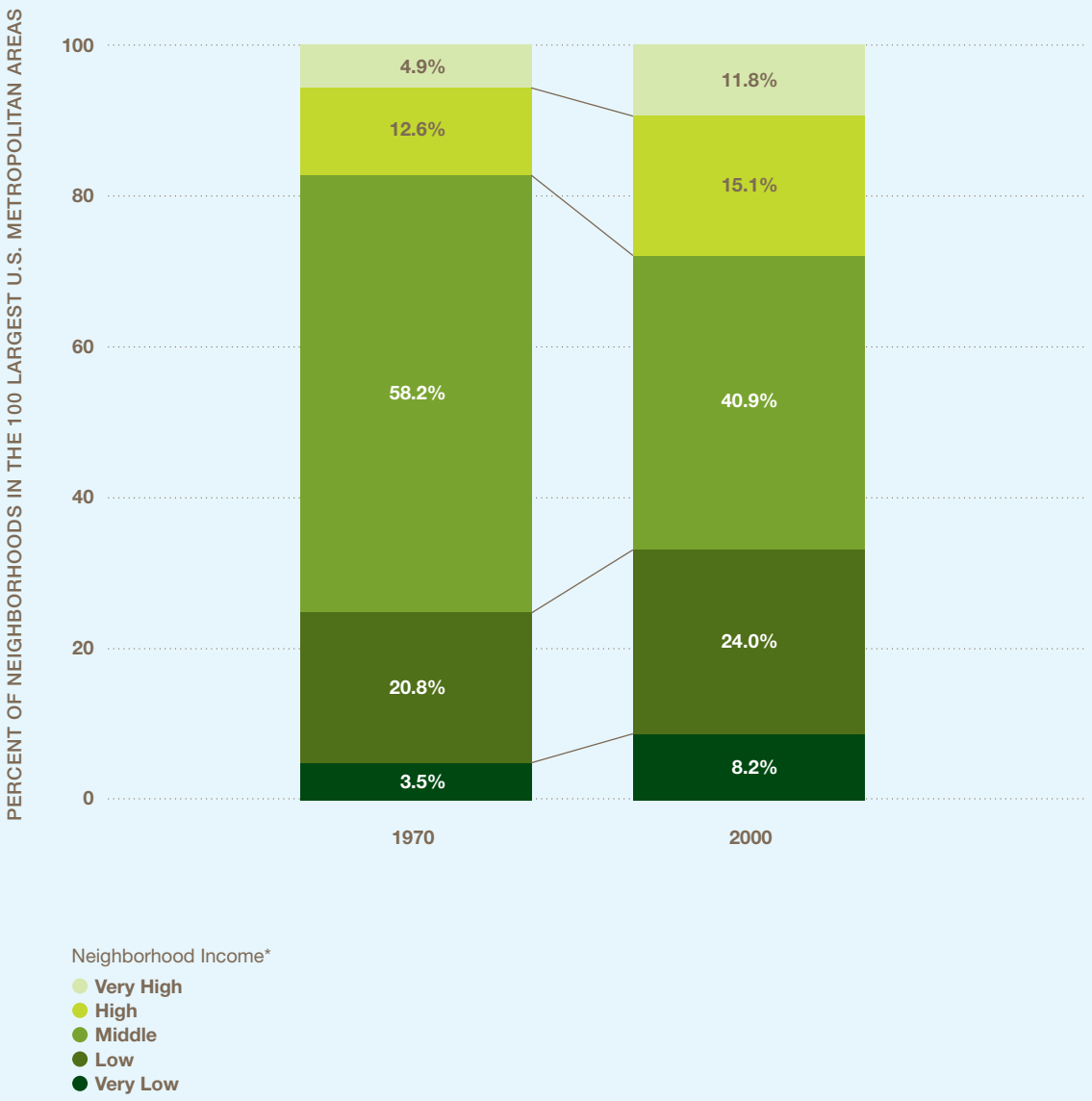


Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Source: DeNavas-Walt C, Proctor BD, Lee CH et al. *Income, Poverty, and Health Insurance Coverage in the United States: 2005.* Current Population Reports, P60-231. Washington, D.C.: U.S. Government Printing Office, 2006.

Increasing Inequality in Where Americans Live

figure 25 The percentage of middle-income neighborhoods has been shrinking, while the percentage of both very high-income and very low-income neighborhoods has increased.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

Source: Brookings' analysis of Geolytics Neighborhood Changes Database, as reported in Booza et al. *Where did they go? The decline of middle-income neighborhoods in metropolitan America.* The Brookings Institution, 2006.

*Very low-income neighborhoods have median family incomes less than 50 percent of the metropolitan area median. Other income ranges include: low income (50 percent to 80 percent); middle income (80 percent to 120 percent); high income (120 percent to 150 percent); and very high income (>150 percent).

CHAPTER SIX

Finding solutions—applying current knowledge to reduce health disparities and improve health for all Americans.

"When I'm sick, they're sick and upset too," she observes. Semaj, her 7-year-old son, wets the bed and has asthma.

"I wouldn't call it the ghetto because it's my home," she says, "and it gets worse. But we're pretty poverty stricken."

Though physicians determined Davis' problem is a chronic stomach illness, the diagnosis fails to document the toll beyond physical pain and financial expense. What the medical records miss is the stress, the humiliation, frustration and isolation that compound life's challenges.

"I know a lot of people," Davis remarks one day as she and Alyla board a local commuter train. "But a lot of them don't know me."

Mother and daughter are traveling from downtown Long Beach, Calif., to the dusty outskirts of town, where welfare applicants cross under a highway and over shattered glass to the county office building.

continued on page 70

Debates about health policy in this country rarely have focused on the powerful influences of social factors—such as child care, education and housing—on health. This is the moment to bring the attention of policy-makers and the public to these influences, in part because of the recent accumulation of knowledge about how social and economic factors, particularly in early childhood, affect health throughout lifetimes and across generations.

Practical experiences in the U.S.[86] and other countries[87] offer guidance. As illustrated in Figure 26, expanding the focus of discussion beyond medical care and personal behaviors to the broader social and economic context can lead to promising policy strategies for reducing health disparities in this country. Effectively addressing health disparities will require consideration of strategies for improving living and working conditions; for promoting child and youth development and education from infancy through college; and for promoting economic development and reducing poverty. Although further research will be needed to identify the most effective and efficient strategies to accomplish these goals, solid scientific knowledge and practical experience that can guide policy in many areas already exist. Promising, knowledge-based directions to explore include:

- A range of collaborative community-focused initiatives that can lead to healthier communities, both by attracting additional resources and by building on and developing community strengths.
- Programs to improve development in early childhood, leading to higher educational attainment, which in turn is tightly linked to adult health.
- Programs to improve the quality and quantity of K-12 education, picking up where early childhood programs leave off.
- Youth development programs targeting youth in disadvantaged communities.
- Strengthening community colleges and increasing financial access to college for low-income students.
- Collaborative economic development initiatives targeting disadvantaged communities.

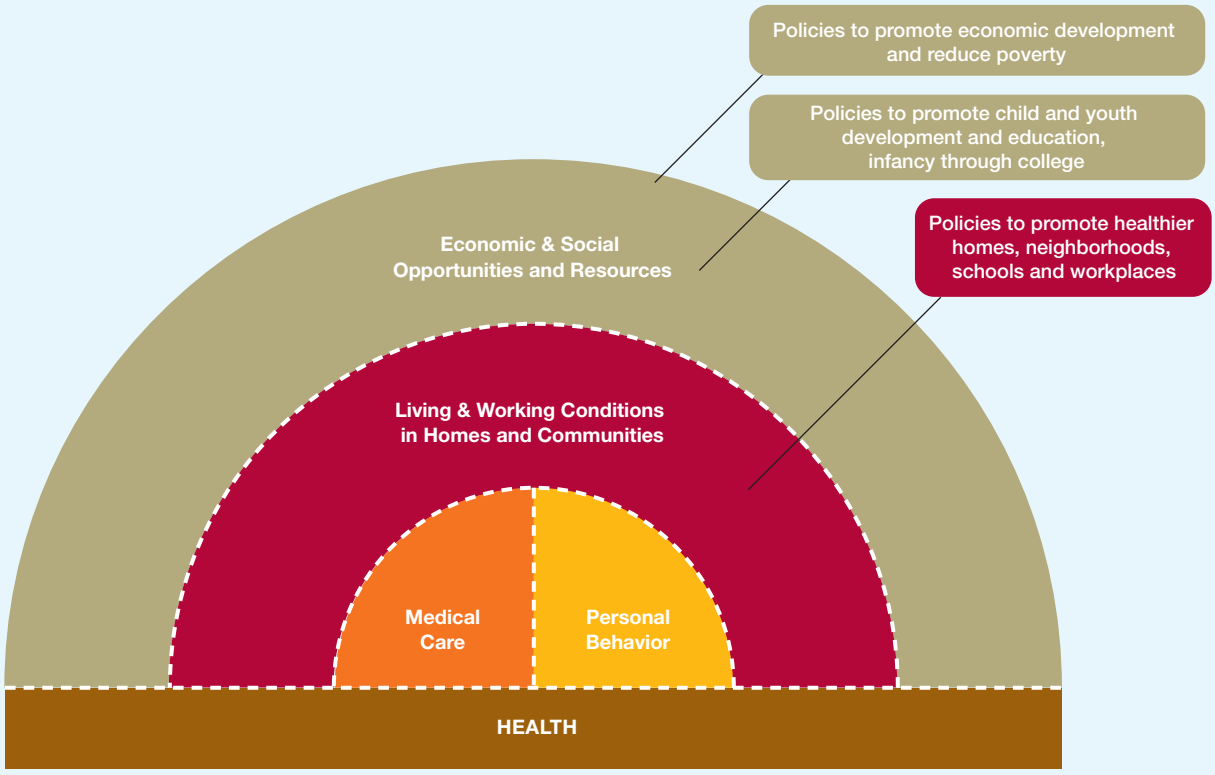
Results of interventions rarely have been framed in explicit terms of effects on inequalities. Nevertheless, successful efforts that target disadvantaged communities or groups can provide guidance. Although the evidence is perhaps strongest for early childhood interventions, other evidence also documents the effectiveness of interventions with potential to reduce inequalities in health, either directly or by reducing disparities in well-established health risk factors. Examples include:

- Housing subsidy programs that give rental vouchers to low-income families so that they can choose where to live.[92]
- Decreasing teenage smoking by engaging high-school students in community advocacy activities that address environmental influences on smoking.[93]
- Increasing exercise by creating or enhancing places for physical activity, or enhancing the length or intensity of school physical education classes.[94]

Breaking the vicious cycle through early childhood intervention. A strong base of evidence demonstrates that it is possible to intervene in early childhood by improving economic and social conditions and by providing quality child care, thereby breaking the vicious cycle from socioeconomic disadvantage to health disadvantage. Such early childhood interventions can have a powerful impact on health during childhood and beyond.[88] Knowledge linking economic and social conditions early in life with adult health[89] can inform strategies to decrease disparities in early childhood.[90] Recent developments in neuroscience, including understanding of the causes and consequences of stress-reactivity, shed light on how early childhood adversity shapes health across a lifetime.[91]

Reducing Health Disparities: Broadening the Focus

figure 26 Medical care and personal responsibility for behaviors are important. But finding promising strategies to reduce disparities will require broadening the focus to include the social and economic contexts in which Americans live.



Prepared for the Robert Wood Johnson Foundation by the Center on Social Disparities in Health at the University of California, San Francisco.

For Davis, it is a familiar route, one she traveled often with her own mother.

"It's like a note in my head," she says, describing the sense of deja vu. "If we don't got food, I know where the food shelter is. If we're homeless, I know where to go.

"The one thing my mom prepared me for is, she gave me the knowledge to survive," she says.

Like many single parents, Davis rarely has a moment of peace. Yet she often feels isolated.

In a worn, salmon-colored notebook, she is penning a collection of poems titled "Letting My Pen Bleed." The evocative writings capture feelings of fear, pain, anticipation and love.

In spite of it all, Beverly Davis is a woman with ambitions, plans and dreams. She hopes to join a parenting group and arrange "play dates" for her children. She wants to design clothing, publish her poetry and develop an "urban television network."

With a bit of money, "we could afford to live in a decent place, I could fix my car, the kids could get in some activities," she says. Karate or baseball for Semaj and dance lessons or gymnastics for Alyla.

"I want them to go to college. I want them to see me paying my bills," she says. "Having a job would make all the difference."

In short, she is determined to beat the odds again. ■

Most small-scale community-level interventions have not been rigorously evaluated, yet many appear to have improved diverse aspects of health in disadvantaged communities. Careful review of the evidence from such local efforts—many of them supported by philanthropies, including the Robert Wood Johnson Foundation—and consideration of costs could provide a rationale for scaling up some of the most promising models.

Useful lessons may also be gleaned from experience accumulated over the past two decades in Europe with interventions (both successful and unsuccessful) aiming to narrow socioeconomic inequalities in health.[95] The 1998 World Health Organization report *Social Determinants of Health: The Solid Facts* (and a more technical reference document supporting that document) reviewed evidence both of the social causes of ill health and, where available, of interventions to reduce social inequalities in health, in nine areas: stress, early life, social exclusion, work, unemployment, social support, addiction, food and transportation. The authors concluded that, in a number of areas, the evidence is sufficient to act.[96]

For example, the authors found that, to promote health in early childhood (and ultimately throughout a lifetime), policies should aim to "reduce parents' smoking; increase parents' knowledge of health and understanding of children's emotional needs; introduce preschool programs not only to improve reading and stimulate cognitive development but also to reduce behavior problems in childhood and promote educational attainment, occupational chances, and healthy behavior in adulthood."[97] Although general recommendations like these do not provide a blueprint for designing specific programs, they suggest promising directions for U.S. policy-makers to pursue.

In reducing disparities, the desirable outcome is improvement for all, with faster improvement for those who were at greatest disadvantage at the start.

Policy-makers may also look to past successes in reducing health and health care inequalities in this country as they consider strategies for addressing health inequalities now. For example, infant mortality among blacks (and the black-white gap in infant mortality) in the United States fell dramatically following enactment of civil rights laws; this has been attributed in part to laws prohibiting federal funding for segregated hospitals.[98] Similarly, disparities in vaccination rates between poor and non-poor children were virtually eliminated following enactment of Medicaid, neighborhood health centers in low-income areas, and the State Children's Health Insurance Program.

Many questions remain, and support for high-quality research to identify the most effective and efficient approaches will be crucial. But considerable knowledge already exists in a number of areas, particularly about intervening to improve conditions in early childhood and the benefits likely to be generated, as a result, for adult health. And with greater attention to the health impact of current policies, societal resources could be directed to higher-yielding investments. In weighing whether to act now, policy-makers must also weigh the costs our society incurs every day because of health disparities, including the toll taken in lost opportunities for health.

The costs of the status quo are too high in human and economic terms; as a society we must act based on the best available knowledge.

Conclusion

Perhaps the most important reason to act now is the shared American ideal of fair opportunity for all to pursue life, liberty and happiness—all of which depend on good health.

This report presents new evidence and reviews existing evidence of the powerful influence on health disparities in the United States exerted by socioeconomic factors such as wealth and education. These factors are more important than medical care and genetic makeup in sustaining large gaps in health among Americans with different levels of socioeconomic advantage. The poor, the least educated, and members of racial or ethnic minority groups tend to have the worst health. However, disparities harm not only society's most vulnerable but those in the middle as well. Middle-class people and their families have poorer health than those with greater wealth and education, even as they struggle to meet the rising costs of health care and insurance on flat or declining incomes.

Of greatest concern, perhaps, is the future of America's children, particularly those who grow up in resource-scarce environments where good schools are rare, crime rates are high, and access to nutritious food is limited. These children are at risk for poor health—not only while they are young but after they reach adulthood as well. Research presented in this report shows how poor health can limit a person's—and a family's—educational, career and financial opportunities, creating a cycle of disadvantage that extends across lifetimes and generations.

Evidence shows that these disparities will not diminish on their own and that many interventions have improved health overall without reducing health disparities. However, sufficient knowledge—both research-based and experiential—is available to identify and test new approaches for reducing health disparities now. Effective solutions are unlikely to be simple and may require substantial investment. In human and economic terms, however, the costs of maintaining the status quo are enormous, as are the potential societal benefits to be gained from reducing disparities.

Perhaps the most important reason to act now is the shared American ideal of fair opportunity for all to pursue life, liberty and happiness—all of which depend on good health. This is a timely moment to seek better ways to help people choose health—to strengthen individuals' abilities and resources to make healthy choices and to remove the avoidable obstacles that deter too many Americans on the road leading to long, healthy, productive and fulfilling lives.

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