

Patterns and Causes of Disparities in Health

DAVID R. WILLIAMS

The health of the U.S. population has improved markedly over time. Average life expectancy at birth increased by 30 years in the last century, from 47 in 1900 to 77 in 2000 (National Center for Health Statistics 2003). Yet different social groups in the United States continue to experience dramatically varying levels of health. For example, the life expectancy of Asian American women in Bergen County, New Jersey, is 97.7 years, while that of American Indian men in a cluster of counties in South Dakota is 56.6 years (Murray et al. 1998). This 41-year difference in life expectancy indicates that some social groups have health experiences reminiscent of the nineteenth century while others enjoy twenty-first-century health status. Sentiment is growing in many quarters that such large disparities in health are unacceptable.

This chapter provides an overview of social disparities in health in the United States. It begins by outlining the complex social forces that combine to produce variations in health. It then considers the patterns of racial/ethnic differences in health and shows how these must be understood in the context of the heterogeneity of those groups, and the even larger disparities by socioeconomic status (SES) and gender. The chapter concludes by focusing on the opportunities and challenges for reducing social disparities in health in the United States.

Determinants of Health

Analysts estimate that behavioral patterns account for 40 percent of U.S. deaths, with social circumstances and environmental exposures accounting for 20 percent, genetics 30 percent, and inadequacies in medical care 10 percent (McGinnis, Williams-Russo, and Knickman 2002). Differential exposure to a broad range of social and behavioral factors can importantly affect the distribution of disease, disability, and death. Race, SES, and gender are social categories that are linked to varying exposures to health-enhancing or health-damaging factors in multiple social contexts, including family, neighborhood, and work environments.

The types of stressors to which individuals are exposed, the availability of resources to cope with stress, and the patterned nature of responses to environ-

mental challenges are shaped by the larger social and economic contexts of people's lives. Although the specific pathways and social processes that determine exposure may differ, the extent to which racial, gender, and SES groups are differentially exposed to common social influences and risks is striking. A brief overview of environmental factors that can increase the risk of health problems follows.

Unemployment and Working Conditions

Participation in meaningful work is important to psychological as well as economic well-being. Men, low-SES individuals, and disadvantaged racial/ethnic groups are differentially exposed to economic marginalization and separation from the labor force. For example, compared with women, men are much more likely to be incarcerated, homeless, or residents of substance abuse treatment facilities (Williams 2003). Because of historic and continuing individual and institutional discrimination, lower levels of preparation for the labor market, and the mass movement of jobs from areas with concentrated minority and low-income populations, racial minorities and low-SES persons have markedly higher levels of unemployment and job instability than their more socially advantaged peers (Williams and Collins 2001).

The health of lower-SES groups, racial minorities, and men is also affected by their disproportionate exposure to occupational stress and poor working conditions. Low-SES individuals and members of disadvantaged racial/ethnic groups are more likely to be employed in occupational settings and job categories characterized by high levels of psychosocial stress, physical demands, and exposure to toxic substances (Williams and Collins 1995). Similarly, men are more likely than women to work in dangerous occupations and industries, and to have higher rates of occupational-related diseases and deaths. For example, men account for 90 percent of job fatalities in the United States (Courtenay 2000).

Stress, Resources, and Health Practices

Exposure to stress is a risk factor for health problems, but coping responses can ameliorate at least some of these negative effects. Compared with their more economically favored counterparts, disadvantaged minorities and low-SES individuals have higher levels of stress and fewer resources to cope with it. With the exception of employment-related stress, men are not more exposed to stress than women, but women employ more effective coping strategies. They are more likely than men to express their distress via their emotions and to seek and receive interpersonal support, especially from other women (Taylor et al. 2000). Men's cultural scripts urging them to avoid displaying emotional vulnerability lead them to cope with stress through externalizing responses such as substance use and anti-social behavior. Thus, while severe emotional distress among women often gives rise to anxiety and mood disorders, it often manifests in men in alcohol and drug abuse (Rosenfield 1999). In turn, substance use and abuse are important contributors to accidents, family problems, criminal behavior, health care costs, and premature mortality (Williams 2003).

Stress is importantly linked to alcohol and drug use. Higher levels of stress

are associated with the initiation and continuation of substance use, as well as with relapse (Brady and Sonore 1999). Alcohol and drug abuse are strongly patterned by SES, with the rates being two to three times higher for the lowest compared with the highest SES category (Kessler et al. 1994). African Americans (or blacks) and other minorities do not consistently have elevated rates of substance use compared with whites, but their use tends to begin at later ages, and heavy use continues for a longer time (McLoyd and Lozoff 2001). Moreover, a given level of substance use and cigarette smoking has stronger negative effects on the health of blacks than on that of whites (Sterling and Weinkam 1989; Williams 2003).

The discussion of substance use highlights the more general role of personal health practices (such as eating, drinking, and exercise) as determinants of health. These behaviors are all socially patterned and play a role in accounting for SES, gender, and racial/ethnic differences in health. Beliefs about masculinity and manhood often lead men to be more likely than women to engage in a broad range of high-risk behaviors and to shun health-promoting activities (Courtenay 2000). SES and racial/ethnic status shape exposure to many different psychosocial and environmental risks for health (Williams and Collins 1995). For example, low-SES persons have higher levels of high-risk behaviors (such as smoking, physical inactivity, and poor nutrition), acute and chronic stress, and hostility and depression, and lower levels of social support and perceptions of control (House and Williams 2000).

Differential Access to Medical Care

Although medical care plays an important role in health, its contribution is much weaker than typically assumed. Clinical medicine has played a small role in improving population health over the last two centuries, yet better nutrition and sanitation and higher living standards have been more important. Moreover, improved access to medical care spurred by national health programs has exerted only limited effect, if any, on socioeconomic inequalities in health. At the same time, timely and appropriate preventive medical services, as well as effective therapies to manage acute and chronic illnesses, can improve health, enhance the length and quality of life, and reduce disparities in health (Politzer et al. 2001).

Socially disadvantaged racial groups and persons of low SES have lower levels of insurance coverage than their socially and economically favored counterparts, and thus are less likely to have access to care (NCHS 2003). However, removing the economic barriers alone would still leave care substantially underutilized (Weinick and Zuvekas 2000). Besides access differences, social groups differ greatly in their utilization of care. For example, although men and women in the United States tend to have similar levels of health insurance coverage, men utilize preventive medical services less often than women (NCHS 2003). The differences for men are linked to male tendencies to project strength and to suppress vulnerability and need (Courtenay 2000). Analysts have identified multiple barriers at both the institutional and the individual level that can lead to lower utilization of care. These include organizational characteristics of the health care system that make it easier for socioeconomically favored individuals to extract maximal benefits, language and cultural barriers, and historic incidents and prior

experiences in medical and other social institutions that prompt greater distrust of health care providers and institutions (Smedley, Stith, and Nelson 2003).

Differences in the way health care providers and institutions respond to social groups also leads to variations in the quality of care they receive. Compared with whites, minority men and women receive less-intensive and poorer quality of care (Smedley, Stith, and Nelson 2003). The sources of these differences are many, but systematic—though often unconscious—discrimination based on negative racial stereotypes is likely an important cause. Similar processes operate for persons of low SES (van Ryn and Burke 2000). In male-dominated health care contexts, providers do not view men in general more negatively than women. Nonetheless, health care providers spend less time with men than women in medical encounters, and offer men fewer services, fewer recommendations to make behavioral changes, less health information, and less medical advice (Courtenay 2000). Health care providers appear to project larger cultural norms regarding the absence of vulnerability and need among men onto their male patients and withhold care and advice that they perceive as unnecessary.

Social Disparities in Health

The patterning of health status mirrors the variation in social and behavioral risk factors among people of different race/ethnicity, SES, and gender. Many different pathways may lead to disparities. Socioeconomic deprivation and exposure to poor living and working conditions are central determinants of poor health for socially disadvantaged racial/ethnic and low-SES groups. In contrast, men are advantaged in social, economic, and political power relative to women. At the same time, deeply held cultural views about maleness have shaped men's beliefs and the practices of social institutions in ways that increase health risks for men.

Racial/Ethnic Disparities in Health

Table 8.1 presents the magnitude of racial differences in mortality for the U.S. working-age population. Two patterns are evident in the data. First, blacks and American Indians (or Native Americans) have mortality rates that are higher than those of whites. These differences are especially marked between the ages of twenty-five and fifty-four; the patterns for the three groups converge in later years. The residential separation of blacks and American Indians has been distinctive in U.S. history and is a key determinant of racial differences in SES and health status for African Americans and the 60 percent of American Indians who live on or near reservations (Williams and Collins 2001).

For example, a study of young African Americans showed that eradicating residential segregation would eliminate differences between blacks and whites in earnings, high school graduation, and unemployment rates, as well as two-thirds of the racial difference in single motherhood (Cutler, Glaeser, and Vigdor 1997). A recent modest decline in black-white residential segregation has not reduced the concentration of urban poverty, the residential isolation of most African Americans, and the number of census tracts where African Americans are a high per-

TABLE 8.1 *Age-Specific Death Rates for Working-Age Adults (per 100,000 population) for Whites and Minority/White Ratios, 2000*

| Age | White (W) rate | Black/W ratio | Am Ind ^a /W ratio | API ^b /W ratio | Hispanic/W ratio |
|-------|-------------------|------------------|---------------------------------|------------------------------|---------------------|
| 15–24 | 75.6 | 1.6 | 1.6 | 0.6 | 1.1 |
| 25–34 | 96.2 | 2.0 | 1.6 | 0.5 | 1.1 |
| 35–44 | 180.3 | 2.0 | 1.7 | 0.5 | 0.9 |
| 45–54 | 391.8 | 2.1 | 1.3 | 0.5 | 0.9 |
| 55–64 | 948.9 | 1.7 | 1.2 | 0.6 | 0.8 |
| 65–74 | 2,375.1 | 1.4 | 1.0 | 0.6 | 0.7 |

Source: U.S. Department of Health and Human Services, 2003.

^a Am Ind is for American Indian.

^b API is for Asian and Pacific Islanders.

centage of the population (Williams and Collins 2001). The continuing residential social isolation and economic marginalization of many blacks and Native Americans suggest that their socioeconomic and health challenges will continue.

The table also reveals a second pattern: equivalent or lower rates of mortality among Hispanics (or Latinos) and Asian and Pacific Islanders (API) compared with whites. At every age, API mortality rates are markedly lower than rates for whites. Hispanic mortality rates are slightly higher than those of whites for the two younger age groups (fifteen through thirty-four), but are lower than those of whites between ages thirty-five and seventy-four. The large number of immigrants within the Asian and the Hispanic populations importantly affects the health status of these groups. Immigrants of all major racial/ethnic groups in the United States have lower rates of adult and infant mortality than their native-born counterparts (Singh and Yu 1996; Hummer et al. 1999). However, because Latinos and Asians differ in their SES levels upon arriving in the United States, and in their trajectories for socioeconomic mobility, they are likely to have diverging patterns of health.

The health literature has paid inadequate attention to the SES characteristics of various immigrant groups. Table 8.2 presents the rate of college graduation and white-collar (managerial and professional) employment for major immigrant groups and the native-born population. Several Asian immigrant groups have higher levels of education and occupational status than native-born Asians and other native-born Americans, including whites. Thus, although the health advantage of Asian immigrants declines somewhat as they assimilate into American culture, their continued relatively high SES profile suggests that Asians are likely to continue to lead the other groups on many health indicators (Frisbie, Cho, and Hummer 2001; Cho and Hummer 2000).

Table 8.2 also highlights considerable variation within the Asian group (similar to the heterogeneity within all major racial/ethnic populations). Cambodian, Laotian, and, to a lesser extent, Vietnamese immigrants have lower levels of edu-

TABLE 8.2 *Socioeconomic Status of Immigrants and Native-Born Persons, 1990*

| Group | College grad ^a (%) | White collar job ^b (%) |
|---------------------|-------------------------------|-----------------------------------|
| NATIVE BORN | | |
| All U.S. born | 20.3 | 27 |
| Asian (U.S. born) | 35.9 | 34 |
| White (non-Hisp.) | 22.0 | 29 |
| Black (non-Hisp.) | 11.4 | 18 |
| Pacific Islanders | 10.8 | 18 |
| Am. Indian | 9.3 | 18 |
| Puerto Rican | 9.5 | 17 |
| Mexican (U.S. born) | 8.6 | 16 |
| IMMIGRANTS | | |
| All foreign born | 20.4 | 22 |
| Asian | | |
| India | 64.9 | 48 |
| Taiwan | 62.2 | 47 |
| Philippines | 43.0 | 28 |
| Japan | 35.0 | 39 |
| Korea | 34.4 | 25 |
| China | 30.9 | 29 |
| Vietnam | 15.9 | 17 |
| Cambodia | 5.5 | 9 |
| Laos | 5.1 | 7 |
| Hispanic | | |
| Mexico | 3.5 | 6 |
| Dominican Repub. | 7.5 | 11 |
| El Salvador | 4.6 | 6 |
| Cuba | 15.6 | 23 |
| Nicaragua | 14.6 | 11 |
| Black | | |
| Africa | 47.1 | 37 |
| Jamaica | 14.9 | 22 |
| Haiti | 11.8 | 14 |

Source: Rumbaut 1996.

^aCollege Grad indicates college graduation or more for persons aged twenty-five years or older.

^bWhite collar job indicates professionals, executives, and managers.

cation and managerial employment than U.S.-born persons. Laotians, Hmong, and Cambodians also have higher rates of poverty and lower levels of family income than blacks and American Indians (Williams 2001). Thus, combining all Asians into one category, or focusing only on subgroups with a long history of settlement in the United States, masks Asian subgroups with higher levels of risks. Where disaggregated health data are available, Laotians, Hmong, Cambodians, and

Vietnamese have poorer health than other Asian groups and the white population (Cho and Hummer 2000; Frisbie, Cho, and Hummer 2001). The combination of APIs into a single group has been similarly problematic because Pacific Islanders have elevated levels of morbidity and mortality compared with the overall U.S. population (Frisbie, Cho, and Hummer 2001; Zane, Takeuchi, and Young 1994). The Office of Management and Budget's recent revision of racial/ethnic categories to include a separate category for Native Hawaiians and other Pacific Islanders will permit better tracking of the health of this group.

The socioeconomic profile of Latino immigrants differs markedly from that of Asians. The rate of college graduation is low for immigrants from Mexico, the Dominican Republic, and El Salvador. Immigrants from Cuba and Nicaragua have higher levels of education but still lag behind the native-born U.S. population on both education and occupational status. In light of this low SES profile, the surprisingly good mortality profile of Latinos has been termed the "Hispanic paradox."

Several factors put the Hispanic health profile into perspective. First, Hispanic immigrants, like other immigrants, are selected on health. Second, the health advantage of Hispanic immigrants declines with length of stay in the United States and acculturation to American society. Adult and infant mortality, psychiatric disorders, psychological distress, substance use, low birth weight, poor health practices, and other indicators of morbidity all rise as Hispanic immigrants adopt the behaviors of their host society (Finch et al. 2002; Vega and Amaro 1994). Third, the trajectory of Hispanic health is likely to differ markedly from that of Asians because of the limited socioeconomic mobility of Latinos. The low SES profile of Hispanic immigrants, the low SES levels of native-born Latinos, and their lack of educational and occupational opportunities are likely to combine to increase the effects of low SES on Hispanic health. These influences also mean that the health of Latino immigrants is likely to decline more rapidly than that of Asians, and to be worse than the U.S. average in the future (Camarillo and Bonilla 2001). Unlike Asian immigrants, who report lower levels of morbidity than their native-born counterparts, Latino immigrants rate themselves lower than native-born Hispanics on indicators of morbidity such as self-rated health (Frisbie, Cho, and Hummer 2001; Finch et al. 2002).

Table 8.2 also shows that black immigrants from Africa have rates of college graduation more than twice those of the overall U.S.-born population and four times those of native-born blacks. Most black immigrants in the United States come from the Caribbean. Jamaican immigrants have SES levels that are slightly higher than those of native-born blacks but lower than those of all U.S.-born persons. The SES levels of Haitian immigrants are similar to those of native-born blacks. Like other immigrants, black immigrants have lower mortality rates than native-born blacks, but their morbidity levels vary by specific group and health outcome (Williams 2001). At least some black immigrants experience serious challenges to socioeconomic mobility. Thus, monitoring the SES and health of black immigrants and their children can help identify how SES, acculturation, and exposure to racism relate and combine to affect health and health trajectories.

TABLE 8.3 *Life Expectancy at Age 25: Race, Income, and Gender Differences*

| Family income (1980 dollars) | Males | | | Females | | | Gender diffs ^a | |
|---------------------------------|------------|------------|---------------|------------|------------|---------------|---------------------------|------------|
| | White | Black | Race diffs | White | Black | Race diffs | White | Black |
| All | 50.1 | 45.7 | 4.4 | 56.7 | 52.4 | 4.3 | 6.6 | 6.7 |
| <\$10,000 | 45.0 | 41.6 | 3.4 | 54.5 | 50.3 | 4.2 | 9.5 | 8.7 |
| \$10,000–24,999 | 50.2 | 47.4 | 2.8 | 56.9 | 53.7 | 3.2 | 6.7 | 6.3 |
| \$25,000+ | 52.9 | 50.2 | 2.7 | 57.8 | 55.3 | 2.5 | 4.9 | 5.1 |
| Income diffs. | 7.9 | 8.6 | | 3.3 | 5.0 | | | |

Source: Lin et al. 2003.

^aDiff = Differences.

Race, SES, and Gender Disparities

The simultaneous consideration of race/ethnicity, SES, and gender in table 8.3 provides important insight into the nature of social disparities in health. There are large racial differences in life expectancy. White men and women have a life expectancy at age twenty-five that exceeds that of their black counterparts by 4.4 and 4.3 years, respectively. Consistent with other research, the racial differences in life expectancy become smaller when comparing blacks and whites at similar levels of income. At the same time, striking racial differences in life expectancy persist at every level of income. At the lowest income level, white males and females live 3.4 and 4.2 years longer, respectively, than their black peers. Even at the highest income level in the table, white men and women at age twenty-five outlive their black counterparts by 2.7 and 2.5 years, respectively. The persistence of racial differences in health after SES is controlled could reflect the noncomparability of SES indicators across race, the residual effects of early life adversity, or the contribution of risk factors linked to racism (Williams and Collins 1995).

Research has documented substantial differences in health by SES, with the largest effects at the lowest SES levels. As SES levels rise, health improves in a stepwise progression—the association is evident even at middle and high levels of SES. Table 8.3 shows that high-income white and black men at age twenty-five live at least 8 years longer than their low-income counterparts. These differences by income are almost twice as large as the black-white difference. Income differences in life expectancy are smaller for women than for men, with the lowest-income white and black females having a life expectancy that is shorter by 3.3 years and 4.3 years, respectively, than their highest-income peers. Income levels fluctuate considerably with stages of the life cycle, with about 40 percent of the U.S. population experiencing large income gains and losses during their working years (McDonough et al. 2000). Both income losses and the persistence of low income predict elevated mortality risk (McDonough et al. 1997).

Large gender differences can be found in a broad range of health status indicators (Williams 2003; Courtenay 2000). Table 8.3 shows that black and white

women have a life expectancy at age twenty-five that is 6.7 and 6.6 years longer, respectively, than that of their male counterparts. The gender differences are largest for the lowest-income groups. Low-income white women outlive their male counterparts by 9.5 years, and the comparable number for blacks is 8.7 years. At the highest income level, both black and white women have a 5-year advantage in life expectancy over their male counterparts. Moreover, the effect of multiple social categories is additive. Race, income, and gender all make independent contributions to disparities in health. As table 8.3 shows, white women with the highest level of income have the highest life expectancy at age twenty-five (58 years), while low-income black males have the lowest (42 years). The difference in life expectancy between these two groups at age twenty-five is more than 16 years. This is almost four times as large as the overall black-white difference in life expectancy, more than twice as large as the gender difference for both races, and almost twice the size of the largest income differences in life expectancy.

The observed differences in life expectancy are sizeable and have important implications for individuals, families, and society. A gain in life expectancy of a month from a preventive intervention targeted at populations of average risk and a gain of a year from an intervention targeted at a high-risk population are considered significant improvements (Wright and Weinstein 1998). To place such gains in context, demographers estimate that if a magic bullet eliminated cancer or heart disease overnight, the gain in life expectancy for the U.S. population would be only two or three years. Disparities in health also have considerable economic costs. Economists have estimated the median value of an additional year of life at \$70,000 (Viscusi 1993). Poorer health status also affects participation in the workforce and in income support programs. A recent study found that differences in illness levels between blacks and Native Americans, on the one hand, and whites, on the other, accounted for a large part of racial differences in employment rates and in participation in public assistance programs and Social Security, especially among forty-five- to sixty-four-year-olds (Bound et al. 2003).

An important characteristic of social disparities in health is their persistence despite overall improvements in the health of populations. For example, although the health of all Americans improved markedly during the twentieth century, social disparities in health remained large or even widened. Infant mortality rates by race illustrate this trend (NCHS 2003). In 1950, the infant mortality rate was twenty-seven per one thousand live births for whites and forty-four for blacks. By 1999, the infant death rate for whites (six per one thousand) was more than four times lower than the 1950 level, and that of blacks (fifteen per one thousand) was almost three times lower. And the absolute racial difference in the rates had been cut in half (from seventeen to nine).

Nonetheless, a large disparity persisted in 1999, and the relative difference had widened because the decline in infant mortality was more rapid for whites than for blacks. The odds that a black infant would die before his or her first birthday compared with his/her white counterpart had risen from 1.6 in 1950 to 2.5 in 1999. Other data also reveal that socioeconomic inequalities in health have persisted or widened in the United States and elsewhere (Williams and Collins 1995).

For example, despite major changes in the causes of death between 1911 and 1981 in England and Wales, the elevated mortality risks for individuals in lower social classes remained large compared with those of professional and managerial classes (Marmot 1986). Moreover, increases in the quantity and effectiveness of medical care during this period, and more equitable access owing to the introduction of the British National Health Service in 1948, appear to have had no effect on reducing SES inequalities in health.

Reducing Disparities in Health

Healthy People 2010 is the third iteration of national health goals first launched by the United States in 1979. This initiative seeks to increase the years of healthy life and eliminate racial/ethnic disparities in health in six target areas by the year 2010 (U.S. DHHS 2000). To accomplish this, the initiative identifies 467 specific objectives in twenty-six priority areas. While expansive in scope, the large number of objectives is overwhelming, lacks focus, and reflects inconsistencies across priority areas (Davis 1998, 2000). I use this initiative as the backdrop for assessing the challenges and opportunities for reducing social disparities in health.

In theory, there are four potential approaches to eliminating disparities in health status, and success may well require initiatives in each area (Mackenbach and Stronks 2002). These include reducing SES disadvantage in the population, reducing the effects of health on SES disadvantage, changing the intervening factors that mediate the effects of SES on health, and reducing deficiencies in medical care. Healthy People 2010 initiatives primarily address the latter two strategies.

Reducing SES Disadvantage in the Population

Healthy People 2010 has devoted little attention to addressing the underlying contexts in which ill health and disparities in health emerge. Given that specific health risks are embedded in larger social and political contexts, effective intervention must take into account the historical and cultural factors that shape the experiences and living conditions of various social groups. Intervention can alter features of these environments to maximize health-enhancing activities and buffer negative exposures. Potential policies to reduce SES inequalities include enhancing educational achievement among low-SES children and improving employment opportunities, neighborhood and housing quality, and transportation services. Other possible strategies include new tax and income support policies to assist the most vulnerable, and reducing long-term poverty through initiatives that enable the chronically unemployed to find work.

Few policies designed to improve SES conditions have been rigorously examined for their health effects, but there is some limited evidence that such strategies would work. For example, the Moving to Opportunity Program, which provided assistance to randomly selected families in high-poverty neighborhoods to move to less-poor neighborhoods, showed that the mental health of both parents and sons had improved three years later (Leventhal and Brooks-Gunn 2003).

A recent natural experiment similarly assessed the impact of an income

supplement on the psychopathology of American Indian children (Costello et al. 2003). The study found that higher family income (because of the opening of a casino) was associated with declining rates of deviant and aggressive behavior. Moreover, although a definitive causal connection cannot be established, a narrowing of the racial income gap from 1968 to 1978 was associated with a larger decline in overall mortality for African American men and women aged thirty-five to seventy-four than for similarly aged whites, on both a percentage and an absolute basis (Cooper et al. 1981). Similarly, as the income of blacks fell relative to that of whites between 1980 and 1991, the life expectancy of blacks dropped, absolutely and relative to that of whites (Williams and Collins 1995). Experiments with a negative income tax during the 1970s found that supplemental income to mothers was associated with higher birth weight for their children without any health intervention (Kehrer and Wolin 1979).

A U.S. task force recently identified over two hundred community-based interventions that could be used to improve social environments and health (Anderson et al. 2003). The task force identified six key factors in the social environment that are determinants of health. These include (1) neighborhood living conditions; (2) opportunities for learning and capacity development; (3) community development and employment opportunities; (4) prevailing norms, customs, and processes; (5) social cohesion, civic engagement, and collective efficacy; and (6) health promotion, disease and injury prevention, and health care opportunities. Within each domain, a wide range of specific strategies were identified. At the same time, the task force acknowledged that there was ample evidence documenting the effectiveness of only two interventions: early childhood development programs for low-income children and rental assistance programs for low-SES families (Anderson et al. 2003).

A report commissioned by the British government—usually referred to as the Acheson report—also concluded that reducing health inequalities requires intervening in the social determinants of health (Department of Health 1998). While acknowledging differences between the United States and the United Kingdom, U.S. observers saw merit in the Acheson report and called for a similar high-level U.S. commission that would be comprehensive in its solutions to social disparities in health (Newman 2001; Tarlov 2000). Proponents argue that such a body would not only broaden American understanding of the determinants of health, but also prompt us to consider the health implications of tax, education, employment, and housing policies.

Reducing the Effects of Health on SES Disadvantage

Reducing disparities in health also requires attending to reverse causation (i.e., the notion that sickness leads people to become economically disadvantaged) by reducing the effects of health on SES disadvantage. Such efforts could include maintaining benefit levels for the long-term disabled, modifying work conditions to boost work participation levels of the chronically ill and disabled, and designing health interventions that would remove barriers to paid employment for persons who now receive government benefits (Mackenbach and Stronks 2002). Such poli-

cies would not address primary prevention but can improve the quality of life and economic productivity of those who are already ill.

Changing the Intervening Factors

A third approach to reducing disparities in health would alter the intervening factors that mediate the effects of SES on health. Healthy People 2010, which calls for many health promotion programs aimed at improving the health practices of individuals, emphasizes this approach. However, a greater focus on environmental measures, such as providing free fruit in elementary schools, raising tobacco taxes to reduce consumption, and reengineering work to reduce occupational stress, would strengthen the likelihood that Healthy People 2010 initiatives will succeed.

In general, the results of large-scale health interventions targeted at individuals have been disappointing. For example, the Multiple Risk Factor Intervention Trial (MRFIT)—an ambitious and intensive U.S.-based experiment—did not significantly reduce cardiovascular risk factors in the targeted group of high-risk men compared with men in the control group (MRFIT Research Group 1982). At the same time, several small-scale interventions with quasi-experimental designs have reduced SES influences on health indicators. For example, in the Netherlands, school health promotion programs eliminated SES variations in tooth brushing and reduced smoking initiation among low-income students (Mackenbach and Stronks 2002). Similarly, changes in working conditions among manual laborers reduced physical workload and absences from work due to illness.

While some interventions targeted at communities find no effects, others have found significant effects on health behaviors for at least some population groups (Emmons 2000). For example, although a community-level intervention to reduce cigarette smoking in eleven matched pairs of communities did not yield significantly lower quit rates for heavy smokers, quit rates increased significantly among both less-educated smokers and light-to-moderate smokers (Emmons 2000). Economic analysis indicates that if the results of community trials were applied to the population level, they would be as cost-effective as accepted medical interventions (Emmons 2000).

Changes in cigarette smoking over time show that successful interventions require a coordinated and comprehensive approach (Warner 2000). Reductions in cigarette smoking require the active involvement of professionals and volunteers from a broad range of organizations, including government, health professional groups, community agencies, and business. The use of multiple channels—including media, workplaces, schools, churches, medical and health societies—and multiple interventions is also essential. The latter include efforts to inform the public about the dangers of cigarette smoking (smoking cessation programs, warning labels on cigarette packs), economic inducements to avoid tobacco (excise taxes, differential life insurance rates), and laws and regulations restricting tobacco use (clean indoor air laws, restricting smoking in public places, and restricting sales to minors). Even with all these interventions, progress is only partial.

At the same time, since behavioral risk factors appear to account for only about 10–20 percent of SES differences in morbidity and mortality, interventions

addressing health behaviors alone are unlikely to eliminate disparities (House and Williams 2000). Experience over the last one hundred years suggests that interventions on intermediary risk factors will have limited success in reducing social inequalities in health as long as more fundamental social inequalities remain intact (House and Williams 2000).

Improving Medical Care

Healthy People 2010 appropriately calls for improving access and quality of care for vulnerable populations. The initiative also notes the critical need to ensure that health services are responsive to patients who do not speak English or who are from other cultures. A recent review of published studies using an experimental or quasi-experimental design concluded that patients who received culturally competent care had significant improvement on multiple health outcomes, compared with those who did not (Kehoe, D'Eramo Melkus, and Newlin 2003). However, the range of outcomes these studies examined was limited, the definition and use of culturally relevant and competent care was variable, and the long-term efficacy of the interventions is unclear.

Some forms of training that emphasize mastering specific information about particular social groups may actually enhance negative stereotypes and lead to unconscious discrimination. Such unconscious bias is likely an important contributor to a pervasive pattern of racial and ethnic differences in the quality and intensity of U.S. medical care (Smedley, Stith, and Nelson 2003). More process-oriented approaches to understanding and responding to the unique needs of every patient are essential. In fact, key aspects of culturally appropriate care appear to include devoting adequate time and attention to the patient, providing individual or group support, or both, and improving quality of care (Kehoe, D'Eramo Melkus, and Newlin 2003).

Improving access to care for vulnerable populations requires addressing the shortage of primary care physicians in disadvantaged areas. Reducing the underrepresentation of minorities in the health professions is also likely to improve quality of care for minority populations. For example, only 2.9 percent of U.S. doctors in 1999 were black, but black and Hispanic physicians are more likely than others to care for the uninsured and those covered by Medicaid, and to practice in underserved urban and rural areas (*Lancet* editorial 1999; Komaromy et al. 1996). A recent study of patients in sixteen urban primary care practices found that race-concordant visits averaged two minutes longer than race-discordant encounters among both black and white patients (Cooper et al. 2003). Patients in race-concordant visits also reported higher levels of satisfaction and judged physicians' participatory decision-making style more positively. Moreover, independent ratings of audiotapes of the encounters indicated that race-concordant visits had a more positive emotional context (as indicated by voice tone) and a slower pace, as reflected in slower speech by both the physician and the patient.

Targeting the Most Vulnerable

Healthy People 2010 seeks to improve overall health while reducing disparities in health. In practice, accomplishing both these aims at once is difficult. Many policies likely to have the greatest impact on population health can lead to growing disparities (Mechanic 2002). Given that the same social factors undergird various disparities in health, a comprehensive approach that improves health and reduces health inequalities is possible. However, such an approach will have to increase prosperity and improve services for all while trying to improve the health of the most vulnerable *faster* than that of the rest of the population (Mackenbach and Stronks 2002).

Ensuring Long-Term and Realistic Goals

The Healthy People 2010 target of eliminating racial disparities by 2010 is unrealistic. For example, the target for cigarette smoking is virtually unattainable, given the past twenty-five years of experience with smoking cessation (Mendez and Warner 2000). More generally, the U.S. experience with tobacco reduction efforts over the last forty years shows that behavioral changes to improve health require a long-term commitment that continually builds on incremental success (Warner 2000). The earlier Healthy People 2000 initiative met only 15 percent of its objectives and made progress on an additional 44 percent (Marwick 2000), suggesting that goals should be appropriately modest based on prior experience. More realistic expectations are evident in other programs to reduce disparities. The European region of the World Health Organization aims to reduce SES disparities by 25 percent in all member states by 2020 (Davis 2000). The Netherlands seeks to reduce the gap in healthy life expectancy between high- and low-SES groups from twelve to nine years by the year 2020 (Mackenbach and Stronks 2002).

The Need for National and Regional Cooperation

The goals for Healthy People 2010 were developed through a national consultative process involving over 350 national organizations, 270 state agencies, public health experts, and public representatives (Davis 2000). However, the report produced by this effort does not, for the most part, indicate which agencies and organizations are accountable for achieving most of the initiative's objectives (Davis 2000). Nor does it clearly articulate the responsibility of the federal government even in areas such as the use of motorcycle helmets, where federal policy has had a large impact (Davis 1998).

Governments can do much to improve health and health care, and strong federal leadership is indispensable to improving health in the United States (Lurie 2002). However, given the multiple factors underlying disparities in health, a coordinated effort by multiple departments and agencies is essential. Yet Healthy People 2010 is an initiative of the Department of Health and Human Services. Taking seriously the broad social determinants of health would require enlisting multiple sectors of society, as well as mounting crosscutting efforts by federal agencies to maximize government spending to improve health and reduce health inequalities.

Reducing inequalities in health requires national leadership that provides di-

rection and financial resources, government action at the regional and local level, and active support and commitment from community organizations and individuals. This combination of a national vision and resources with local action allows for flexibility in planning at the local level. One of the most successful community interventions on record adopted this approach and dramatically reduced residents' rate of coronary heart disease. Importantly, this intervention in North Karelia, Finland, began when the community perceived that it had a problem (the world's highest death rate from heart disease), requested help from public health experts, and worked with multiple sectors not only to increase information and education but also to produce environmental changes (Puska et al. 1985).

The Need for Evaluation

Healthy People 2010 has drawn criticism because competing interests and compromise shaped its final recommendations (Davis 1998). For example, the initiative's targets and strategies often reflect prevailing political ideology rather than current research (such as the failure to suggest a tax on cigarettes). Nevertheless, significant gaps remain in the knowledge base regarding what interventions work, and the need for rigorous scientific evaluation of the health and social results of various interventions is urgent. Few of the many interventions implemented internationally have been subject to rigorous scientific evaluation, and most efforts that have been evaluated have been modest (Mackenbach and Stronks 2002; Stronks 2002). In addition, many major social interventions have not been evaluated for their health consequences. Moreover, since well-intentioned and plausible interventions may have unintended effects, both the positive *and* negative effects of interventions and their cost-benefit ratios must be assessed (Petticrew 2003).

Drawing on examples from smoking cessation efforts, Warner notes the need for constant reevaluation because of the changing nature of the problem (2000). A community-based intervention in Baltimore similarly highlights the need to sustain initially beneficial effects (Levine et al. 2003). In that city a hypertension control program using nurse-supervised community health workers reduced blood pressure over a four-year period and doubled the percentage of hypertensive patients who adequately controlled their blood pressure. However, although the declines in blood pressure were marked during the first twenty-seven months, both the systolic (plus seven) and diastolic (plus four) measures rose between month twenty-seven and the end of the program (month forty). This finding highlights the importance of long-term evaluation of interventions to assess how long any initial beneficial effects can be sustained, and if and when reinforcement or "booster shots" may be necessary.

Overcoming the Barriers

Evidence clearly shows that social disparities in health are large, pervasive across health status measures, persistent over time, and costly to society. Moreover, interventions aimed at improving health that are not coupled with those that seek to reduce social disadvantage are unlikely to substantially reduce disparities.

Healthy People 2010, a federal initiative to eliminate racial/ethnic disparities in health, is narrow in scope and unlikely to be effective given its neglect of broad social determinants.

At least two major barriers may hamper efforts to address these social disparities. First, most Americans are unaware of the problem. A national survey in 1999 by the Kaiser Foundation found that more than half of all whites, Latinos, and African Americans were unaware that blacks had shorter life expectancy and higher infant mortality rates than whites (Lillie-Blanton et al. 2000). This finding is striking, given that racial differences have been central in the reporting of U.S. health data for many decades. And in all likelihood public awareness of disparities linked to race is greater than awareness of disparities related to gender and SES. A society that is largely unaware of a problem is unlikely to be highly motivated to address it.

The second and arguably more important issue is one of political feasibility and political will to do what is necessary to address health disparities. Some observers argue that the American tendency to focus on individual success and opportunity undermines the sense of collective good needed to make a strong national commitment to equity (Leeder 2003). At a minimum, the question of political feasibility means that policymakers must identify real and perceived barriers to implementing programs to address social disparities in health. In particular, decision makers need to determine how to frame such initiatives to ensure that they resonate with American ideals and are perceived as attractive. American norms of equality of opportunity and the dignity of the individual, as well as today's emphasis on improving health care quality, could build public support to improve the health of all. While we await more information on the effectiveness of interventions, we could greatly enhance the health of many U.S. residents if we made applying all the knowledge that we already have a national priority.

Acknowledgments

Work on this chapter was supported in part by grants from The Robert Wood Johnson Foundation Investigator Awards in Health Policy Research program and the National Institute of Mental Health, and by the John D. and Catherine T. MacArthur Foundation Research Network on Socioeconomic Status and Health. I am grateful to Car Nosel, Han Nah Kim, and Trisha Matelski for research assistance and preparation of the manuscript.

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