

CHAPTER 3



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The Social Distribution of Illness in the United States

On August 29, 2005, Hurricane Katrina hit the Gulf Coast of the United States. For more than two weeks afterward, people were trapped and, in some instances, dying in fetid “shelters” and on rooftops without shade, water, or food. Six months later, as I write this, more than a thousand people are known to have died, 3,200 more are still unaccounted for, and most of New Orleans remains uninhabitable.

In the days after the hurricane, the nation was riveted by photos of the dead lying in the streets and in the water, and of refugees who lost everything being scattered around the country or still awaiting evacuation in dangerously squalid conditions. As the photos made clear, these victims were disproportionately very old, very young, chronically ill, or disabled, and they were overwhelmingly African American and poor (as evident in the striking number of refugees interviewed on television who had bad teeth, one of the surest markers that an American grew up poor and unable to afford dental care).

The rich cultural history of New Orleans draws on a legacy of slavery, economic inequality, racial segregation, and racial discrimination. Virtually since the city’s founding, poor African Americans were relegated to housing in low-lying areas near the coast, where flooding was most likely. The chances of flooding have only increased with time, as the city and nation’s power elite supported straightening the Mississippi River channel and draining the marshes surrounding the city, even though this increased the river’s force while depriving the city of its natural protections from both river and sea. Meanwhile, the system of levees that protected the city from flooding was allowed to deteriorate by politicians who believed that taxes should be kept to a minimum and that private enterprise could do a better job than government of providing transportation, housing, emergency aid,

and other needs of the citizenry. Moreover, even though it was widely known that the levees would collapse in a major hurricane, the city's emergency disaster plan called only for individuals to evacuate by private car or to go to the city's Superdome. Yet planners knew that at least one-third of New Orleans residents lacked cars and that in a catastrophe the Superdome would lack sufficient water, food, electric generators, medical personnel, and other crucial goods and services.

Once the hurricane struck, tens of thousands of city residents were unable to flee because they lacked cars in a city with minimal public transportation, lacked money for gas (especially at the end of a month, when paychecks have been spent), or lacked a means to pay for hotel rooms if they did leave. Not knowing how severe the storm would be, many lost their lives because they incorrectly guessed that they would be better off chancing homelessness in their own town, among family, friends, and familiar surroundings, rather than guaranteeing they would become homeless elsewhere among strangers. Others lost their lives because they were too old or too young to flee or because, like poor populations everywhere, they were disproportionately likely to be disabled by diabetes, heart disease, and other health problems, leaving them unable to flee and unable to survive without food, water, prescription drugs, and other basic necessities.

When, almost a century ago, the steamship Titanic hit an iceberg and sunk, less than 3 percent of women and children traveling first class—where all the lifeboats were kept—died, compared to almost half in third class (W. Hall, 1986). Similarly, the horrors experienced by New Orleans residents stemmed not only from the hurricane but also from decisions we have made as a society. That this hurricane disproportionately injured, disabled, and killed persons who were poor, minority, and elderly or very young is an all too common pattern. (Likewise, whenever societies are under stress, women and girls may be especially vulnerable to rape, violence, and attendant health risks.) In this chapter, we look at how four social factors—age, sex and gender, social class, and race or ethnicity—combine with biological forces to inequitably distribute illness, disability, and death in the population.

Age

Overview

Not surprisingly, age is the single most important predictor of mortality and morbidity. As noted in Chapter 2, until the twentieth century, deaths during the first year of life were common. Although far less common now, infant mortality remains an important issue because so many years of productive life are lost when an infant dies and because infant mortality so often is caused

by preventable social and environmental conditions. However, because infant mortality is so closely linked to social class and race or ethnicity, we discuss infant mortality in more detail later in this chapter.

Once individuals pass the danger zone during and immediately after birth, mortality **rates** drop precipitously. Those rates begin to rise significantly beginning at about age 40 and escalate with age. For those who survive past age 65, **chronic illnesses** (such as cardiovascular disease, diabetes, and arthritis) rather than **acute illnesses** comprise the major health problems, often bringing years of disability in their wake.

Because age and illness are so closely linked, when the average age of a population changes, so does the overall health of that population. Since 1900, the American population has aged steadily, with the population over age 85 growing the fastest.

Although most middle-aged and older persons are relatively healthy, rates of illness, disability, and mortality inevitably rise as the population ages. Similarly, both the total costs for health care and the percentage of health care dollars spent on the elderly—already greatly disproportionate to the size of that population—will increase. At the same time, as young persons become a smaller proportion of the population, the pool of persons who can provide or pay for the care needed by the elderly will shrink. Consequently, it will become more difficult to provide services to all the elderly persons who will need health care or assistance with daily tasks such as shopping or cooking.

These problems are amplified by the **feminization of aging**—the steady rise in the proportion of the population who are female in each older age group, so that women comprise a larger proportion of the elderly than of the young and middle-aged. Because elderly women more often than elderly men are poor and lack a spouse who can or will care for them, and because (as we will see in the next section) women in general experience more illness than men do, the feminization of aging will increase the costs of providing health and social services to the elderly.

Case Study: Prostate Cancer and Aging in Men

Among men, one almost inevitable consequence of aging is cancer of the prostate, a poorly understood bodily organ that produces chemicals believed necessary for reproduction. Most men develop prostate cancer by middle age, and virtually all do so if they live long enough (Kolata, 2005). Members of all racial and ethnic groups can get prostate cancer, but for some still-unknown reason, African Americans are especially susceptible.

Prostate cancer typically grows extremely slowly; most men who have it are killed by something else before the cancer can grow large enough to threaten their health. Because prostate cancer is so common, however, the small percentage of men that do develop this health problem account for about 35,000 deaths per year—slightly fewer than the number of deaths per

year caused by breast cancer. Moreover, when prostate cancer does grow, it often leads to excruciatingly painful bone cancer.

Before doctors can treat prostate cancer, they first must identify it. To do so, doctors, since the 1970s, have tested their male patients at periodic intervals for prostate-specific antigen (PSA), a chemical produced by the prostate. If a patient's PSA level has increased significantly, doctors then perform a biopsy—inserting a needle into the prostate to remove a few cells, which they then check for cancer. Unfortunately, PSA tests are highly inaccurate: About 30 percent of those who have cancer are not identified by the test and about two-thirds of those identified by the test as having cancer in fact do not have it. The test brings no benefits to those whose cancers are missed, while those who are falsely identified as having cancer suffer emotional trauma, financial costs, and painful procedures before learning that the test results were incorrect.

If the biopsy suggests cancer, doctors usually perform a prostatectomy (that is, surgical removal of the prostate). The surgery succeeds in removing the cancer in about 80 percent of cases. Even in these cases, however, the risks of surgery can outweigh the benefits. Between 0.5 percent and 2 percent of patients die within a month of surgery, and another 5 percent experience serious and potentially deadly complications (Lu-Yao et al., 1993). In addition, more than 30 percent become impotent and 7 percent develop urinary incontinence, with many more experiencing periodic sexual or urinary problems. Perhaps most important, large studies using **random samples** and **controlling** for other variables have found no significant differences in survival rates between men who do and do not receive prostatectomies, apparently because the short- and long-term dangers of surgery counterbalance the benefits and because untreated prostate cancer rarely causes death (Holmberg et al., 2002; Litwin et al., 1998).

Despite the limitations of current screening techniques and treatments, the American Cancer Society now recommends routine PSA screening for all men beginning at age 50. If this recommendation is followed and the United States implements a nationwide screening and treatment program, the cost of detecting and treating prostate cancer will rise exponentially: Any money saved by treating prostate cancer patients at earlier stages of the disease will be more than counterbalanced by money spent on screening and treating men who probably never would have experienced health problems related to prostate cancer (Mann, 1993).

In sum, at least among older men, the financial, emotional, and physical costs of identifying and treating prostate cancer seem to outweigh the benefits. Consequently, the rapid adoption of these strategies seems “a case study in one of the American medical system's worst shortcomings—its propensity to embrace expensive treatments without considering their long-term social or medical impact” (Mann, 1993: 104). This **technological imperative**, which drives doctors to use all available technology, is discussed in more detail in Chapter 11.

Sex and Gender

Overview

Both sex and gender strongly affect health status. **Sex** refers to the biological categories of male and female, to which we are assigned based on our chromosomal structure, genitalia, hormones, secondary sexual characteristics such as facial hair, and so on; those who have two X chromosomes and a vagina are sexually female, those with one X and one Y chromosome and a penis are sexually male. (Later in this section, we will consider those who do not fit neatly into these categories.) In contrast, **gender** refers to the social categories of masculine and feminine, and the social expectations regarding masculinity and femininity, to which we are assigned based on our behavior, personalities, and so on. Because these categories are social, they vary across time and across culture.

Basic epidemiological data suggest that sex and gender can affect health. For example, before the twentieth century, complications of pregnancy and childbirth often cut short women's lives, and so on average women died younger than did men. These days, however, American women (regardless of race) live longer than men do, as Table 3.1 shows—even though the same set of diseases (including heart disease, cancer, and cerebrovascular disease) eventually kills most people. The *differences* between men and women's life expectancies suggest that sex may directly affect health, while the *changes* in these differences across time suggest that gender affects health: Women now live longer than men not because their biology has changed, but because their social position and access to resources have changed.

But mortality differences tell us only part of the story. If we look only at life expectancies, we might conclude that women are biologically harder than men. When we look at *morbidity* rates, however, the picture blurs. At each age, men have higher rates of mortality and of fatal diseases, even though women have higher rates of morbidity and of nonfatal disease (Rieker and Bird, 2000). Arthritis, for example, which is the most common chronic,

Table 3.1 *Life Expectancy at Birth and at Age 65, by Race/Ethnicity and Sex*

	WHITE		AFRICAN AMERICAN	
	MALES	FEMALES	MALES	FEMALES
At birth:	75.0	80.2	68.6	75.5
At age 65:	81.5	84.5	79.4	82.9

Source: U.S. Bureau of the Census (2004).

nonfatal condition among both men and women above age 45, strikes women about 50 percent more often than it does men. In addition, at each age, women experience a 20 to 30 percent greater incidence of *acute* conditions (not including health problems related to their reproductive systems). In sum, women live longer than men but experience more illness and disability, whereas men experience relatively little illness but die more quickly when illness strikes.

How can we explain these paradoxical findings? Some researchers have hypothesized that women's higher rates of illness are more apparent than real—that women do not actually experience more illness than men but simply *label* themselves ill and seek health care more often. Most researchers, however, have concluded based on various measures of health status that the health differences between men and women are real. They trace these health differences to both the biological differences of sex and the socially reinforced differences of gender.

Sex does seem to offer females some biological health benefits (Rieker and Bird, 2000). Perhaps in natural compensation for those females who die from childbearing, in societies where females receive sufficient nourishment, more females than males survive at every stage of life from fetus to old age. Although the exact mechanisms through which this works are unknown, some theorize that estrogen and other “female” hormones (which in fact also occur in males, but in different proportions) somehow protect the heart and other bodily organs and tissues from fatal disease.

Gender also protects women from fatal disease and injury (Rieker and Bird, 2000). Most importantly, because of differences in male and female gender roles, women less often engage in potentially disabling or deadly activities. Men are more likely than women to use legal and illegal drugs, drive dangerously, participate in dangerous sports, or engage in violence. Work, too, more often endangers men, who more often labor in dangerous occupations like agriculture or commercial fishing. Less importantly, gender roles more often bring women than men into routine contact with medical care. Unlike men, who are socialized to downplay physical problems as signs of weakness, women are more comfortable seeking health care when they experience problems. In addition, because they often must obtain health care for children or elderly parents and must seek obstetric or gynecological care for themselves, women are more likely than men to meet with health care providers. As a result, women are more likely to have health problems identified and treated early enough to make a difference.

Sex and gender may also help explain why, despite women's lower rates of mortality, their rates of morbidity are higher than are those for men. Research on this topic, however, is far less conclusive (Barker, 2005). Most commonly, theories suggest that women are more susceptible to nonfatal illnesses because of their hormones (a sex effect) or their relatively high stress levels and low control over their lives (a gender effect).

A Sociology of Intersex

So far, we have been talking about sex as if it were a *binary category*—one with two and only two conditions, male or female. However, up to 2 percent of babies are born with genitalia that appear neither clearly male nor clearly female (Blackless et al., 2000). Such babies are referred to as **intersex**: having characteristics of both sexes. Intersexuality refers to biological sexual characteristics, and it is not the same as homosexuality, which refers to sexual desires and practices.

Intersexuality can be caused by hormonal factors, chromosomal factors, or both. During their first eight weeks of development, the only sex differences among fetuses are their chromosomes (XX among females, XY among males). After that point, the production of male hormones leads some fetuses to develop male genitalia, while the same fetal tissue becomes female genitalia in the absence of these hormonal changes. A slightly different hormonal balance produces fetuses that have both male and female external genitalia (penis, testicles, clitoris, vagina, labia) or internal genitalia (gonads, uterus, fallopian tubes). This can happen for many reasons. For example, some fetuses inherit unusual hormonal patterns or sex chromosome patterns (such as XO or XXY rather than the typical male XY or female XX), and others are affected by hormones or environmental pollutants their mothers are exposed to.

The social response to intersex conditions varies greatly across cultures. Some cultures revile the condition, and expect parents or midwives to kill intersex babies at birth. Other cultures assume that three or more sexes occur naturally in the population and consider intersex to be merely a normal human variation. These cultures typically integrate intersex individuals into normal social life. Still others assign special, valued roles to intersexed individuals. Modern Western culture, however, generally supports hiding intersex, stigmatizing it, or eliminating it in some way.

Beginning in the 1950s, surgery and hormonal manipulation became the standard medical practice for handling intersex children (S. Kessler, 1998). Under the leadership of Dr. John Money of Johns Hopkins University, doctors urged parents to have their intersex children surgically reassigned to be either male or female as early as possible, on the assumption that this would help children develop into the “appropriate” gender. Decisions about which sex to assign reflected doctors’ cultural assumptions about gender: Children were assigned to be boys if doctors considered their penises sufficiently large, and were assigned to be girls if their internal organs would allow them to give birth. Boys with penises considered too small had their penises surgically removed and artificial vaginas constructed, even if their hormonal and chromosomal makeup were indisputably male. Girls with clitorises considered unattractively large had their clitorises surgically removed or reduced, even though this meant removing healthy organs and impairing their adult ability to experience sexual pleasure. To assist the children in adopting their

assigned sex, parents were instructed to socialize them strictly to their new gender, to hide their history from them, and to place them on a steady (if secret) diet of sexual hormones to change the children's bodies to better match their assigned sex.

Currently surgery is performed on about one to two of every 1,000 babies, with lifelong hormonal injections following (Blackless, 2000). This treatment became the norm because doctors assumed it was the most humane option, although no research was available on its psychological, social, or physical consequences. Since the 1990s, however, this standard medical treatment has come under considerable attack, both from scholars and from activists who themselves experienced sex reassignment as children. Opponents of sex reassignment point out that this treatment is based not on scientific evidence but on gender beliefs: that small penises are "unmanly," that large clitorises are frightening, that children need strict socialization into "appropriate" gender behaviors, and that a vagina need only permit penile penetration, not provide natural lubrication, elasticity, or the possibility of female sexual pleasure (S. Kessler, 1998; Preves, 2003). Moreover, opponents argue, sex reassignment reinforces children's sense of difference, reduces their ability to enjoy sexual pleasure as adults, and depends on webs of deception among children, parents, and doctors that create their own psychological nightmares (S. Kessler, 1998; Preves, 2003).

At this point, there is insufficient evidence to say whether sex assignment more often helps or harms these children. Surgical intervention remains the norm, but doctors increasingly are holding off on surgery at least briefly to allow parents time to consider other options, rather than presenting sex reassignment as the only possibility (M. Navarro, 2004).

Case Study: Woman Battering as a Health Problem

One health issue in which gender plays an especially critical role is woman battering. Although neither health care workers nor the general public typically thinks of battering as a health problem, woman battering is a major cause of injury, disability, and death among American women, as among women worldwide.

The best data currently available on the extent of woman battering come from a national, random survey of 16,000 women and men, conducted during 1995–1996 by researchers cosponsored by the U.S. Centers for Disease Control and Prevention and the U.S. National Institute of Justice (Tjaden and Thoennes, 1998). Half of the surveyed women (51.9 percent) had been physically assaulted during their lives, and 17.6 percent had experienced rape or attempted rape. Three-quarters of those who were raped or assaulted as adults had been attacked by a current or former husband, lover, or date. Women were about twice as likely as men to report that they were seriously injured during an attack, and about one-third of the seriously injured women needed emergency health care. Extrapolating from these

data, the researchers estimate that more than a half million women per year seek care at hospital emergency rooms for injuries resulting from assault by an intimate partner. Other studies have concluded that about 35 percent of women patients in hospital emergency rooms go there to seek treatment for injuries caused by battering (Council on Scientific Affairs, 1992; Novello et al., 1992).

That assaults by men should far surpass battering by women should not surprise us. Before 1962, U.S. courts consistently ruled that women could not sue their husbands for violence against them—in essence declaring wife battering a man's legal and even moral right. Even after that date, most police refused to arrest men for wife battering and most courts refused to prosecute, a situation that did not begin to change for more than a decade.

Woman battering continues to exist because it reflects basic cultural and political forces in our society and, indeed, around the world (Dobash and Dobash, 1998). Through religion, schools, families, the media, and so on, women often are taught to consider themselves responsible for making sure that their personal relationships run smoothly. When problems occur in relationships, women are taught to blame themselves, even if their husbands respond to those problems with violence. Moreover, once violence occurs, women's typically inferior economic position can leave them trapped in these relationships. Men, meanwhile, often receive the message—from sources ranging from pornographic magazines to religious teachings that give husbands the responsibility to "discipline" their wives—that violence is an acceptable response to stress and that women are acceptable targets for that violence. Although most men resist these messages, enough men absorb these messages to make woman battering a major social problem.

Battering occurs most often among men who believe that their power within the family is threatened. For example, men are significantly more likely to batter their wives if they are unemployed or in economic trouble, if their wives have higher educational or occupational levels than they do, or if their wives in some way appear to challenge their power (Lips, 1993: 311–314). In addition, battering occurs most often among men who have a high need for power and who support traditional gender roles. Taken together, these data tell us that woman battering is not only an individual response to social stress, but, at a broader and largely unconscious level, a form of **social control** (that is, a way social expectations and power relationships are reinforced—in this case, reinforcing men's power over women and women's inferior position within society). Consequently, as long as gender inequality remains the norm, so will woman battering.

Recognition of battering as a health risk has led various health-related organizations to enter the fight against woman battering. During the last decade, the U.S. Centers for Disease Control and Prevention has begun funding research on the causes, consequences, and prevention of battering, and the U.S. Public Health Service has evaluated and helped develop violence prevention programs, trained health professionals and others in violence prevention,

and encouraged health care workers to learn how to identify battered women in emergency rooms. Similarly, the American College of Obstetricians and Gynecologists now requires medical schools to teach how to identify and respond to battered women and publishes materials designed to aid health professionals in doing so.

Social Class

Overview

Social class refers to individuals' position within their society's economic and social hierarchy. Most often it is measured by looking at individuals' education, income, or occupational status, with some researchers using only one of these indicators and some combining two or more. Other researchers have argued for additional measures, with wealth perhaps the most important. For example, imagine two students who work together at Starbucks, earning the same income. Now imagine that one receives a new wardrobe and a trip to Europe from her parents every summer, whereas the other receives only a bus ticket home. These students have the same income, education, and occupation, but differ in social class because they differ in wealth.

In addition to being a characteristic of individuals, social class is also a characteristic of groups, activities, occupations, and geographic areas. Bowling, for example, is most popular in working-class neighborhoods and would be characterized by most as a working-class activity. Most bowling teams are working class, and most team members belong to the working class. Like individuals' social class positions, these structural elements of social class also affect health.

Finally, social class is part of the structure of a society. As we saw in Chapter 2, some societies are more characterized than others are by income inequality—which is largely the same as social class inequality. In such societies, individuals are highly likely to remain in the social class into which they were born, and the difference between the lives of those at the bottom and those at the top of the class structure is very great.

The link between social class and ill health is strong and consistent. For example, the food, shelter, and clothing available to poor Americans 200 years ago differed greatly from that available to poor Americans now, which in turn differs greatly from that available to poor Brazilians these days. Even so, in each place and era, poor persons experience more illness than wealthier persons do. Because of this very strong link between social class and health, some sociologists label social class a “fundamental cause” of illness (Link and Phelan, 1995; Phelan et al., 2004).

The impact of social class on health is obvious: Within the United States as elsewhere, at each age and within each racial or ethnic group, those with higher social class status have lower rates of morbidity and mortality

(Feinstein, 1993; Marmot, 2002, 2004; Marmot and Shipley, 1996; V. Navarro, 1990; D. Williams and Collins, 1995). This relationship holds true for all major and most minor causes of death and illness, and regardless of how researchers measure social class (Wilkinson, 1996, 2005). For example, heart disease occurs three times as often and arthritis twice as often among low-income persons compared to more affluent persons. Moreover, these health differences appear not only when the poorest and the wealthiest are compared but also across the entire income scale, with each group on the social class ladder having better health than the group just below it (Wilkinson, 1996, 2005; Marmot, 2004). Controlling for all known individual risk factors (such as obesity and smoking) only slightly reduces the impact of social class on mortality and morbidity rates (Wilkinson, 1996, 2005).

The relationship between social class and ill health begins at birth, with infant mortality significantly higher among those born to poor women (Nersesian, 1988). Similarly, poor children are more likely than other children to become ill or to die (Federal Interagency Forum on Child and Family Statistics, 1999). Only 65 percent of poor children are described by their parents as having very good or excellent health, compared with 84 percent of other children. Similarly, poor children are almost twice as likely as other children to be physically disabled by chronic health problems.

Journalist Laurie Kaye Abraham (1993), in her book *Mama Might Be Better Off Dead*, vividly describes the overwhelming toll that poverty can take on a family's health. Abraham traces the health history of Jackie Banes and her family, who live in Chicago's predominantly African American North Lawndale neighborhood, where unemployment is the norm and almost half of all residents are on welfare. According to Abraham,

accompanying this kind of poverty is a shocking level of illness and disability that Jackie and her neighbors merely take for granted. Her husband's kidneys failed before he was thirty; her alcoholic father had a stroke because of uncontrolled high blood pressure at forty-eight; her Aunt Nancy, who helped her grandmother raise her, died from kidney failure complicated by cirrhosis when she was forty-three. Diabetes took her grandmother's legs, and blinded her great-aunt Eldora, who lives down the block. . . .

For the most part, the diseases that Jackie and her family live with are not characterized by sudden outbreaks but long, slow burns. As deadly infectious diseases have largely been eliminated or are easily cured—with the glaring exceptions of AIDS and drug-resistant tuberculosis—chronic diseases have stepped into their wake, accounting for much of the death and disability among both rich and poor. Among affluent whites, however, diabetes, high blood pressure, heart disease, and the like are diseases of *aging*, while among poor blacks, they are more accurately called diseases of *middle-aging*. In poor black neighborhoods on the West Side of Chicago, including North Lawndale, well over half of the population dies before the age of sixty-five, compared to a quarter of the residents of middle-class white Chicago neighborhoods. (Abraham, 1993: 17–18)

Importantly, health is affected more by social class than by race or ethnicity—which, in the United States, is highly correlated with class (Baquet et al., 1991; V. Navarro, 1990; Nersesian, 1988; Otten et al., 1990; D. Williams and Collins, 1995). For example, data from one national random sample found that apparent race differences in mortality rates between Mexican Americans, Asian Americans, and white Americans disappeared once social class was controlled for, and differences between African Americans and white Americans diminished substantially (Rogers et al., 1996). Looking at the same issue from a different angle, another study also using a national random sample found that class differences in mortality and morbidity were almost twice as great as race differences (V. Navarro, 1990). For example, morbidity was 4.6 times more common among those making \$14,858 or less per year (in 2005 dollars) compared with those making more than \$52,000, but only 1.9 times more common among African Americans than among whites. These numbers suggest that social class is a more powerful predictor of mortality and morbidity than is race or ethnicity. This does not, however, reduce the importance of race or ethnicity, for both contemporary and historical racial discrimination remain at the root of minority poverty. Rather, it suggests that if incomes and social positions of minorities rise, the racial gaps in health status will diminish (Farmer, 1999; D. Williams and Collins, 1995).

The Sources of Class Differences in Health

How can we explain the link between poverty and illness? One possible explanation is that illness causes poverty: As people become disabled or ill, their abilities to earn a living or attract an employed spouse decline, and they fall to a lower social status than that of their parents. This explanation is known as **social drift** theory. Studies that have tracked cohorts of Americans over time, however, have found that social drift explains only a small proportion of the poor ill population (D. Williams and Collins, 1995). Instead, and far more often, poverty causes illness (Marmot, 2002, 2004).

But how does poverty cause illness? Most basically, sociologists argue, those who belong to the lower class experience worse health because, compared to wealthier persons, they are subject to more stress, have less control over that stress, and have less access to health-preserving resources (Link and Phelan, 1995; Phelan et al., 2004). These problems play themselves out in many aspects of everyday life. The most important of these are work conditions, environmental conditions, housing, diet, and access to health care.

First, the work available to poorly educated lower-class persons—when they can find it—can cause ill health or death by exposing workers to physical hazards. A coal miner, for example, is considerably more likely than a mine owner to die from accidental injuries or lung disease caused by coal dust. In addition, lower-status workers typically experience both demanding

work conditions and low control over those conditions. For example, factory workers must keep pace with the production line but cannot control either the speed of the line or even when they take bathroom breaks. Numerous studies have found that workers who face high demands with little control over their work conditions are particularly likely to experience stress, resulting in both physical and psychological illness (North et al., 1996; Marmot, 2004; Wilkinson 2005).

Second, environmental conditions can increase rates of morbidity and mortality among poorer populations. Chemical, air, and noise pollution all occur more often in poor neighborhoods than in wealthier neighborhoods both because the cheap rents in neighborhoods blighted by pollution attract poor people and because poor people lack the money, votes, and social influence needed to keep polluting industries, waste dumps, and freeways out of their neighborhoods (Bullard, Warren, and Johnson, 2001; Camacho, 1998). Pollution fosters cancer, leukemia, high blood pressure, and other health problems, as well as emotional stress. Because of this, both poor and middle-class persons who live in poor neighborhoods have higher mortality rates than do persons with similar incomes who live in more-affluent neighborhoods (Haan, Kaplan, and Camacho, 1987).

Third, inadequate, overcrowded, and unsafe housing increases the risk of injuries, infections, and illnesses, including lead poisoning when children eat peeling paint, gas poisoning when families must rely on ovens for heat, and asthma triggered by cockroach droppings, rodent urine, and mold (Reading, 1997). For example, Dr. Arthur Jones, who runs a clinic in Lawndale, told author Laura Abraham of his initial response to a patient with severe cat allergies who nonetheless refused to give away her cat:

“I really got kind of angry,” Dr. Jones remembered, “and then she told me that if she got rid of the cat, there was nothing to protect her kids against rats.” Another woman brought her 2-year-old to the clinic with frostbite, so Dr. Jones dispatched his nurse . . . to visit her home. . . . The nurse discovered icicles in the woman’s apartment because the landlord had stopped providing heat. (Abraham, 1993: 18)

Fourth, the food poor children eat—or don’t eat—affects lifetime risks of illness. Federal researchers estimate that during 2003 almost 17 percent of poor families with children sometimes or often did not have enough food to eat (Nord, Andrews, and Carlson, 2004). Children who live in such circumstances have significantly more colds each year and are significantly more likely to be in poor health, lack sufficient iron, experience chronic headaches or stomachaches, or have a disability. This situation is likely to worsen over the next few years, as more families reach the five-year lifetime limits on welfare and food stamp benefits that were implemented during the 1990s “welfare reform” movement (Hancock, 2002).

The “diet of poverty” also increases health risks among the poor (James et al., 1997). This diet relies heavily on fast foods children can prepare for

themselves while their parents work and fatty or sweet foods that satisfy hunger and provide energy inexpensively but offer little nutrition. Such a diet saps children's concentration and intellectual abilities, making it difficult for them to succeed in school and continuing the cycle of poverty.

Poor children also suffer nutritionally because they are less likely than others are to be breast-fed (U.S. Department of Agriculture, 1999). Infants who are not breast-fed are more likely than others to develop infections, diabetes, allergies, and other health problems and to die in infancy or early childhood (Lawrence, 1997; Raisler, Alexander, and O'Campo, 1999). Lower rates of breast-feeding among the poor reflect cultural differences in attitudes, more limited education about how and why to breast-feed, and less control over their daily circumstances. For example, women professors are more likely to have the option of breast-feeding at work than are waitresses or maids.

Fifth, poverty limits individuals' access to health care. In the United States, only the poorest can receive free health care under the **Medicaid** health insurance program (described in more detail in Chapter 8). Even these individuals still can find it difficult to obtain care if they cannot afford time off from work for medical visits, transportation to the doctor, or child care while there. Many more Americans, referred to as the **medically indigent**, earn too much to qualify for Medicaid but too little to purchase either health insurance or health care. Not surprisingly, and as Table 3.2 shows, even if they have health insurance poor children and adults are less likely than others to have a regular source of medical care (National Center for Health Statistics, 2004: 256). Instead, they receive care in hospital clinics or emergency rooms, where quality of care is necessarily lower than in less-rushed and less-crowded settings. Similarly, poor children are less likely to receive all necessary vaccinations by the recommended ages (National Center for Health Statistics, 2004: 251).

Access to health care cannot eliminate class differences in mortality and morbidity—differences that exist even in countries where access to care is universal—because it cannot eliminate the other factors that leave poor people more susceptible to illness in the first place (Marmot, 2002, 2004). For this

Table 3.2

Percentage of Children Under Age 18 With No Usual Source of Health Care, by Insurance Status and Income, 2001–02

INSURANCE STATUS	POOR (%)	NEAR POOR (%)	NOT POOR (%)
Insured	5.5	4.8	2.3
Uninsured	39.7	27.9	19.7

Source: National Center for Health Statistics (2004: 256).

reason, access to health care plays a smaller role in the relationship between poverty and ill health than do the other factors discussed so far (Feinstein, 1993; D. Williams and Collins, 1995). Nevertheless, access to health care can protect against some problems, such as debilitating dental disease preventable through routine cleaning and disabling illnesses preventable through immunization. In addition, access to health care can improve quality of life dramatically through such simple interventions as providing eyeglasses, hearing aids, and comfortable crutches or wheelchairs. Conversely, lack of access can have deadly consequences (as we will see in Chapter 8). One large-scale study found that by the end of a 10 year period, 18.4 percent of those who lacked health insurance had died, compared with only 9.6 percent of those who had insurance (Franks, Clancy, and Gold, 1993). Even when the researchers statistically controlled for sex, age, race, education, preexisting illnesses, or use of tobacco, they still found 25 percent more deaths among uninsured persons than among insured persons.

In all these ways, then, poverty and illness are linked by underlying social conditions. Unfortunately, these social conditions have worsened over the last few decades, and social class differences in morbidity and mortality rates have continued to grow (D. Williams and Collins, 1995).

Case Study: Health Among the Homeless

The impact of social class on health falls heaviest on the homeless. Homelessness has been a major problem for the United States since the early 1980s, when the federal government slashed funds for low-income housing while increasing subsidies for “gentrifying” good-quality older buildings in inner-city neighborhoods (Aday, 2001). Although the latter policy was intended to improve quality of life in these neighborhoods, its unintended consequence was to raise rents. Meanwhile, the value of the minimum wage (adjusted for inflation) declined, and public assistance became harder to get and lower in value. As a result, an American must earn *twice* the mandated minimum wage to afford a modest, two-bedroom apartment (National Low Income Housing Coalition, 2001).

Not surprisingly, given the physical and emotional strains of life on the streets, homeless persons experience a disproportionate share of chronic and acute illnesses, as well as greatly increased mortality rates. Researchers estimate that 35 percent of homeless people in Los Angeles have active tuberculosis, and more than 30 percent have some other chronic health conditions (Cousineau, 1997; Kleinman et al., 1996). Homeless women face additional risks from rape and violence: One study of 53 long-term homeless women found that 15 percent had been raped and 42 percent battered in the preceding year (B. Fisher et al., 1995). Finally, a random survey of residents of New York City homeless shelters found **age-adjusted** death rates for both men and women four times higher than among other New Yorkers, with rates highest for those who had been homeless the longest (Barrow et al., 1999).

Homeless children—a growing population—face a particular set of health risks (Aday, 2001). Studies have found that about 50 percent of children in New York City’s homeless shelters have asthma, compared to 25 percent of children in the city’s poorest neighborhoods and 6 percent of children overall (Pérez-Peña, 2004). Asthma can threaten children’s lives and, by making breathing so difficult, can make it impossible for them to concentrate in school or enjoy any activities outside of school. Yet only 50 percent of New York City’s homeless children with severe asthma have been diagnosed by a doctor, and only 10 percent are receiving medication to treat it. Similarly, a Massachusetts study found that homeless children experience ear infections, diarrhea, fever, and severe asthma more often than other children and are more likely to be in fair or poor health overall (Weinreb et al., 1998).

All the factors explaining high rates of morbidity and mortality among poor persons also apply to homeless persons. However, maintaining health is even more difficult for homeless persons than for other poor persons. For example, because poverty, malnutrition, and cold weaken their bodies, and because they often can find shelter only in crowded dormitories where infections spread easily, homeless persons are more likely than others to develop upper respiratory infections. If they develop an infection, they cannot rest in bed until they recover, because they have no beds to call their own. Similarly, homeless persons often suffer skin problems such as psoriasis, impetigo, scabies, and lice; if left untreated, these conditions can cause deadly infections. Even if homeless persons receive prompt treatment for these skin problems, their living conditions make it impossible for them to keep their linens and clothing clean enough to prevent reinfection. Finally, homeless persons, regardless of age or sex, often can support themselves only through prostitution, which dramatically increases their risks of rape, battering, and sexually transmitted diseases, including **HIV disease**.

Access to health care is also particularly difficult for homeless persons. The struggles necessary to meet basic needs for food, clothing, and shelter can leave individuals with little time, energy, or money for arranging transportation to health care facilities or for purchasing health care or prescription drugs. In addition, both substance abuse and mental illness—which affect more than 40 percent of homeless persons and can either cause or result from homelessness—can make it harder for individuals to recognize they need health care, to seek care promptly when they recognize it is needed, to follow the instructions of health care workers, and to return for needed follow-up visits (Cousineau, 1997).

In the book *Under the Safety Net*, Brickner and his colleagues describe the true costs homeless people pay and the limited benefits they receive when they seek health care:

A homeless man with severe cellulitis [diffuse inflammation under the skin] of the legs, skin breakdown, and bilateral leg ulcers makes his way to the local

hospital emergency room. Because he is not a genuine emergency, he waits for five hours. He loses his opportunity for lunch at a soup kitchen. He loses a bed for the night because he wasn't standing in line at the right time. He finally is examined by a physician and given a prescription for antibiotics, told to stay supine [on his back] for a week with his legs elevated and soaked in warm dressings, and given a return appointment for clinic. The realities of his life prohibit him from carrying out any portion of this treatment plan. (Brickner et al., 1990: 10)

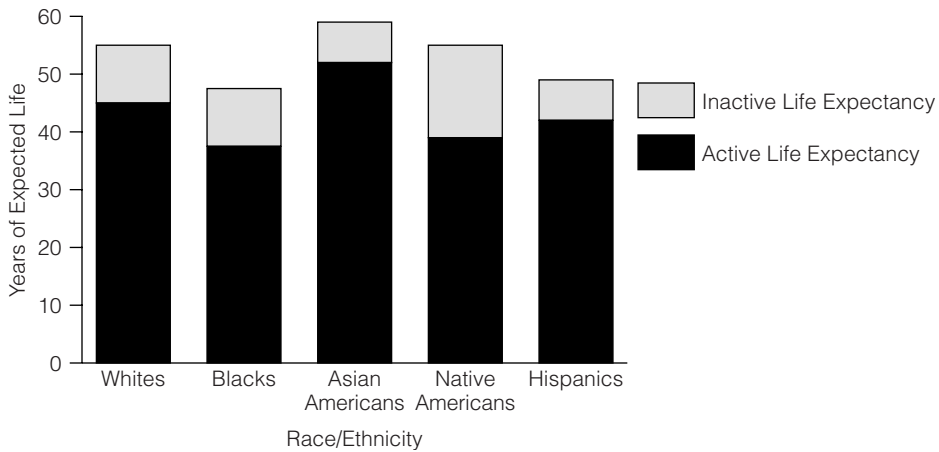
In sum, until the underlying conditions causing homelessness are alleviated, health care workers can offer homeless persons only the most temporary of help.

Race and Ethnicity

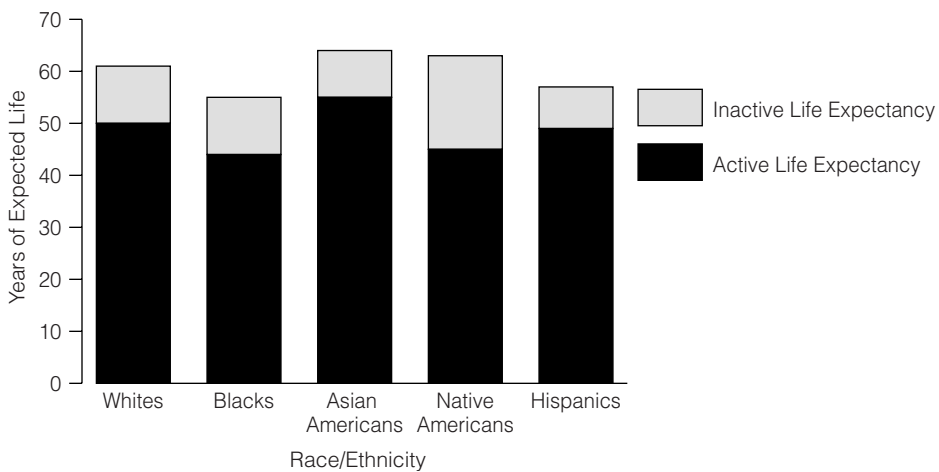
The concept of “race” is a social construction, with almost no biological basis. For example, a century ago many “white” Americans considered Jews and Irish people as separate and inferior races (Jacobson, 1998). Similarly, contemporary Americans typically label individuals “African American” if they have any known African ancestors, even if most of their ancestors were European. For this reason, from this point on this textbook uses the term *ethnicity*, which suggests cultural rather than biological differences, rather than the less accurate term *race*.

As noted in the previous section, social class affects health more than does ethnicity. Yet ethnicity remains an important and independent factor in predicting health status. In this section we look at health and illness among African Americans (12.8 percent of the U.S. population), Hispanics (13.7 percent), Asian Americans (4.0 percent), and Native Americans (1.0 percent). As we will see, life expectancy is shortest among African Americans and longest among Asian Americans.

Ethnic differences are also apparent in active and inactive life expectancy. **Active life expectancy** is the number of years a person can expect to live in good health and without disabilities; **inactive life expectancy** measures the years a person can expect to live in poor health and with disabilities (Hayward and Heron, 1999). (The two figures added together equal total life expectancy.) As Figures 3.1 and 3.2 illustrate, on average, Asian Americans not only live longer but also have a higher active life expectancy than do members of other ethnic groups. Both total life expectancy and active life expectancy are greater for white non-Hispanics than for Hispanics, and greater for Hispanics than for African Americans. Finally, although Native Americans on average live as long as white non-Hispanics, the former live more years in poor health than any other group. For the remainder of this section, we will explore in more detail some reasons for these ethnic differences in health.

Figure 3.1 *Active and Inactive Life Expectancy, by Ethnicity, for Men Aged 20*

Source: Hayward and Heron (1999). Reprinted by permission of Population Association of America.

Figure 3.2 *Active and Inactive Life Expectancy, by Ethnicity, for Women Aged 20*

Source: Hayward and Heron (1999). Reprinted by permission of Population Association of America.

African Americans

The impact of ethnicity on health stands out vividly in studies of infant mortality. For all causes of infant deaths, African Americans have higher mortality rates than whites (Anderson, 2001). Moreover, those differences have increased over time: Whereas in 1950 African American infants were

Table 3.3 *Infant Mortality Rates per 1,000 Live Births*

COUNTRY	RATE	COUNTRY	RATE
Singapore	2.2	United Kingdom	5.3
Hong Kong	2.4	New Zealand	5.6
Sweden	2.8	U.S. white, non-Hispanic	5.8
Japan	3.0	Greece	5.9
Finland	3.2	U.S., all races	6.7
Norway	3.4	Cuba	7.0
Spain	3.7	Hungary	7.3
Czech Republic	3.9	Poland	7.5
France	4.1	Slovakia	7.6
Germany	4.1	Chile	8.3
Denmark	4.4	Puerto Rico	9.6
Switzerland	4.4	Costa Rica	10.0
Austria	4.5	Kuwait	10.0
Australia	4.7	Bulgaria	12.3
Netherlands	4.8	Russia	13.0
Italy	4.8	Uruguay	13.5
Portugal	5.0	Azerbaijan	13.0
Ireland	5.1	U.S. blacks	13.8
Canada	5.2	Romania	16.7
Israel	5.3	Thailand	20.0
Belgium	5.3	Mexico	25.0

Source: Population Reference Bureau (2004).

1.6 times more likely than white infants to die, by 2004 African American infants were 2.4 times more likely to die (Schoendorf et al., 1992; National Center for Health Statistics, 2004: 131). African Americans have an infant mortality rate considerably higher than that found in such poor countries as Cuba, Poland, and Slovakia and similar to that found in countries like Azerbaijan and Russia (see Table 3.3).

One partial explanation for the high rate of infant mortality among African Americans is their relatively low income, for almost 60 percent of African American children are poor or near poor (National Center for Health Statistics, 2004: 25). To determine whether ethnicity affects infant mortality independent of income, Schoendorf and his colleagues (1992) looked at mortality

rates among a national random sample of African American and white infants whose parents were at least 20 years old and college graduates. Even within this relatively well-off sample, and after controlling for age, number of previous births, use of prenatal care, and marital status, African American infants were almost twice as likely to die as white infants, largely because of higher rates of prematurity and low birthweight.

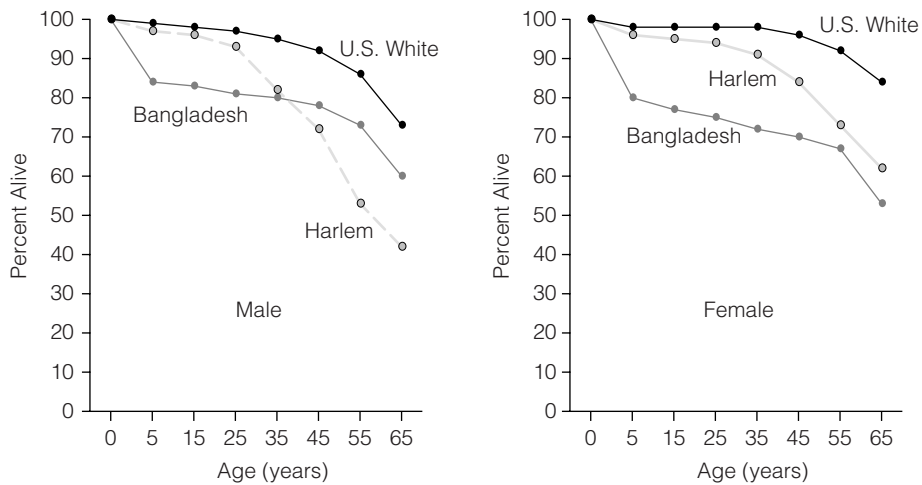
These differences, the authors theorize, reflect a constellation of factors stemming from racism, which although far less common than in the past, remains deeply embedded in American culture (Feagin and Sikes, 1994; D. Williams, 1998). For example, data collected in 2000 by the widely used national, random General Social Survey found that 22 percent of whites believe African Americans are unintelligent, 56 percent believe they prefer to live off welfare, and 58 percent believe they lack the motivation or willpower to pull themselves up out of poverty (General Social Survey, 2002). We can reasonably assume that even more survey respondents held these views, but did not admit it. Because of racism, even middle-class African Americans (like those studied by Schoendorf and his colleagues), who could afford decent housing in neighborhoods free from pollution and violence, sometimes find it impossible to obtain such housing when landlords, realtors, or mortgage bankers flout laws banning housing discrimination (D. Williams, 1998; D. Williams and Jackson, 2005). Other African Americans prefer living in poorer, segregated neighborhoods rather than facing the daily hostility—or, simply, social discomfort—of white neighbors. Consequently, more-affluent African Americans sometimes live in conditions similar to those experienced by poorer African Americans. This hypothesis gains support from studies suggesting (if inconclusively) that African American infant mortality rates are highest among those living in the most segregated cities (LaVeist, 1993; Polednak, 1996).

In addition, the psychosocial stresses of racism can harm health among African Americans (as well as among other minority groups). Several studies have found that as the number of incidents of ethnic discrimination that individuals have experienced increases, their physical and mental health deteriorates (D. Williams et al., 1997; D. Williams, 1998).

The disparities in health status between African Americans and whites do not end in infancy. At each age, and for 13 of the 15 leading causes of death, African Americans have higher death rates and lower life expectancies than whites do. Ethnic differences in life expectancies have declined slowly over the past 30 years, from 7.6 years in 1970 to 4.8 years in 2005 (U.S. Bureau of the Census, 2005: Table 92).

In a much-cited article in the *New England Journal of Medicine*, Colin McCord and Harold P. Freeman (1990) vividly demonstrated these stark differences in life expectancy. The article compared the chances of surviving to old age in Bangladesh, one of the poorest countries in the world, to the chances in Harlem, an overwhelmingly poor, African American, New York City neighborhood. As Figure 3.3 shows, although before age 5 both males

Figure 3.3 *Survival to the Age of 65 in Harlem, Bangladesh, and Among U.S. Whites: 1980*



Source: McCord and Freeman (1990). Reprinted by permission of the *New England Journal of Medicine* 322 (1990):173-177.

and females have higher death rates in Bangladesh than in Harlem, after that age the death rate levels off in Bangladesh but rises in Harlem. Consequently, for females, the chances of surviving are lower in Bangladesh than in Harlem, but only because of the differences in the first five years of life. For males, the chances of surviving are lower in Bangladesh only until age 40 and almost solely because of deaths in the first five years of life. Among those who survive to age 5, both males and females have a greater chance of surviving to age 65 in Bangladesh than in Harlem.

Unfortunately, these high death rates among African Americans extend far beyond the borders of Harlem. Table 3.4 shows the age-adjusted death rates for selected causes of death in 2002 (the latest data available as of 2005). This table shows that HIV disease kills ten times more African Americans than white non-Hispanics, and homicide kills seven times more African Americans. Both these causes of death are markers of poverty, hopelessness, and inequality. The table also highlights the disproportionately large role diabetes plays in African American mortality. Diabetes, which is caused by both genetic factors and a diet of poverty, kills African Americans twice as often as it kills whites, mostly by causing kidney disease (Centers for Disease Control and Prevention, 1998).

Yet kidney disease need not kill, if transplants or dialysis can substitute for failing kidneys. However, African Americans are significantly less likely

Table 3.4 *Age-Adjusted Death Rates per 100,000 for Selected Causes of Death, 2002*

	TOTAL	WHITE, NON-HISPANIC	AFRICAN AMERICAN	NATIVE AMERICAN	HISPANIC	ASIAN AMERICAN OR PACIFIC ISLANDER
All causes	845.3	837.5	1,083.3	677.4	629.3	474.4
Heart disease	240.8	239.2	308.4	157.4	180.5	134.6
Cerebrovascular diseases (strokes)	56.2	54.6	76.3	37.5	41.3	47.7
Cancer	193.5	195.6	238.8	125.4	128.4	113.6
Chronic lower respiratory diseases	43.5	46.9	31.2	30.1	20.6	15.8
Influenza and pneumonia	22.6	22.6	24.0	20.4	19.2	17.5
Chronic liver disease and cirrhosis	9.4	9.0	8.5	22.8	15.4	3.2
Diabetes	25.4	22.2	49.5	43.2	35.6	17.4
HIV disease	4.9	2.1	22.5	2.2	5.8	0.8
Unintentional injuries	36.9	38.0	36.9	53.8	30.7	17.9
Suicide	10.9	12.9	5.3	10.2	5.7	5.4
Homicide	6.1	2.8	21.0	8.4	7.3	2.9

Source: National Center for Health Statistics (2004: Table 29).

than whites to receive transplants or dialysis because standard procedures for selecting patients for these therapies unintentionally discriminate against them (Council on Ethical and Judicial Affairs, 1990; Gaston et al., 1993). Transplant programs generally require near-perfect biological matches between donor and potential recipient before they will perform a transplant, although the difference in survival rates when kidneys are less well matched is small. Because African Americans donate kidneys far less often than whites do, African Americans who need kidneys less often match the available kidneys perfectly and, thus, less often receive transplants. African Americans also receive transplants less often because doctors less often refer them to transplant programs. Even when African Americans are referred to transplant programs, they are more frequently rejected as patients because they lack transportation to care facilities and funds to pay for aftercare, which can cost thousands of dollars per year (Council on Ethical and Judicial Affairs, 1990). This chapter's ethical debate (Box 3.1) looks at the broader problem of allocating scarce health resources.

This pattern recurs among other minority groups and in other areas of health care. A research review conducted by the highly prestigious Institute of Medicine (Nelson, Smedley, and Stith, 2002) found that, after controlling for symptoms and insurance coverage, doctors were more likely to offer whites various life-preserving treatments (including angioplasty, bypass surgery, and the most effective drugs for HIV infection) and more likely to offer minorities various less-desirable procedures (such as leg amputations for diabetes).

Hispanics

Like African Americans, Hispanic Americans experience an unusually high burden of illness—although this is truer for some Hispanic groups than for others. In general, Cubans (3.7 percent of U.S. Hispanics) have fared considerably better than Puerto Ricans (8.6 percent) or Mexican Americans (67.0 percent). Relatively little is known regarding the health status of the newer immigrant groups from Central and South America who comprise 14.3 percent of U.S. Hispanics.

As among African Americans, health problems among Hispanics largely reflect their generally lower social class status (Rogers et al., 1996). Hispanics are two and one-half times more likely than non-Hispanic whites to live in poverty and, except for Cubans, are half as likely to have completed college. In addition, cultural and language barriers as well as social discrimination can make it difficult for Hispanics to take advantage of health care resources even when they can afford them. Partly as a result, Hispanic children are less likely than non-Hispanic white children to receive all necessary vaccinations by age 3 and, regardless of income, are about twice as likely to have no regular source of health care (National Center for Health Statistics, 2004).

For reasons that remain unclear, rates of infant mortality among Hispanics (other than Puerto Ricans) are comparable with those of non-Hispanic white

Box 3.1 Ethical Debate: Allocating Scarce Health Resources

Y*ou are the chair of a regional organ bank charged with allocating one donated kidney. This kidney will mean the difference between life and death to whoever receives it. Which one of these people would you give it to?*

- *James Russell, a world-famous pediatrician who is 60 years old, unmarried, and childless*
- *Julie Brown, a 35 year-old, unmarried mother and sole supporter of four young children, who is a high school dropout and lives on government assistance*
- *Sally Michaels, a 45 year-old homemaker with children in college, who is married to a lawyer and is active in various local charities*

Deciding how to allocate scarce resources has animated public debate since the early 1960s, when kidney dialysis—a treatment that can keep alive those who would otherwise die from kidney failure—first became feasible. Because demand for dialysis far exceeded supply, hospitals had to establish procedures for deciding who would receive treatment and who would not—in essence deciding who would live and who would die.

Since then, demand for dialysis has continued to exceed supply, and so such decisions still must be made. The same dilemma faces all those who must allocate expensive and scarce treatments, for no national policies regulate how to make these decisions.

Probably all observers would agree that medical factors must be considered in allocating scarce resources. For example, it makes little sense to give transplants to someone who is likely to die during or shortly after a transplant operation, such as a patient whose

tissue does not adequately match that of the prospective organ donor and whose body is therefore likely to reject the donated organ. In other circumstances, however, the role played by medical factors in these decisions is far less clear. For example, some argue that those who are healthiest should receive highest priority because they are most likely to survive a transplant and to have a good quality of life afterward. Others, however, argue that these individuals can live the longest *without* a transplant and so should have lowest priority.

Although it might seem fairest, relying on medical factors is also problematic because doing so may unintentionally discriminate against minorities and the poor. For example, for various reasons, including generalized mistrust stemming from a history of poor treatment by the medical establishment, African Americans are less likely to donate organs than are whites. As a result, African Americans more often die while waiting for a closely matched donor kidney. Similarly, selecting the healthiest persons first discriminates against poorer persons, who on average are in worse health.

Using other “objective” criteria for selection also can unintentionally discriminate. Individuals are most likely to benefit from a procedure if they have family members who can take care of them while they recover; can afford to pay all necessary costs of receiving care, including costs for drugs, any special diet, and transportation to and from the health care delivery site; have the intellectual and emotional ability to follow the prescribed treatment and follow-up regimen; and have a stable life that allows them to do so.

Yet all these factors encourage the selection of middle- and upper-class persons who share not only social status but also cultural values with those who control access to health care.

But this selection bias is not necessarily a problem. In fact, some consider it perfectly reasonable to use social characteristics overtly in making decisions, and probably most would agree that it makes more sense to allot scarce health resources to a 40-year-old than to an equally healthy 60-year-old because more years of productive life would be lost should the 40-year-old die.

Implicit in such a decision is a notion of social worth—that a younger person is automatically worth more than an older one. Similarly, many would argue that scarce resources should be allocated to those most likely to benefit the community. This generally translates into those who are married, parents of young children, educated, and employed. Such decision rules, of course, reflect the values of the middle- and upper-class persons who sit on hospital selection committees and are likely to work against minorities and the poor.

The difficulties with establishing equitable decision rules have led some to propose mechanisms for eliminating the need to make decisions, such as lotteries. These proposals assume that all persons have equal social worth. Yet most people *do* consider some people more morally worthy than others, and so find such proposals unacceptable.

Another way to avoid making these difficult decisions is to allot scarce resources on a “first come, first served” basis. Such a policy, however, would benefit more-affluent patients

because they typically receive accurate diagnoses and learn how to join waiting lists earlier in the course of their disease. Consequently, this system would be inequitable in practice.

Finally, some argue that instead of trying to establish equitable decision rules, we should allocate scarce resources simply based on the ability to pay. Proponents of this view see no reason to treat scarce health resources differently from any other valued resource, like shoes or houses. Opponents argue that doing so is equivalent to declaring the lives of some individuals more valuable than others simply because they are wealthier.

In sum, decisions regarding how to allocate scarce health resources always rely on social and cultural as well as medical factors. Perhaps the best we can hope for is that decision makers will recognize how these factors affect their decisions and use that recognition to work for more equitable policies.

Sociological Questions

1. What social views and values about medicine, society, and the body are reflected in this policy? Whose views are these?
2. Which social groups are in conflict over this issue? Whose interests are served by the different sides of this issue?
3. Which of these groups has more power to enforce its view? What kinds of power do they have?
4. What are the intended consequences of this policy? What are the unintended social, economic, political, and health consequences of this policy?

Table 3.5 *Infant Mortality Rate by Ethnicity, United States*

MOTHERS' ETHNICITY	RATE
African American	13.8
Native American	8.6
White non-Hispanic	5.8
Hispanic origin	5.6
Asian or Pacific Islander	4.8
All mothers	7.0

Source: National Center for Health Statistics (2004: 131).

Americans (see Table 3.5). On other measures of health, however, Hispanics fare less well. Life expectancy is lower for Hispanics than for non-Hispanic whites, even though the main causes of death are the same for both groups. Like African Americans, Hispanics are at greater risk than non-Hispanic whites for diabetes and for its more serious complications. Hispanics also die at higher rates from violence and from liver disease (typically linked to heavy alcohol use). Finally, Hispanics are almost twice as likely as whites to die from HIV disease. Conversely, Hispanics have lower death rates from heart disease, cerebrovascular disease, and cancer simply because they are less likely to live long enough to develop these diseases.

Health status is particularly poor among those who are migrant workers (Azevedo and Bogue, 2001; Greenhouse, 2001). Of course, most Hispanics are not migrant workers, but the majority of migrant workers are Hispanic, and most other migrant workers belong to other minority communities. Consequently, issues of minority status and social class are tightly interwoven, and both must be considered in order to understand why these individuals are so vulnerable to health problems.

About half of the 2.5 million migrant laborers working in agricultural fields in the United States are illegal aliens (P. Martin, 2002). The work itself is physically hazardous, with long days of repetitive stooping and bending, heavy lifting, and exposure to toxic pesticides (Gwyther and Jenkins, 1998; Sandhaus, 1998). Access to clean water and sanitary toilets is often limited, and workers are routinely exposed to weather extremes. Living conditions, too, are often poor, with many individuals crowded together in poorly heated or cooled rooms with insufficient water and toilets and low wages that make it difficult to obtain nutritious foods. Yet because so many migrant laborers are illegal aliens, they cannot protest these conditions without risking deportation. Finally, lack of transportation, cultural differences, and communication

problems make it difficult for laborers and their families to obtain good health care. As a result, life expectancy is substantially reduced among migrant workers and their families, and chronic health problems, infectious diseases (including tuberculosis, typhoid, and hepatitis), miscarriages, and infant mortality are several times more common than among the rest of the population (Gwyther and Jenkins, 1998; Sandhaus, 1998).

The same pressures that lead undocumented immigrants to take dangerous jobs leave some immigrant groups more vulnerable than others. Recent years have seen a surge in immigration (legal and illegal) from the poorer countries of Central America (such as El Salvador and Guatemala), where living conditions are poorer than in Mexico. Because of the longer distance to the United States and the fact that migrants must cross more than one national border to reach this country, immigration from Central America is more dangerous and expensive than it is from Mexico. As a result, Central Americans are more likely to stay with whatever job they first get in the United States rather than risk attracting the attention of immigration authorities while seeking other work. Consequently, Central Americans are more likely than Mexicans are to stay in low-paying, dangerous occupations. For example, Arizona health data identify roof building as the most dangerous job in construction—14 percent of roofers reported injuries during 2002, and undoubtedly many more were injured without reporting—and indicate that most of those employed in this work are undocumented Central American immigrants (Gonzales, 2005).

Native Americans

As is true with any ethnic group, Native Americans are highly diverse. Native Americans in the United States belong to more than five hundred different tribes, each with a distinct language and culture. Slightly more than half of Native Americans live off reservations, often in large urban areas.

Native American life expectancy has improved substantially since the 1950s. Official statistics now indicate that average life expectancy for Native Americans almost equals that of white Americans. However, these figures are misleading. Because Native Americans who die at hospitals off of reservations are often listed as “white” on their death certificates, federal researchers estimate that death rates for Native Americans are underestimated by 21 percent (National Center for Health Statistics, 2001). In addition, these death rates include both highly assimilated persons with little Native American background living in suburbia and traditional Native Americans living on reservations. In Arizona, for example, where most live on reservation, average life expectancy is 55 (Nichols, 2002).

Even when looking only at national averages, sharp differences between Native and white Americans are apparent in the particular patterns of disease these two groups experience (Kunitz, 1996; U.S. Department of Health and

Human Services, 1990). These differences begin at birth. Although lower than among African Americans and lower than in the past, infant mortality (see Table 3.5) remains considerably higher among Native Americans than among whites (National Center for Health Statistics, 2004: 131).

The differences between whites and Native Americans become clearer when we divide infant mortality into **neonatal infant mortality** (deaths occurring during the first 27 days after birth) and **postneonatal infant mortality** (deaths occurring between 28 days and 11 months after birth). The *neonatal* infant mortality rates are essentially the same among Native Americans and whites—4.2 per 1,000 live births versus 3.8 (National Center for Health Statistics, 2004: 131). However, the *postneonatal* infant mortality rate is almost three times higher among Native Americans as compared to whites—5.4 per 1,000 live births versus 1.9. These figures reflect differences in rates of pneumonia and gastritis. Although less common than in the past, these easily preventable diseases—precipitated by poverty, malnutrition, and poor living conditions and normally controllable through prompt medical attention—still occur more often among Native Americans than among others. Box 3.2 describes the benefits and limitations of the Indian Health Service, the federally funded program charged with providing health care to Native Americans.

For Native Americans who survive past infancy, heavy alcohol use stands out as an especially serious health risk (see Table 3.4). Although alcohol-related deaths among Native Americans have decreased in recent years, liver disease, which is typically linked to alcohol use, remains 2.5 times more common than in the U.S. population as a whole and more common than in any other ethnic group. In addition, Native Americans are significantly more likely than others are to die from unintentional injuries, with alcohol use often contributing to these deaths. Because of these factors leading to early deaths, Native Americans are less likely than white non-Hispanics to die from heart disease, cerebrovascular disease, or cancer.

Native Americans differ from other Americans in their pattern of diseases as well as their pattern of deaths. The rate of respiratory disease is 31 percent higher than in the U.S. population as a whole, partly due to high rates of tobacco use. Native Americans have higher rates of tobacco use than any other ethnic group in the United States, are the only group in which rates have not declined since the 1970s, and are the only group in which women are as likely to smoke as men (*Morbidity and Mortality Weekly Report*, 1998). Native Americans also have mortality rates from infectious diseases twice as high as those found among white Americans, primarily due to inadequate sanitation, lack of access to clean water, and the general physical debilitation associated with poverty. In addition, diabetes affects approximately 9 percent of Native American adults, who are three times more likely to die from it than whites are (Centers for Disease Control and Prevention, 1998; Claiborne, 1999).

Box 3.2 *The Indian Health Service*

Since the 1830s, under the provisions of various treaties, the U.S. government has provided health care to Native Americans (Kunitz, 1996; Dixon and Roubideaux, 2001). Today, more than 1 million Native Americans, living in urban and rural areas both on and off reservations, receive comprehensive health services from the Indian Health Service (IHS).

The IHS offers both “direct” health care and “contract” care. Direct care programs, generally located on Indian reservations, provide access to generalist medical care from internists, family doctors, and pediatricians and are open to all Native Americans. In addition, the IHS contracts with private health care providers to offer specialty care. This contract health program, however, is open only to Native Americans who live either on a reservation or in the contract area affiliated with their tribe. For example, a Navajo who moves to Flagstaff, Arizona, where the IHS contract health program includes Navajos, can obtain care through that program. The same individual could not receive services in Phoenix, where the IHS contract health program does not include Navajos, or in Minneapolis, where the IHS has no contract health program.

Since the 1970s, the IHS increasingly has moved toward local control (Kunitz, 1996; Dixon

and Roubideaux, 2001). Tribes now can sign agreements to take over some services offered by the IHS or to provide additional services; about half of all Indian health programs in the country are now run by tribes (Nichols, 2002). Unfortunately, the IHS can afford to spend only \$1,920 per capita each year. In contrast, the federal government spends \$3,859 per person on Medicaid and \$5,600 per person on Medicare, while private insurers spend \$4,392 per capita (Nichols, 2002). As a result, only 15 of the 515 IHS health care facilities can provide the kinds of services offered in large hospitals, and funds for these 15 facilities usually run out early in each fiscal year. Similarly, in 1994, the IHS had 90 doctors per 100,000 patients, compared with 229 doctors per 100,000 patients in the United States as a whole (Claiborne, 1999). Because of problems like these, the move toward tribal control of health care has pitted tribes against each other in the fight for limited federal dollars—a battle that has particularly hurt smaller, poorer tribes and tribes located in isolated regions where finding qualified health care providers is difficult and expensive. The need for additional funds to pay for tribal health care costs partly explains why many tribes have aggressively pursued casino gambling in the last two decades (Kunitz, 1996).

Asian Americans

Overall, Asian Americans enjoy far better health than do other American minority groups. The largest Asian American groups (Chinese, Japanese, and Filipino) have life expectancies and infant mortality rates equal or superior to those of white Americans (see Table 3.5, Figures 3.1 and 3.2). As a group, Asian Americans experience the same causes of death as whites but at significantly lower rates.

These statistics, however, tell only part of the story. Since 1975, a substantial portion of Asian immigration has come from the war-torn countries of Southeast Asia. These immigrants typically have far lower income

and education levels than those of established Asian Americans. In addition to having the health problems that always accompany poverty, these individuals often suffer from unavoidable dietary changes, culture shock, tropical diseases for which diagnosis and treatment can prove elusive, and the long-lasting traumas of warfare and refugee life.

The limited available data on the health status of Southeast Asians in the United States suggest that they have significantly higher mortality and morbidity rates than those for whites or other Asians (Association of Asian Pacific Community Health Organizations, 1997). For example, only 22.7 percent of Vietnamese Americans report that their health is excellent, as compared with just over 40 percent of Americans who are white non-Hispanic, Japanese, or Asian Indian (Kuo and Porter, 1998). Compared with white Americans, Southeast Asian immigrants are 13 times more likely to have tuberculosis and 25 times more likely to have hepatitis B. Higher rates of hepatitis B mean higher rates of liver cancer. Lung cancer, too, is more common among male Southeast Asian immigrants largely because they are two to three times more likely to smoke than other American men are.

At the same time, Southeast Asians typically have more limited access to health care (Association of Asian Pacific Community Health Organizations, 1997). Rates of health insurance coverage are low, and even those who have insurance sometimes find that linguistic or cultural barriers make it nearly impossible to communicate with health care workers and to obtain quality health care. As a result, Southeast Asians are less likely than are other Americans to use Western health care (although some continue to use traditional Asian healers and therapies).

Writer Anne Fadiman poignantly describes the communication barriers between new immigrants and their doctors, and the problems these barriers create for both groups, in her prize-winning book, *The Spirit Catches You and You Fall Down: A Hmong Child, Her American Doctors, and the Collision of Two Cultures* (1997). Fadiman describes the completely divergent worldviews of American doctors and Hmong patients in Merced, California, where many Hmong refugees from Laos have settled:

Most Hmong believe that the body contains a finite amount of blood that it is unable to replenish, so repeated blood sampling [for lab tests] . . . may be fatal. When people are unconscious, their souls are at large, so anesthesia may lead to illness or death. If the body is cut or disfigured, or if it loses any of its parts, it will remain in a condition of perpetual imbalance, and the damaged person not only will become frequently ill but may be physically incomplete during the next reincarnation; so surgery is taboo. If people lose their vital organs after death, their souls cannot be reborn into new bodies and may take revenge on living relatives; so autopsies and embalming are also taboo. . . .

Not realizing that when a man named Xiong or Lee or Moua walked into the Family Practice Center with a stomachache he was actually complaining that the entire universe was out of balance, the young doctors of Merced frequently failed

to satisfy their Hmong patients. How could they succeed? . . . They could hardly be expected to “respect” their patients’ system of health beliefs (if indeed they ever had the time and the interpreters to find out what it was), since the medical schools they had attended had never informed them that diseases are caused by fugitive souls and cured by [sacrificing] chickens. All of them had spent hundreds of hours dissecting cadavers . . . but none of them had had a single hour of instruction in cross-cultural medicine. To most of them, the Hmong taboos against blood tests, spinal taps, surgery, anesthesia, and autopsies—the basic tools of modern medicine—seemed like self-defeating ignorance. They had no way of knowing that a Hmong might regard these taboos as the sacred guardians of his identity, indeed, quite literally, of his very soul. [Moreover], what the doctors viewed as clinical efficiency the Hmong viewed as frosty arrogance. And no matter what the doctors did, even if it never trespassed on taboo territory, the Hmong, freighted as they were with negative expectations accumulated [during years under military siege and in refugee camps] before they came to America, inevitably interpreted it in the worst possible light. (Fadiman, 1997: 33, 61)

Growing recognition of problems like these has spurred medical schools to incorporate training in working with culturally diverse populations in their programs, as we will consider in more detail in Chapter 11.

Case Study: Environmental Racism

One health issue that cuts across America’s minority communities is **environmental racism**. Environmental racism refers to the disproportionate burden of environmental pollution experienced by ethnic minorities. According to Benjamin F. Chavis,

Environmental racism is racial discrimination in environmental policymaking. It is racial discrimination in the enforcement of regulations and laws. It is racial discrimination in the deliberate targeting of communities of color for toxic waste disposal and the siting of polluting industries. It is racial discrimination in the official sanctioning of the life-threatening presence of poisons and pollutants in communities of color. And, it is racial discrimination in the history of excluding people of color from the mainstream environmental groups, decision-making boards, commissions, and regulatory boards. (1993: 3)

Environmental racism first became a subject for widespread discussion following the 1983 publication of a groundbreaking study by sociologist Robert D. Bullard. Bullard documented how, since the 1920s, the city of Houston had located all of its landfills and 75 percent of its garbage incinerators in African American neighborhoods, even though those neighborhoods constituted only a tiny fraction of the city. After Bullard’s study appeared, federal agencies, social activists, and scholars around the country began collecting evidence demonstrating that minority communities bear a

Table 3.6 *Percentage Living in Polluted Areas, by Ethnicity*

TYPE OF POLLUTION	WHITES (%)	AFRICAN AMERICANS (%)	
		AMERICANS (%)	HISPANICS (%)
Particulate matter	15	17	34
Carbon monoxide	34	46	57
Ozone	53	62	71
Sulfur dioxide	7	12	6
Lead	6	9	19

Source: U.S. Environmental Protection Agency (1992).

disproportionate share of the nation's environmental hazards, from Hispanic farmworkers exposed to dangerous pesticides to Navajo communities poisoned by deadly uranium mines and inner-city African Americans plagued by asthma-inducing air pollution (Bullard et al., 2001; Camacho, 1998). The most important of these environmental hazards, because it is so widespread and devastating, is lead—found in polluted air, contaminated soil, and the paints and pipes of older residences. Among children under age 5 who are known to have high levels of lead in their blood, 17 percent are white non-Hispanic, 16 percent are Hispanic, and 60 percent are African American (Meyer et al., 2003). Compared with whites, minorities are exposed more often to dust and soot, carbon monoxide, ozone, sulfur, and sulfur dioxide, as well as to pesticides, emissions from hazardous waste dumps, and other hazardous substances. Researchers have found that exposure to environmental pollution is more highly correlated with race than with any other factor, including poverty (Bullard, 1993; Stretesky and Hogan, 1998). Table 3.6 provides some examples.

Environmental racism exemplifies the workings of internal colonialism. The term **internal colonialism** highlights the similarities between the treatment of minority groups within a country and of native peoples by foreign colonizers, such as under the former apartheid system (Blauner, 1972). Scholars and activists who write about environmental racism argue that just as colonizers exploit native labor power and lands and keep native peoples economically dependent for the benefit of the colonizing power, so majority groups can exploit internal colonies of minority group members. In the case of environmental racism, racial discrimination enables industrialists, with the tacit approval of government bureaucrats and politicians, to place environmental hazards in these internal colonies without worrying that those communities will have sufficient political power or financial resources to resist. Poverty and lack of other job opportunities can even encourage minority

Box 3.3 ***Making a Difference: The Center for Health,
Environment & Justice***

During the 1970s, a series of unexplained deaths from cancer and leukemia plagued children living in Love Canal, New York. Eventually, local community activists traced the children's deaths to a nearby toxic waste site and won federal funding to relocate their families to safer areas. Perhaps more important, the activists' work led to passage of the federal Superfund program to clean up toxic waste sites around the country.

In 1981, some of these activists founded the Center for Health, Environment & Justice (CHEJ) to assist other grassroots groups in similar battles (www.chej.org, accessed August 2005). Since then, CHEJ has served as an invaluable resource. Each day CHEJ workers answer letters and phone calls from individuals and grassroots organizations seeking information about toxic threats. In addition, CHEJ publishes

two magazines, *Everyone's Backyard* and *Environmental Health Monthly*, and more than one hundred guidebooks and information packages on issues related to chemical hazards and to environmental justice more broadly. CHEJ also puts interested individuals in touch with appropriate organizations and runs workshops to train environmental activists and to help environmental organizations work more effectively.

Since its founding, CHEJ has had many successes. Working with local activists, CHEJ has helped win legislative approval for laws and regulations establishing state Superfund programs, prohibiting corporations convicted of dumping toxic wastes in one state from setting up business in another, and prohibiting corporations forced to clean up toxic waste in one state from dumping it in another.

communities to welcome polluting industries for the jobs they will bring. This does not mean, however, that those who make decisions about where to locate environmental hazards *intend* to discriminate against minorities—certainly those who make these decisions would argue that they decide solely on economic and technical considerations—only that their actions have the *effect* of discriminating.

Currently, dozens of grassroots groups of African Americans, Hispanics, Asian Americans, and Native Americans are working to fight for environmental justice (Sandweiss, 1998), as are numerous national civil rights and environmental organizations; Box 3.3 describes the work of one of these groups. Similarly, the Environmental Protection Agency (EPA) a few years ago began using the Civil Rights Act of 1964, which forbids racial discrimination in any federally funded programs, as grounds for investigating how companies and local governments decide where to locate environmental hazards. The first EPA study found that 90 percent of major industrial polluters in Louisiana were located in predominantly African American areas and resulted in the cancellation of a hazardous waste permit in that state (Sandweiss, 1998).

Conclusion

Far from being purely biological conditions reflecting purely biological factors, health and illness are intimately interwoven with social position. In the United States as elsewhere, those who are poor or are targets of racial discrimination die younger than others do. Sex and gender have more complex health consequences: Women enjoy longer life spans than men do, but they are subject to more illness and disability.

Because social forces as well as biological factors affect health, understanding social trends can help us predict future health trends. For example, as women's social roles have changed, their rates of tobacco use and lung cancer have approached those for men, while their ability to protect themselves from the health consequences of male violence has increased. Similarly, if economic and ethnic inequality either increase or decrease, we are likely to see changes in the health status of currently disadvantaged economic and ethnic groups.

Suggested Readings

Boston Women's Health Book Collective. 2005. *Our Bodies, Ourselves: A New Edition for a New Era*. New York: Touchstone. An excellent overview of women's health issues, emphasizing self-help while discussing the political and social aspects of health and health care.

Eugenides, Jeffrey. 2002. *Middlesex*. New York: Picador. This funny, poignant, engaging, Pulitzer Prize-winning novel recounts the story of "Cal" Stephanides, who is born with a (real) genetic condition that shifts his body from female to male at adolescence.

Marmot, Michael G. 2004. *The Status Syndrome: How Your Social Standing Directly Affects Your Health and Life Expectancy*. London: Bloomsbury. Epidemiologist Michael Marmot, who received a knighthood for his research, explains why at each step on the social status ladder, persons live longer than those even one step below them.

Schneider, Andrew and David McCumber. 2004. *An Air That Kills: How the Asbestos Poisoning of Libby, Montana Uncovered a National Scandal*. New York: Putnam's Sons. Journalists Schneider and McCumber tell how the actions of a multinational mining corporation led to an epidemic of cancer deaths, and how the community fought back.

Getting Involved

Association of Asian Pacific Community Health Organizations. 439 23rd Street, Oakland, CA 94612. (510) 272-9536. www.aapcho.org. Excellent source of information about health and health care among both new and old Asian American communities.

Center for Health, Environment & Justice. PO Box 6806, Falls Church, VA 22040. (703) 237-2249. www.chej.org. Central clearinghouse for the

environmental justice movement; assists grassroots organizations located primarily in poor and minority communities.

Habitat for Humanity. 121 Habitat Street, Americus, GA 31709. (912) 924-6935. www.habitat.org. Ecumenical Christian organization that helps poor families build low-cost housing.

National Coalition Against Domestic Violence. PO Box 18749, Denver, CO 80218. (303) 839-1852. www.ncadv.org. A national organization that can refer you to organizations in your region.

National Women's Health Network. 514 10th St. NW, Suite 400, Washington, DC 20004. (202) 628-7814. www.womenshealthnetwork.org. Educational and lobbying group concerned with all issues affecting women's health.

Review Questions

What are the health care consequences of an aging population and the feminization of aging?

Why might sociologists and other observers argue *against* early detection and treatment of prostate cancer?

Why do men have higher mortality rates than women but lower morbidity rates?

What are the sources and consequences of woman battering? Why do some health care workers consider woman battering a serious health problem?

How and why does social class affect people's health?

What are the special health problems of homeless persons? of migrant farmworkers?

How does ethnicity affect health separately from social class? How does social class affect health separately from ethnicity? How can you tell which is the more powerful factor?

How and why do the particular health problems of African Americans, Hispanics, Native Americans, and Asian Americans differ from those of whites?

What is environmental racism?

Internet Exercises

1. Both the United Nation's World Health Organization (www.who.int) and the U.S. National Institutes of Health (www.nih.gov) have websites devoted to health problems associated with aging. Find those sites, and compare the major health problems identified by the World Health Organization with the major problems identified by the National Institute of Health. How do you explain the differences?

2. The U.S. Census Bureau (www.census.gov) provides a wealth of information about the U.S. population. Find out what percentage of Americans now live below the poverty line.

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3. To find out how social class affects individuals' perceived health status, first locate the website for the University of California's Survey Documentation and Analysis (SDA) archive. This archive contains data from several national random surveys. Enter the SDA archive; then click on the GSS Cumulative Datafile, 1972–2002, full analysis. Find the “Select an Action” section; then click the button for “Frequencies or Crosstabulations.” Next, click on “Start.” A form with several blank spaces will appear on your screen. For row variable, type “health.” For column variable, type “class.” Click on the boxes to the left of Column Percentaging, Statistics, and Question Text. Then click the button “Run the Table.” What effect does social class have on people's perceptions of their health status?

