CHAPTER

3

The Social Distribution of Illness in the United States

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Meat and poultry processing is one of the most dangerous jobs in the United States, with injury and death rates several times higher than in other occupations. These are jobs that only the poor will take, and, increasingly, are jobs filled only by undocumented Hispanic immigrants, many of whom barely speak English. One worker interviewed by observers from the nonprofit Human Rights Watch (2005) said:

> *The [meat processing] line is so fast there is no time to sharpen the knife. The knife gets dull and you have to cut harder. That's when it really starts to hurt, and that's when you cut yourself. I cut my hand at the end of my shift, around 10:30 at night.... I went to the clinic the next day at 11:00 a.m. They gave me stitches and told me to come back at 2:30 before the start of my shift to check on the stitches. They told me to go back to work at 3:00. I never stopped working* (Human Rights Watch, 2005:35).

Another man, with fingers swollen and bent nearly into claws, said:

> *I hung the live birds on the line. Grab, reach, lift, jerk. Without stopping for hours every day. Only young, strong guys can do it. But after a time, you see what happens. Your arms stick out and your hands are frozen. Look at me now. I'm twenty-two years old, and I feel like an old man* (Human Rights Watch, 2005:36).

And a woman said:

> *I pull ribs with my fingers on the packing ribs line. My fingers and nails are in constant pain because the company won't give us hooks to pull the ribs, and they won't let us bring our own hooks. We need hooks to pull the meat more easily and to avoid injuries. But they say that meat gets lost using hooks, and using fingers pulls more meat, so no hooks* (Human Rights Watch, 2005:45).

Complaints from workers about conditions at processing plants are few because those who complain are usually fired or deported (after plant supervisors call immigration authorities). And medical care is usually unavailable except from company doctors whose jobs depend on minimizing rather than treating workers' health complaints.

Although the conditions faced by meat and poultry workers are extreme, they illustrate how social class and ethnicity can leave individuals vulnerable to illness, injury, and death. In this chapter, we explore how these factors as well as age, sex, and gender result in an unequal distribution of health and illness across the population.

SOCIAL CLASS

Overview

Social class refers to individuals' position within a 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, but 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.

The link between social class and ill health is strong and consistent (Adler and Rehkopf, 2008; Hadler, 2008; Lahelma, 2010). 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 and for almost all illnesses, poor persons experience more illness than wealthier persons do. Because of this very strong link between social class and health across time, place, and disease, some sociologists label social class a "fundamental cause" of disease (Link and Phelan, 2010; Phelan, et al., 2004).

Fundamental-cause theory argues that even though the common diseases and their causes may change over time and place, in each situation, those with greater access to resources will experience better health because those resources help protect their health. For example, Link and Phelan write:

> a person with many resources can afford to live in a high-status neighborhood where … enormous clout is exerted to ensure that crime, noise, violence, pollution, traffic, and vermin have been kept at a minimum and the best health-care facilities, parks, playgrounds, and food stores are conveniently located nearby. Once a person has used [social class-based] resources to locate in an advantaged neighborhood, a host of health-enhancing circumstances comes along as a package deal (2010:6).

In such circumstances, wealthier individuals can increase their odds of good health without even trying.

The impact of social class on health is obvious: Around the world, in every age group and racial or ethnic group, those with higher social class status have lower **rates**. of **morbidity** and **mortality** (Adler and Rehkopf, 2008; Lahelma, 2010; Marmot, 2002, 2004). The relationship between social class and health 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, in the United States, 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 across the entire income scale, with each group on the social class ladder having better health than the group just below it (Marmot, 2004; Wilkinson, 1996, 2005). (However, the sharpest differences exist between the poor and everyone else.) When researchers **control** for all known individual risk factors (such as obesity and smoking), the impact of social class on mortality and morbidity rates declines only slightly (Wilkinson, 1996, 2005).

The relationship between social class and ill health begins at birth, with infant mortality significantly higher among the poor and those with less education (Centers for Disease Control and Prevention, 1995; Matthews and MacDorman, 2010). Similarly, poor children are more likely than other children to fall ill or die (Federal Interagency Forum on Child and Family Statistics, 1999). Only 65% of poor children are described by their parents as having very good or excellent health compared with 84% of other children. Similarly, poor children are almost twice as likely as other children to be disabled by chronic health problems.

The evidence linking social class to health, then, is extremely strong. However, some sociologists (most notably Richard Wilkinson) have argued that **income inequality**—the *gap* in income between a nation's poorest and wealthiest—rather than income itself may best explain why some nations are healthier overall than others (Wilkinson, 1996, 2005). These theorists point, for example, to data showing that as income inequality declined in the United States from about 1960 to 1980, life expectancy rose among all social classes (Krieger et al., 2008; Ezzati et al., 2008). More recent research, however, has convinced most sociologists that income in and of itself has a greater impact on health than does income inequality (Mechanic, 2006). For example, since 1980, income inequality has soared in the United States, but life expectancy fell only for *poorer* Americans. This suggests that income affects health more than does income inequality (Ezzati et al., 2008; Krieger et al., 2008).

The Sources of Class Differences in Health

How can we explain the link between poverty and illness? One 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 illness among the poor (Adler and Rehkopf, 2008; Marmot, 2002, 2004). Instead, and far more often, poverty causes illness.

But *how* does poverty cause illness? As Chapter 2 discussed, social stress is a major cause of illness. Thus, one important reason why poorer persons suffer worse health than do wealthier persons is because poorer persons experience *more stress* and have *less control* over that stress (Adler and Rehkopf, 2008; Link and Phelan, 1995; Phelan et al., 2004). For example, factory workers must keep pace with the production line but can't control the speed of the line and can't even choose when to take bathroom breaks. Numerous studies have found that workers who face high demands with little control over work conditions are particularly likely to experience stress, resulting in both physical and psychological illness (North et al., 1996; Marmot, 2004; Wilkinson, 2005).

As this suggests, stress amplifies the myriad health risks embedded in everyday aspects of lower class life. First, the work available to poorly educated lower class persons—when they can find it—can cause ill health or even death. 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.

Second, environmental conditions place poor people at risk of illness and death. 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 (Brulle and Pellow, 2006; Bullard, Warren, and Johnson, 2001). Such pollution can foster cancer, leukemia, high blood pressure, and other health problems, as well as emotional stress.

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 rely on ovens for heat; and asthma triggered by cockroach droppings, rodent urine, and mold (Reading, 1997).

Fourth, the food poor children eat—or don't eat—affects their lifetime risks of illness. Federal researchers currently estimate that more than 20% of U.S. children sometimes go hungry (Seligman and Schillinger, 2010). These children get significantly more colds each year and are significantly more likely to experience poor health, lack sufficient iron, experience chronic headaches or stomachaches, or have a disability (Seligman and Schillinger, 2010). They are also more likely to miss school and to do poorly in school, thus increasing their chances—and their children's chances—of remaining poor.

The foods available to poor children and adults also increase their health risks (Seligman and Schillinger, 2010). This diet relies heavily on fatty or sweet foods that satisfy hunger and provide energy inexpensively but offer little nutrition. As Chapter 2 discusses, such a diet may lead to heart disease, diabetes, and other illnesses.

Lack of access to health care also fosters illness and disability among the poor, although its effect is relatively weak (Williams et al., 2010; Adler and Rehkopf, 2008). Despite recent health care reforms (discussed in Chapter 8), many Americans still lack health insurance. Many more find it difficult to obtain health care because they cannot afford transportation to the doctor, time off from work to visit a doctor, or drugs or services not covered by their insurance. Even when poor or near poor people have health insurance, they are more than twice as likely as other insured adults to forgo needed medical care (*Morbidity and Mortality Weekly Report*, 2010).

When people lack access to health care, small problems can lead to significant illness or disability. For example, a person who could live a fully independent life may lose the ability to do so if he or she cannot afford to purchase eyeglasses, hearing aids, or an appropriate wheelchair. Similarly, lack of access to health care leaves people vulnerable to brain infections if a cavity is not filled or to kidney failure if diabetes is not properly treated. The prestigious, federally run Institute of Medicine (2002) estimates that undertreatment and low-quality

treatment leave uninsured Americans *25%* more likely than other Americans to die in any given year.

Case Study: Health Among the Homeless

The impact of social class on health falls heaviest on the homeless (Lee, Tyler, and Wright, 2010). Homelessness has been a major problem in the United States since the early 1980s, when governments at all levels slashed funds for low-income housing, failed to raise the value of the minimum wage to keep up with inflation, and reduced access to public assistance. As of 2008 (the latest data currently available), an American must earn between two and six times the mandated minimum wage, depending on region, to afford a modest, two-bedroom apartment (Joint Center for Housing Studies, 2008). The current economic crisis—which includes both high rates of unemployment and high rates of home foreclosures—has obviously contributed to homelessness.

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, depending on the disease, homeless persons are between two and 20 times more likely than others to have tuberculosis, hypertension, strokes, heart disease, and other life-threatening conditions (Lee, Tyler, and White, 2010). In addition, homelessness brings far greater risk of injury or death from substance use, accidents, rape, and beatings. As a result, homeless people on average die in their early forties to mid fifties (O'Connell, 2005).

All of 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 experience 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 re-infection. 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 such as **HIV/AIDS**.

RACE AND ETHNICITY

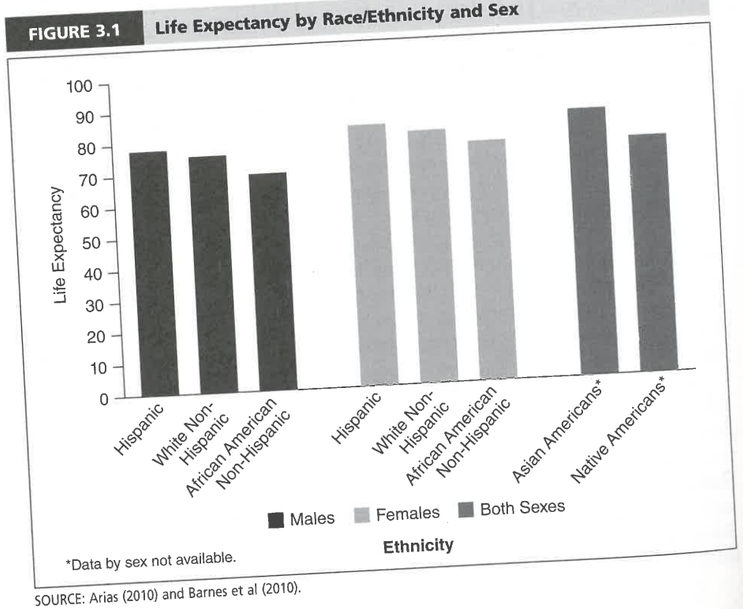
Race is a social construction with almost no biological basis. Research on the human genome has found almost zero support for the concept of race: All

humans share virtually all the same genes (Epstein, 2007). Moreover, when researchers sort individuals according to their genetic variations, the resulting categories do not match existing racial categories (Williams et al., 2010).

The social rules for identifying individuals' race also suggest that the term has little meaning. For example, although these days everyone considers Irish people to be white, a century ago that was not the case (Jacobson, 1998). Similarly, most Americans consider individuals to be nonwhite 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 term *race*.

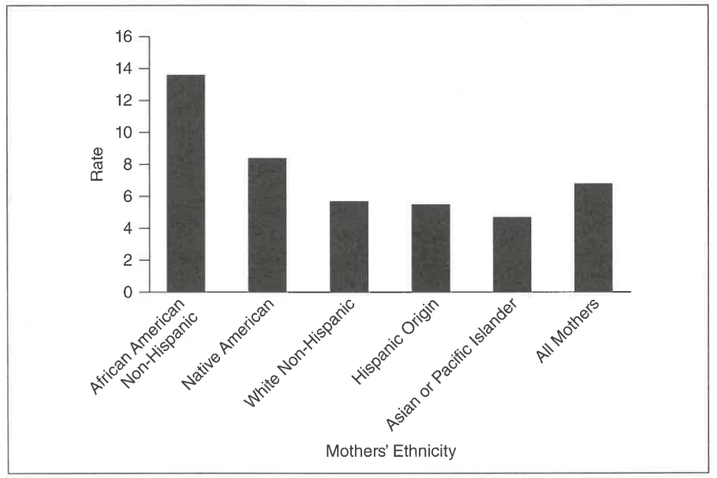
Although social class explains many observed health differences among ethnic groups, ethnicity nevertheless is an important and independent factor in predicting health status (Bradby and Nazroo, 2010). In this section, we look at health and illness among African Americans (12.9% of the U.S. population), Hispanic Americans (15.8%), Asian Americans (4.6%), and Native Americans (1.0%). As Figure 3.1 shows, life expectancy is shortest among African Americans and longest among Asian Americans. Similarly, and as Figure 3.2 shows, Native Americans and, especially, African Americans experience significantly higher rates of infant mortality than do other Americans. The remainder of this section explores in more detail some reasons for these and other ethnic differences in health.

FIGURE 3.1 **Life Expectancy by Race/Ethnicity and Sex**



SOURCE: Arias (2010) and Barnes et al (2010).

FIGURE 3.2 **Infant Mortality Rate by Ethnicity, United States**



SOURCE: National Center for Health Statistics (2010a).

African Americans

The impact of ethnicity on health stands out vividly when we look at infant mortality (Heron, 2010). Not only is it twice as common among African Americans than among whites, but as Table 3.1 shows, it is also more common among African Americans than among Azerbaijanis, Bulgarians, and Cubans.

As we have seen, poverty is a major cause of infant mortality. About two-thirds of African American children are either poor or near poor, and so poverty definitely helps explain high rates of African American infant mortality (National Center for Health Statistics, 2010b). However, even among the middle and upper classes, African American infants are more likely to die than are white infants.

The same holds true for other health problems: At all income levels, African Americans have higher mortality and morbidity rates than do whites (Williams et al., 2010). One explanation for this is racism. First, research consistently shows that the experience of racial discrimination is highly stressful and affects both physical and mental health (Bradby and Nazroo, 2010; Schnittker and McLeod, 2005; Williams et al., 2010). If, for example, pregnant women experience these stresses, they may be more likely to give birth prematurely. Second, racial discrimination by landlords, realtors, or mortgage bankers can leave even middle-class African Americans unable to obtain decent housing in neighborhoods free from pollution and violence (Williams and Jackson, 2005; Williams et al., 2010). Other middle-class African Americans prefer living in poorer, segregated neighborhoods rather than facing the daily hostility—or, simply, social discomfort—of white neighbors. Consequently,

TABLE 3.1 Infant Mortality Rates Per 1,000 Live Births

Country	Rate	Country	Rate
Hong Kong	1.7	United Kingdom	4.7
Singapore	2.2	Cuba	4.7
Sweden	2.2	New Zealand	4.9
Japan	2.6	Hungary	5.0
Finland	2.6	Canada	5.1
Greece	2.7	Poland	5.6
Czech Republic	2.9	Slovakia	5.7
Norway	3.1	**U.S. whites, non-Hispanic**	**5.7**
Denmark	3.1	**U.S., all races**	**6.4**
Belgium	3.1	Thailand	7.0
Spain	3.5	Russia	8.2
Germany	3.5	Chile	8.3
Ireland	3.5	Puerto Rico	8.8
France	3.6	Kuwait	9.0
Italy	3.6	Bulgaria	9.0
Austria	3.7	Costa Rica	9.0
Israel	3.7	Romania	10.3
Netherlands	3.8	Uruguay	10.6
Portugal	4.2	Azerbaijan	11.0
Switzerland	4.3	**U.S. African Americans, non-Hispanic**	**13.6**
Australia	4.4	Mexico	17.0

SOURCE: Population Reference Bureau (2010).

more-affluent African Americans sometimes live in conditions similar to those experienced by poorer African Americans, thus placing themselves and their families at risk.

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 than do whites. Thus, for example, compared with whites who smoke cigarettes, African American smokers are more likely to get lung cancer, to get lung cancer at younger ages, and to die from lung cancer (Williams et al., 2010). Although ethnic gaps in life expectancy have declined, white non-Hispanic women still live an average of 4.2 years longer than do their African American counterparts, and white non-Hispanic men live 6.4 years longer (Arias, 2010).

Table 3.2 shows the top causes of death for each major ethnic group in the United States, with the most significant differences between each group and white non-Hispanics highlighted in italics. Heart disease and cancer are the top causes for each group. However, they kill more non-Hispanic whites and Asian

TABLE 3.2 Top Causes of Death by Ethnicity

Non-Hispanic Whites	Non-Hispanic African Americans	Hispanic Americans	Asian Americans	Native Americans
Heart disease	Heart disease	Heart disease	Cancer	Heart disease
Cancer	Cancer	Cancer	Heart disease	Cancer
Chronic lower respiratory diseases	Stroke	Accidents	Stroke	Accidents
Stroke	Accidents	Stroke	Accidents	Diabetes
Accidents	Diabetes	Diabetes	Diabetes	Chronic liver disease
Alzheimer's disease	Homicide	Chronic liver disease	Chronic lower respiratory diseases	Stroke
Diabetes	Kidney disease	Homicide	Influenza and pneumonia	Chronic lower respiratory diseases
Influenza and pneumonia	Chronic lower respiratory diseases	Chronic lower respiratory diseases	Kidney disease	Suicide
Kidney disease	HIV/AIDS	Influenza and pneumonia	Suicide	Kidney disease

SOURCE: Heron (2010).

Americans than others because these diseases (such as strokes, Alzheimer's disease, influenza, and pneumonia) typically kill only those who survive to old age.

The table vividly illustrates the impact of poverty on African Americans. African Americans are also about eight times more likely to die from homicide and ten times more likely to die from HIV/AIDS (Heron, 2010). Both of these causes of death are markers of poverty and despair. The table also highlights the disproportionately large role played in African American mortality by diabetes, which (as Chapter 2 described) is closely linked to poverty. In turn, diabetes largely accounts for high rates of kidney disease, a common consequence of long-term diabetes.

Yet kidney disease need not kill if individuals can receive transplanted kidneys. However, African Americans are significantly less likely than whites to receive transplants. Doctors less often refer African Americans to transplant programs, less often put African Americans on wait lists for donated kidneys, and more often reject African Americans as transplant patients because they lack transportation to hospitals and aftercare facilities (Epstein, 2000).

Hispanic Americans

Like African Americans, Hispanic Americans experience an array of diseases linked to poverty and despair, including fatal accidents, homicide, diabetes, and chronic liver disease (usually caused by alcohol abuse). Hispanic Americans are 2.5 times more likely than non-Hispanic whites to live in poverty and, except for Cubans, are half as likely to have completed college. Hispanics are also substantially more likely than whites to lack health insurance and to have no usual source of health care (National Center for Health Statistics, 2010b). In addition, cultural and language barriers as well as discrimination can make it difficult for Hispanics to take advantage of health care resources even when they can afford them.

That said, recent research using data from a wide variety of sources suggests that compared with white non-Hispanics, Hispanics enjoy comparable rates of infant mortality and *longer* life expectancies (See Figures 3.1 and Figures 3.2). This surprising finding is known as the "**Hispanic paradox**." The three most common explanations for this paradox are migration effects, cultural differences, and problems with the data (Arias, 2010). First, some researchers argue that Hispanic Americans have unusually good health because only the healthy migrate and because migrants who fall ill often return home (Palloni and Arias, 2004). Second, some researchers argue that strong social networks—both within immigrant communities and within Hispanic families—protect Hispanic Americans from disease. This hypothesis is supported by data suggesting that the Hispanic health advantage declines with each generation after immigration (Williams and Sternthal, 2010). Conversely, other researchers argue that Hispanic Americans only appear to be healthier than white non-Hispanics because the former are often inaccurately identified as the latter on death certificates (Smith and Bradshaw, 2006). At present, data are insufficient to fully support any of these three explanations (Arias, 2010).

At any rate, health status varies enormously among Hispanic Americans. One group at especially high risk is migrant farm workers (Azevedo and Bogue, 2001; Greenhouse, 2001). Farm work 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 for migrant workers are often poor, with many individuals crowded together in rooms that are poorly heated or cooled, with insufficient water and toilets and low wages that make it difficult to obtain nutritious foods. 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, miscarriages, infant mortality, and infectious diseases (including tuberculosis, typhoid, and hepatitis) are several times more common than among the rest of the population (Gwyther and Jenkins, 1998; Sandhaus, 1998).

Immigrants from the poorer countries of Central America, too, are especially at risk, whether farm workers or not. Because these migrants must cross more than 2,000 miles plus at least two national borders to reach the United States, immigration from Central America is more dangerous and expensive than it is from Mexico. As a result, Central Americans are more likely than Mexicans to stay with whatever job they first get in the United States rather than risk attracting the attention of immigration authorities by seeking other work. Consequently, Central Americans are more likely than are Mexicans to stay in low-paying, dangerous occupations. For example, most roof builders in Arizona are undocumented Central American immigrants, and roof building is the most dangerous job in the construction industry (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 500 different tribes, each with a distinct language and culture. Slightly more than half of Native Americans live on reservations, often in large urban areas.

Life expectancy among Native Americans has increased steadily since the 1950s, although according to official statistics, it is still about 2.4 years less than among other Americans overall (Barnes, Adams, and Powell-Griner, 2010). In addition, because Native Americans who die off of reservations are often listed as "white" on their death certificates, death rates for Native Americans are significantly underestimated (National Center for Health Statistics, 2010b). Moreover, these death rates give a misleading picture because they include highly assimilated suburban dwellers with little Native American background, homeless individuals living in city slums, and individuals living more or less traditional lives on reservations. In Arizona, for example, where most Native Americans live on reservations, the average life expectancy is 55 years (Nichols, 2002).

Even when looking only at national averages, sharp health differences between Native and white Americans are apparent. Native Americans are considerably more likely to live with disabilities and to report unmet needs for health care (Barnes et al., 2010). Importantly, Native Americans also experience significantly higher rates of infant mortality than do whites (see Figure 3.2).

These differences in infant mortality grow even starker when we separate **neonatal infant mortality** (deaths occurring during the first 27 days after birth) from **postneonatal infant mortality** (deaths occurring between 28 days and 11 months after birth). *Neonatal* infant mortality rates are essentially the same among Native Americans and whites, but *postneonatal* infant mortality is almost three times higher among Native Americans. Most postneonatal deaths stem from poverty, malnutrition, maternal tobacco use, poor living conditions, and lack of health care for ill infants (Tomashek et al., 2006).

For Native Americans who survive past infancy, heavy alcohol use stands out as an especially serious health risk (see Table 3.2). Although alcohol-related deaths among Native Americans have decreased in recent years, deaths from liver disease, suicide, and accidents (often caused by alcohol use) remain strikingly common. Native Americans (like other poor populations) are also significantly more likely than white Americans to die from diabetes (Barnes et al., 2010; Heron, 2010).

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 Figures 3.1 and 3.2). Overall, 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, they may experience 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.

In addition, Southeast Asians living in the United States typically have less access to health care than do other Asian Americans (Association of Asian Pacific Community Health Organizations, 2008). Rates of health insurance coverage are low, and even those who have insurance sometimes find that linguistic or cultural barriers make it difficult to communicate with health care workers or 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 (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, from Hispanic farm workers 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; Brulle and Pellow, 2006). 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 and known to have high levels of lead in their blood, 17% are white non-Hispanic, 16% are Hispanic, and 60% 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. Exposure to environmental pollution is more highly correlated with race than with any other factor, including poverty (Brulle and Pellow, 2006).

Environmental racism is a consequence of "everyday" racism. Racial discrimination enables industrialists, with the tacit approval of government bureaucrats and politicians, to place environmental hazards in minority communities without worrying that those communities will have the political power or financial resources to resist. Poverty and lack of other job opportunities can even encourage minority communities to welcome polluting industries for the jobs they will bring. This doesn't 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 organizations of African Americans, Hispanic Americans, Asian Americans, and Native Americans are working to fight for environmental justice (Brulle and Pellow, 2006), as are numerous national civil rights and environmental organizations. These organizations have had considerable success, both locally and nationally, in keeping polluting companies out of local communities and getting the federal Environmental Protection Agency to consider environmental justice in its decisions (Brulle and Pellow, 2006).

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 in the United States. 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.

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** rather than **acute illnesses** comprise the major health problems, often bringing years of disability in their wake.

The American population is aging steadily, with the population above age 85 growing the fastest. Although most middle-aged and older persons are relatively healthy, rates of illness, disability, and mortality nevertheless are rising 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—are bound to 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 is shrinking. Consequently, in the future, 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.

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 with two X chromosomes and a vagina are sexually female, and those with one X chromosome, 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 to the social expectations regarding masculinity and femininity that we are expected to follow based on our assigned sex. Because these categories are social, they vary across time and across culture.

Basic epidemiological data show that both sex and gender affect health (Bird and Rieker, 2008; Read and Gorman, 2010; Rieker, Bird, and Lang, 2010). For example, before the twentieth century, complications of pregnancy and childbirth often cut short women's lives, so on average, women died younger than did men. These days, however, American women (regardless of race) live longer than men do, as Figure 3.1 shows—even though the same diseases (including heart disease, cancer, and cerebrovascular disease) eventually kill most people. The *differences* between men's and women's life expectancies suggest that sex may directly affect health, but 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 has changed.

But mortality differences tell only part of the story. If we look only at life expectancies, we might conclude that women are biologically hardier 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 (Bird and Rieker, 2008; Read and Gorman, 2010). Arthritis, for example, is the most common chronic, nonfatal condition among both men and women older than age 45 years, but it strikes women about 50% more often than it does men. In addition, at each age, women experience a 20% to 30% 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 research, however, suggests that the health differences between men and women are real (Bird and Rieker, 2008; Read and Gorman, 2010). These differences stem from both the biological differences of sex and the socially reinforced differences of gender.

Sex does seem to offer females some biological health benefits (Bird and Rieker, 2008; Read and Gorman, 2010). Around the globe, more females than males survive at every stage of life from fetus to old age as long as they receive adequate nutrition. 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 lower proportions) somehow protect the heart and other organs from fatal disease.

Gender, too, protects women from fatal disease and injury (Bird and Rieker, 2008; Read and Gorman, 2010; Rieker, Bird, and Lang, 2010). Most importantly, because of differences in male and female gender roles, women less often abuse alcohol, drive dangerously, participate in dangerous sports, and so on. They are also less likely than men to work in dangerous industries such as 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 women 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, they have higher rates of morbidity than do 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 because of their relatively high stress levels coupled with low control over their lives (a gender effect). The latter theory gains support from an article published in the prestigious *American Sociological Review* and based on national data collected from **random samples** over a 30-year period (Schnittker, 2007). The article found that women's self-reported health (a measure of morbidity) had improved considerably from 1974 to 2004 and that almost all of the improvement was explained by women's increased educational attainment, which in turn increased their employment and income. Increased education apparently gives women more power over their lives and therefore improves their health.

These changes are part of a broader move toward gender convergence (Annandale, 2010). **Gender convergence** refers to the growing similarities in expectations for how men and women should behave in their everyday lives. This gender convergence may well result in greater convergence in men and women's patterns of health, illness, and mortality. For example, women's new freedom to join the Marines may increase their health risks, while men's new freedom to put family ahead of careers may reduce their stress levels and so improve their health.

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% 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 same-sex sexual desires and practices) or to transsexuality (which refers to the perception that one belongs to the opposite of one's biological sex).

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; the same fetal tissue becomes female genitalia in the absence of these hormones. 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 environmental pollutants that their mothers absorbed while pregnant.

The social response to intersex individuals varies greatly across cultures. Some cultures revile them and kill such babies at birth. Other cultures assume that three or more sexes occur naturally in the population and consider intersex 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 intersexuality, 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 in the United States (Kessler, 1998). Doctors urged parents of intersex children to have the children surgically reassigned to be either male or female as early in infancy 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, hide their history from them, and 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 (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 (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 hold off on surgery for six months to give parents time to consider other options (Navarro, 2004).

Case Study: Intimate Partner Violence and Health

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

According to data collected by federal researchers from a large-scale, national, random sample, about 25% of women (compared with 8% of men) have been raped or physically assaulted by a spouse, ex-spouse, lover, or date at some point during their lives (Tjaden and Thoennes, 2000). These numbers, of course, do not include the approximately 1,200 women who are killed each year by intimate partners and so are unable to answer survey questions (National Center for Injury Prevention and Control, 2009).

Women whose romantic partners are male are about three times more likely to suffer an attack than those whose romantic partners are female. In addition, Native American women report experiencing violence considerably more often, and Asian American women considerably less often, than do other women. This last finding, however, may reflect differences in the likelihood of *reporting* violence more than differences in *rates* of violence (Tjaden and Thoennes, 2000).

The consequences of violence are also more severe for women than for men. Women are about three times as likely as men to be killed during an attack and twice as likely to be seriously injured, with about one-third of women requiring emergency health care afterwards. Extrapolating from these data, the researchers estimate that more than a half million women per year seek care at hospital emergency departments for injuries resulting from assault by intimate partners (Tjaden and Thoennes, 2000).

That assaults by men far surpass assaults 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 violence against wives a man's legal and even moral right. Even after that date, most police refused to arrest men for such violence, and most courts refused to prosecute, a situation that did not begin to change for more than a decade.

Intimate violence against women 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 or romantic partners respond to those problems with violence. 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. Moreover, women typically have less access to money than do their male partners and so often find themselves financially unable to leave if a relationship turns violent.

Violence against women occurs most often among men who believe that their power within the family is threatened, such as men who have less education than their wives (Tjaden and Thoennes, 2000). In addition, violence 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 intimate violence against women is not only an individual response to social stress but also is a form of **social control**: a way of reinforcing social expectations and power relationships. Specifically, intimate violence against women operates as social control by reinforcing men's power over women and women's inferior position within society. Consequently, as long as gender inequality remains the norm, woman battering will persist.

Recognition of intimate partner violence as a health risk has led various health-related organizations to enter the fight against it. During the past decade, the U.S. Centers for Disease Control and Prevention has begun funding research on the causes, consequences, and prevention of intimate partner violence, 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 departments. 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.

IMPLICATIONS

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. Importantly, each of these factors (along with age) interacts with the others, leaving some individuals at much greater risk of illness and injury than others; *Contemporary Issues: Ethnicity, Class, Gender, and Hotel Maids* explores the health risks faced by women who are disadvantaged by social class, ethnicity, and immigration status, as well as by gender.

Given that 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 of men, and 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.

CONTEMPORARY ISSUES

Ethnicity, Class, Gender, and Hotel Maids

If you have ever stayed in a nice hotel, you probably enjoyed the fresh sheets, clean sinks, and other amenities provided by hotel maids. Yet maids' work is largely invisible—and far more dangerous than most realize. Moreover, those dangers have multiplied in recent years. Luxury hotels now use three sheets per bed rather than two, requiring maids to lift the mattress eight times simply to make a bed. Meanwhile, mattresses have grown thicker and heavier, making them considerably more difficult to lift. The number of pillows and blankets per bed also has increased along with the physical labor needed to deal with those linens. Yet the number of rooms maids are expected to clean each day has increased. As a result, maids typically lift more weight daily than federal guidelines allow and, consequently, face risks of back injuries equal to those of construction workers (Greenhouse, 2006).

Maids also risk injury when they scrub sinks and tubs or wash floors. The repetitive motion required for these tasks can injure joints and muscles, as can the need to bend, crouch, or reach up to clean various surfaces. Toxic chemicals used in cleaning can also place maids at risk.

Almost all maids are female, immigrants, non-white or Hispanic, and poor or near poor. Each of these statuses reduces the odds that they can find other jobs or negotiate for better working conditions. Moreover, each of these statuses exposes them to health risks outside of the work environment that can multiply the risks they face at work. The union UNITE HERE (www.unitehere.org), which represents hotel workers as well as workers in several other industries, has sponsored an ongoing boycott and campaign aimed at changing dangerous work conditions. The hope is that by working together, maids will gain greater power to change their lives than they ever could have as individuals.

SUMMARY

1. The causes and types of illness are not randomly distributed among the U.S. population but rather vary dramatically according to social class, ethnicity, age, sex, and gender.
2. Social class very strongly affects rates of mortality and morbidity. Poor persons are substantially more likely than others to experience illness and disability and to die young. These social class differences primarily reflect lower class persons' exposure to environmental hazards, unsafe working conditions, inadequate housing, poor nutrition, and psychological stress.
3. Ethnicity also affects health status. Infant mortality rates are especially high among African Americans and Native Americans. African Americans, Hispanic Americans, and Native Americans are all more likely than white Americans to die of conditions linked to poverty and despair, including liver disease and diabetes. In contrast, health is generally excellent among Asian Americans except for recent poor immigrants from Southeast Asia.
4. Environmental racism refers to the disproportionate burden of environmental pollution experienced by racial and ethnic minorities.
5. For those who survive infancy, mortality rates rise significantly beginning at about age 40. For those who survive past age 65, chronic illnesses rather than acute illnesses comprise the major health problems.
6. The American population is aging steadily. As a result, future years will see both higher rates of illness, disability, and mortality and increased health care costs.
7. The United States is experiencing the feminization of aging. That is, each age cohort has a higher percentage of women than the next younger cohort. As a result, in the future, more Americans will likely need health care, and fewer will be able to afford it.
8. Although men have higher rates of *fatal* diseases and die younger, women experience higher levels of *nonfatal, chronic* conditions. These differences stem from both *sex* differences (such as hormone levels) and *gender* differences (such as levels of risk taking).
9. The term *intersex* refers to individuals born with characteristics of both sexes. Until recently, intersex was treated solely as a medical and surgical problem based on social ideas about gender.
10. Intimate partner violence remains a serious source of injury and death. It continues to exist because it reflects basic cultural and political forces in our society and, indeed, around the world.

REVIEW QUESTIONS

1. How and why does social class affect people's health?
2. What are the special health problems of homeless persons? Of migrant farm workers?

3. How does ethnicity affect health separately from social class? How does social class affect health separately from ethnicity?
4. How and why do the particular health problems of African Americans, Hispanic Americans, Native Americans, and Asian Americans differ from those of whites?
5. What is environmental racism?
6. What are the health care consequences of an aging population and of the feminization of aging?
7. Why do men have higher mortality rates than women but lower morbidity rates?
8. What are the sources and consequences of intimate partner violence? Why do some health care workers consider it to be a serious health problem?

CRITICAL THINKING QUESTIONS

1. Explain why poor persons become ill more often and die younger than wealthier persons.
2. Assume that over the next 20 years both men and women increasingly adopt behavior patterns now associated with the other gender. What changes would you expect to see in the health of men and women? Explain your answer.
3. Assume that 20 years from now, African Americans are as likely as whites to graduate from college. Why and in what ways would you expect the health of the African American population to improve? Why and in what ways would you expect it to remain the same?

CHAPTER

4

Illness and Death in
Developed Nati