

SECTION

I

A Call to Action

To confront the chronic disease epidemic that threatens to dominate human health in the 21st century, public health practice must begin to focus on far more than providing basic medical care. To establish a favorable environment for human well-being, public health practitioners must concentrate on effecting social change by helping to modify individual behaviors and lifestyles, to improve social and economic conditions, and to reform social policies.

This section serves as a call to action by demonstrating that the most critical threats to both the public's health and public health as an institution can be addressed only with profound social changes.



CHAPTER

1

Emerging Threats to the Public's Health: Need for Social Change

An epidemic of chronic disease threatens the public's health. Fueling this epidemic are unhealthy lifestyles and behaviors, deteriorating social conditions, and an increasingly hazardous environment, coupled with a crisis in access to quality health care. The emerging chronic disease epidemic poses both a threat to the public's health and a challenge to public health practice. Public health practice must focus on far more than the provision of medical care. It must, first and foremost, dedicate its efforts to modifying individual lifestyle and behavior, to improving social and economic conditions, and to reforming social policy to establish an environment that fosters optimal human health. In other words, the business of public health must focus on creating social change.

The United States is experiencing an epidemic unlike any in its history. Chronic disease is now responsible for 7 of every 10 deaths in the country each year—1.7 million deaths in all (Kung et al., 2008). The impact extends beyond mortality rates: approximately one-fourth of people with chronic conditions have one or more limitations on their daily activities (Anderson, 2004); 100 million Americans—more than one-third of the U.S. population—experience disability or severe limitation of their daily activities due to chronic disease. Chronic disease afflicts more than 120 million Americans and is projected to affect up to 134 million by the year 2020. By then, the costs associated with the epidemic will approach \$1 trillion per year.

Unlike previous epidemics, the historic proportions associated with chronic disease today are not reported as front-page news, efforts to confront the issues are not among the priority program activities of most local health departments, and policymakers allocate precious few resources

to eliminating the epidemic or even to slowing its spread. Improving sanitation and hygiene will do little to stem the tide. Even the medical profession is nearly powerless against it.

The primary and most urgent challenge to public health today is to find a way to halt the epidemic of chronic disease that threatens to dominate the population in the 21st century. Chronic diseases—heart disease, cancer, stroke, injuries, chronic obstructive lung disease, diabetes, and liver disease—are the chief causes of death among Americans in the 21st century (**Figure 1-1**).

By far, the leading causes of death in the United States are heart disease and cancer, which accounted for 25% and 23% of all deaths, respectively, in 2007 (National Center for Health Statistics [NCHS], 2011). Injuries, including motor vehicle accidents, suicides, homicides, falls, and drownings, accounted for an additional 156,000 deaths annually (6.4% of all deaths) and were the leading causes of death among persons aged 15 to 24 years in 2007 (NCHS, 2011). Violence, in particular, is an alarming part of the chronic disease epidemic. Homicide alone is the leading cause of death among Blacks aged 15 to 24 and is the second leading cause of death among all persons in this age group (NCHS, 2011; Rosenberg, Powell, & Hammond, 1997; Satcher, 1996). Annually, cerebrovascular diseases (stroke) and chronic lower respiratory tract diseases cause an additional 135,000 and 127,000 deaths, respectively (10.9% of all deaths; NCHS, 2011).

Chronic diseases also cause a substantial amount of disability and suffering among Americans. Approximately 100 million people in the

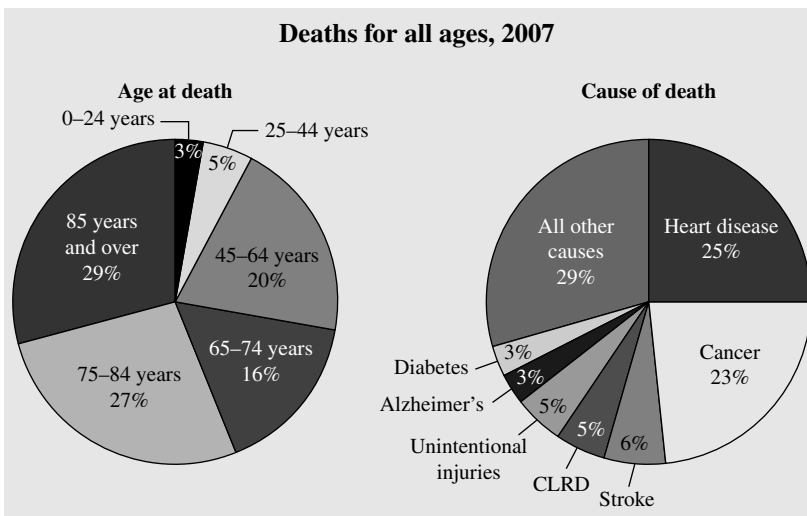


Figure 1-1 Causes of Death—United States, 2007

Source: National Center for Health Statistics. (2011). *Health, United States, 2010: With Special Feature on Death and Dying*, p. 33. Hyattsville, MD.

United States have one or more chronic medical conditions, such as heart disease, stroke, cancer, arthritis, diabetes, lung disease, osteoporosis, multiple sclerosis, and mental retardation; about 40% of this population has more than one chronic condition (Hoffman, Rice, & Sung, 1996). The direct medical costs associated with chronic diseases accounted for about 76% of all direct medical expenditures in the nation (Hoffman et al., 1996). Furthermore, chronic diseases resulted in 11.6% of all individuals, and 32.6% of those ages 65 years and over, having limitation of activity (i.e., limitation of their ability to perform activities usual for their age group) in 2006 (NCHS, 2009).

Despite advances in medical knowledge and treatment, little progress has been made in stemming the epidemic. Although stroke mortality rates declined by 71% and heart disease mortality rates declined by 61% from 1970 to 2007 (NCHS, 2011), only about one-third of the decline in mortality was due to a reduction in the incidence of cardiovascular disease (Sytkowski, Kannel, & D'Agostino, 1990), and the burden of disease morbidity is expected to increase, especially among the elderly (Bonneux et al., 1994). Although fewer people are dying of their disease, nearly the same proportion has cardiovascular disease and suffers from their chronic conditions (Bonneux et al., 1994; Centers for Disease Control and Prevention [CDC], 1993). Between 1997–1998 and 2008–2009, the percent of persons reporting a diagnosis of heart disease or a heart condition decreased by one-half of a percent (from 12.0% to 11.5%), whereas the percentage of persons reporting a diagnosis of stroke increased from 2.3% to 2.7% (NCHS, 2011).

Thus, the overall health status among the American population seems to be worsening, not improving. Between 1993 and 2001, the adjusted proportion of adults who self-rated their health status as being poor increased from 3.3% to 4.1% (Zahran et al., 2005). The proportion of adults who reported more than 13 days of activity limitation due to ill health increased from 5.3% to 5.9%. Also, the adjusted proportion who reported more than 13 unhealthy days due to poor physical health increased from 9.3% to 10.2% (Zahran et al., 2005).

Overall cancer death rates have remained essentially unchanged for the past 50 years (NCHS, 2011). There has been a modest decline in mortality from colorectal cancer, stomach cancer, uterine cancer, and liver cancer, but these changes have been more than offset by the striking increase in lung cancer mortality (American Cancer Society, 1994; NCHS, 2011). Although lung cancer death rates among men peaked in the early 1990s, rates are still increasing among women (NCHS, 2011).

The overall rate of suicide in the United States has decreased slightly since 1950. However, among U.S. teenagers the suicide rate has more than doubled (NCHS, 2011). In this same time period, the overall homicide rate has increased slightly, whereas the homicide rate among teenagers has nearly tripled, mostly due to the widespread availability of firearms (NCHS, 2011; Satcher, 1996).

The incidence of diabetes among adults more than tripled from 1980 through 2009 (CDC, 2011). The burden of this disease falls largely on minority populations: Data from 2005–2008 show that 10.9% of adults over age 20 years have either physician-diagnosed or undiagnosed diabetes. This percentage falls to 9.2% among non-Hispanic Whites and increases to 16.9% among Mexicans and 19.9% among Blacks (NCHS, 2011). Rates of diabetes also increase as poverty increases (NCHS, 2011). Diabetes is merely one example of the increased burden of disease among minority and underserved populations. Ischemic heart disease death rates, which were higher among Whites than Blacks in 1980, have declined in both groups but more rapidly among Whites, so that rates are now higher among Blacks than Whites (NCHS, 2011).

The disparity in overall mortality between higher and lower socioeconomic groups continues to increase in the United States (Pappas et al., 1993). Between 1960 and 1986, overall mortality declined in all socioeconomic groups, but declines were significantly greater among persons with higher income and higher levels of education (Pappas et al., 1993). In communities that are particularly poor, death rates among Blacks have changed little since 1960 (Jenkins et al., 1977; McCord & Freeman, 1990; Pappas et al., 1993).

A striking disparity between higher and lower socioeconomic groups is evident not only in mortality but in morbidity as well. Although only 9.5% of non-poor individuals (those with incomes at least 200% of the poverty level) reported limitation of activity due to chronic disease in 2006, 22.1% of poor individuals (below the poverty threshold) reported limitation of activity, compared with 8.7% of those above 200% of the poverty level (NCHS, 2009). Although only 4.3% of individuals at or above 400% of the poverty level reported fair or poor health in 2009 (compared with good or excellent health), 21.8% of poor persons did (NCHS, 2011).

The contrast in health status between higher and lower socioeconomic class groups is itself a component of the chronic disease epidemic. Several studies have shown that the persistence of social class differences in health status is a stronger determinant of overall poor health than the level of poverty and disadvantage in a community (Henig, 1997; Kennedy, Kawachi, & Prothrow-Stith, 1995; Marmot, Bobak, & Smith, 1995; McCord & Freeman, 1990; Navarro, 1997; Townsend & Davidson, 1982; Wilkinson, 1990, 1992, 1997). Johns Hopkins University professor Vincente Navarro (1997, p. 335) pointed out the following:

A poor person in Harlem, New York City, is likely to have worse health status than a middle-class person in Bangladesh (one of the poorest countries in the world), even though the former has, in absolute terms, more resources (monetary resources and goods and services) than the latter. Still, to be poor in Harlem is far more

difficult (because of the social and psychological distance from the rest of society) than to be middle class in Bangladesh. It is not class structure but class relations that affect the levels of health of our populations.

The chronic disease epidemic must be viewed with no less urgency and concern than traditional infectious disease “epidemics” that have plagued society for centuries. As Dr. David Satcher, former director of the CDC, noted, chronic disease (violence, in particular) “can erode the well-being of neighborhoods and destroy communities with the same deadly impact as the outbreak of a fatal disease” (Satcher, 1996, p. 1707). And an editorial in *American Journal of Public Health* asserted, “We should be as much concerned about the thousands of people who are homeless in American cities and the thousands of children in residentially unstable families as we are when there is an epidemic of an infectious disease affecting a few hundred people, and we should respond with the same urgency” (Breakey, 1997, p. 153).

Recognizing the factors fueling the chronic disease epidemic is necessary to understand why medical and traditional public health efforts have been virtually powerless in confronting chronic disease. These factors are (1) unhealthy lifestyles and behaviors, (2) deteriorating social and economic conditions, and (3) a crisis in access to quality health care.

■ UNHEALTHY LIFESTYLES AND BEHAVIORS

A large body of medical and public health literature documents the role of individual behavior in disease, especially chronic disease. A series of large, population-based, cohort studies identified behavioral risk factors for a variety of chronic diseases, most notably heart disease, stroke, and cancer (Slater & Carlton, 1985). The Harvard Report on Cancer Prevention concluded that two-thirds of cancer deaths alone could be prevented by changes in individual behavior (Colditz et al., 1996).

Researchers from the CDC estimated that of the 2.4 million annual deaths in the United States, more than 400,000 could be prevented by eliminating tobacco use, approximately 365,000 could be prevented through improved diet and physical activity, another 85,000 could be prevented by eliminating excess alcohol consumption, and an additional 20,000 could be prevented by eliminating unsafe sexual practices (Mokdad et al., 2004, 2005). Other behavior-related, preventable causes of death include workplace, home, recreational, and roadway injuries; firearms-related injuries; high blood pressure and high cholesterol levels (which are related to diet and physical activity); illicit drug use; and breast and cervical cancer (where early screening could impact prognosis; CDC, 1995; Mokdad et al., 2004; U.S. Department of Health and

Human Services [USDHHS], 1995). In total, about 1.1 million American lives, or nearly one-half of all deaths, could be saved each year by changes in individual health-related behaviors.

■ DETERIORATING SOCIAL AND ECONOMIC CONDITIONS

Poverty

The single best predictor of a person's health status is his or her socioeconomic status (Adler et al., 1997; Antonovsky, 1967; Gregorio, Walsh, & Paturzo, 1997; Hemingway et al., 1997; Kaplan & Lynch, 1997; Kawachi et al., 1997; Kitagawa & Hauser, 1973; Lynch, Kaplan, & Shema, 1997; Marmot et al., 1995; McDonough et al., 1997; Moss, 1997; Pappas et al., 1993; Patrick & Wickizer, 1995; Power et al., 1997; Satcher, 1996; Susser, Watson, & Hopper, 1985; Syme & Berkman, 1976; Yeracaris & Kim, 1978). Age-adjusted death rates for White males in 1986 ranged from 2.4 per thousand among men with an income greater than \$25,000 to 16.0 per thousand among those with an income below \$9,000 (Pappas et al., 1993). A similar pattern held for White females (1.6 vs. 6.5 per thousand, respectively), Black males (3.6 vs. 19.5 per thousand, respectively), and Black females (2.3 vs. 7.6 per thousand, respectively).

Even after controlling for differences in unhealthy behaviors and lifestyles (e.g., smoking, alcohol use, drug use) and for access to health care, poverty remains a strong, independent predictor of poor health (Haan, Kaplan, & Camacho, 1987; Lantz et al., 1998). Controlling for baseline health status, race, income, employment status, access to medical care, health insurance coverage, smoking, alcohol consumption, physical activity, body mass index, and several other factors, persons living in poverty-stricken areas still have about a two to three times higher mortality rate than those who do not (Haan et al., 1987; Lantz et al., 1998). As Henig (1997) concluded, "the very fact of being poor is itself an independent risk factor for getting sick" (p. 103).

Poverty is a particularly strong risk factor for disease and death among children. Children who grow up in poverty are eight times more likely to die from homicide, five times more likely to have a physical or mental disability, five times more likely to be subject to child abuse, three times more likely to die in childhood, and twice as likely to be killed in an accident (Children's Defense Fund, 1994). Lisbeth Schorr (1989) summarized the problem succinctly: "Poverty is the greatest risk factor of all. Family poverty is relentlessly correlated with high rates of school-age childbearing, school failure, and violent crime—and with all their antecedents. Low income is an important risk factor in itself, and so is relative poverty—having significantly less income than the norm, especially in a society that places a high value on economic success" (p. xxii).

Efforts to improve the public's health must therefore address the problem of poverty. Not only is poverty a social and economic problem, but it is also a fundamental threat to public health.

Despite the importance of poverty as a public health problem and in spite of the so-called war on poverty during the Great Society reforms of the 1960s and President Lyndon Johnson's expressed national "commitment to eradicate poverty," poverty remains nearly as widespread as it was during the late 1960s and has become more prevalent in recent years (Bok, 1996; NCHS, 2011). The proportion of the population living below the official poverty line dropped from 22.4% in 1959 to 11.2% in 1974; however, it has increased overall since then, reaching 15.1% in 1993, the highest rate of poverty in the United States since the mid-1960s (Bok, 1996; NCHS, 1997). Although the proportion of persons living below the poverty level declined during the 1990s, it increased from 11.3% to 14.3% between 2000 and 2009 (NCHS, 2011; U.S. Bureau of the Census [Census], 2010a). Thus, the rate of poverty in the United States in 2002 was actually higher than it was 35 years earlier, in 1974. The proportion of people living in extreme poverty (income less than half the official poverty line) also has increased, rising from 30% of those below the poverty line in 1975 to 40% in the late 1980s (Bok, 1996) and reaching 45% in the 2000 U.S. Census (Census, 2000b).

Not only have rates of abject poverty increased, but the mean family income for the lowest 40% income segment in the country has declined since 1972 (Bok, 1996). Family income for the highest 40% income segment during the same period has increased, widening the gap in income disparity between the middle and upper class and the poor. Mean family income among the lowest 20% income segment decreased from \$10,769 in 1972 (in constant 1992 dollars) to \$9,708 in 1992 and among the second lowest 20% income segment from \$23,725 to \$23,337 (Bok, 1996). At the same time, mean family income among the highest 20% income segment increased from \$82,534 to \$99,252 and among the second highest 20% income segment from \$47,588 to \$53,365.

Hunger

The health consequences of hunger go beyond medical conditions associated with nutritional deficiencies and include inability to concentrate in school, feelings of worthlessness, and other psychological problems (Meyers et al., 1989; Pollitt, Gersovitz, & Garginlo, 1978; Rose & Oliveira, 1997; Sidel, 1997). Thus, hunger can significantly affect a person's physical and mental well-being. Estimates suggest that at least 4 million children under age 12 in the United States experience hunger daily and an additional 9.6 million may experience hunger at some point during the year (Sidel, 1997; Wehler et al., 1995). In 2009, 14.7% of U.S. households were food insecure (having limited or uncertain availability

of nutritionally adequate, safe, or acceptable foods) at some time during the year, the highest rate of food insecurity since national surveys began in 1995 (U.S. Department of Agriculture, 2011).

Educational Attainment

Education is one of the most important determinants of health status. Age-adjusted death rates for White males in 1986 ranged from 2.8 per thousand among those with at least 4 years of college to 7.6 per thousand among those without a high school diploma (Pappas et al., 1993). Similarly, death rates for these educational groups ranged from 1.8 to 3.4 per thousand among White females, 6.0 to 13.4 per thousand among Black males, and 2.2 to 6.2 per thousand among Black females.

Education is strongly related to unhealthy behaviors. For example, educational attainment is one of the best predictors of smoking status. In 1994, adult smoking prevalence ranged from 12.3% among adults with 16 or more years of education to 38.2% among those with only 9 to 11 years of education (CDC, 1996). In 2009, age-adjusted adult smoking prevalence was 28.9% among those aged 25 years and over with no high school diploma but only 9.0% among those with a college degree (NCHS, 2011). Independent of its relation to behavior, education influences a person's ability to access and understand health information. For example, people who are illiterate will not be helped by written educational materials produced by public health practitioners.

The United States has made little progress in improving the educational attainment of its population during the past two decades. The overall proportion of adults ages 25 and older with a high school diploma (or equivalency) increased from 75.2% in 1990 to 81.1% in 2000 to 87.1% in 2010 (Census, 1990, 2000a, 2010b). Perhaps of even more concern, the Department of Education estimates that about 35% of 18-year-olds in the nation are functionally illiterate (Harris, 1996; U.S. Department of Education, 1994). In 1992, more than one-fifth of all adults in the United States (representing more than 38 million individuals) scored in the lowest level of literacy measured in the National Adult Literacy Survey (U.S. Department of Education, 2002).

Housing

The lack of adequate and stable housing is associated with a number of chronic and severe health problems. Homelessness is associated with tuberculosis, trauma, depression and other mental illnesses, alcoholism, drug abuse, sexually transmitted diseases, and poor nutrition (Breakey, 1997; Breakey & Fischer, 1995; Dellon, 1995; Greene, Ennett, & Ringwalt, 1997; Robertson, Zlotnick, & Westerfelt, 1997). The lifetime prevalence of homelessness (the percentage of persons who report having been homeless at some time in their lives) in the United States is

about 7.4%, and the 5-year prevalence of homelessness is 3.1% (Breakey, 1997; Link et al., 1994). In any given year, nearly 1% of the population experiences homelessness, as do 6.3% of people living in poverty (Burt & Aron, 2000). Although accurate estimates of trends in homelessness are not available, no evidence exists that the extent of homelessness is decreasing (Breakey, 1997) and available evidence suggests that the number of homeless persons has markedly increased over the past two decades (Urban Institute, 2002).

Even among those who do have housing, the quality of housing conditions is a significant concern. In 1991, 6.7% of all housing units had a leaking roof, 5.1% had open cracks in the ceiling or walls, and 5.0% had unusable toilets (Bok, 1996). The percentage of families eligible for federal assistance through public housing, subsidized housing, and rent supplements who receive such aid is only 30% (Bok, 1996). Although the federal government provides about \$90 million in housing subsidies each year, \$70 million of it is in the form of tax deductions for homeowners (Bok, 1996). For families not receiving subsidies or living in public housing, 77% pay more than half their income for rent (Bok, 1996).

The health consequences of poor-quality housing can be substantial. A study published in the *New England Journal of Medicine* found that exposure to cockroach debris may be the leading cause of asthma among inner-city children (Rosenstreich et al., 1997). Children who were exposed to higher levels of cockroach allergen not only had higher rates of hospitalization for asthma but also had more symptoms of wheezing, more physician visits, and more days of school absence than other asthmatic children. The high exposure to cockroaches in the inner city may explain both the high prevalence of asthma in the inner city and the increase in the incidence of asthma among inner-city children over the past 30 years (Platts-Mills & Carter, 1997).

Another example of important health consequences caused by poor housing is lead poisoning among children. Peeling lead-paint chips in older housing is still the chief cause of lead poisoning. Children living in houses built before 1946 are at greatest risk. From 1991 to 1994, about 16% of poor children living in such housing had elevated blood lead levels, putting them at risk for significant neurological and psychological impairment, including decreased school performance and IQ (CDC, 1997).

Unemployment

Unemployment is recognized as a major predictor of morbidity and mortality in the population. Catalano (1991) showed that for every 1% increase in unemployment during the 1980s, there was a 5% increase in mortality from heart disease and stroke and a 6% increase in homicide deaths. Economic strains associated with unemployment pose especially large health risks to disadvantaged people (Smith, 1987).

Overall unemployment rates in the United States fell slightly during the latter part of the 20th century, decreasing from 8.5% in 1975 to 4.9% in 1997 (U.S. Department of Labor, 1997). Unemployment rates remained relatively stable and were still at 5.8% in 2008 but increased to 9.3% in 2009 (U.S. Department of Labor, 2010). This rate, however, does not affect all demographics equally: The 2009 unemployment rates were 14.8% for African Americans, 12.1% for Hispanics, 8.5% for Whites, and 7.3% for Asians (U.S. Department of Labor, 2010).

Environmental Hazards

Exposure to environmental toxins is associated with a wide range of chronic health problems. Among the environmental hazards that cause the greatest disease burden are secondhand smoke (53,000 deaths per year; Glantz & Parmley, 1991; Wells, 1988), indoor radon (7,000 to 30,000 deaths per year; National Research Council, 1998; U.S. Environmental Protection Agency, 1992), and arsenic in drinking water (about 4,700 deaths per year; A.H. Smith et al., 1992). The CDC estimated that approximately 17% of all deaths in the United States could be prevented by reducing exposure to environmental hazards (CDC, 1995; USDHHS, 1995).

Despite improvements in environmental quality for the advantaged segment of the population, disadvantaged segments of the population still suffer from the adverse health effects of an unhealthy environment. A classic example of the disproportionate burden of environmental risk on the disadvantaged is the problem of childhood lead poisoning. Although the problem has been recognized for decades, the lead content in paint and gasoline has been regulated for many years, and the federal and state governments have spent millions of dollars on lead abatement programs, lead poisoning is still a significant health problem for poor, inner-city children (CDC, 1997). From 1991 to 1994, more than 16% of low-income children who lived in houses built before 1946 had elevated blood lead levels, compared with 4.1% and 0.9% of middle- and high-income children, respectively (CDC, 1997).

A report by the Pew Environmental Health Commission at Johns Hopkins University reported that the ability of public health professionals to prevent health problems due to environmental hazards is being severely impaired by the nation's lack of adequate surveillance of environmental factors contributing to human disease. The panel's chairman, former Senator Lowell Weicker Jr., noted that an epidemic of environmentally caused diseases should be addressed with no less urgency and no less comprehensiveness than infectious disease threats that affect far fewer people: "We responded quickly to the threat of West Nile virus, tracking and monitoring every report of infected birds and people, but 20 years into the asthma epidemic, this country is still unable to track where and when attacks occur and what environmental links may trigger them" (Reuters Health, 2000).

Crime and Violence

In 1984, former Surgeon General C. Everett Koop declared violence to be an epidemic and a public health problem: “Violence is as much a public health issue for me and my successors in this country as smallpox, tuberculosis, and syphilis were for my predecessors in the last two centuries” (Henig, 1997, p. 110). In 1988, CDC researchers Mercy and Houk called for a similar approach to the problem of violence: “The time has come for us to address this problem in the manner in which we have addressed and dealt successfully with other threats to the public health” (p. 1284). CDC director David Satcher said, “If you look at the major cause of death today it’s not smallpox or polio or even infectious diseases. Violence is the leading cause of lost life in this country today. If it’s not a public health problem, why are all those people dying from it?” (Applebome, 1993, p. A7).

The disadvantaged communities in the United States have been ravaged by violence. After a decrease in the rate of firearm-related deaths from 1970 to 2000, rates have remained stable at 10.2 deaths per 100,000 people (NCHS, 2011). Furthermore, homicide remains the second leading cause of death among young people, ages 15 to 24, and the homicide death rate remains six times higher among African American males than among the general population (NCHS, 2011). There are more than 200 million guns in private ownership throughout the United States and 5.5 million new ones introduced each year, of which 100,000 are carried by children to school each day (Bok, 1996). The link between the availability of firearms and the increasing homicide rate is “every bit as strong as the studies that linked cigarettes to lung cancer” (Taubes, 1992, p. 215). In addition, child abuse rates have increased from 10 per thousand children in 1976 to 45 per thousand in 1992; some of this increase may be attributable to increased reporting of abuse, but at least a portion is due to a real increase in incidence (Bok, 1996).

In 2009, there were 1.3 million violent crimes in the United States, including more than 15,000 murders, 88,000 cases of forcible rape, and 806,000 cases of aggravated assault (U.S. Department of Justice, 2009). Despite a 5.2% decline in the rate of violent crime between 2005 and 2009, there is still one murder every 34 minutes, one forcible rape every 6 minutes, and one aggravated assault every 39 seconds in this country (U.S. Department of Justice, 2009).

Social Support

The availability of a social support network—family, friends, and community programs to which an individual can turn for help, advice, reassurance, and consolation—is a strong determinant of health status (Berkman, 1984; Berkman & Breslow, 1983; Berkman & Syme, 1979; Broadhead et al., 1983; Cassel, 1976; Corin, 1995; Patrick & Wickizer, 1995;

Pilisuk & Minkler, 1985; Schorr, 1989). Even after controlling for most other known determinants of health—socioeconomic status, access to health care, and individual behaviors and lifestyle factors—the absence of social support remains a strong, independent predictor of disease (Berkman & Syme, 1979). As Schorr (1989) argued, “Formal social supports protect people from an amazing variety of pathological states, including destructive family functioning, low birthweight, depression, arthritis, tuberculosis, and even premature death” (p. 155).

The focus on what policymakers have termed “welfare reform” has taken a devastating toll on the availability and quality of social support networks in American communities. By reducing the level of government provision of basic needs—food, housing, transportation, child care, and health care—welfare “reform” has forced traditional social support networks, such as community support programs, to abandon their supportive tasks and instead scramble to find ways to meet the basic needs of their clients (Pilisuk & Minkler, 1985). As Pilisuk and Minkler (1985) argue, the primary value of welfare benefits is that it allows alternative support systems (families, friends, and community programs) to provide exactly the kind of support needed to keep people healthy.

“Family and community effectiveness in the provision of social support depends heavily on the broader economic and social environment. To build and maintain strong supportive ties, we must provide those programs, services, and policies on a societal level, which can help meet basic human needs. For it is only within this broader context of system-level support and commitment to people of all ages and places that social support on the individual and community levels can fulfill its potential” (Pilisuk & Minkler, 1985, p. 11).

The real threat that welfare reform poses to the public's health is that it renders ineffective the systems of social support in the family and community that are so closely tied to health status (Broadhead et al., 1983; Cassel, 1976; Cobb, 1976; Cohen & Syme, 1985; Pilisuk & Minkler, 1985). By forcing social support networks to concentrate on filling gaps in the basic needs of the poor rather than on providing a true social support system for those in distress, welfare reform as it is currently crafted makes it increasingly more difficult to achieve within communities the social conditions in which people can be healthy. Lisbeth Schorr (1989) summarized the problem:

For those living in persistent and concentrated poverty, it is reformed services and institutions that will furnish the essential footholds for the climb out of poverty. Yet in the legislative, academic, and political forums where antipoverty strategies and welfare reform are debated, the spotlight is only on short-term measures to reduce the numbers now on welfare, now unable to work productively.

The shocking deficiencies in the health, welfare, and education of poor children, the long-term investments that could help the vulnerable children of today to become the productive and contributing adults of tomorrow, are rarely on the agenda. . . . Children and families have needs that cannot be met by economic measures alone, and that cannot be met by individual families alone. (pp. xxiii, xxiv)

■ A CRISIS IN ACCESS TO QUALITY HEALTH CARE

Inadequate access to health care services is associated with increased burdens of economic hardship, poor health, and increased mortality (Blendon et al., 1994; Donelan et al., 1997; Franks, Clancy, & Gold, 1993; Henry J. Kaiser Family Foundation, 1994; Lurie et al., 1984; Lurie et al., 1986; Weissman & Epstein, 1994). The CDC estimated that about 11% of all deaths could be prevented by improving the population's access to quality medical treatment (CDC, 1995; USDHHS, 1995). In spite of the widespread recognition of this problem and the rhetoric about the importance of ensuring all citizens access to health care, the proportion of uninsured Americans increased from 13.6% in 1970 to 15.4% in 1995 (Bok, 1996; NCHS, 1997). Approximately 18% of the population—more than 46 million people—lack health insurance (NCHS, 2011). As of 2009, 8.5% of all children (under age 19) lacked any health insurance coverage (NCHS, 2011). Lack of insurance tends to be a problem of the poor. Although only 5.8% of non-poor individuals (incomes at or above 400% of the poverty level) lacked health insurance coverage in 2009, 30.4% of individuals below the poverty level had no health insurance coverage (NCHS, 2009).

The problem of access to quality health care among the poor is not limited to lack of insurance. Several studies have shown that disadvantaged populations tend to receive inferior health care, regardless of whether they have health insurance (Burstin, Lipsitz, & Brennan, 1992; Dalen & Santiago, 1991; Diehr et al., 1991; Goldberg et al., 1992; Kahn et al., 1994; Kasiske et al., 1991; Wenneker & Epstein, 1989; Yergan et al., 1987). For example, even among those who are insured by Medicaid, access to high-quality health care is limited. Several studies have shown that Medicaid patients are less likely to receive preventive care and that their physical health fares worse under Medicaid-managed care than under fee-for-service care (Ware et al., 1996). Ware and associates (1996) found that during a 4-year follow-up period, poor patients treated under Medicaid-managed care suffered greater declines in physical health status than those treated under traditional, fee-for-service Medicaid. Even without managed care, Medicaid patients have less access to continuing care and preventive care than patients who are privately insured (Davidson et al., 1994; Kerr & Siu, 1993).

Similarly, poor elderly patients who are enrolled in Medicare managed care may be less likely to have access to the intensive rehabilitation and support services that are necessary to keep them self-sufficient and avoid institutionalization. Retchin and associates (1997) found that compared with fee-for-service Medicare patients, Medicare managed care patients who suffer a stroke are more likely to be discharged to nursing homes and less likely to be placed in rehabilitative settings or discharged to home. Access to home health care and outcomes under Medicare managed care have also been shown to be worse than under traditional, fee-for-service Medicare (Experton et al., 1997; Shaugnessy, Schlenker, & Hittle, 1994). Ware and colleagues (1996) reported that elderly patients in health maintenance organizations had more significant declines in physical health compared with those who remained in fee-for-service settings over a 4-year follow-up period.

There is hope, however, that the problem of inadequate access to health care may be lessened with the Affordable Care Act, which was signed into law in March 2010. Although the effects of this law remain to be seen, the aims include expanding coverage to those denied health insurance due to preexisting conditions, increasing the number of people covered by Medicaid, and encouraging more businesses to provide insurance by offering tax credits (USDHHS, 2010).

■ IMPLICATIONS OF THE CHRONIC DISEASE EPIDEMIC FOR PUBLIC HEALTH PRACTICE

During the 19th and early 20th centuries, when the chief causes of preventable death were infectious diseases spread by contaminated water and food, the focus of public health practice was building a societal infrastructure for proper sanitation and hygiene and for the delivery of vaccines and treatments to the population. The chronic disease epidemic of the early 21st century, however, is largely related to individual lifestyle and behavior, deteriorating economic and social conditions, and the failure of social policy to address problems such as affordable and accessible health care of high quality for all Americans. Thus, public health practice must now focus on modifying individual lifestyle and behavior, improving social and economic conditions, and reforming social policy.

To start, at least 1.1 million American lives, or nearly one-half of all deaths, could be saved each year by changes in individual health-related behaviors (**Figure 1-2**; Mokdad et al., 2004, 2005). Although public health practice clearly has to focus on modifying individual lifestyle and behavior, it is important to note that personal behavior does not take place in a vacuum. Rather, it takes place in the context of a historical, cultural, and political environment and in communities with varying economic and social conditions. To change individual behavior, one cannot ignore

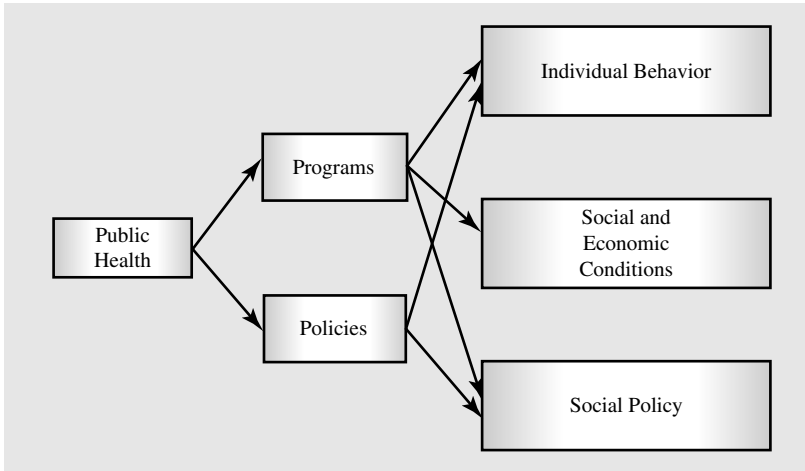


Figure 1-2 An Overview of the Functions of Public Health: Creating Social Change

the conditions and environment in which that behavior takes place. In fact, some argue that focusing on the economic and social conditions that give rise to unhealthy behaviors is essential to changing those behaviors. Because behavior is a product of the social conditions and social norms of the community in which a person lives (Tesh, 1994), “discussing changes in lifestyles without first discussing the changes in the social conditions which give rise to them, without recognizing that the lifestyle is derivative, is misleading” (Berliner, 1977, p. 119).

Social and economic factors not only influence health behaviors and individual lifestyle but also are themselves independently related to health status. Several decades of research have demonstrated that lower social class, social deprivation, and lack of social support are among the most important determinants of health (Antonovsky, 1967; Berkman, 1984; Bright, 1967; Cassel, 1976; Conrad, 1994; Frey, 1982; Haan et al., 1987; Kitagawa & Hauser, 1973; Marmot, 1982; Morris, 1979, 1982; Rose & Marmot, 1981; Salonen, 1982; Stockwell, 1961; Syme & Berkman, 1976; Yeracaris & Kim, 1978). Moreover, the strong association between these socioeconomic factors and health is not entirely explained by differences in individual lifestyle and health behaviors between members of higher and lower social class groups (Haan et al., 1987; Lantz et al., 1998; Rose & Marmot, 1981; Salonen, 1982; Slater & Carlton, 1985; Slater, Lorimor, & Lairson, 1985; Wiley & Camacho, 1980). Link and Phelan (1996) proposed a novel view of the relationship between socioeconomic status and disease, asserting that socioeconomic status must be viewed as a “fundamental cause” of disease.

Lantz et al., writing in the *Journal of the American Medical Association*, noted that “Although reducing the prevalence of health

risk behaviors in low-income populations is an important public health goal, socioeconomic differences in mortality are due to a wider array of factors and, therefore, would persist even with improved health behaviors among the disadvantaged" (1998, p. 1703). "We must look to a broader range of explanatory risk factors, including structural elements of inequality in our society" (p. 1708). The Institute of Medicine report (1988) on the future of public health, noting the importance of social and economic factors as determinants of health status, suggested that public health must take a much wider view of disease than in the past: "Public health programs, to be effective, should move beyond programs targeted on the immediate problem, such as teen pregnancy, to health promotion and prevention by dealing with underlying factors in the social environment. To deal with these factors, the scope of public health will need to encompass relationships with other social programs in education, social services, housing, and income maintenance" (p. 113).

The late Sol Levine noted that social factors "mean not only poverty but also social class, family, community, gender, ethnicity, racism, political economy, and culture. We have to learn how these interact with health, how, for example, culture, political economy, and racism may affect the community and family environment, which, in turn, may influence people's health. We have to look not only at individual characteristics but at the features of the society as well" (Henig, 1997, p. 102).

Because social and economic conditions are themselves a product of social policy, public health practice must also focus on changing social policy. Poverty is not a consequence of individual frailty, lack of responsibility, and lack of motivation, as some have argued. Rather, it is the product of social and economic conditions created and maintained by the historical, political, and cultural environment in which society has developed (Zaidi, 1988). Social policy contributes, at least in part, to the environment that determines social and economic conditions in the community. The availability of adequate food, housing, and jobs; the quality of the physical environment; access to medical services; the extent of social support in the community; and the amount of economic, employment, and educational opportunity are all influenced strongly by social policies. Former Harvard University president Derek Bok (1996) argued that "current levels of poverty are not immutable but are the result of policy choices, choices that seem at odds with the stated desire of most Americans to do more for the deserving poor" (p. 35).

For example, government assistance for single mothers with no earned income is only 27% of the median family income in the United States, compared with 38% in France, 47% in Germany, 60% in Britain, and 64% in Sweden (Bok, 1996). The rate of poverty among single mothers in the United States is more than twice the rate in each of the other countries (Bok, 1996). Quite simply, social policy has a direct and understandable effect on social conditions.

To confront threats to the public's health effectively, the three major functions of public health must be (1) modifying individual behavior and lifestyle, (2) improving social and economic conditions, and (3) reforming social policies. All represent fundamental aspects of social change. Ultimately, then, public health is in the business of creating or facilitating social change (Figure 1-2).

It should be noted that although chronic diseases have replaced infectious diseases as the chief causes of death in the United States, the nation has experienced a reemergence of infectious diseases, primarily due to acquired immunodeficiency syndrome (AIDS). Although the death rate from AIDS decreased from 16.2 in 1995 to 3.7 in 2007, its incidence has remained relatively stable during the past 18 years, with 41,000 reported cases in 1990 and 37,000 diagnoses in 2008 (NCHS, 1997, 2011). With the rise of AIDS has come increased risk for other infectious diseases, such as drug-resistant tuberculosis. In addition, influenza and pneumonia caused more than 52,000 deaths in 2007 (NCHS, 2011). The threat of emerging infectious diseases also remains a critical public health concern because of the potential for a worldwide avian flu epidemic (Parry, 2005) and because of already established threats, such as West Nile virus (Gorsche & Tilley, 2005) and severe acute respiratory syndrome, or SARS (Lu et al., 2005).

Infectious diseases, like chronic diseases, are strongly related to individual lifestyles and behaviors, social and economic conditions, and social policy. Infection with the human immunodeficiency virus (HIV), for example, is commonly precipitated by intravenous drug use. The spread of tuberculosis infection, especially multi-drug-resistant strains, is promoted by crowded and unsanitary living conditions. And the failure of society to develop rational policies to control the spread of HIV infection—such as needle exchange programs—that have been shown to be among the most highly effective interventions available has contributed to the AIDS epidemic (Lurie & Drucker, 1997).

■ CONCLUSION

The major implication of the chronic disease and emerging infectious disease epidemics for public health policy and practice is that public health must focus on far more than the provision of medical care. It must, first and foremost, focus on modifying individual lifestyle and behavior, improving social and economic conditions, and reforming social policy that contributes to an environment in which it is difficult for people to be healthy. Ultimately, then, public health is in the business of creating or facilitating social change.

The three-pronged attack that is necessary to control the epidemic of chronic disease and emerging infectious diseases in the United

States—modifying individual lifestyle and behavior, improving social and economic conditions, and reforming social policy—is not one that public health practitioners have traditionally been well equipped to conduct. And it has not been one at which public health has been particularly successful. Chapter 2 explores the threats to the survival of public health as an institution and why the task of marketing public health programs and policies is necessary for public health practitioners to effect change.

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