Chapter 1

Health vs. Health Care

Learning Objectives

- Compare health outcomes in the United States and their trends over time to 16 peer countries.
- Identify the "actual" causes of death in the United States.
- Describe all determinants of health and their proportional impact on the health of people in the United States.
- Compare, contrast, and critically assess public health models outlined by the Institute of Medicine.
- Discuss the role of socioeconomic factors on health, including the role of geographic location.
- Identify strategies to improve health outcomes in the United States.

THE CONTROVERSY

"U.S. health is *lousy* compared with peer nations," one newswriter says[1] reporting on a 2013 report from the U.S. National Research Council (NRC) and the Institute of Medicine (IOM), called *U.S. Health in International Perspective: Shorter Lives, Poorer Health.*[2] Another reporter asked, "What's ailing America?"[3] The committee chair overseeing the report's development summarized its findings simply as, "It's a tragedy."[3] The report's title describes the situation exactly, with the IOM president and NRC executive director writing, "The United States spends much more money on health care than any other county. Yet Americans die sooner and experience more illness than residents in many other countries."[2] An article in *The Atlantic* further lamented that, "Americans' health is even worse than we thought, ranking below 16 other developed nations."[4]

What is this report? What did it say? Why are Americans so unhealthy? This particular study was commissioned after another report issued earlier by the NRC in 2011[5] compared life expectancy in middle-aged Americans

with 50 year olds in other high-income countries and found that U.S. life expectancy ranked behind other countries. The Office of Behavioral and Social Sciences Research (OBSSR) of the National Institutes of Health (NIH) asked the NRC and IOM—both prominent U.S. organizations—to join forces in order to study the factors behind health differences in high-income countries.[2]

A variety of health status measures were used to compare the United States to 16 other "peer" countries, focusing on the time period from the 1990s to 2008. In addition to shorter life expectancy, Americans had worse health outcomes in a variety of areas; these findings were seen even within higher socioeconomic groups in the United States compared to people in other peer countries.[2] One of the report's authors pondered whether our country's emphasis on individual freedom, characterized as "live free *and* die," might be contributing to these poor health findings.[4] Others called for immediate action, emphasizing that "mobilization of an unprecedented kind is now necessary in the United States."[6] *Shorter Lives, Poorer Health*[2] implicated factors beyond health care, such as behaviors, environmental conditions, and social and economic factors. However, one U.S. senator dismissed these, remarking that the Affordable Care Act "addresses many of these primary causes," while other members of Congress did not seem to notice the report at all.[4]

BACKGROUND AND SCOPE OF THE PUBLIC HEALTH AND HEALTH POLICY ISSUE

Health in the United States—Higher Costs and Worse Outcomes

Is it new news that the United State lags behind many other countries in our collective health? Not really. In 2000, the World Health Organization issued a 215-page report: *Health Systems: Improving Performance*,[7] which ranked the U.S. healthcare system 37th in the world.[8] In 2006, although the United States ranked number one in healthcare spending (per capita), it performed poorly on basic measures of health status, such as infant mortality (39th), adult female mortality (43rd), adult male mortality (42nd), and life expectancy (36th).[8] The authors asked, "Why do we spend so much to get so little?"[8] Not only was the U.S. ranking poor when compared to other countries, any improvements that were seen (e.g., mortality among males aged 15 to 60) happened more slowly than similar improvements in other countries.[8] Although lack of health insurance was part of the explanation, potentially

preventable conditions also likely contribute, including smoking-related diseases, hypertension, obesity, physical inactivity, elevated blood glucose and blood lipids, all risks for chronic conditions, premature death, and increased healthcare costs.[8] Different populations within the United States as well as people living in different geographic regions had different rates of risk factors for chronic conditions.[8]

The 2013 publication by the IOM and NRC, *U.S. Health in International Perspective: Shorter Lives, Poorer Health,*[2] used extensive data and trends (from the 1990s to 2008) to highlight differences and illustrate the complexities of what determines the health of the U.S. population, something often oversimplified in a discussion of health insurance. Life expectancy in the United States is shorter than our peer (high-income) countries, and is also noted in different age groups.[2] Contrary to popular perception, differences in the health status of racial and ethnic minority populations or lower income individuals in the United States are not enough to explain these results; health differences between the United States and other peer countries are also seen in wealthier and more educated U.S. populations.[2]

Health status measures, also called health outcomes, were compared in 16 countries: Australia, Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and the United Kingdom.[2] In a commonly used measure of population health status, life expectancy at birth (in 2007) for men in the United States ranked 17th (of 17 countries), with an average length of life of 75.64 years, in contrast to men in Switzerland (ranked 1st) where men live an average of 79.33 years. For women in the United States, average length of life is 80.78 years, ranked 16th, in comparison to women in Japan, ranked 1st, who live an average of 85.98 years. Furthermore, the differences in life expectancy between the United States and other countries has become worse over the past 30 years[2] (see **Figures 1–1** and **1–2**).

The term "health disadvantage" describes the differences between the U.S. population and peer countries for all age groups (under age 75).[2] People in the United States who reach age 50 have worse health than their peers in other countries, and although lower socioeconomic populations experience a large share of poor outcomes, this "health disadvantage" is seen in all socioeconomic groups in the United States, including those with the highest levels of income and education.[2] Another interesting observation is that people who were born in the United States have worse health than people who have recently immigrated to this country, suggesting more complex and systemic reasons for observed health differences.[2] After age 75, people in the United States survive longer, have higher screening

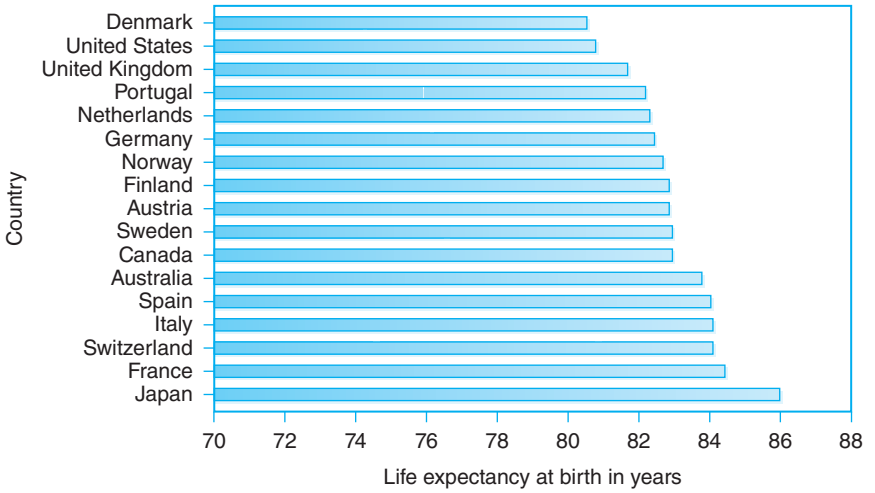

Figure 1–1 Life expectancy at birth for females, 2007.

Data from *U.S. Health in International Perspective: Shorter Lives, Poorer Health.* The National Academies Press; 2013. Table 1–3; p.39. http://www.nap.edu/catalog.php?record_id=13497

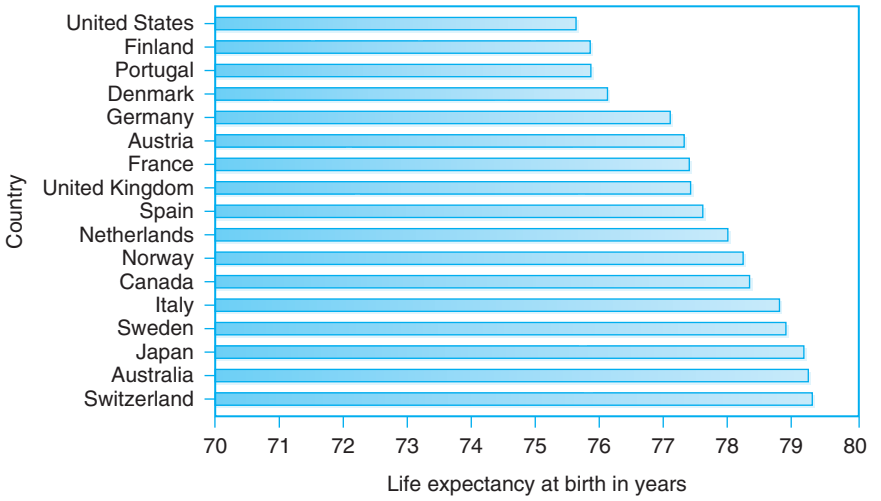

Figure 1–2 Life expectancy at birth for males, 2007.

Data from *U.S. Health in International Perspective: Shorter Lives, Poorer Health.* The National Academies Press; 2013. Table 1–3; p.39. http://www.nap.edu/catalog.php?record_id=13497

rates for some cancers, better control of cardiovascular risk factors (such as blood pressure and smoking), and access to life-saving care for some conditions.[2] Nine categories where U.S. health outcomes are worse than comparison countries include: infant mortality and low birth weight; injuries and homicides; teen pregnancy; HIV and AIDS; deaths from drug and alcohol abuse; obesity and diabetes; health disease; chronic lung disease; arthritis; and disability.[2]

Possible Explanations

Differences between the United States and other high-income countries could not likely be explained by a "single factor."[2] For example, lack of health insurance and financial access to primary and preventive care may contribute to some differences, but this alone is not enough to explain higher rates of injuries and homicides seen in the United States.[2] Smoking and obesity may also contribute, but higher rates of diseases (such as heart disease and diabetes) were seen in the United States, even in people without such risk factors.[2] On average, compared to peer countries, Americans eat more, have more firearms, don't wear seat belts, drink and drive, have higher rates of poverty (especially for children), are more likely uninsured, lack access to social services, or do not live in an environment that supports physical activity or access to nutritious food, all compared to other peer countries.[2] Unfortunately, there is no "quick fix" for these problems, and the authors of this report called for a systemic understanding of social, education, transportation, health care and other policies that can together promote better health in the United States.[2] A national campaign to educate the public, greater use of existing health objectives, and evidence-based approaches were all recommended, with the worry that health differences between the United States and peer countries will continue to worsen in future years, unless immediate actions are taken.[2]

What Really Kills Us?

In the United States, the Centers for Disease Control and Prevention (CDC), through its National Center for Health Statistics (NCHS) and Web-Based Injury Statistics Query and Reporting System (WISQARS) publishes annual summaries of leading causes of death and injury, including statistics by age group. For 2011, NCHS reported the leading causes of death

	Age Groups										
Rank	<1	1–4	5–9	10–14	15–24	25–34	35–44	45–54	55–64	65+	Total
1	Congenital Anomalies 5,013	Unintentional Injury 1,337	Unintentional Injury 761	Unintentional Injury 874	Unintentional Injury 12,330	Unintentional Injury 15,518	Unintentional Injury 15,230	Malignant Neoplasms 48,897	Malignant Neoplasms 112,572	Heart Disease 475,097	Heart Disease 596,577
2	Short Gestation 4,106	Congenital Anomalies 493	Malignant Neoplasms 441	Malignant Neoplasms 419	Suicide 4,822	Suicide 6,100	Malignant Neoplasms 11,717	Heart Disease 36,100	Heart Disease 69,742	Malignant Neoplasms 397,106	Malignant Neoplasms 576,691
3	SIDS 1,910	Homicide 412	Congenital Anomalies 182	Suicide 282	Homicide 4,554	Homicide 4,185	Heart Disease 10,635	Unintentional Injury 20,749	Unintentional Injury 15,158	Chronic Low. Respiratory Disease 121,869	Chronic Low. Respiratory Disease 142,943
4	Maternal Pregnancy Comp. 1,591	Malignant Neoplasms 353	Homicide 129	Congenital Anomalies 176	Malignant Neoplasms 1,611	Malignant Neoplasms 3,499	Suicide 6,599	Liver Disease 8,864	Chronic Low. Respiratory Disease 15,044	Cerebro-vascular 109,323	Cerebro-vascular 128,932
5	Unintentional Injury 1,163	Heart Disease 165	Heart Disease 92	Homicide 154	Heart Disease 998	Heart Disease 3,301	Homicide 2,519	Suicide 8,858	Diabetes Mellitus 12,688	Alzheimer's Disease 84,032	Unintentional Injury 126,438
6	Placenta Cord. Membranes 1,004	Influenza & Pneumonia 112	Chronic Low. Respiratory Disease 64	Heart Disease 111	Congenital Anomalies 432	Diabetes Mellitus 686	Liver Disease 2,449	Diabetes Mellitus 6,012	Cerebro-vascular 11,205	Diabetes Mellitus 52,402	Alzheimer's Disease 84,974
7	Bacterial Sepsis 526	Septicemia 61	Influenza & Pneumonia 63	Chronic Low Respiratory Disease 72	Influenza & Pneumonia 220	HIV 666	Diabetes Mellitus 1,842	Cerebro-vascular 5,705	Liver Disease 10,749	Influenza & Pneumonia 45,386	Diabetes Mellitus 73,831
8	Respiratory Distress 513	Chronic Low Respiratory Disease 53	Benign Neoplasms 40	Influenza & Pneumonia 55	Cerebro-vascular 186	Cerebro-vascular 530	Cerebro-vascular 1,718	Chronic Low. Respiratory Disease 4,634	Suicide 6,521	Unintentional Injury 43,258	Influenza & Pneumonia 53,826
9	Circulatory System Disease 500	Benign Neoplasms 45	Cerebro-vascular 40	Cerebro-vascular 47	Complicated Pregnancy 172	Influenza & Pneumonia 515	HIV 1,619	HIV 2,781	Septicemia 4,953	Nephritis 37,796	Nephritis 45,591
10	Neonatal Hemorrhage 456	Cerebro-vascular 42	Septicemia 38	Septicemia 31	Chronic Low. Respiratory Disease 170	Liver Disease 505	Influenza & Pneumonia 859	Septicemia 2,461	Nephritis 4,754	Septicemia 26,746	Suicide 39,518

Figure 1–3 Ten leading causes of death by age group, United States – 2011.

Reproduced from Centers for Disease Control and Prevention: Injury Prevention and Control: Data & Statistics: Ten Leading Causes of Death and Injury, 2011. Available at http://www.cdc.gov/injury/wisqars/LeadingCauses_images.html http://www.cdc.gov/injury/wisqars/leadingcauses.html

as: heart disease (596,577 deaths); cancer (576,691 deaths); chronic lower respiratory diseases (lung disease; 142,943 deaths); stroke (cerebrovascular disease; 128,932 deaths); accidents (unintentional injuries; 126,438 deaths); Alzheimer's disease (84,974 deaths); diabetes (73,881 deaths); nephritis, nephrotic syndrome, and nephrosis (kidney diseases; 45,591 deaths); influenza and pneumonia (53,826 deaths); suicide (39,518 deaths)[9,10] (see **Figure 1–3**).

The top 10 leading causes of death in the United States, for all ages, reflect summaries of deaths collected in vital records and reported from all states in the United States.[10] This type of data has many practical uses, such as determining the magnitude of different causes of death and their trends over time, whether in response to new diseases and conditions, medical improvements, or demographic changes in the overall population. In 1993, in a very novel approach, McGinnis and Foege published a paper called *Actual Causes of Death in the United States.*[11] Instead of using the

disease and medical conditions causing deaths, they quantified the impact of underlying risk factors for these deaths by searching for and using high-quality published studies to calculate estimates of "actual" causes of death.[11] In 1990, the leading contributors to death in the United States were tobacco (estimated 400,000 deaths), diet and activity (300,000 deaths), alcohol (100,000), microbial agents (90,000), toxic agents (60,000), firearms (35,000), sexual behavior (30,000), motor vehicle deaths (25,000), and illegal drug use (20,000).[11] In total, these factors, which all represent potentially preventable conditions, contributed to about half of all deaths in the United States in 1990.[11] The impact of social and economic factors could not be determined in this study, but quantifying the "actual causes of death" highlighted the missed opportunities and enormous potential for prevention in the United States each year.[11]

This study, using similar methods, was repeated 10 years later, for all deaths in the United States in the year 2000.[12] In a 10-year period, tobacco was still the leading actual cause of death, causing 18.1% of the total U.S. deaths (435,000), poor diet and physical inactivity (sedentary behaviors) were next, causing 15.2% of United States deaths (365,000), and alcohol consumption caused 3.5% of U.S. deaths (85,000).[12] The growing contribution of poor diet and physical inactivity to deaths in the United States reflect the worsening obesity epidemic, and the authors argue that in the face of rising healthcare costs, disease prevention is desperately needed in the United States.[12]

What Determines Health?

Public perception and media focus support the notion that health care is the primary determinant of health. Much scientific literature argues against this belief, recognizing that while access to quality health care is an essential determinant of our collective health, it is certainly not the only one, nor the most influential, despite how much the United States spends on health care per capita.[13] Determinants of health include our genetic predisposition to disease, our habits and behaviors (such as tobacco and alcohol use, the quality of our diet, and how active we are), access to health care, environmental factors (including the quality of the air we breathe and water we drink, as well as whether our environment hinders or promotes our health, such as in neighborhood designs), as well as social circumstances (where we live, our income and education).[13] In fact, estimates of the relative contributions to premature death in the United States emphasize the important contribution of behavioral patterns (contributing 40%), followed

by our genetic predisposition (30%), social circumstances (15%), health care (10%), and environmental exposures (5%).[13] In a famous Shattuck lecture, Dr. Steven Schroeder explained, "First, the pathways to better health do not generally depend on health care, and second, even in those instances in which health care is important, too many Americans do not receive it, receive it too late, or receive poor-quality care."[14]

Experts generally agree that directly impacting our genetic make-up is difficult, if not impossible, however, we can sometimes limit genetic risks through our behavior, our environment, or access to health care.[14] Preventing tobacco use, obesity, and alcohol excess, all require behavior changes. Recent successful approaches to reducing smoking in the United States are cited as a potential model to help with other analogous but different health challenges, such as preventing obesity.[14] Successful tobacco reduction in the United States required a collective and sustained approach that included programs to help smokers quit, laws and policies to limit access to environmental tobacco smoke, educational initiatives to prevent children from using tobacco products, and price increases to reduce consumption, especially in young people.[14] However, many authors note tobacco's ongoing public health impact,[11,12] especially in less educated and lower income individuals, and as a major contributor to the premature death of people with mental illness in the United States.[14]

Changing demographics in the U.S. population also have public health implications. Since 1950, the U.S. population is more than twice as large (from 152.3 million to 308.7 million people).[15] As a whole, the population is getting older, with an increasing number of people aged 65 and older. This is significant because of the increased prevalence with age of many chronic conditions. As a consequence of population aging, ensuring that adequate numbers of healthcare professionals are available to care for the growing population of older individuals becomes a priority.[15] In addition, the racial and ethnic composition of the U.S. population is changing, becoming more diverse.[15] CDC highlights public health concerns in people living in mostly minority communities: they may experience higher risks for illness, have more challenges getting health care, and often have lower socioeconomic statuses.[16] Difference in deaths, illness, risk factors, and access to care have been widely documented. For example, risk for premature death from cardiovascular disease is higher in non-Hispanic black individuals than in whites; infant mortality in non-Hispanic black women is more than twice as high as in non-Hispanic white women; homicide rates are 665% higher in non-Hispanic black individuals when compared to non-Hispanic white individuals.[16] CDC regularly issues findings

and recommendations for national public health strategies related to these changing demographic factors, such as *The State of Aging and Health in America 2013*[17] and the *CDC Health Disparities and Inequalities Report—United States, 2013.*[16]

Social and economic factors, and their influence on U.S. health, are both the most complex and controversial health determinants to study and influence. Americans with limited incomes in the United States often have higher rates of habits and behaviors associated with premature illness and death, but these alone are not sufficient to explain differences in health outcomes within the United States or compared with health status indicators in peer countries.[2,16] Using the National Heart, Lung, and Blood Institute's Atherosclerosis Risk in Communities Study, a study in four U.S. communities in North Carolina, Mississippi, Minneapolis, and Maryland, investigators studied characteristics of neighborhoods, including such factors as income, education, and occupation, and the subsequent risk of developing coronary heart disease.[18] For each neighborhood they studied, they developed a summary measure of the socioeconomic environment. After a period of 9 years, they found that people who lived in disadvantaged neighborhoods, even after adjusting for individual factors of income level, education, and occupations, and known risk factors for coronary heart disease, had higher risks for developing heart disease.[18] In other words, the socioeconomic characteristics of communities, in addition to individual risk factors, contributed to health differences.[18]

Other authors note substantial health variations within the United States. For example, white men in the 10 healthiest U.S. counties live an average of 76.4 years, compared to a life expectancy for black men in the least healthy U.S. counties, who have life expectancies of 61 years (Philadelphia), 60 years (Baltimore and New York), and 58 years (District of Columbia).[19] Using international comparisons, people with low income in the United States (despite the fact their incomes exceed those in many countries) may have poorer health status and shorter lives than people living in some poor countries internationally.[19] The Whitehall studies of British civil servants showed that deaths from both heart disease and all causes were inversely related to the social grade of employment.[19]

An elegant study of disease and social and economic factors in the United States and England tried to sort out some of the factors contributing to health differences between the United States and other countries.[20] This study focused on people aged 55 to 64 from the United States and England, using national surveys from each country that measured comparable indicators, and limited the study to non-Hispanic whites in both locations. The

researchers measured rates of chronic conditions such as diabetes and heart disease, based on people's own reports, and also used actual biological measures (blood tests) for inflammation and cholesterol levels to ensure their findings were not due to differences in the two counties in how people perceived or defined their own illness.[20] The investigators found that when compared to the population in England, middle-aged people in the United States have higher rates of diabetes, high blood pressure, heart disease, myocardial infarction, stroke, lung disease, and cancer.[20] Furthermore, the differences in health between the two countries was not simply due to differences in rates of known risk factors for chronic diseases (i.e., smoking, obesity, alcohol). In both the United States and England, self-reported disease rates were highest in people with lowest income and education, and this relationship followed a "gradient" of socioeconomic factors.[20] The findings were still seen when the biological measures were used, and the authors concluded that, at every socioeconomic level, people in the United States were not as healthy as people in England.[20] Another study compared health outcomes for six chronic diseases in 10 European countries, with the results analyzed according to categories of income.[21] At all levels of income, people in the United States reported worse health than people in Europe, and differences were even worse among people in the United States with the lowest incomes.[21]

What Is Public Health? Who Is Responsible for Public Health?

"Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy."[22] In 1988, the IOM published *The Future of Public Health* in response to a growing national concern that public health was not well understood, "in disarray," and not-at-all prepared to deal with current, emerging, and complex public health issues.[22] These findings presented a sharp contrast to improvements seen in many other areas due to public health measures, such as infectious diseases, safe drinking water, childhood immunizations, and others. The role of governmental public health agencies was carefully scrutinized, and despite the importance and role of private agencies, individuals, nonprofit organizations, and others in public health, this report concluded that "the governmental public health agency has a unique function: to see to it that vital elements are in place and that the mission is adequately addressed."[22] The core functions of public health agencies were defined as "assessment, policy development, and assurance,"[22] terms that remain resonant today in public health practice.

The role of government public health agencies continued to change, as public health issues evolved and future study committees expressed their findings. In 2003, the Institute of Medicine, in *The Future of the Public's Health in the 21st Century*,[23] reported that the role of government was no longer enough to ensure the public's health. Although the committee acknowledged that governmental agencies have the responsibility to "promote and protect" the health of the public, they could not do this alone. Public resources were shrinking, improving health required other sectors, and collaborative relationships were critical to improving health.[23] Their promotion of a new "intersectoral" public health system was designed to enhance the ability of governmental public health agencies to protect and improve health—still their designated responsibility. In this model, the governmental public health infrastructure, communities, academia, healthcare providers, employers, and businesses all shared responsibility for health.[23] Extensive recommendation were outlined in each of these areas. Some sectors continued to be natural partners, such as the ongoing connections of governmental public health agencies with health care, communities, and academia, whereas collaboration with others, such as business and the media, required new approaches.[24,25]

However, there are both tensions and opportunities in relationships between public health agencies and businesses. For example, the relationship between public health agencies and the tobacco and alcohol industries is often adversarial.[24] In addition, public health has many regulatory responsibilities that may prevent even preliminary discussion of partnerships with employers and businesses.[24] Furthermore, some authors cite challenges of communicating with diverse stakeholders, including the public, about public health. These authors argue that the first "language" of the United States is built on individualism and personal responsibility, and they emphasize the importance of developing and strengthening a "second language" in the United States, that better describes connections between the factors contributing to poor health and the strategies needed for current and pervasive public health issues.[26]

Centers for Disease Control and Prevention: Public Health Achievements and Threats

CDC has highlighted 10 great public health achievements from 1900 to 1999, which collectively added 25 years to the life expectancy of Americans.[27] These include immunizations, motor-vehicle safety,

workplace safety, infectious disease prevention and control, reductions in deaths from heart disease and stroke, food safety, maternal and child health, family planning, water fluoridation, and decline in tobacco use.[27] For 2013, CDC cites achievements in public health related to a national media campaign that resulted in 200,000 Americans quitting smoking, advanced laboratory methods of detecting listeria, a cause of death from foodborne illness, public health role in the Million Hearts campaign, improved national tracking of healthcare-related infections, and international efforts to prevent HIV/AIDs, called the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).[28] But also in 2013, they cite leading imminent health threats: antibiotic-resistant infections, prescription drug abuse, global health security, HPV and the need for vaccination, and polio.[28]

Community, state, national, and global collaboration and sustained and evidence-based public health efforts are both required as approaches for new threats and for public health successes. Although funding has been under repeated challenge,[29] many share optimism about new resources for public health through the Prevention and Public Health Fund created by the Patient Protection and Affordable Care Act (ACA)[30] and the National Prevention Strategy advanced by the National Prevention Council, also created by the ACA.[31]

EVIDENCE BASE FOR PREVENTION AND PRACTICE

Measuring Health Outcomes: *Healthy People 2020*

In 1990, the U.S. Public Health Service announced *Healthy People 2000*, measurable goals and objectives for the nation to improve the health of the public in many areas, such as immunizations, smoking rates, cancer screening, and many others, building on the first such initiative a decade prior.[32] Some authors noted that improvements in the delivery of clinical services were easier to achieve than changes in risky behaviors, such as tobacco and alcohol use, because changing behaviors required broader engagement of a variety of stakeholders and often controversial policy changes.[32] Evidence-based strategies are familiar for clinical preventive services,[33] but are less well known for community preventive services,[34] both of which use scientific evidence to make recommendations for individuals and populations respectively.

Decades after it was first used, *Healthy People 2020* continues as a national public health strategy to improve health through the use of

measurable health outcomes, collaborative strategies, and policies.[35] Topics and objectives range from access to health services to oral health, nutrition, and health of older adults. Some *Healthy People 2020* areas emphasize clinical objectives (e.g., diabetes), whereas others (e.g., physical activity) require clinical and community prevention. There are a total of 42 topic areas and about 600 measurable objectives. Priority health areas, called *leading health indicators*, are measured and reported on a regular basis, and include such areas as maternal, infant, and child health; injuries and violence; social health determinants; and measures of nutrition, physical activity, and obesity,[35] all areas where the United States fares measurably worse than peer countries.[2] This approach, using measurable outcomes, is flexible, allowing states and communities to choose priority indicators that are the most important in their geographic areas. It is also strategic, promoting focus on the most pressing issues and setting priorities. In addition, the use of measurable health objectives (health outcomes) reflects collective actions, and supports the approaches described in the newest models of public health as well as approaches needed to best influence current public health issues.

DISCUSSION QUESTIONS: TEMPLATE FOR DISCUSSION

1. Significance of this public health issue:
   a. Why is this health issue important?
   b. How many people does it impact?
   c. How serious is it?
   d. Is it preventable?
2. What is the evidence base for prevention?
3. What specific strategies should be used to achieve progress on this health issue?
   a. What evidence-based approach would you use?
   b. Where would you start if you are an individual citizen; public health professional; healthcare professional; community, state, or federal policymaker?
4. Specific questions for this topic:
   a. How does health differ from health care?
   b. What approaches might be used to educate the public about determinants of health?
   c. How might the 2013 report *U.S. Health in International Perspective* be used as a catalyst for health improvements in the United States?

5. What is the controversy?
   a. Define the controversy.
   b. Is controversy a good or bad thing? (Does it help or hinder progress?)
6. *Why* is this health issue controversial?
   a. What specific factors are involved?
   b. Do economics, government, scientific uncertainty, or politics play a role?
   c. What is the role of the media?
7. How would you respond to the controversy?

PERSPECTIVES TO CONSIDER

The fundamental question is: Why isn't the IOM and NRC's *Shorter Lives, Poorer Health* report causing a national stir? Why aren't people talking about this in schools, communities, college campuses, state legislatures, in congress, and over coffee? Their question "Why do we spend so much and get so little?" remains unanswered.[8] Health is not the same as health care. Research comparing the United States to other similar countries, and especially to England,[20] is very revealing, and highlights the facts that health is dependent on health care and much, much more. Genetics and biology, habits and behaviors, our environment (whether effective in worsening or promoting good health), social and economic factors (education, income, housing, transportation and others), as well as access to health care (especially primary and preventive care) all determine our collective health.[13]

Improvements in all areas are desperately needed if we want better *health* in the United States. Why is this so difficult to accomplish? Some note that the language of public health explaining connections between education, services, programs, and policies relevant to health determinants is complicated, compared to talking about habits and behaviors or health care.[26] Others worry about the public health system itself, and the perpetual challenge for sufficient resources, a well-educated workforce, and the increasing dependence on accountability for health outcomes by organizations whose primary mission is not related to health. The authors of the *Shorter Lives, Poorer Health* report[2] note the need to evaluate policies, both health and social, the need for a national conversation about *health,* and a more systematic use of currently available national health metrics.

Continually challenged by needed improvements in critical health-related behaviors that require methods, models, programs, and policies external to

health care, we need a wide-angle lens. Public and population health may be viewed through the lens of health care, rather than one that recognizes root causes of poor health and the need to partner with individuals, groups, and organizations that share the potential to change it. Focusing the public's attention on *health*, while we reform health care, and expand the use of population-based models of care, makes great sense. The use of measurable outcomes, such as *Healthy People 2020*,[35] on a national, regional, and local level, along with the systematic use of evidence-based public health and clinical prevention, might begin the collective shift in decades of worsening health in the United States. The tested, but underutilized *Healthy People* model, uses evidence-based, measurable objectives to improve population health, linking prevention in individuals and populations. In addition, much of the data are readily available through CDC or health departments.

Achieving 10-year outcomes requires partnerships in defined geographic or population settings, an approach easily applied to the geographic differences in health seen in many areas of the United States, with available tools such as health impact assessments (HIA).[36] Objectives for chronic disease management, clinical prevention, and habits and behaviors (40% of preventable mortality[13]), could easily be tied to data measures for healthcare quality. If we can embrace a broadened view of population health, we can achieve better health for patients and populations—all needed to improve our "dead last"[4] ranking.

For Additional Study

Banks J, Marmot M, Oldfield Z, Smith JP. Disease and disadvantage in the United States and in England. *JAMA*. 2006;295(17):2037–2045.

References

1. Brown E. U.S. health is lousy compared with peer nations, report says. *Los Angeles Times.* 2013. http://articles.latimes.com/2013/jan/09/news/la-heb-us-health-lags-peers-20130109. Accessed January 30, 2014.
2. *U.S. Health in International Perspective: Shorter Lives, Poorer Health.* Washington, DC: The National Academies Press; 2013.
3. Paramaguru K. What's ailing America? New report finds U.S. falls behind international peers in health and life expectancy. *Time.com.* 2013. http://newsfeed.time.com/2013/01/11/whats-ailing-america-new-report-finds-u-s-falls-behind-international-peers-in-health-and-life-expectancy/. Accessed January 29, 2014.
4. Rubenstein G. New health rankings: Of 17 nations, U.S. is dead last. *The Atlantic.* 2013. http://www.theatlantic.com/health/archive/2013/01/new-health-rankings-of-17-nations-us-is-dead-last/267045/. Accessed January 29, 2014.

5. *Explaining Divergent Levels of Longevity in High-Income Countries.* Washington, DC: The National Academies Press; 2011.
6. Bayer R, Fairchild AL, Hopper K, Nathanson CA. Public health: Confronting the sorry state of U.S. health. *Science.* 2013;341(6149):962–963.
7. WHO. The world health report 2000. 2000. http://www.who.int/whr/2000/en/whr00_en.pdf?ua=1. Accessed January 30, 2014.
8. Murray CJ, Frenk J. Ranking 37th—measuring the performance of the U.S. health care system. *N Engl J Med.* 2010;362(2):98–99.
9. CDC. FastStats: Leading causes of death. 2013. http://www.cdc.gov/nchs/fastats/lcod.htm. Accessed January 31, 2014.
10. CDC. Ten leading causes of death and injury. 2012. http://www.cdc.gov/injury/wisqars/LeadingCauses.html. Accessed January 31, 2014.
11. McGinnis JM, Foege WH. Actual causes of death in the United States. *JAMA.* 1993;270(18):2207–2212.
12. Mokdad AH, Marks JS, Stroup DF, Gerberding JL. Actual causes of death in the United States, 2000. *JAMA.* 2004;291(10):1238–1245.
13. McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Aff (Millwood).* 2002;21(2):78–93.
14. Schroeder SA. Shattuck Lecture. We can do better—improving the health of the American people. *N Engl J Med.* 2007;357(12):1221–1228.
15. Shrestha LB, Heisler EJ. The changing demographic profile of the United States: Congressional Research Service Report. 2011. http://fas.org/sgp/crs/misc/RL32701.pdf. Accessed August 14, 2014.
16. Frieden TR, CDC. CDC health disparities and inequalities report—United States, 2013. [Foreword]. *Morbidity and mortality weekly report. Surveillance summaries.* 2013;62(Suppl 3):1–2.
17. CDC. The state of aging and health in America 2013. 2013. http://www.cdc.gov/features/agingandhealth/state_of_aging_and_health_in_america_2013.pdf. Accessed August 14, 2014.
18. Diez Roux AV, Merkin SS, Arnett D, et al. Neighborhood of residence and incidence of coronary heart disease. *N Engl J Med.* 2001;345(2):99–106.
19. Marmot M. Inequalities in health. *N Engl J Med.* 2001;345(2):134–136.
20. Banks J, Marmot M, Oldfield Z, Smith JP. Disease and disadvantage in the United States and in England. *JAMA.* 2006;295(17):2037–2045.
21. Avendano M, Glymour MM, Banks J, Mackenbach JP. Health disadvantage in US adults aged 50 to 74 years: A comparison of the health of rich and poor Americans with that of Europeans. *Am J Public Health.* 2009;99(3):540–548.
22. *The Future of Public Health.* Washington, DC: The National Academies Press; 1988.
23. *The Future of the Public's Health in the 21st Century.* Washington, DC: The National Academies Press; 2003.
24. Simon PA, Fielding JE. Public health and business: A partnership that makes cents. *Health Aff (Millwood).* 2006;25(4):1029–1039.
25. Majestic E. Public health's inconvenient truth: The need to create partnerships with the business sector. *Prev Chronic Dis.* 2009;6(2):A39.
26. Wallack L, Lawrence R. Talking about public health: Developing America's "second language". *Am J Public Health.* 2005;95(4):567–570.

27. CDC. Ten great public health achievements in the 20th Century. 2013. http://www.cdc.gov/about/history/tengpha.htm. Accessed January 31, 2014.
28. CDC. CDC's top ten: 5 health achievements in 2013 and 5 health threats in 2014. 2014. http://blogs.cdc.gov/cdcworksforyou24-7/2013/12/cdc%e2%80%99s-top-ten-5-health-achievements-in-2013-and-5-health-threats-in-2014/. Accessed January 29, 2014.
29. Kliff S. The incredible shrinking prevention fund. *The Washington Post WONKBLOG*. 2013. http://www.washingtonpost.com/blogs/wonkblog/wp/2013/04/19/the-incredible-shrinking-prevention-fund/. Accessed January 31, 2014
30. Benjamin G. Public health investments critical in 2014 omnibus spending bill. 2014. http://www.apha.org/about/news/pressreleases/2014/omnibusspendingbill.htm. Accessed January 31, 2014.
31. U.S. Department of Health and Human Services. National prevention strategy. 2011. http://www.surgeongeneral.gov/initiatives/prevention/strategy/. Accessed September 6, 2013.
32. McGinnis JM. Health in America—the sum of its parts. *JAMA*. 2002;287(20):2711–2712.
33. U.S. Preventive Services Task Force 2014. http://www.uspreventiveservicestaskforce.org/. Accessed January 31, 2014.
34. The Community Guide: What works to promote health. 2014. http://www.thecommunityguide.org/index.html. Accessed January 31, 2014.
35. *Healthy People 2020*. http://www.healthypeople.gov/2020. Accessed January 30, 2014.
36. CDC. Healthy places: Health impact assessment. 2009. http://www.cdc.gov/healthyplaces/hia.htm. Accessed January 31, 2014.