

Policy Challenges in Modern Health Care



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PART II



*Promoting Population
Health and Reducing
Disparities*

Fundamental Sources of Health Inequalities



BRUCE G. LINK AND JO C. PHELAN

The primacy of social conditions as determinants of health has been observed for centuries. The idea was forcefully articulated by nineteenth-century proponents of “social medicine,” who noted strong relationships between health and the dire housing circumstances, poor sanitation, inadequate nutrition, and horrendous work conditions that poor people encountered at that time. This social patterning of ill health led to Virchow’s famous declaration that “medicine is a social science” and “politics nothing but medicine on a grand scale” (1848). The idea is also prominent in the work of McKeown, who focused attention on dramatic secular trends toward improved population health (1976). The McKeown thesis, as it has come to be called, states that the enormous improvements in health experienced over the past two centuries owe more to changes in broad economic and social conditions than to specific medical advances.

Nevertheless, this perspective has not always been prominent. In the late twentieth century, the rise and influence of “risk-factor epidemiology” focused attention on individually based biological and behavioral risks for ill health. While this perspective has been enormously successful in providing information that has helped reduce individual risk, and thereby improve population health, its dominance has also helped downplay social conditions as important causes of ill health. Social factors came to be seen not as causes but as clues—starting points in the search for “true” causes that were seen to reside in individual health behaviors and the biological mechanisms that produce pathogenesis. Reflecting this trend, Rothman’s influential text on modern epidemiological methods indicated that social class is “causally related to few if any diseases but is a correlate of many causes of disease” (1986, 90).

But risk-factor epidemiology has recently experienced its own crisis, criticized from within for its rote “black box” approach, and for having run out of large risk factors to uncover (Susser and Susser 1996). While numerous factors have contributed to this crisis, two major problems have been the approach’s inattention to multiple levels of influence and its inability to understand empirical associations between population characteristics and the health profiles of populations.

For example, both the behavioral and biological risk factors identified by this approach have generally failed to account for or explain gradients in morbidity and mortality associated with socioeconomic status (Lantz et al. 1998; Marmot et al. 1991).

In the context of these problems with risk-factor epidemiology, a revitalization of interest in social and economic factors in health has occurred within social epidemiology and medical sociology. For example, investigators have turned intense attention to macro-level influences on health such as income inequality, social cohesion, and racial segregation and discrimination (Lynch et al. 2000; Kaplan et al. 1996; Kennedy, Kawachi, and Prothrow-Stith 1996; Kawachi et al. 1997; Williams and Collins 2001; Williams, Neighbors, and Jackson 2003). Researchers have also sought to assess multiple levels of social and economic influence, particularly the effects of neighborhood and community-level factors (Diez-Roux et al. 2001; Robert and Li 2001). Finally, analysts have directed intense effort to understanding how these distal causes affect more proximal influences on health to produce pathogenesis, disease, and death (Adler et al. 1994).

Like many of these lines of investigation, the theory of fundamental causes arose in response to the dominant risk-factor approach (House 2002). Instead of social conditions as mere correlates or clues pointing the way to true causes, we claim that social conditions are fundamental causes of health inequalities. We go beyond prior statements regarding the prominence of social factors to indicate why social conditions deserve to be called fundamental and why risk-factor approaches are unsuccessful in accounting for the persistence and pervasiveness of associations between social conditions and health.

Our approach claims that some types of policy interventions will be far more effective in reducing health disparities than others. First, according to the fundamental-cause explanation, social inequality produces health inequality, and thus policies that reduce social and economic inequality will reduce health inequality. Second, policies that benefit people irrespective of individual resources or initiative (for example, fluoridating water versus brushing with fluoride toothpaste) will be more effective in reducing health disparities than policies that require individuals to marshal resources to obtain health benefits. Third, we hold that policies that attend to the social distribution of knowledge about risk and protective factors—and the ability to act on that knowledge—are essential.

Social Conditions as Fundamental Causes

We use socioeconomic status (SES) to exemplify the theory of fundamental causes, although the idea may also pertain to circumstances such as social capital, social stigma, and racism. We begin with the well-established and robust association between mortality and educational attainment, occupational standing, and income (Antonovsky 1967; Sorlie, Backlund, and Keller 1995; Kunst et al. 1998). Biological mechanisms are clearly involved in the SES-disease association. Just as clearly, other mechanisms involving behaviors and environmental exposures must also be present: disease does not flow directly from income, educational, or occupational status into the body. Nevertheless, we cannot understand the effect of SES

on mortality by focusing solely on the mechanisms that happen to link the two at any particular time.

To show why, we turn to one of the most striking features of the SES-health association: its persistence across time and place. The association was present in Mulhouse, France, in the early nineteenth century, in Rhode Island in 1865, in Chicago in the 1930s, and occurs in Europe and the United States today (Antonovsky 1967; Sorlie, Backlund, and Keller 1995; Lantz et al. 1998; Kunst et al. 1998). Given the vast differences in life expectancy, risk factors, diseases, and health care systems characterizing these different places and times, the persistence of the SES-mortality association is remarkable. Indeed, it is this persistence that suggests the irreducible nature of SES as a fundamental cause.

Imagine a causal model with SES as the distal factor linked to death by more proximal risk factors. If the proximal risk factors are eliminated, we would expect the SES-mortality association to disappear. However, in several important instances SES disparities in mortality persisted even though major proximal risk factors were eliminated. As a first example consider circumstances in the nineteenth century in which overcrowding, poor sanitation, and widespread infectious diseases such as diphtheria, measles, typhoid fever, tuberculosis, and syphilis appeared to explain higher mortality rates among less-advantaged persons. But the virtual elimination of those conditions and diseases in developed countries in the late twentieth century did not diminish SES inequalities in mortality (Rosen 1979).

As a second example consider that in the twentieth century, countries created national health programs providing free medical care to all with the express purpose of radically altering an important link between SES and health—differential access to care. While such programs addressed important mechanisms and may have kept disparities from growing even larger than they have, SES disparities in mortality nevertheless remained undiminished decades after these programs were implemented (Black et al. 1982). In both examples mechanisms explaining the SES mortality association were dramatically modified. The causal-model approach would predict a substantial reduction in the association between SES and mortality, but that did not happen.

A ready answer to this puzzle is that other mediating risk factors, such as health behaviors and psychosocial stress, have replaced earlier ones. This situation calls to mind Lieberman's description of "basic causes," which have enduring effects on a dependent variable because when the effect of one mechanism declines, others emerge or become more prominent (1985). House and colleagues first suggested that such a process might explain the enduring SES-mortality association (House et al. 1990). Still, although Lieberman's notion of basic causes is critical for understanding the tenacity of the SES-mortality association, it does not tell us what about SES allows it to reproduce its effects even as intervening mechanisms are eliminated.

We have argued that new mechanisms arise because persons higher in socioeconomic status enjoy a wide range of resources—including money, knowledge, prestige, power, and beneficial social connections—that they can utilize to their health advantage (Link and Phelan 1995). Such resources are important in at least

two ways. First, they directly shape individual health behaviors by influencing whether people know about, have access to, can afford, and are supported in their efforts to engage in health-enhancing behaviors. Second, resources shape access to broad contexts such as neighborhoods, occupations, and social networks that vary dramatically in associated risk profiles and protective factors. Housing that poor people can afford is more likely to be located near noise, pollution, and other noxious conditions; blue-collar occupations tend to be more dangerous than white-collar occupations; and high-status jobs are more likely to include health care benefits. Thus the processes implied by the fundamental-cause perspective operate at both individual and contextual levels.

As a result, socioeconomic resources shape access to a broad range of circumstances that affect health. Examples include gaining access to the best doctors; knowing about and asking for beneficial health procedures; having friends and family who support healthy lifestyles; quitting smoking; getting flu shots; wearing seat belts; and eating fruits and vegetables. Other examples include exercising regularly; living in neighborhoods where garbage is picked up often, interiors are lead-free, and streets are safe; having children who bring home useful health information from good schools; working in safe occupational circumstances; and taking restful vacations.

This reasoning introduces four essential components of the theory of fundamental causes of morbidity and mortality. First, such causes influence multiple disease outcomes. For example, SES was related to cholera, tuberculosis, and diphtheria in the nineteenth century and is now related to heart disease, stroke, and many types of cancer. Second, such causes operate through multiple risk factors, including but not limited to the items listed above. Third, new intervening mechanisms reproduce the association between fundamental causes and mortality over time. Finally, the “essential feature of fundamental social causes is that they involve access to resources that can be used to avoid risks or to minimize the consequences of disease once it occurs” (Link and Phelan 1995, 87).

Because these resources are general in nature, people can adapt them to changing health-related conditions and use them to protect health no matter what the risks, treatments, and diseases are in a given situation. Thus, for example, socioeconomic resources were equally as useful in avoiding the worst sanitation, housing, and industrial conditions of the nineteenth century as they are in shaping access to health-promoting conditions today. As new discoveries expand our ability to control disease processes, the list of health-enhancing circumstances will only grow. According to our theory, people who command more resources will, on average, hold an advantage in gaining access to and benefiting from this new knowledge.

Evidence for the Fundamental-Cause Theory

An Empirical Test

Phelan and colleagues constructed a test of the theory of fundamental causes by identifying situations where even the richest and most powerful people on earth cannot use resources to escape death. One such situation occurs in the case of po-

tentially fatal diseases that we do not know how to prevent or treat. If the utilization of resources is critical in prolonging life, then in circumstances when resources associated with higher status are useless, high SES should confer little advantage, and the usually robust SES-mortality association should be reduced.

Phelan and colleagues tested this prediction using the National Longitudinal Mortality Study and ratings they developed of the preventability of death from specific causes (1999). The National Longitudinal Mortality Study (Sorlie, Backlund, and Keller 1995; Rogot et al. 1988, 1992) is a large prospective study that uses combined samples of selected Current Population Surveys that are then linked to the National Death Index to determine occurrences and causes of death in a follow-up period of approximately nine years. Reliable ratings (intra-class correlation .85) of the preventability of death were made by two physician-epidemiologists. Causes were categorized into high-preventability and low-preventability groups with common high-preventability causes being cerebrovascular diseases, chronic obstructive pulmonary disease, ischemic heart disease, malignant neoplasm of the trachea, bronchus, and lung, and pneumonia and influenza; and common low-preventability causes being arrhythmias and malignant neoplasms of the pancreas, female breast, and prostate. Gradients according to SES indicators of education and income were then examined separately for high—and low-preventability causes. Consistent with predictions derived from the fundamental-cause theory, Phelan et al. found that the SES-mortality association is much stronger for highly preventable causes of death than for less preventable causes (1999).

Resources versus the Stress of Hierarchical Position

Unlike the fundamental-cause theory, which strongly emphasizes the role of resources, British sociologist Richard Wilkinson argues that the “psychosocial effects of social position” influence the SES gradient more than material conditions such as “bad housing, poor diets, inadequate heating” (1997, 591). Wilkinson believes that the anger, resentment, and envy associated with where one stands in relation to others—along with maladaptive behaviors such as smoking, drinking, and overeating that follow from these emotions—are the most important determinants of SES gradients in health. Support for this view is drawn from ecological studies in industrialized nations, animal studies, and the finely graded nature of status differences in health investigations like the Whitehall study.

Even though SES gradients are apparent within countries, differences in median per capita income between countries are a relatively weak predictor of life expectancy (Wilkinson 1992; Lynch et al. 2000). For Wilkinson, this suggests that relative deprivation is more important than absolute differences in deprivation. Whether conducted in the wild or in captivity, studies of monkeys generally find that a lower position in a dominance hierarchy is associated with worse health, as indicated by measures of atherosclerosis, hyper-secreted cortisol, blood pressure, and immune function (Sapolsky 1990; Shively and Clarkson 1994). Finally, even within the relatively stable employment of the British civil service, and given extensive controls on behavioral and biological risk factors, the Whitehall study found finely graded differences in mortality by occupational level. Because hierarchical

position remained a prominent predictor of mortality, and because material deprivation was largely absent in this group of men, the study seems to support the centrality of hierarchy for understanding SES gradients in health.

But the hierarchy-stress explanation cannot account for important changes in the association between SES and specific diseases. According to such an explanation, the stress of low positional location should remain relatively constant across cohorts and therefore produce relatively stable associations between positional location and disease outcomes in different eras. However, evidence concerning two major killers—coronary artery disease and lung cancer—runs counter to this prediction. The link between SES and coronary heart disease shifted dramatically over the last century, changing from a direct to an inverse association (Beaglehole 1990; Marmot, Kogevinas, and Elston 1987). And whereas lung cancer mortality was not related to SES as late as 1931, a large inverse association emerged in the 1950s and 1960s (Logan 1982).

If positional location is the prime determinant of SES gradients in health, one would not expect such dramatic changes; the stress of low position should produce the same inverse gradient across time. On the other hand, from a fundamental-cause perspective, these shifts represent important instances in which SES gradients for specific disease outcomes changed after knowledge about health risk and protective factors emerged. High-SES groups use this new knowledge and its benefits disproportionately, resulting in shifts in the SES-disease/mortality gradient that benefit higher-SES groups.

Intelligence: A Competing Flexible Resource?

Once we have the idea that broadly serviceable resources are required to understand the persistence and the ubiquity of the association between SES and health, we see that a resource other than the social resources identified in the fundamental-cause approach is possible. Intelligence or cognitive ability can also be conceptualized as a broadly serviceable resource that enhances people's abilities to deal with life situations, including situations that have health implications. In seeking to maximize one's chances for a healthy life, one must be able to gain access to information, identify the most salient aspects of one's health situation, and craft an effective approach to addressing it. A case can be made that someone who is more gifted with respect to cognitive ability will fare much better than someone who is not. Moreover, as with other fundamental social causes, people can use intelligence to gain a health advantage no matter the health circumstances of a particular place or time. Because it can be conceptualized in this way, many of the theoretical predictions one might make from a fundamental-social-cause perspective could just as easily be made from a perspective that emphasizes intelligence. Indeed, this is precisely what Linda Gottfredson does in a paper published in the *Journal of Personality and Social Psychology* (2004). By collecting evidence from disparate sources, Gottfredson makes the argument that "general intelligence" may be the fundamental cause of health inequalities. While the evidence she gathers is consistent with this possibility, none of it involves direct measures of cognitive ability, SES, and health.

The research issue concerning the role of cognitive ability is relatively straightforward. In our formulation, social and economic resources of knowledge, money, power, prestige, and beneficial social connections are critical, whereas for Gottfredson the psychological resource of intelligence is the source of both the socioeconomic-related resources and health. Critical facts that separate these two interpretations hinge on the importance of cognitive ability for health with SES controlled and the role of SES for health with cognitive ability controlled. To investigate these relationships, Link, Phelan, and Meich located two large public-access data sets—the Wisconsin Longitudinal Study and the Health and Retirement Survey—that provide the requisite measures of SES and IQ and allow us to examine relationships prospectively (2003).

Link and colleagues found no evidence to support the idea that cognitive ability might supplant socioeconomic-related resources of knowledge, money, power, prestige, and social connections in the fundamental-cause framework (Link, Phelan, and Meich 2003). Specifically, in examining mortality and life-threatening illnesses, the investigators found that the effects of education and household income remained significant and were changed only slightly by controls for cognitive ability. In sharp contrast, measures of cognitive ability—though related to health at the bivariate level—declined dramatically, generally to nonsignificant levels, when educational attainment was controlled.

Thus while cognitive ability plays an important role in determining SES resources, it cannot account for the connection between those resources and health. Instead, the findings tell us that within levels of educational attainment, differences in cognitive ability have little consequence for health outcomes. On average, two people with comparable IQ scores, one of whom receives more education, will have different health, but two people with different IQs but the same education will have similar health.

Policy Considerations

The fundamental-social-causes approach leads to very different policies for addressing health disparities than does an individually oriented risk-factor approach. The latter promotes strategies that ask us to locate modifiable risk factors that lie between distal causes (such as SES) and disease, and to intervene in those risk factors to break the link between the distal factors and disease. By addressing intervening factors, the logic goes, we will eliminate health disparities.

But our approach points to the pitfalls of this logic and leads us to recommend policies that take a distinctly population-health perspective in addressing health disparities. Specifically, our approach points to policies that eliminate or reduce the ability to use socioeconomic advantage to gain a health advantage—either by reducing disparities in socioeconomic resources themselves, or by developing interventions that, by their nature, are more equally distributed across SES groups.

We make three general policy recommendations. First, create contextually based health interventions that automatically benefit individuals irrespective of their

own resources or behaviors. Second, prioritize interventions that are potentially available and beneficial to people at all socioeconomic levels and target the special needs of resource-poor groups who may face barriers in implementing those interventions. Third, promote policies that increase the SES-related resources available to resource-poor groups.

We assume that social inequalities in health according to SES, race/ethnicity, and other social circumstances are undesirable: that every person, whether rich or poor, black or white, top executive or manual laborer, should have an opportunity to live a healthy life. We hold that something is wrong when social positions of power and privilege determine who lives and who dies, and that efforts to ameliorate such circumstances are desirable. We emphasize this latter point because the goals of improving overall population health and decreasing health disparities may require different kinds of policy initiatives (Marchand, Wikler, and Landesman 1998). Progressive public-health-oriented interventions (such as life-saving screens for colorectal cancer and flu shots) may improve population health without addressing social inequalities in health, and may even contribute to such inequalities if life-enhancing interventions are mal-distributed by SES and other social variables (Mechanic 2002).

***Interventions That Benefit Individuals
Regardless of Their Own Resources and Actions***

In the United States we tend to emphasize both the ability of individuals to control their personal fate and the importance of doing so (Becker 1993), and thus we carry a strong orientation toward individually based solutions to health problems. But individuals frequently encounter barriers that block their capacity to maximize health. For people at lower socioeconomic levels, lack of money, awareness, understanding, time, social support for health-enhancing behavior, and optimism that adopting certain behaviors will result in a long and satisfying life can be obstacles. When we construct individually based interventions focused on diet, exercise, dental care, illness screening, and the like, we create the possibility that people with greater resources will benefit more from these interventions. This contributes to SES gradients in health. A fundamental-cause approach calls for population-based interventions that influence everyone. When we observe a health problem, we should ask how we can change the context to eliminate the problem or minimize its consequences.

Consider rising asthma rates, particularly in low-income urban areas of developed countries such as the United States (Claudio et al. 1999). Individuals can address known (or strongly suspected) modifiable risk factors and employ medical responses to lessen symptoms and keep asthma from worsening (National Institutes of Health 1997). Medical practitioners can tell individuals that asthma is less severe if homes and apartments are well ventilated and kept spotlessly clean to avoid dust mites, animal dander, and other environmental toxins. Parents can also be informed that cockroach infestation may be problematic for children with asthma and that they should try to eliminate this risk factor from their children's living space. Parents can also be exhorted to get their children away from the tele-

vision and into the open air. Finally, parents can be told to use preventive medications even when no symptoms are present to reduce the risk of hospitalizations and (rarely) death.

However, while these individually based responses would certainly be helpful to those who implemented them, such a strategy is bound to create SES disparities in the prevalence of severe symptoms of asthma. People with fewer resources are less likely to receive information regarding risk factors and to be able to pursue strategies to counteract them. Resource-poor persons are more likely to live in areas where rodents are common and are unlikely to have household help or equipment for effective cleaning. Roaches are difficult to eliminate from an individual apartment when they infest the entire building, and getting kids away from the television is difficult when open spaces are not available or safe. Finally, uninsured persons are less likely to obtain effective medical interventions to deal with chronic symptoms, and Medicaid reimbursement levels make it hard for doctors to spend enough time to provide parents with needed skills and children with quality care.

Fortunately, pressing individuals to address risk factors is not the only option. Contextually based interventions would seek to encourage city-sponsored rodent and roach reduction efforts that target entire buildings or areas, to provide sponsored activities for children in open areas such as parks, and to locate health screening and medical interventions in schools, where all children can receive them free of charge. Like individually based approaches, contextually based approaches would reduce the overall incidence of asthma symptoms and hospitalizations; but, unlike individual approaches, they would have the added benefit of reducing SES disparities.

Another contextual intervention is to employ air bags rather than seatbelts to reduce road fatalities. Seatbelt use requires each person to secure his or her own belt, and ample evidence shows that people with higher educational attainment are more likely to do so. To the extent that seatbelts are effective, highly educated people benefit more than less-educated people, thereby contributing to a gradient in a health-related outcome. Another contextual intervention concerns the decades-long buildup of lead paint in the homes of many U.S. residents. Will we move from a strategy of warning parents about the dangers of paint chips and paint dust to actually removing the hazard from the environment?

Similar examples include providing vaccinations and health screening in schools, workplaces, and other community settings rather than through private physicians, requiring window guards in all high-rise apartments versus advising parents to watch their children carefully, and adding warning labels to health-hazardous products versus relying on individuals' knowledge of product risks. Other choices include banning smoking in public buildings versus advising people to avoid secondhand smoke, thoroughly inspecting meat instead of advising consumers to wash cutting boards and cook meat thoroughly, and fluoridating water rather than exhorting people to brush often with fluoridated toothpaste. To the extent that interventions influence everyone regardless of the resources they possess or the health behaviors they manifest, we can block the creation of SES gradients: everyone

benefits equally. Creative interventions that influence entire contexts rather than individuals could go a long way toward narrowing health disparities.

Monitoring the Dissemination of Health-Enhancing Information and Interventions

Even if we become far more creative in developing population-based interventions focused on contexts, addressing many health problems will still require individual resources and action. The fundamental-cause idea tells us that resource-rich persons will be far more effective in gaining access to and employing health-enhancing initiatives focused on individuals than people who are resource poor. This means that policy approaches will need to address the consequences of individually targeted information and interventions for health disparities. Two issues are critical.

The first concerns whether we promote initiatives that people with fewer resources may not be able to access. As we seek to create interventions to respond to disease, we need to ask if an intervention is something anyone can potentially adopt, or whether the benefit is available only to people with the requisite resources. The point becomes clear if we take a global view of the medical response to the AIDS epidemic. Research, policy, and investment in the West spawned drugs that have been enormously effective in enhancing the survival and quality of life of people with HIV/AIDS in the United States and Europe. But, because of their cost, these drugs have been unavailable in poor areas of Africa and Asia, creating an enormous resource-related health disparity.

Similar circumstances exist within the United States regarding access to optimal procedures following heart attacks, control of diabetes, rapid response to strokes, and many other interventions. When we create interventions that are expensive and difficult to distribute broadly, we create health disparities. While we might proceed with such interventions because they help some people, and because expensive initiatives sometimes become less expensive with time, we must also weigh the fact that they will create disparities. If our goal is to reduce disparities, we must ask whether we could redirect our intellectual, social, and economic resources to produce a more broadly distributable health benefit.

A second issue in disseminating health-enhancing information and interventions entails understanding why people with fewer resources do not always act on information or adopt health-enhancing ways of life. We call this contextualizing risk and protective factors: that is, understanding what puts people at “risk of risk” and what blocks them from adopting protective strategies (Link and Phelan 1995). The idea is to use such understanding to construct interventions that simultaneously address a risk or protective factor and any barriers to broadly implementing it. For example, interventions that tackle diet and exercise to reduce obesity and encourage a heart-healthy lifestyle would begin with careful attention to all the life circumstances that might create barriers to behavioral change. Examples of such contextual factors include the cost, availability, and convenience of healthful versus unhealthful foods; targeted advertising of convenience and fast foods; access to safe and accessible settings in which to exercise; time for exercise; and support

for healthful habits from family, friends, and employers. Absent such efforts, the life circumstances of people with fewer resources will tend to block the adoption of beneficial information, and we will create a health disparity.

A good example of an initiative that has mandated the kind of scrutiny we endorse is the mapping of the human genome. Concerned about the impact of new genetic knowledge, including the possibility that expected benefits might be maldistributed, Congress reserved 5 percent of funding for the Human Genome Project to consider social, ethical, and legal issues (Collins et al. 2003). Whether the initiative will be successful or not remains to be seen; but in general, to the extent that we can anticipate and address factors that produce the unequal distribution of health benefits, the better able we will be to minimize health disparities.

Policies That Distribute Resources to Resource-Poor Populations

The fundamental-cause idea stipulates that people use their knowledge, money, power, prestige, and social connections to gain a health advantage, and thereby reproduce the SES gradient in health over and over again. It follows that if we increase the resources available to resource-poor populations, the relative health of those populations will likely improve. We provide several examples consistent with this prediction.

First, consider an analysis by Peter Arno and James House of the impact of Social Security in the late 1930s. Before Social Security, elders were often extremely resource poor, and death rates were very high. After the advent of Social Security, poverty declined sharply among people sixty-five and older, and death rates also dropped faster than among people under sixty-five. While these data do not prove that Social Security had a causal effect on mortality, they are certainly consistent with that interpretation. If Social Security had an impact on health, it is an indication that providing resources to a group with relatively few resources has health benefits for that group and moves its health profile toward that of groups with more resources.

Another example is the work of Costello and colleagues, who capitalized on a natural experiment where an influx of money from a casino dramatically altered the monetary resources of American Indians living in eleven rural counties in North Carolina (2003). The casino netted each man, woman, and child a monetary stipend that reached six thousand dollars a year in 2001. Costello and colleagues' study of children found substantial improvements in the mental health status (externalizing behaviors) of the children living in these communities from a baseline starting point before the influx of resources to a follow-up point about four years after the monetary stipends began.

A final example is the U.S. Department of Housing and Urban Development's Moving to Opportunity study, which randomly assigned families eligible for housing assistance to one of three groups—those that were given Section 8 vouchers, which help cover housing costs, plus special assistance in moving to low-poverty neighborhoods; Section 8 vouchers alone; or no vouchers at all. Even though only 40 percent of the families receiving assistance actually moved to new housing, the group assigned to Section 8 vouchers plus assistance in relocating to low-poverty

areas recorded lower levels of parental anxiety as well as less anxiety and depression among male offspring. Families that actually moved to better neighborhoods showed the greatest improvements (Leventhal and Brooks-Gunn 2003).

Together these studies suggest that providing resources to populations that are resource poor, such as elderly people, American Indians, and people living in areas of concentrated disadvantage, may improve their health profiles. The further up the SES gradient the infusion of resources enables people to move, the more we can expect them to benefit. While the reasons for boosting groups that are relatively resource poor go beyond health benefits, these studies suggest that providing resources to populations at risk of negative health consequences is one important way to reduce health disparities.

Conclusion

Perhaps the strongest policy conclusion we can offer is that standard risk-factor-oriented thinking about social disparities in health will fail to produce policies that can narrow such disparities. We will not be able to eliminate disparities if we focus solely on the individually based risk factors that happen to link SES and health in a given place or time. While the fundamental-cause approach points us away from policy based on a standard risk-factor approach, it points us toward other policies. We endorse three broad types: (1) policies that benefit all people in a context irrespective of their behaviors and resources, (2) policies that minimize resource-related barriers to avoiding risks or implementing beneficial interventions, and (3) policies that distribute resources to resource-poor groups. Pursuing policies like these provides the best opportunity for reducing health disparities in the time ahead.

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A Public Health Approach to Firearms Policy



DAVID HEMENWAY

An American who dies before the age of forty is more likely to succumb to an injury rather than a disease. The leading cause of injury death in the United States is motor vehicles. The second leading cause of injury death is firearms. In 2001 some 29,500 Americans were killed with firearms in non-war-related events, and about three times that number were wounded seriously enough to be hospitalized. Gun shot injuries are one of the leading causes of both traumatic brain injury and spinal cord injury.

The United States has more firearms in civilian hands than any other high-income nation. About 25 percent of adults in the United States personally own a firearm. Many gun owners have more than one firearm; some 10 percent of adults own over 75 percent of all firearms in the country. The percentage of households with a firearm has declined in the past two decades; about one in three households now contains a firearm.

Among the two dozen or so high-income countries (as classified by the World Bank), the United States is exceptional not only because of the number of firearms in civilian hands but also because so many of our guns are handguns. Our firearm regulations are also relatively permissive. For example, unlike most other industrialized countries, the United States does not have a national firearm licensing or registration system, or laws mandating that all gun owners receive firearm training.

U.S. crime and violence rates—including burglary, robbery, car theft, and assault rates, as assessed in victimization surveys—are comparable to those of other industrialized nations. What is not comparable is our rate of *lethal* violence, and the majority of our homicides are firearm homicides. Studies show that high-income nations that have more guns have more homicides because of higher rates of firearm homicide (Hemenway and Miller 2000; Hepburn and Hemenway 2004).

Studies comparing U.S. regions, states, or cities also find that areas with more firearms have more homicides, primarily because of higher rates of firearm homicide. The association between guns and homicide holds even after controlling for levels of violent crime, unemployment, poverty, urbanization, and alcohol

consumption (Miller, Azrael, and Hemenway 2002c). Case-control studies find that a gun in the home is a risk factor for committing a murder and for being murdered (Hepburn and Hemenway 2004). The large majority of perpetrators and victims of lethal violence are male. Few male-on-male homicides appear to be the carefully planned actions of individuals with a single-minded intention to kill. More people are murdered during arguments with someone they know than during the commission of a robbery.

Strong evidence also shows that guns raise the likelihood of suicide in the United States. Nine case-control studies have all found that a gun in the home is a risk factor for completed suicide, and cross-sectional studies find that regions, states, and cities with more guns have more suicides per capita, owing to higher rates of firearm suicide (Miller and Hemenway 1999; Brent 2001; Hemenway 2004). The gun-suicide connection holds even after controlling for poverty, urbanization, divorce, unemployment, education, alcohol consumption, major depression, and suicidal thoughts (Miller, Azrael, and Hemenway 2002d; Hemenway and Miller 2002). A recent study finds that the rate of death from suicide attempts is over 90 percent for firearms, compared with only 2–3 percent for drug overdoses and cutting and piercing, the most common forms of suicide attempts (Miller, Azrael, and Hemenway 2004).

Unintentional firearm injuries are also a problem in the United States. In the 1990s, some fifty people a day were shot unintentionally and about four died. From 1965 to 2000 more Americans were killed in gun accidents than were killed in wars. The majority of Americans who die unintentionally from firearms are under twenty-five years of age. Not surprisingly, in states with more guns, many more youth as well as adults die from firearm accidents (Miller, Azrael, and Hemenway 2001).

TABLE 6.1 *Homicide, Suicide, and Unintentional Firearm Death Rates among 5-to-14-Year-Olds (rates per 100,000, early 1990s)*

	United States	Other countries ^a	Mortality rate ratio
Homicide rates			
Gun homicides	1.22	0.07	17.4
Non-gun homicides	0.53	0.23	2.3
Total	1.75	0.30	5.8
Suicide rates			
Gun suicides	0.49	0.05	9.8
Non-gun suicides	0.35	0.35	1.0
Total	0.84	0.40	2.1
Unintentional firearm death rates	0.46	0.05	9.2

Source: Centers for Disease Control and Prevention 1997, 101–105.

^aTwenty-five other high-income, populous countries.

TABLE 6.2 *Homicide, Suicide, and Unintentional Firearm Deaths among 5-to-14-Year-Olds, 1996–2001*

	High-gun states	Low-gun states	Mortality rate ratio (high gun: low gun)
Total population, 5-to-14-year-olds	32.2 million	32.6 million	
Homicides			
Gun homicides	224	82	2.8
Non-gun homicides	152	114	1.4
Total	376	196	2.0
Suicides			
Gun suicides	172	17	10.3
Non-gun suicides	158	107	1.5
Total	330	124	2.7
Unintentional firearm deaths	159	12	13.5

Source: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS) (online), 2003. Available at www.cdc.gov/ncipc/wisqars (accessed January 15, 2004).

Note: The fifteen states (included in this table) with the highest average levels of household gun ownership (based on the 2001 Behavioral Risk Factor Surveillance System) were Wyoming, Montana, Alaska, South Dakota, Arkansas, West Virginia, Alabama, Idaho, Mississippi, North Dakota, Kentucky, Wisconsin, South Carolina, Utah, and Louisiana. The six states (included in this table) with the lowest average levels of household gun ownership were Hawaii, Massachusetts, Rhode Island, New Jersey, Connecticut, and New York. Data exclude violent deaths caused by the terrorist attacks on September 11, 2001.

Guns are bad for the health of children. Children (aged five to fourteen) in the United States are far more likely than children in other high-income countries to be victims of homicide, suicide, and gun accidents (CDC 1997) (see table 6.1).

Children in states with more guns are also more likely to be murdered, to commit suicide, and to die from unintentional gunshot wounds (Miller, Azrael, and Hemenway 2002a). To illustrate, consider the states at the extremes in terms of gun ownership (see table 6.2). (Because some states with the fewest guns, such as New York and New Jersey, are quite populous, the table compares the fifteen highest-gun states with the six lowest-gun states to obtain equal populations at risk for death.) From 1996 to 2001, children in the high-gun states were far more likely to be victims of homicide, suicide, and gun accidents.

More women are also murdered in high-income countries with more guns, primarily because of higher rates of firearm homicide. Women in the United States are not more likely to commit suicide, but they are far more likely to be homicide victims than women in other industrialized countries. Indeed, over 70 percent of all women murdered in high-income countries are Americans (Hemenway, Shinoda-Tagawa, and Miller 2002).

In states with more guns, women are more likely to be murdered, to commit

TABLE 6.3 *Homicide, Suicide, and Unintentional Firearm Deaths among Women, 1996–2001*

	High-gun states	Low-gun states	Mortality rate ratio (high gun: low gun)
Total population, women	121.4 million	121.1 million	
Homicides			
Gun homicides	2372	709	3.3
Non-gun homicides	2117	2231	1.0
Total	4489	2940	1.5
Suicides			
Gun suicides	2860	461	6.2
Non-gun suicides	2832	2999	0.9
Total	5692	3460	1.6
Unintentional firearm deaths	221	26	8.5

Source: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, Web-based Injury Statistics Query and Reporting System (WISQARS) (online), 2003. Available at www.cdc.gov/ncipc/wisqars (accessed January 15, 2004).

Note: The fifteen states (included in this table) with the highest average levels of household gun ownership (based on the 2001 Behavioral Risk Factor Surveillance System) were Wyoming, Montana, Alaska, South Dakota, Arkansas, West Virginia, Alabama, Idaho, Mississippi, North Dakota, Kentucky, Wisconsin, South Carolina, Utah, and Louisiana. The six states (included in this table) with the lowest average levels of household gun ownership were Hawaii, Massachusetts, Rhode Island, New Jersey, Connecticut, and New York. Data exclude violent deaths caused by the terrorist attacks on September 11, 2001.

suicide, and to be accidentally killed with a firearm. This relationship holds even after accounting for other factors, including urbanization and poverty (Miller, Azrael, and Hemenway 2002b). For example, from 1996 to 2001 women in the fifteen states with the most firearms were over three times as likely to be murdered with a firearm as women in the six states with the fewest firearms. The former were also six times more likely to commit suicide with a firearm, and over eight times more likely to be killed in a firearm accident (see table 6.3).

Male homicide victims are usually shot outside the home, by strangers or acquaintances, while women are more often shot in their own homes, by intimates. Indeed, more than twice as many women are killed with a gun used by their husbands or intimates than are murdered by strangers using guns, knives, or any other means (Kellermann and Mercy 1992). Gun threats in the home against women by intimates appear to be more common than home self-defense uses of guns by women (Azrael and Hemenway 2000). A gun in the home raises the risk to women for homicide, suicide, and gun accidents (Bailey et al. 1997). No study has found that a gun in the home reduces the risk of burglary, robbery, home invasion, spousal abuse, or any crime against women.

Although evidence linking firearm prevalence and violent death is both strong and compelling, firearm issues are among the most contentious in U.S. poli-

tics (Hemenway 2004). The gun lobby and other pro-gun advocates continually cite two firearm researchers (and many polemicists) who claim that firearms make us safer, or at least no less safe (Lott 2003; Kleck 1997). Most Internet sites that discuss firearms make repeated claims concerning their benefits for reducing crime and death. Yet the large majority of studies—and all credible studies—show no net benefit from firearms, and usually large social costs.

The gun lobby and pro-gun advocates present a bipolar view of the world: for example, you are either pro-gun or anti-gun. More important, these advocates generally depict people as either violent criminals or decent, law-abiding citizens. According to that worldview, criminals obey no laws and can always obtain firearms whenever they desire. Any firearm law will thus inconvenience only decent, law-abiding citizens, or worse, prevent them from obtaining the firearms they need for protection against violent sociopathic predators. Even with suicide, only two types of people exist: normal people and those who really want to kill themselves and will stop at nothing until they succeed. Firearm laws thus cannot have any effect. Rational firearm policy cannot even reduce accidents, as these are caused by “self-destructive individuals...without guns they would likely find some other way to kill themselves accidentally” (Kopel 1992, 415).

The real world is, of course, much more complex, with many shades of gray. For example, policies that raise the costs of obtaining firearms for criminals, depressed people, and adolescents reduce the likelihood that they will obtain and use them (Hemenway 2004).

The gun lobby claims that an armed citizenry deters crime and that regular citizens are continually protecting themselves with guns and shooting criminals. Yet no credible evidence exists that more guns deter crime. The evidence actually shows the opposite: in all surveys respondents report far more criminal gun uses against them than self-defense uses (Hemenway, Miller, and Azrael 2000; Hemenway 2004).

Some private citizens have undoubtedly benefited by defending themselves with a firearm. Yet most self-defense gun uses reported on private surveys appear to occur during escalating arguments rather than in self-defense against a clear criminal act, and most of these uses appear to be illegal and threaten public safety (Hemenway, Miller, and Azrael 2000). Most gun-owning Americans will never have the opportunity to use their guns against actual robbers or burglars. Untrained in dispute resolution, however, they will have plenty of opportunity to use their guns inappropriately when they are angry, annoyed, tired, drunk, or afraid.

Implicit in the claims of the gun lobby is that people without guns are unarmed and incapable of defending themselves and their property. Yet the large majority of weapon self-defenses occur with weapons other than a firearm. Indeed, homeowners may defend themselves more often with a baseball bat than with a firearm (Hemenway, Miller, and Azrael 2000). Evidence from the National Crime Victimization Surveys indicates that self-defense with any weapon is as likely to prevent an injury as self-defense with a firearm (Kleck and Kates 2001). In any case, the policies suggested by a public health approach to firearms will have little effect on people’s ability to protect their homes with a firearm.

The Public Health Approach to Firearms

A public health approach has reduced the burden of infectious disease, tobacco-related illness, and motor vehicle injury, and can also be successful in reducing gun violence. This approach emphasizes prevention, focuses on the community rather than the individual, and encourages collaboration, research, and policies involving many sectors. An important public health insight is that opportunities abound for preventing injuries.

The sharp reduction in motor vehicle injuries over the past fifty years is a public health success story (Hemenway 2001). In the 1950s the traffic safety community focused on the driver. Statistics supposedly showed that driver error caused almost all motor vehicle injuries. Policymakers thus emphasized education and enforcement—training motorists to drive better and fining them when they drove unsafely. Despite these efforts, significant success did not occur until the advent of a more comprehensive approach that did not solely target individual behavior.

For public health experts in the 1950s, the key issue was not which individuals would die in a motor vehicle collision but why over thirty-five thousand fatalities occurred year after year, why some cities and states had higher rates, and why some car makes presented the highest risk. These experts recognized that improving the vehicle and the highway environment would reduce the likelihood of collision more than an exclusive focus on the driver. Over the past forty years cars and roads have become much safer. For example, automobiles now have better braking and a third brake light, roads have better lighting and signage, and interstate highways have been built as limited-access roads with median dividers.

Of prime importance was reducing the likelihood of serious injury once a crash occurred. People are sometimes careless, and they can behave recklessly. But when they do, should they or others die? The goal was to create a system that not only made motorist error less likely, but was also more forgiving when motorists made errors or behaved unlawfully or inappropriately.

The most important traffic safety advances over the past forty years have entailed making motor vehicles safer for human occupants in crashes. For example, we now have collapsible steering columns, airbags, shatterproof windshields, lap and shoulder belts, and non-rupture gas tanks. Roads are also much safer and more forgiving when accidents occur. Many roadside hazards have been eliminated or modified, telephone poles have been removed from the sides of highways, and signs often break away on impact. And improvements in emergency medical services have reduced disabilities caused by crashes. Helicopters now fly the seriously injured to designated trauma centers to receive immediate, high-quality care.

Today's drivers are no better than those of the 1950s—indeed, many believe that road rage has grown along with traffic. Yet motor vehicle fatalities per mile driven have fallen by more than 80 percent. The United States has one of the lowest rates of death per vehicle-mile in the world. The key was reframing the policy question from the fatalistic, “How can we change human nature?” to the realistic, “What are the most cost-effective ways to reduce injury?” (Hemenway 1995). Similarly, while the gun lobby tries to focus exclusively on education and enforcement,

injury control practitioners emphasize that directing policy solely to individual users is not cost-effective.

Of course, people should be held accountable for their actions. However, such responsibility pertains not only to gun users but also to gun owners, gun manufacturers, gun distributors, and public officials and other decision makers. The goal of public health is not to find fault. The goal is to prevent mortality and morbidity, and to promote healthy lives.

Only in the mid-1980s did policymakers recognize violence as an important public health issue. In the past twenty years, the public health approach to firearms policy has broadened the discussion from an exclusive criminal justice orientation to one concerned with all firearm injuries, including suicides and unintentional gun deaths. The entry of public health practitioners into the field of firearm injury control has provided new sources of information (including hospital data), new types of statistical analyses (such as odds ratios), new research designs (case-control studies), and many important scientific studies. The public health approach has also attracted new organizations to violence prevention, including the American Academy of Pediatrics. Most important, public health advocates promote science, pragmatism, and optimism in an area long beset by stale polemical debates.

Policy Recommendations

Like the approach to reducing motor vehicle injuries, a public health approach to curtailing problems caused by firearms suggests pursuing a wide variety of policies while maintaining the ability of law-abiding Americans to use guns responsibly. This approach emphasizes the importance of obtaining accurate, detailed, and comparable information each year on the extent and nature of the problem. For each motor vehicle death in the United States, the Fatality Analysis Reporting System collects data on more than one hundred variables, including the make, model, and year of vehicles, speed and speed limit, the location of passengers and whether they were wearing seatbelts, and whether airbags deployed. This information suggests interventions and permits evaluation of which policies are effective and which are not.

A major problem is that detailed national information about firearm injuries does not exist. For example, whether most unintentional firearm injuries occur at home or away from home, or with long guns or handguns, is unknown. Whether adolescents preferentially use certain types of firearms to commit suicide, and whether the percentage of homicides due to inexpensive firearms or assault weapons has been rising or falling, is also unknown.

Many groups have backed the creation of a national violent death reporting system to provide detailed information on all homicides, suicides, and unintentional firearm deaths. The Harvard Injury Control Research Center, working with the Medical College of Wisconsin and others, is coordinating a pilot of this system. Death certificates and reports by medical examiners, police, and crime labs already include this information; it just needs to be assembled consistently. The

Centers for Disease Control and Prevention have funded more than a dozen state health departments to test such a reporting system and are now working to create a comprehensive national system. This is the first step in the public health approach to reducing firearm injuries.

Many other policies directed at gun manufacturers and sellers, firearm owners, and other interested parties could also help reduce firearm injuries.

Manufacturers and Distributors

Although firearms are among the most lethal consumer products, killing tens of thousands of civilians each year, firearm manufacturing is one of the least-regulated industries in the United States. No federal regulatory body has specific authority over firearm manufacturing, which is exempt even from regulation by the Consumer Product Safety Commission. The industry has also escaped any comprehensive examination by Congress. Instead, Congress is considering giving the industry immunity from tort liability for negligence.

A public health approach would create incentives for firearm manufacturers to make products that reduce rather than increase the burden on law enforcement. Rather than producing and promoting firearms that appear primarily designed for criminal use, such as those that do not retain fingerprints, manufacturers could produce guns with unique, tamper-resistant serial numbers. They could also make guns that “fingerprint” each bullet to permit authorities to match bullet and firearm with a high degree of accuracy.

Manufacturers could also improve the safety of their firearms. Unintentional firearm injuries appear to stem partly from a lack of federal safety standards. All firearms could be manufactured so they do not fire when bumped or dropped. Like aspirin bottles, new guns could also readily be made childproof, with minimum trigger pull standards to prevent very young children from shooting them. Since many firearm accidents occur when individuals do not realize a gun is loaded, indicators could alert the user when the gun’s chamber contains a bullet, and disconnect devices could prevent a pistol from firing once the user has removed the ammunition magazine, even though a bullet still remains in the firing chamber. The industry could adopt uniform standards for trigger safety mechanisms: the action on some handguns now locks when the manual thumb safety is down, while on others it locks when the thumb safety is up. A lesson from motor vehicles is the key role that can be played by a regulatory agency—with the authority to recall products with hazardous designs and to promote personalized, or smart, guns that only the authorized user can fire.

Gun-making technology is constantly changing. A small but deadly nubun gun manufactured in the 1990s looks like a key chain. At the other extreme, recoil compensation mechanisms are making larger-caliber handguns more manageable. Sniper rifles available to civilians can shoot .50-caliber rounds capable of downing helicopters. Caseless ammunition reduces the ability of law enforcement officials to identify a crime weapon by the cartridge left at the scene. Various types of ammunition, such as Glaser safety slugs and flechettes, may create more tissue damage and thus make it more likely that a shooting will result in

a death. While Israeli tanks have occasionally fired flechettes—clusters of nail-like projectiles used as anti-personnel weapons—they are controversial because of the danger they pose to civilians. Flechette ammunition can also be used in shotguns and may extend their range and penetrate body armor better than conventional ball shot loads. A regulatory structure could deal quickly and definitively with these and other new technologies that could pose a threat to public safety and health.

The firearm distribution system could also improve. Police stings demonstrate the ease with which felons can obtain firearms directly from licensed dealers. For example, in the Detroit area in 1999, undercover officers acting as prohibited buyers purchased firearms from almost all the dealers they approached. The Bureau of Alcohol, Tobacco, and Firearms, which regulates licensed dealers, could do its job more effectively if given more enforcement authority. For example, ATF agents cannot now pose as felons in sting operations, and serious dealer misconduct is a misdemeanor rather than a felony.

The private sale of firearms is a major loophole in the chain of distribution. Some 40 percent of retail gun sales occur without the involvement of a licensed dealer—at flea markets and gun shows, from car trunks and over the Internet. These sales can occur without background checks, record keeping, or government oversight, making it easy for criminals and terrorists to obtain firearms. Requiring all firearm transfers to pass through licensed dealers, with the required background checks and paper trail, would reduce the enormous flow of firearms to the illegal market.

Investigations of criminal gun use show that adolescents living in states with strict gun-control laws obtain their illegal firearms from states with less restrictive laws. Evidence also shows that a state one-gun-per-month law, which prevents any individual from buying more than one gun each month from any particular dealer, reduces gun running from that state. A national one-gun-per-month law could reduce gun-running across state lines, especially combined with background checks and waiting periods for all sales as well as strong enforcement against scofflaw dealers. Such supply-side restrictions could have an immediate impact on adolescent gun crime; a third of guns used by youth in crime are less than three years old.

Gun Owners

Policies common in other developed countries—registration of handguns, licensing of owners, and background checks for all gun transfers—could reduce the U.S. homicide rate substantially by making it harder for adolescents and criminals to obtain handguns. Such policies would probably have little effect on U.S. rates of assaults, burglary, or robbery, since those crimes usually do not involve guns. Guns are not necessary for most crimes, except perhaps some bank robberies and assassinations. But guns do make crime more lethal.

Illegal and irresponsible gun-carrying is a major problem in the United States; most gun robberies and gun homicides—particularly of men—occur away from home. Polls show that the majority of Americans do not favor allowing regular citizens to carry firearms. And by more than a ten-to-one margin, Americans do

not think regular citizens should be allowed to bring their guns into restaurants, bars, college campuses, hospitals, sports stadiums, or government buildings (Hemenway, Azrael, and Miller 2001). Nonetheless, in the past decade, many states have required police to issue gun-carrying permits to anyone who is not expressly prohibited by statute, even if police have reason to believe that individual may misuse the firearm. Proponents of these policies claim that more gun-carrying by law-abiding citizens will thwart and deter criminals and thus reduce crime. While evidence regarding the effects of these more permissive gun-carrying policies is not conclusive, the best scientific studies suggest that they may increase rather than reduce crime overall (Ayres and Donohue 2003). It is not clear why allowing individuals whom the police want to prohibit from carrying guns to do so should boost public safety.

Parents, Physicians, and Teachers

Although firearm safety experts urge owners to store guns appropriately, many leave their guns loaded even when they are not intended for protection. Many individuals, such as concerned parents, could become more assertive in this arena. Asking about guns and gun storage in the homes that children visit could become as commonplace as ensuring that a child's seatbelt is securely fastened. Women could also become better informed about their own homes. Many women appear to believe—incorrectly—that there are no guns in the house or, if there are, that they are unloaded and locked up (Azrael, Miller, and Hemenway 2000).

Clergy, teachers, labor leaders, and physicians could also take active steps to help reduce our gun problem. For example, psychologists and psychiatrists often treat depressed and manic adolescents, yet many do not even discuss firearms or firearm storage with their parents, even though most adolescents who commit suicide do so with firearms.

The Power of the Gun Lobby

The policies discussed in this chapter should not face Second Amendment barriers. Although the gun lobby claims an individual right to gun ownership, most U.S. courts have found no such right in the U.S. Constitution. For example, the Supreme Court let stand a decision upholding an ordinance in Morton Grove, Illinois, that banned the possession of handguns within its borders. A policy statement of the American Civil Liberties Union, proud defender of the Bill of Rights, states, "The ACLU agrees with the Supreme Court's long-standing interpretation of the Second Amendment that the individual's right to bear arms applies only to the preservation or efficiency of a well-regulated militia.... There is no constitutional impediment to the regulation of firearms" (quoted in Hemenway 2004, 159). While many state constitutions provide special protections for gun ownership, the federal constitution provides little more protection for firearms than it does for the ownership of cars, chain saws, or swimming pools, none of which the public health community has a desire to ban.

Polls consistently show that the overwhelming majority of the U.S. public

wants reasonable firearm policies. They want tamper-resistant serial numbers for guns, childproof firearms, magazine safeties, background checks for gun sales between private individuals, personalized guns, registration of hand guns, and licensing of gun owners. A solid majority even favors prohibiting citizens from carrying guns. These results are not a passing fancy spurred by school shootings or terrorist bombings, nor are they rigged results that reflect unclear wording of survey questions. Every independent poll, year after year, shows the same results (Smith 2001). The vast majority of the population—and even a majority of gun owners and NRA (National Rifle Association) members—want more government action to make guns safer and keep them out of the wrong hands.

If such policy measures could make a difference and the large majority of Americans desire them, why haven't they been enacted? One reason is the power of special interests in U.S. politics; in this instance, that of the gun lobby. Interestingly, compared with industries such as alcohol and cigarettes, firearm manufacturing and distribution are quite small and employ relatively few people. The power of the gun lobby reflects not so much corporate money as the ability to mobilize grassroots support. Gun leaders do this partly by fomenting fear and anger among gun owners, portraying any minor gun policy initiative as a veiled attempt to confiscate everyone's guns. To prevent this catastrophe, people rally with funds and commitment, preventing the enactment of many reasonable gun laws.

The gun lobby is filled with individuals who are knowledgeable and passionate about guns, and they share a common interest. While the lobby represents only a small minority of gun owners, it still totals some three million members. This lobby can readily mobilize groups of ten or more individuals to attend even the most local political events. By contrast, gun-control groups have smaller memberships, and many members have little knowledge of firearms; their common interest is often only that they or their loved ones were victims of firearm violence. Only a political commitment keeps them together. The rest of the American public—the large majority—hopes that reasonable gun policies are enacted but does not actively work to ensure that result.

Creating a Regulatory Firearm Agency

The public health approach to reducing gun violence emphasizes the need for prevention as well as punishment, recognizes that alterations in the product and the environment are more likely to be effective than attempts to change individual behavior, and urges the pursuit of multiple strategies to tackle the problem. The public health community understands the importance of involving the entire community and sees roles for many groups, including educational institutions, religious organizations, medical associations, and the media.

The concern of public health advocates regarding firearms is similar to its concern about stairs, swimming pools, and motor vehicles: the manufacture and use of such products can affect community safety and well-being. The goal of the public health community is to prevent violence and injury, not to ban swimming pools, motor vehicles, or guns.

Since guns move easily across state boundaries, federal rather than state and local policies will often be the most effective. A useful step might be to endow an agency with the power to regulate firearms as consumer products. The National Highway Traffic Safety Administration (NHTSA) mandates that automobiles have seatbelts and shoulder belts, collapsible steering columns, and shatterproof windshields; a firearm agency could similarly require that firearms are childproof, that pistols have magazine safeties, and that serial numbers are tamper resistant. Just as NHTSA bans unsafe products such as three-wheeled all-terrain vehicles, a firearm agency might ban regular civilian use of caseless ammunition and .50-caliber bullets. Certainly a federal firearm regulatory agency should have the power to require companies to recall defectively designed products. An effective agency would respond rapidly to changes in technology and the marketplace.

An effective agency would also have the ability to promote new technologies that could help make society safer. For example, personalized, or smart, guns that only authorized users can fire could limit criminal use of stolen guns and reduce the chance of unintentional injury to children and adolescents. Improvements in less-lethal firearms—such as tranquilizer and beanbag guns and electric stunphasers—could help prevent deaths and serious injuries in police, civilian, and even criminal shootings. All adults, including gun owners, should be responsible for their behavior. Motorists in the United States must obtain a driver's license and register their automobiles. Other industrialized nations commonly license gun owners and register all handguns. Their experience suggests that these measures may help reduce firearm violence.

Not only gun owners and users but also gun dealers and manufacturers have responsibilities. Some gun dealers do not act in a socially responsible way, and government regulators need to bring the dealers under greater scrutiny. To help ensure that inappropriate people cannot easily obtain firearms, every gun transfer should occur through a licensed dealer, after a background check.

The public health approach does not focus on finding fault; it emphasizes prevention. The threat of punishment can deter criminals, and incarceration can help prevent them from harming other members of society; criminal justice (like tort law) is part of the prevention package—but only one part. Instead of looking exclusively at the pathologies of hundreds of thousands of perpetrators and victims of firearm violence and injuries, public health advocates try to understand why these events occur year after year, and to determine how best to break the cycle.

The first step is to obtain detailed, consistent data each year on the extent of the problem. Like NHTSA's national data system, a national violent death reporting system could provide detailed information on the circumstances surrounding all fatal shootings, information that is crucial for evaluating regulations. Such data should be readily available to all, along with funds for scientific research.

Accurate data and good science are usually critical for ensuring success in public health; reliable information helps change social norms. For example, before science showed the dangers to public health, spitting on the subway was acceptable and smoking was sophisticated. It is time to change the norm that accepts

gun violence as a routine part of American life. Fortunately, more and more Americans are seeing firearm violence as a uniquely U.S. problem—and one that a public health approach can tackle.

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Tobacco Policy in the United States

LESSONS FOR THE OBESITY EPIDEMIC



KENNETH E. WARNER

On June 16, 2004, cigarette smoking killed some twelve hundred Americans. That shocking death toll warranted no headlines. Neither did the same outcome—some twelve hundred more deaths—the following day, nor the day after. Indeed, it is the rare headline that informs the public that smoking accounts for nearly one of every five deaths in the United States, one in three during middle age. Smoking is simply too commonplace, too mundane. Yet it is far and away the nation's—and increasingly the world's—leading killer. In this chapter I examine the burden smoking has imposed on society and what we have learned in attempting to deal with that burden. I then consider lessons drawn from this experience for addressing the most rapidly growing behavioral cause of chronic disease: the epidemic of obesity, the only behavior that threatens to overtake smoking as a cause of death.

The Toll of Smoking

Cigarette smoking currently kills over four hundred thousand Americans annually. The vast majority are long-time smokers—smoking kills about half of lifelong smokers—but thousands are nonsmokers, victims of exposure to smoke from other people's cigarettes (U.S. Department of Health and Human Services 1989; Samet 2001; Glantz and Parmley 1995).

The lethal danger lies in the chemical stew that is cigarette smoke and the frequency with which it is inhaled. Cigarette smoke consists of more than four thousand chemical compounds, including arsenic, hydrogen cyanide, formaldehyde, benzene, naphthalene, vinyl chloride, lead, polonium-210, cadmium, ammonia, carbon monoxide, and, of course, nicotine. More than forty of the chemical compounds in smoke are known carcinogens. Taking about ten puffs per cigarette, a pack-a-day smoker inhales this potpourri of chemicals 200 times daily, or 73,000 times per year. Over a lifetime of fifty years of smoking, a pack-a-day smoker inhales 3.65 million times, having consumed more than a third of a million cigarettes. There may be no greater testimony to the strength of the human organism than the fact that roughly half of lifelong smokers survive this remarkable chemical assault.

The vast majority of smokers begin smoking as children, when they have no conception of their own mortality and every expectation that they will not continue to smoke as adults. For at least half, this expectation will not be realized, for they quickly become addicted. As smokers grow into adulthood and fail to quit, cognitive dissonance kicks in, allowing them to believe that the dangers of smoking are exaggerated and that, in any case, the dangers are not relevant to them personally. Smokers—especially heavy smokers—systematically underestimate the risks they are incurring (Weinstein 2001).

On surveys, over 70 percent of smokers report that they would like to quit, yet only about 2.5 percent succeed in doing so each year, and these are disproportionately the most educated. Because both quitting and initiation rates reflect educational status, smoking has progressively become concentrated in lower socioeconomic groups that may have less motivation and fewer resources with which to quit. Thus, while only 9 percent of survey respondents with a postgraduate degree smoke today, 29 percent of people lacking a high school degree are smokers (Warner and Burns 2003).

Given the adverse publicity about smoking and social disapproval, remaining smokers may constitute “hard-core” individuals unable or unwilling to quit. The issue is controversial—quit rates have not declined—but evidence is accumulating that future efforts to reduce smoking may require new and more effective methods (Warner and Burns 2003).

The Antismoking Campaign

The modern assault on smoking began in earnest following publication of epidemiological studies linking smoking to lung cancer in the early 1950s, with major health organizations leading efforts to involve the government in a public stance against smoking (U.S. Department of Health and Human Services 1989). Publicity surrounding the publication of the first surgeon general’s report on smoking and health in January 1964 was so intense that per capita cigarette sales plummeted 15 percent by March of that year (U.S. Public Health Service 1964). By year’s end the decline measured 5 percent after sales recovered, but the drop was significant when measured against the nearly annual increases that had occurred since the beginning of the century. The year 1963, it turned out, marked the pinnacle of cigarette consumption in this country.

One indicator of the success of the antismoking campaign is the fact that adult per capita consumption (total cigarettes divided by the population over seventeen years of age) declined from forty-two hundred in 1963 to two thousand in 2001. The U.S. antismoking campaign divides into three phases, the first occurring predominantly through the early 1970s.

The Campaign’s First Phase: Public Education and Exhortations to Quit

The naïve expectation of public health campaigners was that, newly informed about the dangers of smoking, smokers would see the error of their ways and quit.

Educated kids would not start. This proved both more difficult and less successful than expected. Through the 1960s, cigarette advertising dominated the airwaves and filled magazine pages. In striking contrast, the public health community, with meager resources, had to rely on news coverage, donated space for antismoking messages, and pleas to school boards to incorporate antismoking education into health curricula.

Two policy developments gave the antismoking message newfound prominence. Shortly after the release of the 1964 surgeon general's report (itself a prime example of public information), and prompted by the Federal Trade Commission, Congress mandated that "one side" of cigarette packs include a health warning label beginning in 1966. Although research later questioned the effectiveness of these warnings, coverage of the debate and the novelty of the warnings themselves undoubtedly had some early impact (U.S. Department of Health and Human Services 1989).

Around the same time, the Federal Communications Commission ruled that its Fairness Doctrine should apply to broadcast advertising of cigarettes. Developed to ensure a diversity of views on political issues, the Fairness Doctrine required broadcasters to donate airtime to the "other side" of controversial issues to produce "balance." The commission concluded that smoking was then a controversial issue and that the heavy presence of cigarette ads demanded a countervailing force. As a result, broadcasters were required to donate airtime to antismoking messages.

The Fairness Doctrine affected broadcasters from mid-1967 through the end of 1970. At their peak, antismoking messages received approximately one minute of airtime for every three minutes of cigarette advertising. Research showed that the novel Fairness Doctrine ads depressed cigarette consumption far more than cigarette ads increased it. Adult per capita cigarette consumption declined during all four years that the antismoking ads aired—the first time in history that per capita consumption had fallen more than two years in a row. And two-year declines had occurred only twice before: during the Great Depression and following the first epidemiological research linking smoking to lung cancer (Warner 1979).

Supported, quietly, by the cigarette industry—which fully appreciated the devastating effect of the Fairness Doctrine ads on sales—Congress banned cigarette ads from radio and TV effective January 2, 1971. This removed the need for broadcasters to donate time to the antismoking message, and the volume of anti-smoking ads plummeted. Per capita consumption rose for the next three years—the first, and last, multiple-year increase since publication of the surgeon general's 1964 report.

The public health community responded in part by adopting a more aggressive—but still publicity-based—approach to reducing smoking, one inaugurated in the Fairness Doctrine ads. From informing smokers about the dangers of smoking in the 1960s, the strategy shifted in the early 1970s toward exhorting smokers to quit, in part by attempting to embarrass or shame them into doing so. Antismoking "marketers" portrayed smoking as antisocial and stupid; they made a mockery

of smoking and often smokers. Such marketers also appealed to smokers' concern for their loved ones by disseminating images of young children, often with tears in their eyes, begging their parents to quit.

The first decade of the antismoking campaign yielded mixed results. Per capita cigarette consumption had leveled off, and research indicated that per capita consumption would have continued to rise without the campaign, reaching 20–30 percent higher by 1975 (Warner 1977). Yet these aggregate figures masked developments that created cause for concern. One of the most striking effects of the campaign was its differential impact on smokers depending on their education. In the mid-1960s, smoking prevalence varied little by educational attainment. Shortly thereafter a gap emerged, with prevalence declining steadily among the nation's most educated population but changing little among the least educated. This gap widened over the years (Warner and Burns 2003).

The message was clear, if not then widely appreciated: education and exhortation were working for the educated populace; the strategy was failing for the less educated. Overall, the campaign had succeeded in stabilizing smoking but not in achieving the major declines its leaders had expected. Some smokers were responding to the antismoking message but many were not. Given the steady rise of smoking among women during the decade preceding the antismoking campaign, mortality was rising (U.S. Department of Health and Human Services 1989). All was not well.

The Campaign's Second Phase: The Nonsmokers' Rights Movement

In a 1972 report, Surgeon General Jesse Steinfeld observed that cigarette smoke might damage nonsmokers' health (U.S. Department of Health, Education, and Welfare 1972). This was the first official mention of the possibility, and one of the few cases where a surgeon general's report "scooped the field." Significant scientific evidence that environmental tobacco smoke (ETS) harmed the health of nonsmokers did not emerge until a decade later (U.S. Department of Health and Human Services 1989). Since then, a wealth of studies has shown that cigarette smoke causes lung cancer in heavily exposed but otherwise healthy nonsmoking adults, also likely causes a large number of heart disease deaths, and damages the respiratory function and health of children (Glantz and Parmley 1995). Based on the scientific evidence, in 1992 the Environmental Protection Agency declared ETS a Class A carcinogen (U.S. Environmental Protection Agency 1992). If the association with heart disease proves causal, as appears likely, environmental tobacco smoke may induce forty thousand to fifty thousand deaths per year, placing involuntary or passive smoking just behind active smoking, obesity, and alcohol as the leading behavior-related causes of death in our society.

While the scientific evidence on ETS dates from the early 1980s, public concern—first with the "fairness" of nonsmokers being exposed to ETS and then with its health effects—emerged much earlier. In 1973 Arizona adopted the first modern state law restricting smoking in public places for public health reasons. Two years later Minnesota adopted the first comprehensive clean indoor air law. Other states rapidly followed suit, with laws growing more restrictive over time. Today

forty-five states have some restrictions on the books. The latest trend is toward banning smoking completely in restaurants and bars, mandatory, as of this writing, in five states and dozens of cities and counties.

The nonsmokers' rights movement is the most sustained and in many ways most transforming phase of the antismoking campaign. Now spanning three decades, this phase converted smoking from a socially acceptable behavior to one pursued by social pariahs. Clean indoor air laws and associated private policies (smoking prohibitions in businesses, no-smoking policies in private homes) have both followed and contributed to the evolution of a nonsmoking ethos. Clearly, the majority support required to pass a law derives in some fundamental way from the will and support of the public. But the growing presence of such laws itself transforms public attitudes toward smoking.

The proportion of the citizenry stating that they prohibit smoking in their own homes has risen dramatically, following the adoption of public policies on clean indoor air. These private policies serve as a major indicator of the social attitude toward smoking, especially since their growth has considerably exceeded the rate of decline in smoking prevalence (Soliman, Pollack, and Warner 2004). More visible, and equally compelling, is the rash of state laws and city and county ordinances prohibiting smoking in all restaurants and bars.

Prohibitions on indoor smoking, intended to protect the health and rights of nonsmokers, have succeeded (Hopkins et al. 2001). An additional impact—one not publicly anticipated by those urging their adoption—is a rise in the rate of smoking cessation. Studies principally comparing workplaces with and without smoking prohibitions consistently find higher rates of cessation among employees in firms prohibiting smoking (Fichtenberg and Glantz 2002). That impact ranks clean indoor air laws and policies as among the most effective tobacco-control policy measures available.

The Campaign's Third Phase: Comprehensive State Tobacco-Control Programs

In 1988, California activists successfully passed an initiative raising the state's cigarette excise tax by twenty-five cents per pack, with some \$100 million of the new revenues dedicated annually to tobacco control. Thus was born the first comprehensive state-based tobacco-control program. Through an aggressive antismoking media campaign, support and passage of strong local clean indoor air ordinances, support of telephone stop-smoking hotlines, and other initiatives, the California program led to declines in per capita consumption well above those in the rest of the nation. Declining smoking-related mortality rates were also associated with the program (Farrelly, Pechacek, and Chaloupka 2003; Glantz and Balbach 2000).

In 1992, Massachusetts successfully followed with a similar ballot initiative raising the state's cigarette excise tax by a quarter per pack, with a portion of the revenues used to create the Massachusetts Tobacco Control Program. Like the California experience, the Massachusetts program is credited with producing significant declines in smoking among both children and adults. Several other states have

now developed comprehensive programs of their own, including Arizona, Oregon, Maine, and Alaska. National initiatives launched by the National Cancer Institute, American Cancer Society, and The Robert Wood Johnson Foundation have provided funding to most states to begin tobacco-control programs (Farrelly, Pechacek, and Chaloupka 2003).

The Centers for Disease Control and Prevention (CDC) concluded that comprehensive state-based programs are an effective and cost-effective means of controlling tobacco use and of achieving significant public health gains. CDC developed a guide to comprehensive state programs, identifying nine components and estimating state-specific funding needs (Centers for Disease Control and Prevention 1999). The Institute of Medicine has also endorsed comprehensive programs as a cost-effective investment in public health (National Cancer Policy Board 2000), and a recent econometric analysis reveals a clear association between states' tobacco-control investments and ensuing declines in smoking (Farrelly, Pechacek, and Chaloupka 2003).

For a brief historical moment, the air was filled not with smoke but with optimism that soon all states would mount credible, comprehensive tobacco-control programs. In 1998, the state attorneys general announced a settlement of their Medicaid lawsuits against the tobacco industry (the Master Settlement Agreement, or MSA), which included an unprecedented payout of \$206 billion to forty-six states over a twenty-five-year period. Four other states had settled individually with the industry prior to MSA; the total payout from both efforts came to \$246 billion. The attorneys general most heavily involved in the MSA negotiations envisioned that all states would dedicate a significant proportion of the settlement funds to an aggressive assault on youth smoking.

Such was not to be. Although a few states used settlement funding for tobacco control, only a handful ever achieved CDC's minimum funding level for a comprehensive program. Instead, states devoted the vast majority of the money to other purposes, ranging from education to road repair. More recently, many states have drawn on their future MSA payments to help cover large budget deficits. Massachusetts has cut its model program by 90 percent. California's program, which often struggled with a legislature intent on redirecting excise tax revenues, has found the problem intensifying as the state grapples with the nation's largest state deficit. The national funding initiatives are drying up.

It is far too early to declare the demise of the era of comprehensive state tobacco-control programs; in a rebounding economy the tobacco-control community's numbers, sophistication, and influence could revitalize these efforts. But it is also clear that the promise of the California and Massachusetts experiments cannot come to full realization nationwide under these circumstances. From the heady days of the mid- to late-1990s, the antismoking campaign has entered an uncertain, uncomfortable, and mostly discouraging period, with abundant resources having disappeared as precipitously as they appeared on the scene just a few years ago.

The Tobacco Lawsuits

The state lawsuits, and the resulting MSA, constituted one highly visible component of lawsuits that have dotted the tobacco-control landscape for years. The lawsuits themselves divide into three distinct “waves” (Rabin 2001). The most recent wave—which includes the state suits and a variety of class-action lawsuits—has clearly changed the face of tobacco control in the United States and abroad.

The suits have exerted a profound impact on multiple aspects of smoking and health. Electronic publication of lawsuit-generated internal documents has created a treasure trove of facts and incriminating statements. The MSA has raised cigarette prices, restricted marketing, and created a national countermarketing campaign. Other suits have occasionally even threatened the manufacturers with the prospect of financial ruin.

These impacts notwithstanding, with the exception of the MSA, much of the lawsuits’ potential to affect smoking still lies in the future. Verdicts favoring plaintiffs will have to survive a lengthy appeals process to impose a truly substantial financial burden on cigarette manufacturers, one that would force prices up dramatically or even cause the manufacturers to seek protection from bankruptcy. It remains to be seen whether, collectively, the lawsuits will fundamentally alter the landscape of tobacco use in the future or merely constitute a fascinating (and temporally important) chapter in tobacco control history.

Other Dimensions of the Antismoking Campaign

Preeminent among other facets of the campaign has been cigarette taxation. Raising cigarette prices, primarily through taxation, is one of the most effective policy tools to reduce smoking, and a popular one (Chaloupka et al. 2000). Raising the tax rate allows legislators to do good while doing well: while decreasing the health burdens of smoking, a tax increase also boosts government revenues.

Congress has raised the federal cigarette tax infrequently and only modestly, a reflection of the influence of tobacco states. An increase in the federal tax also reduces state revenues: the tax induces quitting, while a state’s take per pack has not changed. Absent some quid pro quo, states thus oppose increases in the federal cigarette tax.

In contrast, tax increases have been frequent in many states and have resulted in high per-pack taxes in some; as of July 1, 2003, New Jersey tops the list, with a tax of \$2.05 per pack. Thirteen other states (and the District of Columbia) have tax rates of \$1.00 or more per pack. (New York City imposes a \$1.50 tax per pack in addition to the state’s \$1.50 tax.) Historically, state tax increases have come (and gone) in waves. From 1964 through 1972, numerous states increased their taxes, causing the real price of cigarettes to rise substantially. Over the next decade, concerns that tax-induced interstate price differences were fostering cigarette smuggling from low- to high-priced states led to a period of few increases; real prices actually fell. Taxes and prices cycled back up and then down again. In very recent years prices have risen substantially, the result of MSA-induced price increases (used to fund the state payments required of the industry) and a new spate of state

tax increases responding to burgeoning state deficits. Cigarette consumption has always varied inversely with real price.

Antismoking efforts also include restrictions on cigarette sales to or purchases by youth, restrictions on advertising, modification of warning labels, and so on. An effective tool, inaugurated during the Fairness Doctrine period in the late 1960s, is the use of media countermarketing. Several states have made media campaigns a centerpiece of their efforts. The MSA included a provision that led to a national media campaign known as “Truth.” Evidence from these experiences supports the proposition that well-designed, well-funded, and sustained counteradvertising campaigns can have a significant impact on smoking among both youth and adults (Farrelly, Niederdeppe, and Yarsevich 2003).

The Anti-antismoking Campaign: The Role of the Tobacco Industry

No discussion of the antismoking campaign would be complete without recognition of the obstructionist role of the tobacco industry. The industry has worked hard and often successfully to deceive the public about the dangers of smoking, silence critics, and buy the silence of potential critics such as the media. The industry has also used financial largesse to enlist organizational allies to develop the charade of grassroots opposition to tobacco-control measures, and again relied on deep pockets to develop close-knit relationships with legislators who block public health measures designed to reduce smoking (Advocacy Institute 1998).

The campaign of deception dates from a 1954 industry ad entitled “A Frank Statement to Cigarette Smokers” (Tobacco Industry Research Committee 1954). The ad assured the American public that the companies “accept an interest in people’s health as a basic responsibility, paramount to every other consideration in our business. . . . We always have and always will cooperate closely with those whose task it is to safeguard the public health.” Internal industry documents reveal that the “frank statement” represented the first step in a public relations campaign to deny the dangers of smoking and challenge the public health establishment at every turn.

As recently as 1994, the CEOs of all the nation’s major cigarette companies testified before Congress that they did not believe that smoking was addictive and did not know that it caused fatal disease. Their own scientists and lawyers had known both facts for decades and had been consistently telling them so.

Today the cigarette companies are trying to present a “new face” to the public. They acknowledge the dangers and addictiveness of smoking and claim, much as they did in 1954, that they want to cooperate with public health authorities to keep kids off cigarettes and help smokers who wish to quit to do so. The tobacco-control community is justifiably skeptical.

Evaluating the Antismoking Campaign and Its Future

The numerous, disparate, and uncoordinated efforts to combat smoking—public sector and private, institutional and individual—that constitute America’s national antismoking campaign have produced a remarkable record of public health

success. As a result of the campaign, smoking prevalence has fallen by nearly half. Extrapolating from earlier research, one can conclude that, had the antismoking campaign never occurred, well over 100 million U.S. adults would have smoked in 2003—in contrast with fewer than half that number who actually did smoke. In 2001 Americans consumed two thousand cigarettes per adult. Had the campaign never materialized, the figure would be in the vicinity of six thousand cigarettes. Literally millions of Americans have each enjoyed an average of fifteen to twenty additional years of life as a result of their decisions not to smoke or to quit in response to the campaign. No other public health movement in the past half-century has produced comparable health benefits.

At the same time, 45 million Americans continue to smoke, despite a highly unsupportive social environment. Beyond the resulting deaths, additional millions live with smoking-induced emphysema, heart disease, and cancer. The continuing presence of smoking serves as a stark reminder of the tenacity of nicotine addiction, both for individuals and historically. In the late sixteenth century, Turkish Sultan Murad IV decreed tobacco smoking punishable by death. This rather austere tobacco-control policy (the first to prove that smoking was, in fact, hazardous to health) did not stop smoking in Turkey. It is perhaps not surprising, therefore, that our own smoker-unfriendly environment is not sufficient to clear the air.

Indeed, a few tobacco-control leaders are now contemplating a next phase for the antismoking campaign: an era of harm reduction. Harm reduction entails offering inveterate smokers—those who cannot or will not quit—the option of switching from cigarette smoking to a hopefully less hazardous form of ingesting nicotine. The notion of harm reduction is highly controversial (Martin, Warner, and Lantz 2004). But its serious consideration reflects the continuing burden of smoking, the fact that notwithstanding the enormity of its accomplishments, the antismoking campaign remains a long way from victory.

Lessons for Public Health

Tobacco-control successes would multiply if proponents could apply lessons from the experience elsewhere in public health. All too often, the public health “community” functions as a series of isolated silos, each enclosing advocates and professionals dedicated to a single issue, such as unprotected sex, lack of exercise, or tobacco. Those who do make occasional forays outside their silos often produce useful insights.

Tobacco and alcohol abuse—seemingly a natural set of subjects for cross-fertilization—have benefited from such interdigitation on occasion, but far less often than one might expect. And those interactions that have occurred have been only partially productive. Advocates in the alcohol field relied heavily on the tobacco-control experience in securing congressional legislation mandating alcohol warning labels. The tobacco experience indicated, however, that small labels placed in obscure locations were not likely to be effective. Yet the alcohol label is itself small, wordy, and more obscure than any cigarette label. Did advocates of alcohol labels ignore the evidence, or did they believe, as one concluded, that it was not

the labels per se that mattered, but rather the “noise” in Congress and the media surrounding debate over legislation?

On the other side of the exchange, tobacco-control advocates drew on the alcohol-control community’s experience to push for state laws prohibiting minors from buying cigarettes. Such laws are now universal throughout the country. But their effectiveness relies on enforcement, something the experience with alcohol should have taught. Only recently has the tobacco-control community begun to address the enforcement issue aggressively, but with mixed success. As the alcohol example demonstrated long ago, even reasonably well-enforced minimum-age-of-purchase laws cannot stop minors from acquiring a product (Wakefield and Giovino 2003).

Reflecting the many decades of experience with the antismoking campaign, tobacco control likely has more to offer other domains of public health than they have to offer it. Many lessons are direct and self-evident, and many have been applied. Taxation as a successful deterrent to teen smoking has had applications in alcohol taxation, for example. A congressional hearing several years ago focused on taxation of cigarettes and bullets, the latter seen as a (small) deterrent to gun violence. Most recently, the novel and successful experience with state and class-action tobacco lawsuits generated a similarly reasoned legal assault on guns. Today the intellectual leaders of the tobacco lawsuit strategy provide direct guidance to lawyers and nutrition experts exploring the use of lawsuits against the food industry to address America’s burgeoning obesity epidemic.

That epidemic has all the signs of becoming America’s next tobacco crisis. Thus it seems particularly appropriate to explore how the tobacco-control experience might inform the public health assault on the country’s newest epidemic.

Lessons from the Antismoking Campaign for Controlling Obesity

Today’s obesity epidemic bears a striking resemblance to the tobacco epidemic at mid-century in many ways. Driven by both biology and behavior, the product of an environment that seduces and induces abuse (consider junk food and fast-food advertising directed at children), the rising tide of excess weight has created the second-greatest source of preventable, premature mortality in our society. With smoking on the decline and obesity rising rapidly, the latter may soon overtake the former as a cause of death (Centers for Disease Control and Prevention 2003).

Biologically, humans are hard-wired to seek out high-calorie, fatty foods. Whenever our early ancestors captured animal prey, they stuffed themselves to survive the long periods when they would go without. In an era of plentiful, inexpensive, and easily accessible food, much of it laden with fat, we continue to crave the tastes that permitted our ancestors to survive and now threaten our health. Eating occurs in a “toxic environment” that fosters the now-counterproductive behavior of bingeing on fatty, high-calorie foods (Brownell and Horgen 2003).

Economic and social factors create a real challenge for most people to avoid

overeating. Food manufacturers find it especially profitable to advertise sugary cereals and fast-food meals to children. Budget-challenged school systems contract for corporate food sponsorships and vending in exchange for new resources. Low prices make unhealthy manufactured foods far more affordable than fresh produce. The economics of food preparation lead to gigantic portions in restaurants. In their convenience and low cost, attractive and ubiquitous fast-food restaurants easily compete with work-stressed parents intending to prepare meals at home. The information-age work environment has greatly diminished physical activity, which burned off calories. Suburban sprawl makes walking and biking endangered modes of transportation. What's more, like smoking today, obesity disproportionately afflicts the most disenfranchised members of society. The poor care more about food prices, have less access to fresh produce, and find dangerous streets and lack of fitness facilities deterrents to regular exercise.

As an epidemic, obesity has become a national concern only recently. The response has a familiar ring to students of the early phases of the antismoking campaign. Efforts are inaugurated to educate the public about healthy eating habits and the need for regular physical exercise. Calls for parental responsibility dominate responses to children's lust for fast food. Discussions about limiting food advertising on children's TV shows reappear. Leading food manufacturers and purveyors are urged to produce and promote healthy food. The government seeks to collaborate with the industry in finding solutions. Advocates call for more informative labeling of manufactured food products and new labeling of restaurant meals.

Like the first phase of the antismoking campaign, the obesity-prevention information and exhortation effort will win converts. Some people—primarily drawn from the most highly educated segment of society—will take (and indeed have taken) public health messages to heart and will modify their behavior accordingly. In the face of nearly overwhelming social forces, however, the odds of a substantial turnaround are low. As long as it persists in its current form, the “toxic environment” will poison efforts to make “individual responsibility” an important answer to the problem. Consider the challenge confronting well-intentioned parents who wish to guide their children toward a healthy diet. What those children hear from their parents contradicts what they see on TV and billboards, what they are offered in school, and what their friends consume.

A principal implication is that education, exhortation, and the theme of individual responsibility cannot do it all, as they could not with tobacco. In particular, they are likely to have the least impact on those most burdened—people mired in poverty. More assertive public policy interventions will be needed, many possibly of a regulatory nature. The public health community will have to confront the toxic environment directly, in a manner that risks creating an adversarial relationship with the food industry. This will be a source of discomfort for many people on both sides. Furthermore, as the tobacco-control experience recommends, public health forces will need to develop multipronged and comprehensive strategies, and remain for the long haul (Mercer et al. 2003). Indeed, in a public health battle against a behavior-related health problem, be it obesity, smoking, illicit drugs, teen

pregnancy, or gun violence, “victories” are tallied by the reduction in damage wrought, not by the final conquest of the risk factor in question.

The similarities between the early assault on tobacco and the contemporary attack on obesity raise an intriguing question: Must a full-fledged public health campaign begin with the least combative and coercive intervention—information—before launching into an adversarial mode? To persuade disinterested but necessary parties that more assertive methods are essential, proponents may need to try this most “reasonable” of all approaches first. However, the obesity campaign seems to be mixing more assertive, even combative, elements of a public health campaign with multiparty “discussion” of the problem. For example, prominent activists and scientists have called for and, in some instances, achieved “snack taxes.” Their interest in using an excise tax to simultaneously deter unhealthy eating and raise funds to combat it derives directly from the successes of cigarette taxation. Calls for bans on food advertising aimed at children also resemble tobacco-control strategies, as do efforts to remove soft drink sponsorship from schools.

An excise tax on “bad foods” deserves explicit attention, especially if it can be combined with a food subsidy program for the poor that facilitates purchase of “good foods” such as fresh produce. The tax-and-subsidy combination is attractive for both practical and political reasons. Practically, the tax would raise revenues to support a food subsidy program that, in budget-strapped times, likely could not be sold without a new revenue source. The tax would also likely discourage junk-food eating more among the price-sensitive poor than among the rich. Meanwhile, subsidizing the purchase of fresh produce for the poor would allow substitution of now less expensive fruits and vegetables for now more expensive snack foods. The availability of “fresh produce food stamps” could dramatically boost the number of retail outlets selling fresh produce in the nation’s inner cities. The paucity of retail availability of fresh produce constitutes a significant barrier to healthy diets among poor people. Selling a snack tax may be far easier if revenues are designated to help the poor, especially poor children, secure healthier diets. One survey after another has found that Americans are especially supportive of cigarette taxes if revenues are earmarked for programs designed to prevent youth smoking.

Targeting population subgroups with interventions believed to be more effective for them is likely to emerge as an important feature of the national attack on obesity. In the early antismoking movement, campaigners failed to distinguish between high- and low-education smokers, for example, and between African American and white smokers. Over time we learned which interventions had the most impact on which subgroups. Early media campaigns worked best with educated white smokers. Later media campaigns targeted different socioeconomic and ethnic groups. California’s campaign, for example, included messages developed specifically for Hispanics, Koreans, and African Americans.

Success with antismoking countermarketing recommends using the media to sell healthy eating behaviors. A large, sustained, professionally developed media campaign could provide at least a modicum of competition for pervasive enticements to consume soft drinks, cookies, candy bars, potato chips, and fast-food meals. The tobacco-control experience emphasizes that a campaign that is poorly

funded, of short duration, and prepared by well-meaning amateurs is unlikely to have much impact. Reliance on donated airtime will not work. Scores of worthy causes compete for scarce public-service announcement spots. Substantial financing would have to be secured to mount an effective campaign, probably on the order of \$100 million or more annually. Snack taxes could contribute here, too—a modest national tax could generate billions of dollars—as might voluntary “good-will” contributions from food manufacturers, many of whom would have a direct financial interest in moving America’s dietary habits in a salutary direction.

The fact that some food producers might participate in such an endeavor suggests a potentially fundamental difference between the tobacco and obesity cases. Smoking-prevention campaigns often portray tobacco companies as exploiting the young. Through media portrayals, as well as news conferences and congressional hearings, the tobacco-control community strives to reveal companies’ disinterest in the futures of their young victims. Many food manufacturers are inextricably linked to Big Tobacco—Kraft owns Nabisco, and Philip Morris (recently renamed Altria) owns Kraft, for example—and it is easy to see them as driven by similar greed and disdain for the customer.

The situations are not entirely the same, however. Food manufacturers produce low-fat versions of their traditional products and, increasingly, trans-fat-free snacks. Soft drink producers have introduced diet versions of their mainstay products. Fast-food purveyors have reduced their use of unhealthy oils and added salads to their menus. One can ask whether these alternatives have made much of a difference in the U.S. diet, as Americans’ weights have burgeoned, but food manufacturers’ behavior appears less reprehensible on the surface than that of the tobacco companies. Cigarette manufacturers, in contrast, sell only unhealthy products (although their emerging emphasis on harm reduction products bears some resemblance to snack food producers’ introduction of low-fat snacks) (Martin, Warner, and Lantz 2004). Evil tobacco companies thus make for a far more appealing public policy target than mixed-message food manufacturers.

More generally, the obesity issue presents a far more complicated picture than does tobacco control. Cigarettes offer smokers few benefits other than satisfying nicotine cravings; the product is clearly not needed to sustain life. And as addictive as nicotine is, smokers can cease cigarette consumption entirely. Half of all Americans who have ever smoked have done so. Especially today, given smoke-free workplaces and public buildings, and with cigarette billboards now removed from the landscape, former smokers can reside in an environment relatively free of cues to smoke.

In obvious contrast, food is essential. Obese people must eat, and the cues to eat are ubiquitous. At the personal level, this helps explain why the battle of the bulge is so much more difficult than quitting smoking: the agent is ever-present, literally “in your face.” At the public level, the necessity and positive values of food mean that policy cannot create a “food-free” environment. The clean indoor air law that has transformed Americans’ attitudes toward smoking and boosted quitting in environments (notably workplaces) that prohibit smoking has no equivalent in the world of obesity. This means that very few dieters manage to sustain

significant weight loss, far less than the fraction of former smokers who remain abstinent.

Some lessons from the clean indoor air movement do apply to the obesity epidemic, however. While one cannot envision (nor desire) a food-free environment, one can easily imagine a junk-food-free environment. This is the goal of people working to remove the pervasive influence of junk food in schools, some of it sponsored by the manufacturers, much of it in response to student demand. Research has shown that replacing soft drinks with fruit juices and bottled water in vending machines improves students' diets (Brownell and Horgen 2003). Replacing pizza, burgers, and fries with salads and healthy sandwiches in cafeterias could also alter students' diets. Clearly, achieving such changes will be extraordinarily difficult; but think back twenty-five years. Who would have believed it possible that major cities, entire states, would ban smoking in all restaurants and bars?

Much of this discussion focuses on community and other social interventions; much, either implicitly or explicitly, emphasizes prevention rather than attempts to treat obesity. However, the case for treating obesity may be compelling, and lessons from tobacco may be relevant here as well. Broader social interventions probably use scarce resources more cost-effectively than individualized clinical treatment of smoking addiction. Still, clinical treatment for smoking cessation is "the gold standard of health care cost-effectiveness" (Eddy 1992). Only a minority of treated smokers succeeds in quitting, but the low cost of treatment, combined with the high health benefits of success, create an attractive cost-effectiveness outcome. Especially given that individualized treatment may be necessary for certain smokers to quit—namely, those who do not respond to social interventions—health groups should urge providers and insurance companies to cover cessation counseling and treatment. That many providers do not offer such treatment reflects a constellation of problems surrounding the delivery of behavioral counseling in the health care setting (Warner 1997).

Likely, the most important message from the antismoking campaign is that tackling the obesity problem requires a sustained, thoughtful, well-resourced, multidimensioned effort. Such an effort must begin with education and exhortation: with creative use of the media to get the word out. It must include concerted attempts to convince major economic interests—including food producers and fast-food purveyors—to engage in enlightened self-interest by supporting constructive initiatives (a healthy-eating campaign) and dissociating themselves from destructive ones (product placement in schools). It should engage the broader community in encouraging physical activity (such as by creating convenient walking and bike paths). An obesity-control movement must be prepared to fight the prolonged and painful battles to achieve meaningful public policy.

Improved food labeling is one such battle that has been fought with considerable success. Junk food excise taxes constitute another, where forays have achieved mixed success at best, with a limited number of small taxes having been adopted to date, several of which have been eliminated subsequently. Anti-obesity campaigners must remain vigilant for external developments that may profoundly affect their work and figure out how to maximize the benefits from them. The to-

bacco lawsuits are a case in point, one that lawyers viewing obesity as a new target of opportunity have already borrowed. Finally, underpinning both policy and treatment interventions must be a sound base of research. Its contribution to tobacco control has been vital (Warner 2004).

The remarkable achievements of the antismoking campaign notwithstanding, the public health community is a long way from declaring victory over tobacco. The lesson is clear: obesity-control campaigners must set realistic goals, derive satisfaction from partial victories, and commit for the long run.

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Patterns and Causes of Disparities in Health

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

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

Determinants of Health

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

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

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

Unemployment and Working Conditions

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

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

Stress, Resources, and Health Practices

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

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

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

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

Differential Access to Medical Care

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

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

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

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

Social Disparities in Health

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

Racial/Ethnic Disparities in Health

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

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

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

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

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

^aAm Ind is for American Indian.

^bAPI is for Asian and Pacific Islanders.

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

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

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

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

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

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

Source: Rumbaut 1996.

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

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

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

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

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

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

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

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

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

Source: Lin et al. 2003.

^aDiffs = Differences.

Race, SES, and Gender Disparities

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

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

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

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

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

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

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

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

Reducing Disparities in Health

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

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

Reducing SES Disadvantage in the Population

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

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

A recent natural experiment similarly assessed the impact of an income

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

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

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

Reducing the Effects of Health on SES Disadvantage

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

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

Changing the Intervening Factors

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

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

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

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

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

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

Improving Medical Care

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

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

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

Targeting the Most Vulnerable

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

Ensuring Long-Term and Realistic Goals

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

The Need for National and Regional Cooperation

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

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

Reducing inequalities in health requires national leadership that provides di-

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

The Need for Evaluation

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

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

Overcoming the Barriers

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

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

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

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

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Addressing Racial Inequality in Health Care



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*F*ocusing on the role of race in health policy is not easy. Any such analysis raises a host of complex issues that lie at the policy intersection of health care and civil rights. More fundamentally perhaps, such an exploration cannot proceed without confronting two matters that many might prefer to avoid. The first is the historical dominance of racially biased attitudes, beliefs, and customs in medicine no less than in other areas of life, such as education, employment, housing, transportation, public accommodations, and even marriage and family formation. The second, which follows on from the first, is the need for the medical system itself to be an equal player in a broad national undertaking, which includes active policy interventions when necessary, to find ways to erase discrimination's vestiges.

Some may believe that race is too profound a societal issue to lend itself to a public policy response. Research on health and health care unfortunately tends to bolster this perception by failing to push beyond statistical analysis of racial disparities to explore their underlying causes.¹ Even more troubling are the disparity studies that conclude by speculating on the possible roles of patient attitudes and preferences without giving equal weight to the possible roles of systemic factors. There are far too few studies, such as that conducted by Schulman and colleagues (1999), which attempt to probe the role in health disparities that may be played by physician perception and clinical judgment. Furthermore, it is not uncommon to find that such evidence is either met with denial or whitewashed when it is presented (Geiger 2004).

In their watershed chronicle of race and health care, *An American Health Dilemma*, W. Michael Byrd and Linda A. Clayton present an almost overwhelming picture of a problem that lies at the juncture of culture and policy (2002). In the authors' view, the attitudes, preferences, and beliefs that must change are not those of individual patients but those of the health care system itself. This study depicts a threefold dilemma: a social expectation that minority Americans will experience substandard health status; a highly privatized health system that accords broad discretion to entrepreneurs and marginalizes poor and minority members;

and a widespread refusal to acknowledge the problem of racial segregation and exclusion in health care. This exhaustive exploration underscores that were the nation to minimize the role of law and policy in changing health care culture, it would commit an error as serious as ignoring policy tools in other social settings.

Using the law to move a nation to address race is inherent to democratic government. Law can be understood as the formal language by which society shapes, institutionalizes, and preserves its mores (Friedman 2002); and thus, the notion that racial matters should be addressed in laws that govern the health care system is hardly radical. Indeed, official racial segregation sanctions once dominated the law, not merely in the southern states, but also as part of the federal Hospital Survey and Construction Act of 1946 (Hill Burton), which authorized the construction of segregated facilities (Smith 1999). Just fifty years have passed since *Brown v. Board of Education*, and it has only been forty years since *Simkins v. Moses Cone Hospital*, in which the federal courts declared segregated health facilities unconstitutional.² Furthermore, scores of communities managed to preserve health care's racial divide even after this decision, through the use of laws and policies governing hospitals' medical staffing privileges (Smith 1999; Byrd and Clayton 2002; Bobinski 2003; Trubek and Das 2003; IOM 2003; U.S. Commission on Civil Rights 1999).

Not only do the specific remedial tools that public policy can bring to bear on social problems argue for a vibrant role for law in race and health care. The very use of the legal process itself signals the nation's willingness to use a public, democratic forum—its most formal, transparent, and visible means of social ordering—to address race. Robert Caro's description, in *Master of the Senate* (2002), of the debate over the 1957 Civil Rights Act illuminates the role of lawmaking in challenging racial beliefs. As Caro notes, the true import of this debate for national civil rights policy lay far less in the law that ultimately emerged (true reform would not arrive until the Civil Rights Act of 1964) than in the act of public debate itself. The issue of race in health care is simply too important to leave to the less visible world of shifting social attitudes.

Despite the distance yet to travel, the paucity of data measuring racial progress, and lingering barriers to care, efforts to address race in health care reveal the profound impact of laws. These include legislation desegregating U.S. hospitals and creating public financing programs, which exerted an enormous impact on systemic barriers to care (Smith 1999). Legislation also established community health centers in medically underserved, disproportionately minority communities (Davis and Schoen 1977; IOM 2003; U.S. Commission on Civil Rights 1999; Byrd and Clayton 2002; GAO 2003; Shone et al. 2003).

Addressing race and health care requires understanding the interaction between civil rights law and the vast body of law that collectively defines and influences the financing and provision of health care (Rosenbaum and Teitelbaum 2003). One law in particular—Title VI of the 1964 Civil Rights Act—has tended to dominate legal analysis of race and health care. Title VI prohibits discrimination in federally assisted programs and services and defines virtually all sources of public health care financing as a form of federal assistance. Furthermore, Title VI reaches

not only intentional discrimination (known as disparate treatment) but also seemingly neutral conduct that nonetheless—as shown by statistical evidence—has an adverse impact on racial and ethnic minority groups (Perez 2003). This latter form of conduct has long been termed “disparate impact” and has obvious parallels to more recent discussion of health disparities.

This classic legal construct, which grounds the problem of disparities in the law of civil rights, may now be giving way to shared ownership with the law of health care quality. Shifting the legal paradigm from civil rights to health quality may make the conversation easier and remedies more attainable. Certainly, the task of proving a legal wrong cannot be any more challenging under a quality paradigm than as a civil rights violation. Proving the latter is extraordinarily difficult given the lack of a universal and compulsory system for collecting data on patient care by race, the most crucial evidence in a disparate treatment claim.

Even assuming statistics do exist, litigating a case of discrimination requires a plaintiff to be able to prove not only injury but also at least proximate causation, a very high bar. The result is that only those acts that have the most visible and overt potential impact on minority populations, such as hospital closures or relocations, or the segregation of patient floors or wings by race, have tended to be litigated (Rosenbaum, Markus, and Darnell 2000). Furthermore, many of the most troubling examples of racial disparities may be replete with confounding factors where the law is concerned. Proving a civil rights claim requires isolating these potential confounders to show that the injury was indeed racial rather than economic or tied to health status. In this regard, of course, an added complication is the extent to which physicians’ choice of diagnosis and treatment approaches in specific types of cases affects the outcome of care (IOM 2003). Basing treatments on individuals’ financial status or ability to “benefit” from treatment may be troubling but nonetheless may not violate Title VI, whose scope is confined to racially identifiable injury. Health care discrimination cases brought under Title VI thus remain relatively few and far between (Rosenbaum, Markus, and Darnell 2000; Watson 1990).

Federal oversight of civil rights compliance—groundbreaking in the early years of the Civil Rights Act—has also become virtually nonexistent (U.S. Commission on Civil Rights 1999). The near-total absence of federal enforcement has become an even more critical problem in the wake of the 2001 Supreme Court decision in *Alexander v. Sandoval*.³ That decision virtually eliminated individuals’ ability to bring suits aimed at halting practices with discriminatory effects at least against private recipients of federal funds, such as hospitals, nursing homes, and managed care organizations (Rosenbaum and Teitelbaum 2003).

The modern consumerism movement might have given new strength to challenges to perceived discrimination in health care. But modern health care consumerism has its roots in the law of markets, not in the law of civil rights; and, as a result, the legal framework of open markets applies (Havighurst 2002). Market advocates emphasize information, choice, and transparency rather than the establishment of legal rights of patients and substantive operational duties on the part of providers (Halvorson and Isham 2003). While the concept of transparency might

propel such advances in industry practices as the greater availability of racially relevant information on quality and utilization, the disproportionately weak purchasing power of many racial and ethnic minority groups, related to their higher poverty, health risks, and lack of insurance, makes this result unlikely.

Health policy debates that focus on race are thus fraught with legal complications and raise issues that the nation—especially the medical care system—would prefer to avoid. Furthermore, the relatively limited power of minority consumers as a group may serve to undermine rather than advance their position in an age of consumerism. Still, despite these challenges, the discussion of race and health care has not only persisted but broadened to include health care quality along with civil rights. Indeed, the continued dominance of race as a public policy matter in both legislatures and the courts has, if anything, reinforced the search for the means to advance the issue of race in health policy.⁴

What Does the Evidence Show?

Considerable research into racial disparities in health supports several basic conclusions. First, while patient preference and what is referred to as “lifestyle” may play some role, socioeconomic factors appear to be powerful drivers of racial disparities in health. This is particularly true for measures of mortality and morbidity from preventable causes as well as complications of illness (IOM 2003; Bobinski 2003; U.S. DHHS 2000). Second, even when patient characteristics are controlled, differences in use and outcomes are evident, a finding that suggests the role of the medical care system itself in contributing to racial disparities (Geiger 2004). Barriers seem to arise after individuals have already entered the medical care system, when practice style rather than individual behavior tends to dominate the course of events (IOM 2003).

Third, racial disparities in access to health care and outcomes appear pervasive, affecting numerous health conditions and health care settings, even when investigators control for insurance status and income. Were race a predictor of health care and outcomes only in isolated circumstances, the inference might be weaker, but the pattern surmounts the bounds of mere coincidence (IOM 2003; Kaiser Family Foundation 2003; Collins, Hall, and Neuhaus 1999; Geiger 2004).

Fourth, for a number of reasons, the nation’s approach to health insurance significantly discriminates against racial and ethnic minorities. In a voluntary, employment-based health care system, economically disadvantaged individuals (who are more likely to be members of racial and ethnic minority groups) are more likely to be either uninsured or publicly insured (Kaiser Family Foundation 2003; Hall, Collins, and Glied 1999). These racial disparities permeating the health insurance system persist even into old age. Among Medicare beneficiaries aged sixty-five and older, non-Latino white beneficiaries are significantly more likely to possess supplemental employer-sponsored or other private coverage, while their minority counterparts are six to seven times more reliant on Medicaid to supplement Medicare (Kaiser Family Foundation 2003).

Fifth, large racial gaps appear in patients’ access to health care, even when

personal characteristics are held constant. Minority patients, particularly those of Latino descent, are more likely to lack a usual source of health care and less likely to use any medical services. Regardless of whether the measure is primary care or specialty care, minority populations also show a consistent pattern of lower levels of utilization, and disparities persist even when researchers control for income (Kaiser Family Foundation 2003).

Finally, and perhaps most compelling from a policy standpoint, even when minority patients have entered the health system, they are less likely to receive the level of care accorded nonminority patients for the same conditions regardless of insurance status (Bobinski 2003; IOM 2003). Medicare managed-care enrollees, for example, receive differential levels of treatment based on race for comparable cardiovascular conditions such as acute myocardial infarction (Schneider, Zaslavsky, and Epstein 2002). Latino and African American patients with public insurance do not receive coronary artery bypass surgery at rates comparable to their white, publicly insured counterparts. African American patients are also less likely to receive treatment for early-stage lung cancer and, not surprisingly, post lower five-year survival rates. Minority nursing home residents with cancer are more likely to experience untreated daily pain (Kaiser Family Foundation 2003).

Studies reveal important racial disparities in managing chronic illness as well. Medicaid-insured African American and Latino children use less primary care, depend more extensively on emergency departments, experience higher rates of hospitalization, and die at significantly higher rates than their white counterparts (IOM 2003; Kaiser Family Foundation 2003). Together, these results reveal a broad and consistent relationship between the race of patients and the use and outcome of care, regardless of whether treatment entails primary care or specialized services. The health care financing system intensifies these results because it works least well for economically disadvantaged racial and ethnic minority groups.

The cumulative evidence flowing from this immense body of research supports several major policy inferences. The most controversial is the inference that the medical care system itself acts in ways that are discriminatory in result, if not in design. This inference is controversial because its ultimate evidentiary source is real clinicians and institutions interacting with real patients. It suggests that the very act of medical decision making can increase the potential for racially identifiable outcomes even where none are intended (Bloche 2001).

This link between the conduct of individual physicians and institutions and patterns of patient care is hardly a new one. In a compelling study conducted nearly forty years ago, two Yale researchers, physician Raymond Duff and sociologist August Hollingshead, chronicled the relationship between patients and clinicians at Yale New Haven Hospital. They observed a correlation between patients' economic and racial characteristics and the extent to which the hospital and its medical staff—as a result of both individual conduct and institutional protocols—acted as their “committed sponsors.” Patients who experienced what Hollingshead and Duff brilliantly termed “committed sponsorship” from their physicians showed better survival rates and health outcomes; those who did not fared poorly, as measured by mortality, morbidity, and overall health quality (Duff and Hollingshead

1968). This seminal work points to the fundamental connection between the relationship between physicians and patients, on one hand, and good results in a complex health system, on the other. This finding should hardly surprise anyone who knows the system, yet it has only recently reemerged as a focus of policy attention.

The potential of the U.S. health care enterprise to produce racially identifiable results extends beyond the individual conduct of clinicians and institutions, however. Equally important to both minority patients and minority communities are the broad discretion accorded the health care industry—at both the practitioner and corporate entity level—to select both product and geographic markets and the general lack of governmental standards or oversight of aggressive market conduct (Rosenbaum 2003). It is true that the government has made modest investments in programs to compensate for market failure in the area of primary care, such as community health centers and other community-based and publicly supported services. But these providers (whose services are consistently recognized for their high quality) hardly can overcome the effects of an immense and inaccessible system of specialized and extended health services.

Discretion over the design of health care markets can have important racial implications. With the demise of health planning in most states and communities, providers' decisions regarding location and services—such as whether to stay in the city or move to the suburbs and whether to offer outpatient and diabetes management programs—become matters of business strategy rather than community need. U.S. civil rights law has been particularly unhelpful regarding the basic business of health care: virtually every case challenging health care closures and relocations on civil rights grounds has lost. One review of cases from 1965 to 1998 suggests that Title VI claims tend to succeed only when evidence shows discrimination within a particular market or institution, rather than refusal by a health care provider to either enter or remain in a market (Rosenbaum, Markus, and Darnell 2000). Similarly, although refusal by hospitals and nursing homes to accept Medicaid patients has been shown to have a disproportionate adverse impact on minority patients in violation of Title VI, this evidence has virtually never been used by courts or legislatures to compel provider participation in Medicaid.

Managed care had the potential to open new markets to publicly insured minority patients by imposing on network providers a contractual duty of care toward plan members. However, this is not how managed care has in fact played out. Residential segregation in many communities has limited care networks to the physicians and safety net providers already serving affected neighborhoods. Moreover, those physicians who are members of networks have resisted the “all-products” clauses that insurers attempted to write into their provider agreements, insisting on maintaining the right to select their patients (Rosenbaum et al. 1997).

Medicaid managed care is especially important for minority populations, given the tendency toward a racially identifiable distribution of health plan members by payer type. Medicaid has played a fundamental role in reducing disparities, and its value for persons with chronic illness and disabilities compared with more limited conventional insurance can hardly be overstated (Rosenbaum 2002; Weil 2003). But Medicaid managed care today is dominated by specialty compa-

nies typically affiliated with safety net providers who already treat beneficiaries. As impressive as the health care safety net has been in terms of clinical quality and overall commitment to community-wide outcomes, individual clinics continue to report serious problems ensuring access to specialty care for their publicly insured patients (Gusmano, Fairbrother, and Park 2002). Although the growing dominance of managed care organizations in public insurance for lower-income patients may appear to have improved access by integrating service delivery and financing, the extent of improvements remains an open question characterized by a conflicting body of evidence (Rosenblatt, Law, and Rosenbaum 1997).

The Law and Policy Implications of Race and Health Care

Maintaining a focus on the intersection between racial disparities and legal interventions remains an important policy priority. Legislation introduced in both the House and the Senate in 2003 attests to the persistence of racial inequality in health care as a target of legal intervention. This legislation would address racial disparities through an array of venues, from more active enforcement by civil rights agencies to additional programs and services aimed at improving minority access to health care.⁵

A good part of the problem of using civil rights laws aimed at the protection of racial and ethnic minority groups to address racial disparities in health and health care is the confounding effects of socioeconomic and health insurance status. In this regard, legislation reforming insurance coverage would by definition amount to a legal intervention aimed at reducing racial disparities. For example, a uniform, universal health insurance scheme that did not distinguish by employment, family income, or place of residence in either coverage or financing might be expected to reduce barriers to health care and improve the supply and distribution of health resources in poorer communities. Past efforts to expand Medicare and Medicaid coverage certainly are dramatic testaments to the power of major insurance reform in fostering racial equality (Davis and Schoen 1977; Kaiser Family Foundation 2003).

But favorable racial results are a possible byproduct of insurance reform rather than a specific remedy aimed squarely at reducing documented disparities. Furthermore, the evidence shows that financing improvements alone might well mitigate the role of race in health care only modestly, since, even controlling for income and coverage, researchers find that disparities persist (IOM 2003).

These studies suggest the importance of addressing racial disparities in health and health care directly, rather than hoping for progress as a felicitous byproduct of insurance reform. From a public policy standpoint, reducing disparities requires a formal and enforceable scheme that promotes accountability toward discrete subgroups of patients as well as the overall population. Such a scheme would act as a lever for advancing reforms that otherwise might languish, and whose importance easily can be obscured by the aggregated results of generalized improvement activities.

The power of law to compel change in custom and practice is fundamental

to the premise of law itself, and evidence of this power is visible in civil rights laws such as Title VI of the 1964 Civil Rights Act, financing programs such as Medicare and Medicaid, and laws aimed at improving health care quality (Smith 1999; Rosenblatt, Law, and Rosenbaum 1997). Perhaps the most famous articulation of the role of law in altering outmoded or inappropriate custom arises in the context of legal accountability for one's conduct, in the landmark case of *The T. J. Hooper*. In that 1932 case, Judge Learned Hand emphasized that reasonable conduct—determined by objective evaluation of relevant evidence rather than by industry custom—was the proper legal standard for ensuring public accountability.⁶

Two important legal traditions could anchor a formal scheme of public accountability for reducing health disparities: the law of civil rights and the law of health care quality. The point at which these two legal traditions converge in the flow of federal Medicare and Medicaid funds deserves careful attention because of the power of financing to shape the structure and process of medical care.

Innovations in Civil Rights Law

Individual enforcement has always been a central tool of civil rights law because of the lack of agency oversight, but in this regard the *Alexander v. Sandoval* decision represents an unprecedented diminution of individuals' ability to counter industry practices that have discriminatory effects (Rosenbaum and Teitelbaum 2003). In a post-*Sandoval* world, even if individuals claiming disparate impact surmount barriers such as the lack of data, cost of litigation, and difficulty in meeting the legal burden of proof, this decision amounts to a total bar to individual enforcement of Title VI's de facto discrimination ban, at least regarding private entities.

But *Sandoval* addressed only the question of whether individuals could enforce the discriminatory impact rule. It did not grapple with whether Title VI's effects test is enforceable by federal agencies. This crucial fact raises once again the notion of breathing new life into direct federal enforcement of providers' legal obligations under federal civil rights law. A policy statement released by Justice Department officials in the wake of the *Sandoval* decision reiterated the power of agency enforceability. Moreover, recent administration actions regarding access to care by persons with limited English proficiency suggest a renewed willingness to use civil rights law to reduce health disparities (Rosenbaum and Teitelbaum 2003).

Civil rights laws that link eligibility for federal grants and contracts to non-discrimination standards could be effectuated by conditioning Medicare and Medicaid payments on evidence of provider adherence to specific conduct aimed at promoting access and quality of care for minority patients. The standards could then be enforced through the reporting of patient care data by race. In essence, this is the approach taken by the Office for Civil Rights in its formulation of standards of conduct for programs and entities serving non-English speaking persons. This approach could be extended to other aspects of health care operations as well, including service arrangements, the design and implementation of residency and health professions training programs, and other practices linked to access to care.

Such a regulatory approach effectively mirrors the early days of Title VI, when federal officials conditioned eligibility for Medicare and Medicaid payments on a showing of nondiscrimination (Smith 1999). For this approach to work, officials would have to develop specific performance standards in areas that research links to reducing disparity. For example, agencies might condition federal payments on modifications in facility staffing, training programs, clinical affiliations, practice techniques, and diversity training. To be legally viable as a Title VI-propelled standard, the conduct in question must be reasonably related to disparate racial outcomes and need not be linked to evidence of intentional discrimination. A second civil rights-based approach—closely linked to the first but cast as an incentive—would be to establish legal “safe harbors.” The federal guidance regarding the obligations of health care providers toward persons with limited English proficiency (LEP) contains the seeds of this approach. This guidance, originated by the Clinton administration in 2000 and revised by the Bush administration in 2003, details broad standards that federally assisted providers must satisfy to comply with Title VI. (Ironically, perhaps, the *Sandoval* decision also involved barriers to such federally assisted services.) Although the Bush administration exempted physicians in private practice whose only source of federal assistance is Medicare, these guidelines nonetheless retain considerable breadth. In effect, the LEP guidance creates legal safe harbors against civil liability for “disparate impact” under Title VI.

This approach is loosely modeled on strategies for enforcing antitrust and fraud and abuse statutes that could be used to address other goals for reducing health disparities as well. Recent research links improvements in health care quality to reductions in racial disparities (Sehgal 2003). Thus, tying training programs and quality improvement activities to data on access and outcomes by race might ensure compliance by health care institutions with federal civil rights standards.

In short, developing health-care-related Title VI standards for racial and ethnic minority patients similar to the LEP standard should be feasible. Such standards could establish goals aimed at eliminating health care disparities and allow providers to show compliance with those goals by collecting, analyzing, and publishing data. This approach borrows heavily from the methods developed for measuring improvements in health care quality now widely accepted by providers and purchasers alike.

Developing such policies would be complex, but no less so than creating any performance measurement system that is valid, reliable, and reasonably calculated to measure the desired conduct, adjusted to control for individual cases. Given systems for collecting information by racial and ethnic origin, providers can adapt systems for measuring quality to those measuring progress in reducing racial disparities. This approach would acknowledge the basic link between civil rights law and efforts to remedy racial disparities through health care financing.

The Law of Health Care Quality

For decades, civil rights law has “owned” the concept of racial disparities; indeed, the concept of disparity in treatment originated in civil rights theory and practice. Racial disparities as a distinct concept in health quality, in contrast, first

loomed large in the late 1990s as part of a deliberate effort by the Clinton administration to broaden the legal and policy approach to race in health care. This new paradigm has gained sufficient momentum so that the Bush administration has continued to emphasize racial disparities as a separate and independent measure of health quality, albeit by softening the language about the effects (or extent) of disparities in its reports to Congress (Geiger 2004).

In reconceptualizing racial disparities as an independent measure of health quality, federal officials have succeeded in accomplishing what two generations of civil rights legal advocacy could not: framing evidence of racial disparities as related not only to legal discrimination but to poor quality. This reframing has not only expanded public understanding of the problem, but also served to minimize the need to distinguish between economic and racial factors, a necessary step in using civil rights law as legal leverage over the health care system. Disparities in health care have become an all-important component of the growing effort to identify formal interventions aimed at promoting health care quality. Research suggests a focus on three distinct areas: health care management and practice (staff privilege rules, clinical program affiliations, training programs, and participation in public insurance programs), the process of care (staff training and education and clinical practice style), and clinical outcomes and consumer experiences. Of particular importance, in our view, is broadening the avenues into and through care and the nature of health professionals who achieve formal status and influence. In view of the link between the physician-patient relationship and health quality, public programs could link institutional eligibility for training funds to race-conscious admissions policies, as permitted by the Supreme Court in 2003. Also important could be incorporating cultural training into education curricula, as it appears to influence the quality of clinical care (Betancourt 2003).

As with a civil rights approach, enforcing the law of quality could entail both regulations and incentives. Enforcement of a quality-based model could occur through not only federal payers (Medicare, Medicaid, and the Children's Health Insurance Program) but also state payers (and regulatory and licensure agencies) and even public and private employers. The latter could include private employer-sponsored health plans and public employee plans for both civilian and military workers, such as the Federal Employees Health Benefits Program, which can achieve similar results through contractual specifications.

A health quality agenda for reducing racial disparities requires widespread acceptance of the need to collect and publish much more extensive data on patients' race, payer, and income. The health care system has ferociously resisted collecting such data in a civil rights context, so these efforts do not exist outside of a few Medicare reporting systems. Indeed, one of the best-known pieces of civil rights litigation stemmed from the secretary of Health and Human Services' unsuccessful effort to mandate a collection system (Rosenbaum, Markus, and Darnell 2000).

The world of health quality has no equivalent to *Sandoval*. No court has ruled that individuals cannot sue over quality of care and medical negligence, and basic common law principles could form the foundation for medical tort claims under

state law (Rosenblatt, Law, and Rosenbaum 1997). Extending confidentiality to information collected for studying racial disparities could address this legal exposure, just as the law protects information stemming from medical peer review (Marchev 2003).

Achieving consensus on the use of law and policy to encourage efforts to reduce racial disparities would be difficult, but the discomfort caused by this debate only underscores its importance. Ideally U.S. mores, preferences, attitudes, and beliefs would be free of racial overtones. But despite decades of progress, race remains very much alive in the American consciousness and national experience. Thus race in all its complexity must continue to play a central role in the U.S. health policy debate, no matter how painful the discussion or complex the policy response. In our view, belief in simpler solutions such as better insurance coverage and more patient choice overlooks more than two centuries of history as well as a litany of studies showing that race really matters. The sooner the nation actively adopts the goal of reducing disparities in health care policy and practice, the stronger the health care system will be.

Notes

1. A comprehensive treatment of race and health policy would focus not only on medical care but also on the inequalities in health determinants that underlie disparities in health (Bobinski 2003).
2. *Brown v. Board of Education*, 347 U.S. 483 (1954); *Simkins v. Moses H. Cone Memorial Hospital*, 323 F.2d 959 (4th Cir. 1963).
3. *Alexander v. Sandoval*, 532 U.S. 275 (2001).
4. *Grutter v. Bollinger*, 123 S. Ct. 2325 (2003).
5. Healthcare Equality and Accountability Act, S. 1833; H.R. 3459 (108th Cong., 1st sess., 2003).
6. *The T. J. Hooper*, 60 F. 2d 737, 2d Cir. (1932).

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