9
CHAPTER

Toward Health Equity: A Prevention Framework for Reducing Health and Safety Disparities

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OBJECTIVES

After reading this chapter, you should

- Be able to provide a framework for understanding how health disparities are produced and how they can be addressed and eliminated
- Have the ability to increase capacity to discuss an environmental approach to health disparities
- Have an understanding of the take two steps back model, from medical conditions to exposures and behavior to the environment

KEY TERMS

Community conditions
Community health
Disparity
Environment
Environmental approach
Equity
Norms
Primary prevention
Resilience
Root factors

Prelude

In 1965, H. Jack Geiger, physician and civil rights activist, opened one of the first two community health centers in the United States in Mound Bayou, Mississippi (Prevention Institute, 2007b). The invention of the double-row cotton-picking machine had recently replaced the need for an entire population of

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sharecroppers, causing massive unemployment and exacerbating poverty (Caplan & Rodberg, 1994).

To assess the needs of the community, the Mississippi health center began holding a series of meetings in homes, churches, and schools. As a result of these meetings, residents created 10 community health associations, each with its own perspective and priorities. In the beginning, the health center saw an enormous amount of malnutrition, stunted growth, and infection among infants and young children. Geiger and his colleagues linked hunger, a health issue, to acute poverty and linked poverty to the massive unemployment that had turned an entire population into squatters (Prevention Institute, 2007b).

Instead of just treating individual cases, Geiger and his colleagues addressed the problem of malnutrition, first by writing prescriptions for food. Health center workers recruited local Black-owned grocery stores to fill the prescriptions and reimbursed the stores out of the health center's pharmacy budget. "Once we had the health center going, we started stocking food in the center pharmacy and distributing food—like drugs—to the people. A variety of officials got very nervous and said, 'You can't do that.' We said, 'Why not?' They said, 'It's a health center pharmacy, and it's supposed to carry drugs for the treatment of disease.' And we said, 'The last time we looked in the [Physician's Desk Reference], the specific therapy for malnutrition was food (Geiger, 2005, p.7)."'

By addressing the roots of illness drawn from community concerns, these health centers pioneered an effective methodology for approaching health care in underserved communities. They explored environmental conditions such as housing, food, income, education, employment, and exposure to environmental dangers and linked them to health outcomes. Then, in an effort to prevent these poor health outcomes, they moved upstream to change the conditions that led to those illnesses in the first place.

Introduction

There are large, chronic, and increasing socioeconomic and racial and ethnic disparities in health in the United States (House & Williams, 2000). While the overall health of the U.S. population in general is improving, racial and ethnic minorities experience higher rates of morbidity and mortality than nonminorities (Institute of Medicine [IOM], 2003). Focusing attention and resources on **primary prevention** could significantly reduce this huge and unfair inequity. Specifically, attention to the broader environmental conditions that shape well-being could be life saving. **Environment** refers to the broad social, economic, and physical context in which everyday life takes place. Community action, changes in institutional practices, and policy change represent a tremendous opportunity to reduce health disparities through altering existing environmental conditions.

Health disparities are differences "in the overall rate of disease incidence, prevalence, morbidity, mortality, or survival rates in the population

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as compared to the health status of the general population." (Minority Health and Health Disparities Research and Education Act, 2000). They are generally not the result of people experiencing a different set of illnesses than those affecting the general population. Rather, the same diseases and injuries that affect the population as a whole affect people in low-income communities and communities of color more frequently and more severely.

Poor health is not only a burden to those directly affected but also to the entire population of a community whose health status is worsened by the poor health status of its least healthy members (IOM, 2003). A population that is not well is more susceptible to, and less able to ward off, infection, which can be transmitted to others. Poor health status also puts a disproportionate strain on the health care system. An excess of people with poor health overburdens the health care infrastructure, increases the spread of infectious diseases, and uses up public health and health care resources. Good health for all is precious; it enables productivity, learning, and building of opportunities. Poor health jeopardizes independence, responsibility, dignity, and self-determination.

The success of U.S. communities, society, and economy also depend on good health. Healthy workers and a healthy emerging workforce are critical for progress. As a nation, the United States spends 1 of every 7 dollars of its GDP on health care, and it is anticipated that proportion will soon rise to 1 of 6 dollars (California HealthCare Foundation, 2005a, 2005b). In fact, the United States spends double that of any other nation (Farley & Cohen, 2005). However, by spending primarily on the medical end—after people get injured or sick—the nation is expending and not investing. The strain is also taking a toll on government and consequently on taxpayers. When public money is used for medical care, there is less money available for other vital services, such as education and transportation.

There is a great risk that the prevalence of disparities may increase in the United States as the population becomes even more multicultural. As the country becomes increasingly diverse, the reality of a healthy and productive United States will increasingly rely on the ability to keep all Americans healthy and to reduce disparities.

Disparate health outcomes are not primarily due to one microbe or one genetic factor. A broad range of social, economic, and **community conditions** interplay with individual factors to exacerbate susceptibility and to provide less protection. These conditions, such as deteriorated housing, poor education, limited employment opportunities and role models, limited household resources, and ready availability of cheap high-fat foods, are particularly exacerbated in low-income neighborhoods where people of color are more likely to live. Research has now shown that after adjusting for individual risk factors, there are neighborhood differences in health outcomes (House & Williams, 2000). These neighborhood conditions are related to a history of bias directed against people of color. Therefore, it is not surprising that there are disparities in health; it is the relationship of place, race, ethnicity, and poverty that can lead to the greatest disparities.

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This chapter provides a primary prevention framework for thinking about how disparities can be reduced. It begins with an overview of primary prevention, provides a framework for understanding the health disparities trajectory,[1] examines how social determinants enable an **environmental approach** to addressing health disparities, and describes what can be done to help close the persistent gap in health and safety outcomes in the United States.

Primary Prevention

Prevention is a *systematic* process that promotes safe and healthy environments and behaviors, reducing the likelihood or frequency of an incident, injury, or condition occurring. Ideally, prevention addresses problems *before* they occur, rather than waiting to intervene after symptoms appear or incidents occur. This is called primary prevention. Examples of primary prevention include ensuring availability of healthy, affordable food in communities to help reduce frequency of chronic disease and developing and mandating child safety restraints in vehicles to prevent injury and death of young children.

Prevention Continuum Example: Lead

Primary prevention: strives to ensure there is no lead in the environment through policies, laws, and organizational practices targeting new lead production and removal of existing lead

Secondary prevention: screens to establish the presence of lead and actions to minimize the consequences

Tertiary prevention: treats and rehabilitates those who have physiological damage and implements efforts to see that the damage does not advance

Effective primary prevention holds the promise of reducing needless suffering, premature death, and disparities. By utilizing primary prevention to address the underlying factors that contribute to health disparities, the quality of life for communities and individuals alike can also appreciate drastic improvement. Primary prevention employs systematic processes that enable a cost-effective use of resources while decreasing the pressure on the medical care system, in effect siphoning off cases that otherwise require treatment. In addition to decreasing the demands for medical services, primary prevention also reduces the need for other services such as mental health services, protection, criminal justice, and incarceration. It is this

[1] The health disparities trajectory is a model developed by Prevention Institute that diagrams the major components that contribute to poor health, safety, and mental health outcomes.

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synergistic relationship of concurrently reducing the needs for costly services while improving the overall quality of life of a community that embodies primary prevention.

Prevention Continuum

Primary prevention is distinguished from secondary prevention because it explicitly focuses on action *before* there are symptoms. Secondary prevention relies on symptoms to determine action, focusing on the more *immediate* responses *after* symptoms have appeared. Tertiary prevention focuses on *longer-term* responses to ameliorate future negative health consequences. Efforts at all three levels are important, mutually supportive, and reinforcing.

Quality Matters: Ensuring Prevention is Effective

Despite its many benefits and successes, primary prevention practice is often misunderstood—resulting in it being viewed as tangential and underutilized. Many believe that prevention is delivered mainly through messages. Thus, health care providers add teachable moments to exams, educational brochures are made available for health fairs, or public service announcements are developed. Frequently employed as an add-on to treatment, prevention might be based more on what fits into the treatment or medical model than what is known to be effective prevention. This misunderstanding impinges on the potential for far-reaching, long-term impact and consequently reduces the enthusiasm and commitment for prevention efforts. Some organizations approach prevention more as a marketing strategy, in response to polls indicating that people want prevention as part of their health services, instead of utilizing prevention as a strategy to improve health and safety.

Defining prevention as simply education is not only inaccurate but does not effectively address the complexity and nature of problems such as health disparities. Behavior is complicated, and awareness about risk does not automatically result in protective action (Ghez, 2000). Further, in many cases when prevention is confused with education, practitioners and advocates jump from "What can we do *before* a problem," to "Here is some information *about* the problem." Although important, information about the magnitude of the problem or the availability and importance of treatment services does not foster healthy, equitable community environments and behaviors.

Educational efforts tend to focus on behavior change; changing the environment is often critical to support behavior change. For example, if it is important to walk regularly, an environment conducive to walking—an environment with safe, pleasant sidewalks, parks, business districts, stairwells, or trails—will maximize the likelihood of walking. Behavior change will not be as likely without comprehensive efforts that change environments in order to make the healthy choice the easy choice.

The Challenges of and Opportunities for Garnering Support for Prevention

Despite the advantages of primary prevention, it can be challenging to maintain as a focus. In the real world, priorities are based on criteria, such as urgency, time, funding, and achievability. To many, prevention can feel like a distraction given the urgency of ensuring that everyone has access to quality medical treatment.

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Because the "big changes" may be hard to accomplish, it is critical to develop and identify interim markers that provide context for more modest efforts to assure that prevention strategies are on the right track. Prevention evaluation needs to be strengthened to garner this support. An evaluation myth is that prevention is invisible and therefore cannot be measured. This is not the case, as population-based evaluation strategies provide evidence of improvement. Nevertheless, the drama, and the human face of a problem, is better conveyed with an actual event than with data that show an event did not take place. Powerful advocacy movements tend to arise from victims and survivors. Therefore, for primary prevention, there is not the same constituency, because these efforts have resulted in people being able to go about their daily lives without experiencing the pain and trauma. All of this makes it harder to garner the legislative attention and to develop the political will. That is why primary prevention needs advocates who bear witness to the suffering and strongly assert that it is unacceptable for anybody to experience that suffering ever again.

Another challenge to garnering support is that in the past, economists have argued against the economic benefits of prevention, contending that accrued savings will be lost in end-of-life care costs. However, conventional economic models do not account for the many complexities at play in assessing the health of populations. As new models emerge that better account for the varied factors affecting health, they predict potential cost savings from prevention (Prevention Institute and the California Endowment, 2007).

Traditional models have been limited in three crucial respects. First, results are measured almost exclusively based on the effect of prevention measures on single conditions. This misses the impact that those measures have on other related conditions. Programs to lower the incidence of diabetes by increasing physical activity could also improve outcomes for stroke and cardiovascular disease.[2] Initiatives that reduce smoking affect cancer rates and also emphysema and childhood asthma. Policies aimed at improving mobility among senior citizens can reduce the incidence of falls as well as improve mental health and hypertension. Second, the models look chiefly at medical system costs, which, though a crucial measure of cost savings, are an incomplete measure because improved health results in savings beyond the health care sector. Therefore, one initiative could result in reduced costs in a number of different areas, including medical care, workers compensation payments, and disability claims. It could also result in improved worker productivity. Thirdly, the models generally focus on a short time frame—2 to 6 years—while the benefits of prevention are likely to accrue over a much longer period. Illnesses and injuries typically

[2] David Chenoweth's Topline Report on the costs to California of physical inactivity and obesity clearly illuminates the ways in which addressing one factor influencing health, such as physical inactivity, increases costs across a wide spectrum of health issues including diabetes, hypertension, and cardiovascular disease (Chenoweth, 2005).

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become more expensive the older the afflicted individual is and the longer the duration of the problem, so the greatest savings from prevention will accumulate not in the immediate future but further out as the individual remains disease free.

Emerging models are able to account for a broader range of possible savings from prevention measures. Researchers who have looked at the relationship between savings to the health care system and returns in other areas from improved health have concluded that the direct medical costs savings should be multiplied to account for the overall savings (see Figure 9-1). Estimates of the multiplying factor range from 2 to 12 times the medical cost savings (Colliver, 2007; Shiell & McIntosh, 2006).

The multiplier effects model shown here is based on a stock-and-flow conception of the health process. That is, it takes into account the number of people that are potentially at risk of a particular condition and the factors that influence whether the individual progresses to that condition over time. It then considers the influence of primary prevention on that process, the

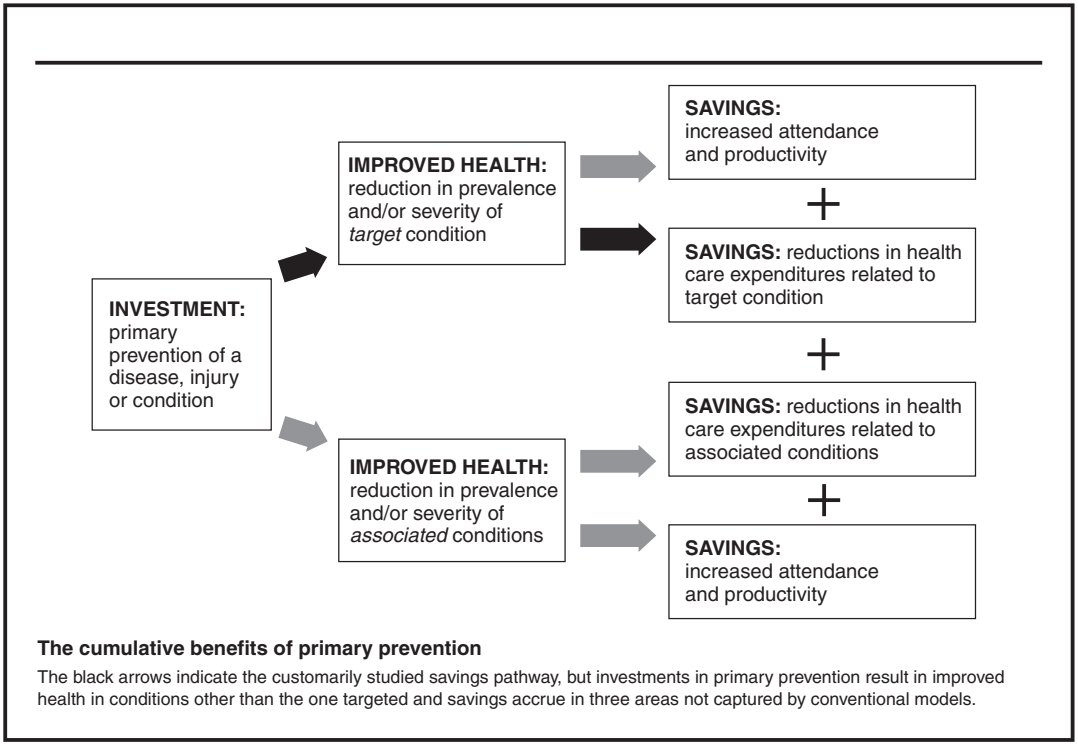

Figure 9-1 Multiplier Effects

Source: Prevention Institute and the California Endowment. (2007). *Reducing health care costs through prevention*. Available at http://www.preventioninstitute.org/documents/HE_HealthCareReformPolicyDraft_091507.pdf. Accessed December 18, 2007.

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resulting prevalence of the condition, and the implications for health care expenditures. Today's public expenditure on prevention is an investment in future health and productivity. Preventing illness and injury reduces not only suffering but also costs and burdens on the health care system. Health outcomes can be improved not only through quality treatment but also by preventing poor health before it occurs by employing and expanding proven prevention efforts. Based on a review of published sources, Table 9-1 delineates a few examples of national prevention savings. The total accrued savings for every $18 invested in the selected prevention efforts is a total of $393.93 to $461.60 saved in health care costs, social services, and lost productivity. Given concerns about escalating health care costs, further building and disseminating the case for the cost effectiveness of prevention can help build more support for investment in it.

Table 9-1
Cost Savings through Prevention

Source: Prevention Institute, unpublished, 2007.

Every $ Invested in:	Produces Savings of:
Investments in workplace safety	$4–6 in reduced illnesses, injuries, and fatalities (U.S. Department of Labor)
Breastfeeding support by employers	$3 in reduced absenteeism and health care costs for mothers and babies and improved productivity (United States Breastfeeding Committee, 2002)
Lead abatement in public housing	$2 in reduced medical and special education costs and increased productivity (Brown, 2002)
Child safety seats	$32 in direct medical costs and other costs to society (Eichelberger, 2003)
High-quality preschool programs	$7 from averted crime, remedial services, and child welfare services (Schweinhart, Barnes, & Weikhart, 1993)
The measles-mumps-rubella vaccine	$16.34 in direct medical costs (Centers for Disease Control and Prevention, 1999)

*More current economic modeling was not available at the time of press but can be found at www.preventioninstitute.org.

Lessons from Prevention Successes: Changing Norms

Prevention has demonstrated success. Tobacco is one example. A generation ago virtually every public space was smoke filled and, despite the surgeon general's pronouncement that tobacco smoke was risky for health, the norm was to light up or accept others lighting up in public. Education campaigns about the danger of smoke, even secondhand smoke, had little impact and stop smoking clinics had marginal success.

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A Case Study of Smoking Restrictions

In the early 1980s, two cities limited smoking in sections of restaurants and public spaces, and these laws in Berkley and San Francisco were initially dismissed as "fringe tactics" from out-of-the-mainstream communities. Then, a coalition formed to change the law in a more moderate county and its 18 different cities. Before long, the partnership between public health, the American Cancer Society, and the American Heart and Lung Associations became a model replicated in numerous spots across California and then throughout the United States. Organizations started voluntarily restricting smoking, something they previously would have been reluctant to do. Although the space regulated was limited (e.g., sections of public places, such as restaurants), these efforts signaled a new norm.

Norms are collective beliefs, assumptions, and standards (Berkowitz, 2003). These modest behavioral changes engendered and rapidly led to momentum for more. As the norms changed, the spaces where smoking was limited increased, support for tax increases on cigarettes surged, and smoking rates dropped (California Department of Health Services, 2006).

Similar stories can be told about most other prevention successes. Mass behavior change never occurs because of information alone. Norms change shaped by changes in policies and organizational practices generally function as the tipping factor that changes behavior. Each prevention success is different from another. But, in every case, it took leaders who believed something could and should change. It took courage taking on industry, lobbyists, and public opinion. It took moving from information to norms change through comprehensive approaches. It required overcoming obstacles so large they were described as insurmountable. In every single case, success was a product of focusing on changing the environment, which in turn influenced individual behaviors.

Trajectory of Health Disparities: A Framework for Understanding and Reducing Disparities

The frequency and severity of injury and illness is not inevitable. An analysis of the underlying causes of medical conditions reveals a trajectory by which poor health outcomes develop and worsen. The health disparities trajectory (see Figure 9-2) depicts elements that contribute to inequitable health, mental health, and safety outcomes in low-income communities and communities of color. First, some individuals are born into a society that neither treats people nor distributes opportunity equally, creating environments that put low-income communities and communities of color at risk for poorer health and safety outcomes. Second, these environments disproportionately produce exposures and behaviors that contribute to poor physical and mental health,

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resulting in the need for medical care. A lack of access to medical care and lower quality diagnosis and treatment leads to higher rates of sickness, disability, and mortality. The circles, decreasing in size, represent the relative contribution to increasing disparities. That is to say, the environment, with an effect on health directly and indirectly through shaping behaviors, significantly determines health status. The arrows, which increase in size and get darker in shading from left to right, reflect growing disparities and increasing poor health status. Factors at each of these levels—environment, exposures and behaviors, and medical care—shape poorer health and safety outcomes in low-income communities and communities of color and cumulatively contribute to the widening health gap. Understanding these pathways in greater detail clarifies what actions are needed to eliminate health disparities.

As depicted in Figures 9-2 and 9-3, the environment encompasses the social determinants of health (see "Clarification of Terms No. 1"), which includes **root factors** (racism, discrimination, poverty, and other forms of oppression) and the social, economic, and physical environment of a community.

Clarification of Terms No. 1: Social Determinants of Health

The *social determinants of health* encompass the multitude of social conditions in which we live that have an impact on health. Three broad categories of social determinants are social institutions, including cultural and religious institutions, economic systems, and political structures; surroundings, including neighborhoods, workplaces, towns, cities, and built environments; and social relationships, including position in social hierarchy, differential treatment of social groups, and social networks. These can potentially be altered by social and health policies and programs.

This includes, for example, the presence of toxic contamination, higher rates of joblessness, inadequate access to nutritious food and exercise, less effective transportation systems, and targeted marketing of unhealthy products.

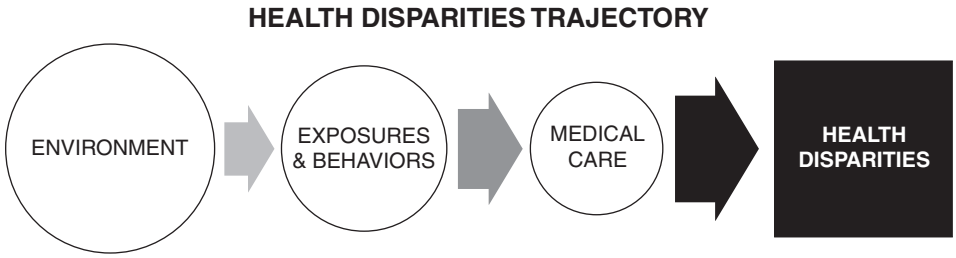

Figure 9-2 Health Disparities Trajectory
Source: Courtesy of Rachel Davis and Larry Cohen, Prevention Institute.

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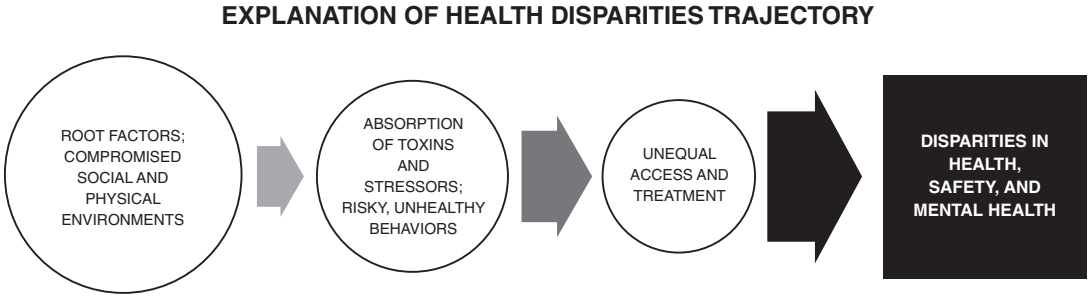

Figure 9-3 Explanation of Health Disparities Trajectory
Source: Courtesy of Rachel Davis and Larry Cohen, Prevention Institute.

These environments shape exposures and behaviors, which are the manifestation of the environment in the population and individuals. Exposures and behaviors in an unhealthy environment include breathing polluted or contaminated air and exposure to other toxins; experiencing stressors associated with root factors (e.g., poverty and racism) and with living in impoverished community environments; and practicing risky and unhealthy behaviors (e.g., poor eating and activity patterns, tobacco and alcohol use, and violence). These all contribute to the onset of illness, injury, and mental health problems. Illness, injury, and mental health problems prompt the need for medical care. Inequities in access to and quality of medical care are well documented (IOM, 2003) and contribute to even greater disparities. Although it is critical that medical care inequities be eliminated, at this point in the trajectory, there are already significant disparities in health status.

In order to significantly reduce disparities, intervention should not only occur to improve medical care but also occur as early in the trajectory as possible to ensure that people are not becoming sick or injured in the first place. This is the goal of primary prevention, which aims to remove the conditions in the environment that give rise to poor health and safety and to enhance the conditions that give rise to good physical health, mental health, and improved safety.

Take Two Steps Back to Reduce Disparities: From Medical Care to Environment

There are many illnesses and injuries that disproportionately affect people from low-income communities and communities of color (see Table 9-2). Many health problems interact, contributing to the excess burden of a disease in a population (Centers for Disease Control and Prevention [CDC], n.d.). They result from both largely genetic and external factors (McGinnis & Foege, 1993). The external factors can be modified, in contrast to inborn factors that cannot be altered, and account for nearly 50% of annual deaths—

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Table 9-2
Disproportionate Onset of Illness and Injury

- Asthma
- Cancer
- Cardiovascular disease
- Depression
- Diabetes
- Diseases of the heart, lungs, kidneys, bladder, and neurological system
- Hepatitis B
- HIV infection
- Injuries from violence
- Low birth weight and other problems at infancy
- Post-Traumatic Stress Disorder
- Sexually transmitted diseases
- Unintentional injuries

and the impaired quality of life that frequently precedes them (McGinnis & Foege, 1993).

The determinants of health and safety are multifaceted; the four forces that shape health are environment, lifestyles, heredity, and medical care services (Blum, 1981). Behavioral and lifestyle factors account for more than half of premature mortality, while environmental exposure to hazards accounts for 20% and health care for 10% (Adler & Newman, 2002). Similarly, research confirms that the explanations for disparities involve multiple factors. Because disparities may largely reflect a combination of socioeconomic differences, differences in health-related risk factors, environmental degradation, direct and indirect consequences of discrimination, and differences in access to health care (IOM, 2003), there have been calls for addressing the social and political context (Giles & Liburd, 2007) in order to reduce them.

One way to think about a prevention-oriented model for reducing health disparities is to think backwards from a given health problem or medical condition, such as diabetes, injury, or cancer, to the exposures and behaviors that might produce such a problem or condition. From that point, it can be traced further back to elements in the environment that underlie the exposures and behaviors. This is, in effect, taking two steps back. The first step back is from medical care, which most typically means access and treatment, to the exposures and behaviors that contributed to the need for medical care. For example, type 2 diabetes is an illness requiring treatment and taking a step back would be to the behaviors that led to the illness, such as unhealthy eating and a sedentary lifestyle, in order to prevent future occurrences of type 2 diabetes. The second step back is from these behaviors to the environment that shaped them. In this example, unhealthy eating and a sedentary lifestyle can be linked to the availability of healthy, affordable food and safe places to be active in the community.

For the most part, attention to addressing disparities has focused predominantly on issues related to medical care. Disparate health and treatment outcomes have been attributed to cultural and linguistic barriers; lack of stable relationships with primary care providers; financial incentives to limit

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services; financing and delivery fragmentation; and possible bias, prejudice, clinical uncertainty, and stereotyping (IOM, 2003). Ensuring that all individuals have access to quality medical care is one vital part of a comprehensive strategy to reduce health disparities. Quality health care means culturally competent, accessible health care for everyone. A quality health care system will provide preventive services and emergency response; diagnose, treat, and manage disease and injury; support rehabilitation; and reduce the severity and repeat occurrences of disease.

Taking two steps back is critical because, as important as quality medical care is, improving it is only part of the solution to reducing health disparities. Medical care and intervention play important restorative or ameliorating roles after disease occurs (Blum, 1981), but even by providing universal health care coverage to all citizens, patterns of disease and injury that follow the socioeconomic status (SES) gradient would still remain (Adler & Newman, 2002). While medical care is vital, there are three reasons why addressing access to and quality of medical care *alone* will not significantly reduce disparities:

- *Medical care is not the primary determinant of health.* Of the 30-year increase in life expectancy since the turn of the century, only about 5 years of this increase are attributed to medical care interventions. Even in countries with universal access to care, people with lower socioeconomic status have poorer health outcomes.
- *Medical care treats one person at a time.* By focusing on the individual and specific illnesses as they arise, medical treatment does not reduce the incidence or severity of disease among groups of people because others become afflicted even as others are cured (IOM, 2000).
- *Medical intervention often comes late.* Medical care is usually sought after people are sick. Today's most common chronic health problems, such as heart disease, diabetes, asthma, and HIV/AIDS, are never cured. Therefore, it is extremely important to prevent them from occurring in the first place.

Therefore, in order to address disparities, it is critical to not only improve the access to and quality of medical care for preventive services, screening, and treatment, it is also vital to address the reasons why people from low-income communities and communities of color become disproportionately ill and injured in the first place.

One Step Back: From Medical Care to Exposures and Behaviors

The first step back is from medical care to exposures and behaviors. Exposures and behaviors are those characteristics that capture the risks of poor health, safety, and mental health outcomes, such as exposure to environmental toxins, risky or unhealthy behaviors, and experiencing chronic stressors associated with racism or poverty or witnessing violence.

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This first step back to exposures and behavior is explained in a study by McGinnis and Foege (1993). In an analysis of the contributing factors to fatal conditions in the United States, they identified a set of nine factors strongly linked to the major causes of death (see Table 9-3) which they labeled "actual causes of death" (see Clarification of Terms No. 2).

Clarification of Terms No. 2: Actual Causes of Death

For instance, when looking at the actual causes of death, if lung cancer is the medical condition, the cause can often be traced back to smoking. As McGinnis and Foege note, the origins of disease and injury are multifactorial in nature and may act independently or synergistically. For example, alcohol is a significant contributor to numerous unintentional and violent injuries, sexually transmitted diseases, cancers, and liver disease. According to the analysis, when external factors contribute to deaths, the deaths are by definition premature and are often preceded by impaired quality of life (McGinnis & Foege, 1993).

Seven of the actual causes are related to human behavioral choices, such as tobacco, diet and activity patterns, motor vehicles, firearms, and alcohol; however, many aspects of the environment shape behaviors. Far more than air, water, and soil, the environment is anything external to individuals, including community behavioral norms (Cheadle, Wagner, Koepsell, Kristal, & Patrick, 1992). For example, poor choices about diet and physical activity, which account for approximately one-third of premature deaths in

Table 9-3
The Relationship Between Leading Health Problems and Actual Causes of Death

Source: McGinnis, J.M., & Foege, W.H. (1993). Actual causes of death in the United States. *Journal of the American Medical Association*, *270*, 2207–2213.

Actual Causes of Death	Leading Health Problems and Medical Conditions
Tobacco	cancer, cardiovascular disease, low birth weight and other problems at infancy, and burns
Diet and activity patterns	cardiovascular and heart disease, cancers, and diabetes
Alcohol	risk factor for injuries (motor vehicle, home, work, burns, and drowning) and cancer (Alcohol is associated with an increased risk of violence, which may include the use of firearms and increased risk-taking behaviors, which includes sexual behavior).
Microbial agents	pneumococcal pneumonia and other bacterial infections, hepatitis, HIV, and other viral infections
Toxic agents	cancer, cardiovascular disease, and diseases of the heart, lungs, kidneys, bladder, and neurological system
Firearms	homicide, suicide, and unintentional injury
Sexual behavior	sexually transmitted diseases, excess infant mortality rates, cervical cancer, Hepatitis B and HIV infection
Motor vehicles	injury and death to passengers and pedestrians
Illicit use of drugs	infant deaths, suicide, homicide, motor vehicle injury, HIV infection, pneumonia, hepatitis, and endocarditis

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the United States, are not based just on personal preference or information about health risks. An individual will have a harder time changing his or her behavior if he or she lacks sufficient income to purchase food, is targeted for the marketing of unhealthy products, and does not have access to healthy foods. Similarly, it is much harder for people to be physically active when streets are unsafe and there are few gyms or parks. One analysis asserts that shifts have altered the environment to one that encourages sedentary occupations, high-calorie food consumption, and higher costs for physical activity (Mitka, 2003). The environment plays a particularly important role in low-income and minority communities, where limited household income and geographic isolation leave residents without access to many alternatives. A landmark study of the relationship between supermarket access and dietary quality found that African-Americans living in neighborhoods with a lower density of supermarkets were less likely to meet dietary recommendations for fruits and vegetables compared to neighborhoods where more markets were available (Morland, Wing, & Roux, 2002).

Despite the available evidence, prevention efforts focus on behavior change alone, such as through health education and counseling efforts, which ignore the larger environmental factors that can work against the educational message. Educational efforts will have greater impact if they are linked with efforts to change environmental conditions. Although lower income levels are associated with a higher prevalence of risky behaviors, such as tobacco use, physical inactivity, and high-fat diet, there is a risk of "blaming the victim" by viewing behaviors as simply lifestyle choices (Adler & Newman, 2002). Behavioral change is not only motivated by knowledge but also by a supportive social environment and access to facilitative services (McGinnis & Foege, 1993), support from other societal mechanisms (Blum, 1981), and an emphasis on setting up social conditions that promote health (Giles & Liburd, 2007). The evidence that the environment is far and away the major determinant of health has been marshaled time and time again (Blum, 1981). Behaviors are shaped and controlled by social, physical (Adler & Newman, 2002), and cultural (IOM, 2000) environments that are associated with socioeconomic status (Adler & Newman, 2002).

Beyond shaping behavior, the environment also directly affects health. The actual causes list includes specific environmental hazards—microbial and toxic agents. These can be described as symptoms of the environment. Environmental quality tends to be worse in areas in which the population is either low income or primarily people of color. Toxic sites are concentrated in areas where low-income and minority populations reside (Lee, 2002). Housing is more likely to be a source of lead, insect dust, and other harmful contaminants. Further, low-income people of color may have higher exposure to industrial hazards in their workplaces. The environment also affects health outcomes by producing higher stress levels, which can contribute to poorer mental health and health outcomes.

For example, children who hear gunshots may be more likely to experience asthmatic symptoms (Husain, 2002). Chronic stress may contribute to

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other poor health outcomes such as cardiovascular disease and some forms of cancers. The impact of social, economic, and political exclusion results in a "weathering," whereby health reflects cumulative experience of stress (due to factors such as discrimination, inadequate incomes, unsafe neighborhoods, lack of neighborhood services, and multiple health problems) rather than chronological or developmental age (Geronimus, 2001).

Given the overwhelming influence of the environment in producing symptoms of ill health—in the form of toxins, shaping risky and unhealthy behaviors, and stressors—altering environments is a critical strategy to reduce disparities. It may also be more cost effective to prevent at the community and environmental levels than at the individual level (IOM, 2000). Indeed, there has been a call for more resources to be directed at underlying determinants of illness and injury (McGinnis, Williams-Russo, & Knickman, 2002).

The Second Step Back: From Exposures and Behaviors to Environment

The second step back is from exposures and behaviors to environment. Many community leaders and health advocates intuitively understand that the environment is a primary determinant of health. Further, it is also a key determinant of health disparities. Focusing on the environment—the social determinants of health—remains an underutilized approach to reducing disparities and a tremendous opportunity to prevent illness and injury before their onset.

The environment represents both the root factors of illness and injury (racism, discrimination, poverty, economic **disparity**, and other forms of oppression) and the community conditions (physical, economic, social, and cultural) that reflect how the root factors play out at the community level. For the purposes of this analysis, *community* refers to a physical place—the geographic area that encompasses the places where people live, work, and socialize—although it can also refer to a group of people who identify around a particular characteristic or experience, such as immigration, faith, age, and sexual orientation. Place-based strategies, with an emphasis on community participation and building community capacity, are extremely promising. In order to fundamentally close the health gap, there is a need to focus on the community environment and the broader factors that shape place.

Working towards the elimination of social and economic inequalities per se is a critical aspect of efforts to reduce health disparities. The weight of racism, oppression, and economic disparity takes its toll on health. Socioeconomic status is a key underlying factor of health (Adler & Newman, 2002). Education, income, and occupation influence health, which includes exposure to damaging agents, the social environment, health care, behavior–lifestyle, and chronic stress. Efforts to eliminate disparities include building more understanding of root factors and their impact on health outcomes; using social determinant status indicators for measurement and change; improving socioeconomic status (e.g., earned income tax credit); and righting injustices, such

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as through affirmative action and reparations. The goals of such efforts are to reduce racism, poverty, and other forms of oppression; to establish a "level playing field"; and to reverse damages experienced from a history of bias, discrimination, and limited opportunities.

Further, understanding how these root factors play out at the community level contributes to a valuable understanding of why health disparities exist and what can be done to minimize the influence of root factors on health outcomes (see Table 9-4). Individual income alone has been shown to account for less than one-third of increased health risks among Blacks (Schultz, Parker, Israel, & Fisher, 2001). Segregation and other neighborhood and community factors make up the additional risk (Jackson, Anderson, Johnson, & Sorlie, 2000; Schultz et al., 2001).

Community conditions, largely influenced by the root factors, can be improved through a **community health** approach. A community health approach builds on strengths and assets within communities and advances community elements that have an impact on health, mental health, and safety. Knowing exactly which factors, how they interact, and examples of specific activities and approaches that can make a difference is key to making a difference. The community clusters and factors presented here are an important step in this process.[3]

The 13 community factors are organized into 3 interrelated clusters—equitable opportunity, people, and place (see Table 9-5)—and either directly influence health and safety outcomes via exposures (e.g., air, water, soil quality,

Table 9-4
Examples of How Root Factors Play Out at the Community Level

Source: Mikkelsen, L., Cohen, L., Bhattacharyya, K.,Valenzuela, I., Davis, R. & Gantz, T. (2002). *Eliminating health disparities: The role of primary prevention.* Oakland, CA: Prevention Institute.

People affected by health disparities more frequently live in environments with

- Toxic contamination and greater exposure to viral or microbial agents in the air, water, soil, homes, schools, and parks
- Inadequate neighborhood access to health-encouraging environments including affordable, nutritious food, places to play and exercise, effective transportation systems, and accurate, relevant health information
- Violence that limits the ability to move safely within a neighborhood, increases psychological stress, and impedes community development
- Joblessness, poverty, discrimination, institutional racism, and other stressors
- Underperforming schools
- Targeted marketing and excessive outlets for unhealthy products including cigarettes, alcohol, and fast food
- Community norms that do not support protective health behaviors

[3] The community factors are based on an iterative process conducted from July 2002 to March 2003. The process consisted of a scan of peer-reviewed literature and relevant reports and interviews with practitioners and academics as well as an internal analysis that included brainstorming, clustering of concepts and information, and a search for supporting evidence as the analysis progressed. Based on the findings of this scan and analysis, the authors identified a set of community factors that could be linked to health outcomes in the research and were ratified by a national expert panel (Davis, Cook, & Cohen, 2005).

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Table 9-5
Community Factors Affecting Health, Safety, and Mental Health

Source: Prevention Institute. (2007a). *Good health counts: A 21st century approach to health and community for California.* Los Angeles: The California Endowment.

EQUITABLE OPPORTUNITY

1. Racial justice, characterized by policies and organizational practices that foster equitable opportunities and services for all; positive relations between people of different races and ethnic backgrounds
2. Jobs & local ownership, characterized by local ownership of assets, including homes and businesses; access to investment opportunities, job availability, the ability to make a living wage
3. Education, characterized by high quality and available education and literacy development across the lifespan

THE PEOPLE

1. Social networks & trust, characterized by strong social ties among persons and positions, built upon mutual obligations; opportunities to exchange information; the ability to enforce standards and administer sanctions
2. Community engagement & efficacy, characterized by local/indigenous leadership; involvement in community or social organizations; participation in the political process; willingness to intervene on behalf of the common good
3. Norms/acceptable behaviors & attitudes, characterized by regularities in behavior with which people generally conform; standards of behavior that foster disapproval of deviance; the way in which the environment tells people what is okay and not okay

THE PLACE

1. What's sold & how it's promoted, characterized by the availability and promotion of safe, healthy, affordable, culturally appropriate products and services (e.g. food, books and school supplies, sports equipment, arts and crafts supplies, and other recreational items); limited promotion and availability, or lack, of potentially harmful products and services (e.g. tobacco, firearms, alcohol, and other drugs)
2. Look, feel & safety, characterized by a well-maintained, appealing, clean, and culturally relevant visual and auditory environment; actual and perceived safety
3. Parks & open space, characterized by safe, clean, accessible parks; parks that appeal to interests and activities across the lifespan; green space; outdoor space that is accessible to the community; natural/open space that is preserved through the planning process
4. Getting around, characterized by availability of safe, reliable, accessible and affordable methods for moving people around, including public transit, walking, biking
5. Housing, characterized by availability of safe, affordable, available housing
6. Air, water & soil, characterized by safe and non-toxic water, soil, indoor and outdoor air, and building materials
7. Arts & culture, characterized by abundant opportunities within the community for cultural and artistic expression and participation and for cultural values to be expressed through the arts

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stressors) or indirectly via behaviors that in turn affect health and safety outcomes (e.g., the availability of healthy food affects nutrition).

Equitable Opportunity

This cluster refers to the level and equitable distribution of opportunity and resources. Access and **equity** affect health in fundamental ways over a lifetime. The availability of jobs with living wages, absence of discrimination and racism, and quality education are all important. Underlying economic conditions play out through a variety of effects, and poverty is closely associated with poor health outcomes (Adler & Newman, 2002). Economic inequity, racism, and oppression can serve to maintain or widen gaps in socioeconomic status (Adler & Newman, 2002). Lower education levels are associated with a higher prevalence of health risk behaviors such as smoking, being overweight, and low physical activity levels (Lantz et al., 1998). High school graduation rates correlate closely with poor health outcomes (Adler & Newman, 2002).

A Case Study of Economic Development

Long-term poverty and lack of hope or opportunity can be devastating for individuals and communities. Being able to support oneself and one's family fosters self-sufficiency and dignity while reducing the stresses associated with poverty and being unemployed. When adults and youth cannot find appropriate employment, they are more likely to turn to crime and violence and associated illicit activities, such as selling drugs. Individuals and communities without resources are less likely to be able to develop strategic responses to health issues (for example, providing healthy food or eliminating lead from houses and soil). Establishing employment programs that link employees to their community fosters community ownership and connection and can result in positive changes for the neighborhood. Since the 1960s, government has invested in community development corporations designed to provide agile, strategic assistance to neighborhoods with few resources. The most effective community development corporations have been those that have brought together coalitions of community stakeholders. The community development corporations–led citizen involvement has consistently created better neighborhoods. In many cases, it also created a new cadre of energetic and skilled leaders, able to seize further opportunities to advance neighborhood interests (The Urban Institute, 2005).

Although economic development is rarely recognized as a key strategy to reduce disparities, well-designed economic development efforts, in fact, can address multiple community health issues simultaneously. Recognizing that residents of low-income communities in Philadelphia were experiencing high rates of diet-related chronic disease, the nonprofit Philadelphia Food Trust (PFT) launched an effort to bring supermarkets into low-income areas where access to fresh food and produce was poor. The PFT concluded that the number of supermarkets in the lowest income neighborhoods of Philadelphia was 156% fewer than in the highest income neighborhoods (Philadelphia Food Trust, n.d.).

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Leaders of the PFT-inspired Food Marketing Task Force, along with two state representatives, pushed for the development of the Pennsylvania Fresh Food Financing Initiative in the fall of 2004. To date, the Pennsylvania Fresh Food Financing Initiative has committed resources to 5 supermarket projects and has committed $6 million in grants and loans to leverage this investment. These 5 projects will result in the creation of 740 new jobs and represent $22,378,000 in total project costs. In addition, at the time of publication, there are over 20 projects in the financing pipeline, ranging from 6,000 square-foot corner stores to 60,000-square-foot full-service supermarkets (Philadelphia Food Trust, n.d.).

Applying a health lens to economic development is critical to ensuring that these efforts help close the health gap. This means ensuring that economic development efforts are designed to affect the 13 community factors. For example, in many communities, small corner stores are the primary food outlets. Many of these stores depend on alcohol sales to survive. Projects such as Literacy for Environmental Justice in San Francisco have worked to develop incentives and plans to help small stores transition to selling fresh food instead of junk food and liquor (Literacy for Environmental Justice, n.d.). The impact is not only in terms of increased availability of fresh food but also reduced availability of alcohol—a key factor in preventing violence, and increased support of local ownership.

People This cluster refers to the relationships between people, the level of engagement, and norms, all of which influence health and outcomes. Strong social networks and connections correspond with significant increases in physical and mental health, academic achievement, and local economic development, as well as lower rates of homicide, suicide, and alcohol and drug abuse (Buka, 1999; Wandersman & Nation, 1998). For example, children have been found to be mentally and physically healthier in neighborhoods where adults talk to each other (Wilkenson, 1999). Social connections also contribute to a community's willingness to take action for the common good, which is associated with lower rates of violence (Sampson, Raudenbush, & Earls, 1997); improved food access (Pothukuchi, 2005); and anecdotally with such issues as school improvement, environmental quality, improved local services, local design and zoning decisions, and increasing economic opportunity. Changes that benefit the community are more likely to succeed and more likely to last when those who benefit are involved in the process (CDC, 1997); therefore, active participation by people in the community is important. Additionally, the behavioral norms within a community "may structure and influence health behaviors and one's motivation and ability to change those behaviors" (Emmons, 2000, p. 251). Norms contribute to many preventable social problems, such as substance abuse, tobacco use, levels of violence, and levels of physical activity. For example,

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traditional beliefs about manhood are associated with a variety of poor health behaviors, including drinking, drug use, and high-risk sexual activity (Eisler, 1995).

Place This cluster refers to the physical environment in which people live, work, play, and go to school. Decisions about place, including look, feel, and safety; transportation; open space; product availability and promotion; and housing can influence physical activity, tobacco use, substance abuse, injury and violence, and environmental quality. For example, physical activity levels are influenced by conditions such as enjoyable scenery (Jackson, n.d.), the proximity of recreational facilities, street and neighborhood design (CDC, 2000), and transportation design (Hancock, 2000). A well-utilized public transit system contributes to improved environmental quality; lower motor vehicle crashes and pedestrian injury; less stress; decreased social isolation; increased access to economic opportunities, such as jobs (Hancock, 2000); increased access to needed services, such as health and mental health services (B. Helfer, personal communication, March 11, 2003); and access to food, because low-income households are less likely than more affluent households to have a car (Cotterill & Franklin, 1995). What is sold and how it is promoted also play a role. For example, for each supermarket in an African-American census tract, fruit and vegetable intake has been shown to increase by 32% (Morland et al., 2002). Further, the presence of alcohol distributors in a community is correlated with per capita consumption (Schmid, Pratt, & Howze, 1995). Poor housing contributes to health problems in communities of color (Schultz et al., 2001) and is associated with increased risk for injury and violence; exposure to toxins, molds, viruses, and pests (PolicyLink, 2002); and psychological stress (Geronimus, 2001).

A Case Study of the Built Environment

Over the past decade there has been a growing recognition of the critical ways in which physical structures and infrastructure, the *built environment,* impact the physical and mental health of community residents. The built environment is the manmade surroundings that provide the setting for human activity, from the largest-scale civic surroundings to the smallest personal place. Momentum for long-term sustainable change can be generated through increases in community efficacy built on improved cohesion and trust. Two tactics for transforming the built environment are emerging as important in reducing disparities. One is the building of campaigns to address existing deficits in the built environment in a community. The other is to create mechanisms for the assessment of the health implications of proposed investment that would alter existing infrastructure, such as new transit routes, new buildings, and changes to utility services. Both are necessary.

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An example of effective modification of the existing environment was carried out in Boyle Heights, a predominantly Latino neighborhood in Los Angeles. Neighborhood residents were concerned about the lack of open space and available walking paths. They partnered with the Latino Urban Forum to create a 1.5 mile walking–jogging path around the Evergreen Cemetery. Rates of physical activity increased, and the Evergreen Jogging Path has become a catalyst for further community improvement projects (Aboelata et al., 2004).

The Trajectory as a Tool to Reduce Disparities and Promote Health Equity

Eliminating persistent and growing health disparities requires a public health strategy that not only includes but also goes beyond treating afflicted individuals. The three trajectory elements—environment, exposures and behaviors, and medical care—correspond to public health classifications of primary, secondary, and tertiary prevention (see Prevention Trajectory), which are increasingly being referred to as universal, selective, and indicated. The environment affects the entire population and thus interventions at this point in the trajectory are *universal*; negative exposures and behaviors manifest in an at-risk population, and thus interventions will be more *selective*, focusing on those who have been exposed or are engaging in risky behaviors; and finally, medical care is *indicated* for those who are sick and injured.

The trajectory from environment to exposures and behaviors to medical care and the inequities at each point represents a continuum of why health disparities occur. Although intervention is necessary at each point in the trajectory in order to reduce disparities, implementing changes in the environment has the most potent capacity to positively affect the population's health and to reduce disparities, and the community clusters and factors provide a valuable framework for selecting strategies for action. Quality intervention at each point in the trajectory can synergistically improve health, safety, and mental health outcomes and foster health equity.

Strengthening environments and improving medical care are not only necessary elements in the strategy to reduce health disparities but are mutually supportive. High-quality, accessible health care contributes to improving community environments. Providing timely and effective diagnosis and treatment not only reduces demands on the medical system, it also better enables people to contribute to the community environment through such activities as work and civic participation. Further, an effective health care institution will provide preventive care and will be active in encouraging the kinds of community services and policies that keep people healthy. An effective health care institution can also improve the local economy by purchasing local products and employing local residents.

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Positive behaviors and environments equally improve the success of treatment and disease management. Some specific examples include the following:

- Healthy eating and activity habits are not only critical for prevention but also for disease management, such as for diabetes, cardiovascular disease, HIV/AIDS, and cancer treatment.
- Improved air quality—indoors and outdoors—reduces asthma triggers.
- A reliable, affordable, and accessible transportation system transports people to screening and treatment appointments.
- Literacy improves the ability to read and understand prescription labels—both directions and warnings.
- Strong social networks are associated with people looking out for each other and taking care of each other during treatment and recovery.

A Tool for Evaluating and Changing Community Environments: THRIVE (Tool for Health and Resilience in Vulnerable Environments)

THRIVE is a community **resilience** assessment tool that helps communities bolster factors that will improve health and safety outcomes and reduce disparities. It provides a framework for community members, coalitions, public health practitioners, and local decision makers to identify factors associated with poor health outcomes in communities of color, to engage relevant stakeholders, and to take action to remedy the disparities. The tool is grounded in research and was developed with input from a national expert panel. It has demonstrated utility in urban, rural, and suburban settings. Within months of piloting, several communities had initiated farmers' markets and youth programs. At the community level, the THRIVE tool contributed to a broad vision about community health, confirmed the value of upstream approaches, challenged traditional thinking about health promotion, organized difficult concepts and enabled systematic planning, and proved to be a good tool for strategic planning at community and organizational levels.

THRIVE is not an end in itself; rather it is a tool that can be used as part of a community process to improve health. THRIVE can be used to inform all of the elements of a community planning process. For example, the information gleaned from the tool can be part of the needs assessment and identify priority areas for action. It can also serve as a framework for strategic planning, help identify which partners to engage in a coalition, and provide the context for community participation. It enables people to either start with specific health and safety concerns and to link these to community health factors or to start with community health factors. It then allows people to rate how well the community is doing on these, to prioritize factors, and, based on these priorities, to generate potential actions, examples of activities communities have undertaken to address the particular factors, and additional links and resources (Davis, Cook, & Cohen, 2005); for more information, visit the THRIVE website at http://www.preventioninstitute.org/thrive/index.php.

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The Role of Public Health: A New Way of Doing Business

The analyses of community factors, trends, and directions that influence rates of disparities reveal the value of improving environments in order to close the health gap. This approach to improving health outcomes necessarily requires that the public health sector and health advocates approach health in a new way. It requires a new way of thinking and a new way of doing business. This is an approach that identifies a medical condition and asks, how do we treat this? It also requires understanding how the fundamental root causes of health disparities play out in the community in a way that affects health and injury and asking, who do we need to engage and what do we need to do in order to *prevent* people from getting sick and injured? Approaching health, and community, in this way requires a concerted focus on applying a health lens, comprehensive approaches, interdisciplinary collaboration, a resilience-based approach to working with communities, and evaluation and accountability.

Apply a Health and Health Disparities Lens

No one strategy will, in isolation, solve the disparities crisis. What has the most promise for reducing disparities is that efforts be promulgated with both a health lens and a focus on disparities. That is, efforts (e.g., planning and design, zoning, marketing, economic development) should be undertaken with attention not only to ensuring actions are designed to bolster community factors to improve health but also to ensuring actions are specifically designed to close the health gap. Public health has a key role to play in insisting that necessary players understand the health impact of their decisions and in working with them to ensure that they are contributing to, not compromising, good health.

Advance Comprehensive Approaches

It is important to understand that research is still examining which community factors may have greater influence; however, it is clear that no single strategy, program, or policy is the answer. Multiple changes are needed to shift community norms toward healthier behaviors. Based on experience with other public health issues, such as controlling tobacco or reducing impaired driving, a variety of changes help to build momentum and to gain traction and interest over time; incremental changes lead to others that ultimately change the overall dynamics.

To understand the necessary range of activities, practitioners have used the Spectrum of Prevention (Cohen & Swift, 1999), a tool that enables people and coalitions to develop a comprehensive plan while building on existing efforts. The spectrum (see Table 9-6) encourages movement beyond the educational or individual skill-building approach to address broader environmental and systems-level issues. When the six levels are used together, they produce a more effective strategy than would be possible by implementing an initiative or program in isolation. The spectrum has been used

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Table 9-6
The Spectrum of Prevention

Source: Cohen, L., & Swift, S. (1999). The spectrum of prevention: Developing a comprehensive approach to injury prevention. *Injury Prevention*, 5, 203–207.

Levels of the Spectrum	Description
Strengthening individual knowledge and skills	Enhancing an individual's capability of preventing injury or illness
Promoting community education	Reaching groups of people with information and resources in order to promote health and safety
Educating providers	Informing providers who will transmit skills and knowledge to others
Fostering coalitions and networks	Bringing together groups and individuals for broader goals and greater impact
Changing organizational practices	Adopting regulations and norms to improve health and safety; creating new models
Influencing policy and legislation	Developing strategies to change laws and policies in order to influence outcomes in health, education and justice

to advance multiple efforts including, but not limited to, violence and injury prevention, physical activity and nutrition promotion, sustainability of mental health promotion, and lead prevention.

Efforts employing the spectrum as an organizing tool are most effective when they simultaneously take action at multiple levels while also create synergy between levels. Work at different levels can serve to build together toward change. Efforts at the top levels of the spectrum may have the greatest impact on broad population health and disparity reduction but will not be successful unless momentum has been built at the upper levels.

Generate Interdisciplinary Approaches

Improving community health cannot be achieved by any one organization or by addressing one individual at a time. Eliminating racial and ethnic health disparities and improving health outcomes requires participation from key public and private institutions working in partnership with communities.

Institutions, including banks, businesses, government, schools, health care, and community service groups, have a major influence on community environments. The decisions they make—such as whether to accommodate pedestrian and bicycle travel on city streets, where to locate supermarkets or alcohol outlets, or what efforts to take to reduce hazardous emissions—influence health behaviors and health outcomes. As employers, investors, and purchasers, each has an impact on the local economy. As providers of services, they influence what is and is not available to community residents. As prominent facilities within communities, they help establish norms for students, employees, and the general public. By providing activity breaks, creating welcoming stairwells, or ensuring healthy affordable food options, these facilities can create an atmosphere that supports healthy behavior. Schools are an important community resource and an excellent venue for reaching families. While meeting educational needs, they can both promote healthy behaviors and link students to services and support.

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Engaging all communities in shaping solutions and taking action for change is critical. Communities need to be involved in identifying the health problems of greatest concern, examining the critical pathways to illness and injury, and working to alter these pathways. There are many strengths in communities of color upon which to anchor an effective strategy. Strong family ties and social networks, trust and respect among community members, and health-promoting traditions, such as active lifestyles or high fruit and vegetable diets, are all resilience factors that need support and enhancement for reducing health disparities.

Foster Community Resilience

Community resilience is the ability of a community to recover from and/or thrive despite the prevalence of risk factors. Prevention strategies have focused largely on reducing risk factors. Equally important is building upon and enhancing resilience in communities. Enhancing community resilience can have long-term, positive impacts on individual and community health.

Every community has strengths and sources of resilience. Building on a community's strength can contribute to needed change. In order to substantially reduce health disparities, a long-term plan that consistently builds momentum and involves community partners is required. Focusing on building community capacity and resilience has three important results: community members are brought into the process and feel a greater vested interest in successful change; community members can apply new skills to address health factors outside of the current initiative and are able to respond to advances and emerging practices (as opposed to being passive recipients); and community members gain skills and a sense of efficacy that can permeate many aspects of their lives and improve broad life outcomes.

Studies show that resilience factors can counteract the negative impact of risk factors (Bradley et al., 1994; Smith, Lizotte, Thornberry, & Krohn, 1995). For instance, while a high availability of firearms and alcohol within a community is a risk factor for violence, positive social norms can provide social controls that are protective against the use of weapons. One study demonstrates that the effects of protection on reducing problem behaviors become stronger as levels of risk exposure increase (Pollard, Hawkins, & Arthur, 1999). In effect, resilience factors moderated the negative effects of exposure to risk. Effective approaches need to include attention to both risk and resilience (Pollard et al., 1999; Smith et al., 1995). Addressing risk factors results in the absence of factors that threaten health and safety; however, it does not necessarily achieve the presence of conditions that support health.

Drive Evaluation and Accountability

Public health has an important contribution to make in regards to data and evaluation and using this capacity to measure progress and to establish benchmarks for accountability. Community indicator reports—published reports that use a carefully selected set of indicators to track the social, health, and economic conditions in a defined geographic area—are a valuable tool for this (Flores, Davis, & Culross, 2007; Prevention Institute, 2007a). The most comprehensive and valuable reports are able to monitor

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trends over time and offer some interpretation about the magnitude and direction of any changes. Simply making indicators available will not result in change. Effective indicator reports frame the information in a way that can lead to action; they identify relevant policies and steps that can be undertaken to improve the indicator. Reports and report cards also work best in a context of accountability (i.e., when the agencies or organizations responsible for acting on the information are clearly identified). Community indicator reports facilitate community improvement in a number of different ways. They may foster community engagement and collaboration, improve health care quality, identify agendas for public resource distribution, set baselines for government performance, monitor progress in government performance or community health and well-being, inform public policy development and advocate for specific policies, or do a combination of these. Some reports focus on improving community health through a particular sector, whereas others suggest multisector collaborations to achieve the desired outcome.

One of the most important considerations is a commitment to ongoing community input. Community input ensures that reports and the process of developing reports reflect local priorities and keep the meaning of indicators transparent and clearly understood by populations for whom the report is intended. The process of developing a community indicator report can facilitate dialogue on issues that matter, translate collaboration into a meaningful product, and allow communities to think through a vision for a healthy future. The process of taking an interest in and contributing to the improvement of the conditions for health in a community can also be valuable to a community's overall health. The process is what makes the difference; the report is a tool that results from the process.

CONCLUDING REMARKS

Of the 5% of health dollars spent on health promotion and disease prevention (McGinnis & Foege, 1993), relatively few resources are devoted to prevention initiatives that address the major influences, or underlying factors, that negatively impact health. Because these factors interact to cause a greater burden of disease among certain groups of people, it is critical that these factors be addressed to close the gap in health disparities. Successfully reducing these disparities requires a broad approach that pays attention to the environment instead of focusing on medical care alone. In many cases, decisions are made without awareness of their relationships to health outcomes. When communities and institutions make decisions more explicitly, they can improve health and reduce disparities. By examining the trends and analyzing these against what is known about how to reduce disparities, priorities for action will emerge. Public health leaders and practitioners have a significant role to play as major catalysts and players to move forward this approach.

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Primary prevention, with an emphasis on changing the environment (root factors and the physical and social environment), is an emerging craft that shapes comprehensive solutions, thus achieving a broad impact. With its emphasis on a community orientation, multidisciplinary collaboration, and organizational and policy-level changes, this approach can significantly improve the health of individuals, families, and communities who are most impacted by poor health and premature death.

The opportunity to reduce health disparities is palpable. Communities and government agencies are grappling with the complex issue of health disparities. The seriousness of the consequences and the inadequacies of current approaches make a new way of working a requirement. In addition to improving the health of individuals and communities, the approach presented here provides a tremendous opportunity to equip communities with skills to proactively address other issues that affect them. For those most at risk, furthering the movement for an environmental and systematic approach to health will reduce morbidity and mortality, save money, and improve the quality of life.

Health disparities are in part the result of a long history of governmental and institutional policies and practices that have put minorities at a higher risk of illness and injury. Reversing the impact of these policies and practices requires a long-term commitment from public and private institutions to improve the environments in communities of color and low-income communities and should be a major goal of public health.

DISCUSSION QUESTIONS

1. Jack Geiger offered prescriptions for food and shoes at the community clinic he started in Mississippi. What are some other things medical facilities today could offer that would have a great impact on health?
2. Why does medical care alone have limited ability to impact health disparities?
3. Why is it important to look at the environment as well as behaviors when looking at how disparities in health are produced?
4. Why is prevention a necessary strategy to address health disparities?
5. Are there community elements that consistently show up as having an impact on multiple illnesses, injuries, conditions, or disparities?
6. Think about a two steps back approach to type 2 diabetes. What does that look like when you take a step back from the illness (diabetes) and medical care to exposures and behaviors and then take another step back to the social and physical environment?

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