

ACHIEVING HEALTH EQUITY IN AMERICA

Health disparities are both real and deadly, but disparities are not inevitable. The causes of health disparities are complex, and their elimination will require multi-dimensional interventions. We have developed a three-dimensional model for the elimination of health disparities. The foundation of public health is surveillance, which is the first dimension. We must continually measure racial-ethnic disparities in each specific disease, in its risk factors, and in outcome-relevant quality of care. The second dimension is research into the causes of disparities and potential intervention points to eliminate disparities. These causes and potential intervention points can be in the individual's biology or their behavior, or in their physical and social environment, or in the healthcare arena (quality and access). The third dimension is intervention, which requires moving from what we know to what we do. Translation must not only take knowledge from the bedside, but to the curbside and the countryside, into each community and into each home. We can achieve health equity in America, but first, we all must care enough, know enough, do enough, and persist long enough. (*Ethn Dis.* 2006;16[suppl 3]:S3-8-S3-13)

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INTRODUCTION

The health of our nation is a dynamic force propelled by myriad factors that change with time: the racial and ethnic composition of each generation; age distribution (eg, the aging baby boomers); and socioeconomic status levels, to name just a few. In 1980, for example, 6.4% of the American population was Hispanic or Latino; 11.5% Black; and 79.9% White. Twenty years later in 2000, the population composition had shifted to: 12.5% Hispanic or Latino; 12.2% Black; and 69.5% White.¹

The US population is also aging, with increasingly large segments of the population in the 75 years and older age group: 2.6% in 1950; 5.9% in 2000; and 11.6% projected for 2050.² Poverty is also a persistent risk factor for adverse health outcomes. Adults and children in families living at or below poverty level often have poor health due to nutritional deficits, poor housing, exposure to environmental hazards, unhealthy lifestyles, and decreased access to health care. During a 22-year period (1980–2002), poverty rates for all ages in the United States rose to an all-time high of 15.1% in 1993, dropping off during 2000 to 11.3% but increasing again to 12.1% by 2002.³

HEALTH DETERMINANTS: INDIVIDUAL, ENVIRONMENT, AND POLICY

While demographic characteristics are a driving force for the health status of the nation as a whole, these characteristics combine with other, closely interwoven determinants to yield the overall health of an individual. Healthy People 2010 presented a more complete

framework for understanding the causes and determinants of health outcomes and health disparities, as illustrated in Figure 1.⁴ These include the physical and social environment, the biology and behaviors of individuals, and system-level determinants such as healthcare access, health policy, and social and economic policy.

For example, physical environmental factors clearly play a role in initiating and exacerbating disease. Poor air quality can derive from industrial pollutants, auto and truck emissions, and agricultural chemicals. These exposures, along with landfills and toxic waste sites, are more likely to be found in low-income and minority communities.^{5,6} Low-income workers, and a disproportionate number of minority workers, are more likely to work in areas of exposure within any given industry. In a broader definition of environmental health, some neighborhoods are simply unsafe for walking, either because of crime or automobile traffic (inadequate pedestrian walkways).

What may be less obvious is the extent to which the social environment can influence disparities in health. For example, poverty and hopelessness among teens and young adults can drive unhealthy behaviors such as smoking or violence or risky sexual behaviors. Impoverished neighborhoods can also feed a sense of powerlessness or external locus of control that directly conflicts with efforts to achieve empowered self-management of various chronic diseases. The social environment can also foster feelings of mistrust in the healthcare system. Individuals have often experienced racism or ethnic discrimination on a daily basis, as well as having community memories of episodes of earned distrust such as the Tuskegee syphilis experiments.^{7,8,9}

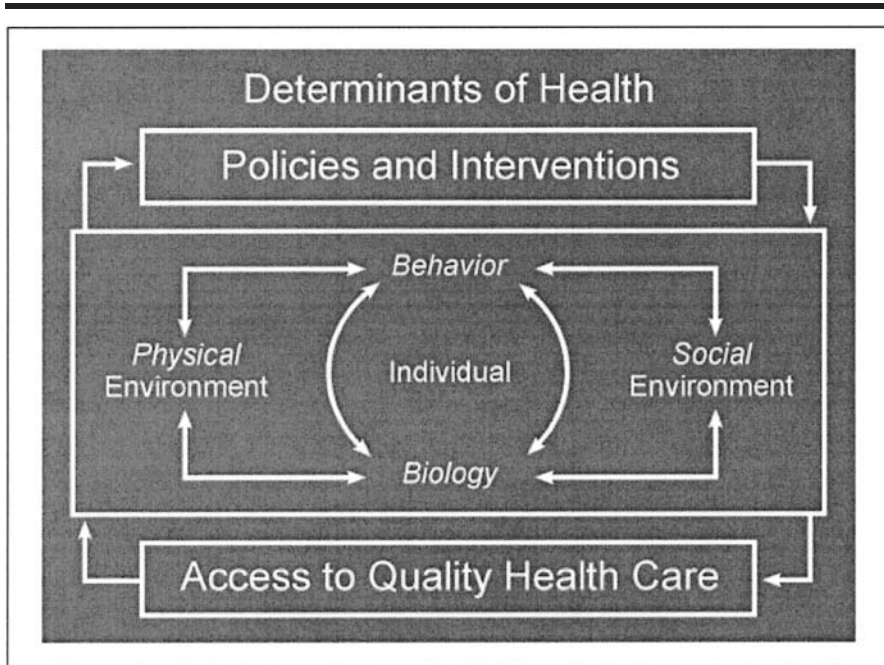


Fig 1. Healthy People 2010: Determinants of health

At the individual level, each person brings to the table his or her own genetics, biology, personality, and behaviors. Cigarette smoking is an example of a behavioral factor that also interacts with the biology of the individual. Some smokers get cancer or chronic obstructive pulmonary disease, while others do not. What personal biology or genetic factors or environmental co-factors influence these outcomes? Other risk factors include genetic and proteomic factors such as PPAR-gamma, which has been linked to cardiovascular risk. These are not inherently racial factors, since race is a social construct, but there may be differences in prevalence between racial groups, and also significant “within-group” variability. Behavioral factors not only include risk factors like smoking, but also include positive behaviors such as exercise and healthy eating, as well as self-care behaviors such as home glucose monitoring or adherence to medications to achieve optimal control of diabetes or hypertension or hyperlipidemia.

At the big-picture level, state and national health policies and changes in healthcare financing can also impact

health outcomes and health disparities. Consider issues such as the Medicare prescription drug benefit—will it improve or worsen disparities in access to prescription medication? Will access to medication disparities drive increased disparities in blood pressure and diabetes control, and ultimately drive increased disparities in cardiovascular death rates?

Another driver of disparities in health care and health outcomes is healthcare access. Access is dramatically worse for the poor and uninsured, even within high-disparity racial groups. For example, our analysis of MEPS data showed that non-poor, insured, African Americans with a primary care home were four to seven times more likely to have doctor’s office visits and to obtain prescription drugs than African Americans who were poor and uninsured and had no primary care home.¹⁰ Providers serving minority and low-income patient populations face significant barriers to the provision of quality care, including access to specialty referrals, diagnostic testing, and affordable prescriptions for their patients.¹¹

Health Issues Driven by Intertwining Determinants

According to *Healthy People 2010*,¹² ten leading health indicators measure how these intertwining determinants affect the health of our nation and reflect the major health issues anticipated for the 10-year period, 2000–2010. The indicators can be grouped in two categories: 1) health systems indicators (access to care, mental health, injury and violence, environmental quality, and immunization) and lifestyle indicators (physical activity, overweight and obesity, tobacco use, substance abuse, and responsible sexual behavior).

Elimination of Race/Ethnic Disparities Prioritized as National Goal

Racial and ethnic disparities persist in most measures of health care and health outcomes. Elimination of these health disparities is one of two overarching goals of *Healthy People 2010*, our public health agenda for the current decade. Cardiovascular disease and infant mortality are just two areas of health concern where vast differences in health outcomes exist. The death rates from cardiovascular disease are much higher in Black men than in any other segment of the population (Figure 2).¹³ The African American community also experiences 14 infant deaths for every 1,000 live births, a number that is twice that for White or Hispanic babies.

In its report on racial and ethnic health disparities, *Unequal Treatment*, the Institute of Medicine (IOM) cited the model of Gomes and McGuire, in which three D’s (differences, disparities, and discrimination) summarize the categories of unequal healthcare quality and outcomes experienced by minority and non-minority individuals. In this model, we must acknowledge that not all differences in patterns of healthcare utilization are inherently wrong (Figure 3).¹⁴ If women in a particular racial or ethnic sub-group view birthing as a natural part of the human cycle, and

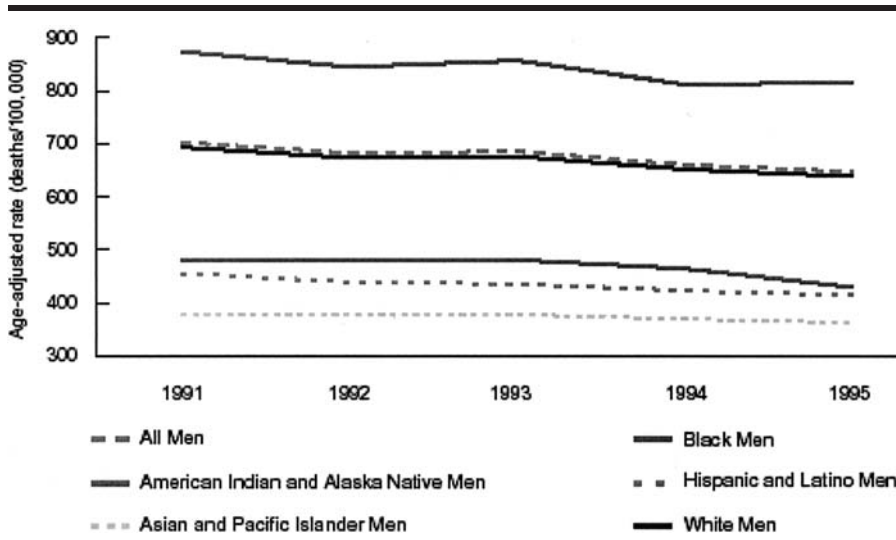


Fig 2. Trends in heart disease mortality among men 35 years of age and older, by race and ethnicity, 1991–1995

not as a medical event, then they may have less enthusiasm for invasive procedures to control pain or to monitor the progress of labor. However, there may also be systemic issues, such as the high rate of uninsurance in certain immigrant populations, or the unavailability of translators for obtaining informed consent.¹⁵ Finally, there can be unconscious bias and prejudice, as evidenced by studies in which patients with identical symptoms and risk factors receive different treatments based on race or gender, or studies showing racial

disparities in pain medication given to young people with similar leg fractures presenting to the same hospital emergency department.

While the literature provides significant evidence of disparities, there is not enough evidence-based information on interventions that will be effective in eliminating these barriers. Research is needed to explain how race and ethnicity are associated with disparities in the process, the structure, and outcomes of care. Research must provide a better understanding of the contribution of

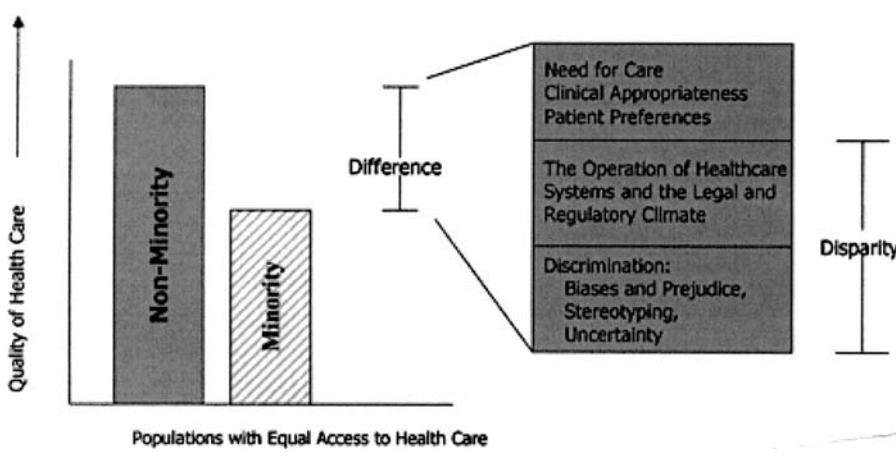


Fig 3. Gomes & McGuire model of differences, disparities, and discrimination as published in Institute of Medicine's report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*¹⁴

the patient, provider, and institutional characteristics that will affect the quality of care for minorities. Through this type of in-depth research, we will be able to influence the five *Healthy People 2010* points of attack for achieving healthcare equity: access to care, improving quality of care, lifestyle enhancement, improving environmental quality, and a balanced research agenda. We can summarize these issues as seven major barriers that keep people from accessing needed primary care and preventive health services: the uninsured and underinsured, the underserved, the under-represented, the uninspired, the untrusting, and the uninformed.

WHAT IF?

In our recent study analyzing the Black-White mortality gap over four decades from 1960 to 2000, we found that an estimated 83,750 deaths each year could have been prevented in the United States, if this Black/White gap had been eliminated.¹⁶ In addition, elimination of these disparities could have meant:

- 24,000 fewer deaths from heart disease;
- 7,000 fewer deaths from HIV/AIDS;
- 4,700 fewer infant deaths;
- 22,000 fewer deaths from diabetes;
- 2,000 fewer deaths of Black women from breast cancer.

In this same study, we concluded that health disparities may be more resistant to change than other social determinants. For example, between 1960 and 2000, median income for African-American individuals rose from 65 percent to 84 percent of the median income of Whites, while Black-White high school dropout rates declined from almost 2.2 times higher in 1967 to 1.3 times higher in 1997.¹⁷ However, there was virtually no improvement in the relative Black-White mortality gap during the same time period.

THREE-DIMENSIONAL MODEL OF RESEARCH TO ELIMINATE HEALTH DISPARITIES

The Center of Excellence on Health Disparities at the National Center for Primary Care at Morehouse School of Medicine has designed a three-dimensional model of research to eliminate health disparities to monitor progress in eliminating health disparities in the areas of cancer, hypertension and heart disease, maternal and child health, diabetes, HIV/AIDS, and mental health.

Racial and ethnic disparities in health care and outcomes have proven to be quite resistant to simple or one-dimensional interventions. Black-White inequities in mortality rates have been remarkably persistent over the past four decades, during which we have experienced dramatic changes in clinical medicine and in healthcare delivery. Given the complex causation of health disparities, and this resistance to simple interventions, the Center of Excellence on Health Disparities at the National Center for Primary Care at Morehouse School of Medicine has developed a three-dimensional approach to research that will guide the path toward eliminating racial and ethnic health disparities in America.

The three-dimensions of our approach to eliminating disparities in health include the following dimensions, shown as three axes on the model shown in Fig. 4: (1) **surveillance/monitoring**, in which we measure and track over time rates of incidence, prevalence, morbidity, disability, and mortality related to specific risk factors (smoking, for example) and specific disease areas such as diabetes, cardiovascular disease, HIV/AIDS, maternal-child health, mental health, etc., with a special focus on racial-ethnic disparities in these rates of disease and adverse outcomes; (2) **a balanced research agenda**, in which we attempt to answer questions related to the nature and cause of diseases and disparities and

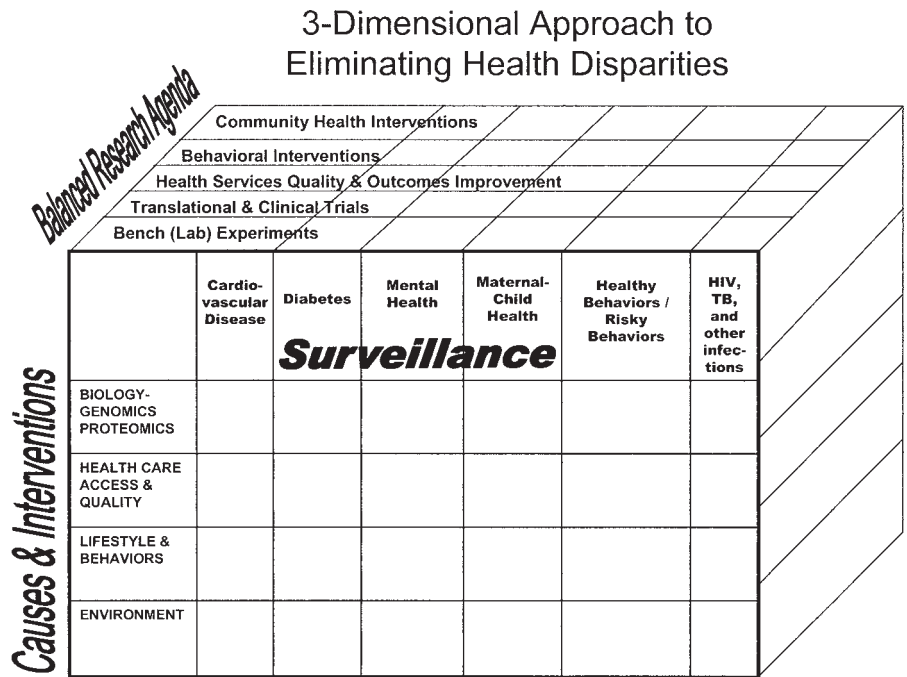


Fig 4. Three-dimensional approach to eliminating health disparities. From the Center of Excellence on Health Disparities at the National Center for Primary Care, Morehouse School of Medicine

what works in reducing those disparities; and (3) **interventions**, in which we implement programs based on our research and evaluate the outcomes of those programs, thus feeding back to the surveillance dimension of the process.

As this process unfolds, time becomes the very important **fourth dimension**, in which we must cycle rapidly between surveillance, research, interventions, and re-assessment of outcomes based on trends in the surveillance data in order to achieve real-world improvements in health outcomes and health equity.

X-Axis: Surveillance on Disease-Specific Disparities

The first dimension (the x-axis in Figure 4) represents the surveillance required to track trends in incidence, prevalence, and adverse outcomes of specific disease conditions and risk factors that are known to have disparate outcomes. Surveillance is the foundation of any population-based effort to

improve health. Reducing disparities in adverse birth outcomes will require a very different set of interventions than those that will help overcome disparities in stroke deaths, but in both conditions we must have accurate, rapid-cycle data specific to each racial-ethnic sub-group in order to monitor trends over time. There are clearly documented clinical outcome disparities in each of the listed categories of disease, as well as many others, and there are interventions that could reduce disparities in each. Surveillance allows us to measure the disparities at baseline, and to assess the impact of disparities-focused interventions as well as trends in the broader healthcare and social environment.

Y-Axis: Causes and Cures (Interventions)

A second dimension is to focus on the causes of and potential cures or points of **intervention** for eliminating health disparities — biological/genetic, environmental, and behavioral causes, as well as

those related to differential access to and quality of health care. Our Morehouse School of Medicine Cardiovascular Research Institute is actively engaged in assessing genetic and proteomic markers of cardiovascular risk across various populations, which may one day inform treatment in a patient-specific manner, recognizing the tremendous genetic homogeneity of individuals within racial groups. Health services researchers within the National Center for Primary Care are identifying sources of disparities in healthcare quality, and testing interventions in real-world practice settings to achieve better care and outcomes.¹⁸ Our Department of Community Health and Preventive Medicine, in partnership with our Prevention Research Center, are testing behavioral research strategies to bring about change in lifestyle choices made within the individual, family, and community domains. We are currently partnering with the 100 Black Men of Atlanta to persuade more African-American males to change their lifestyle choices related to diet, exercise, and smoking.

Z-Axis: A Balanced Research Agenda from Bench to Bedside to Curbside to Countryside

A third dimension is to develop a balanced agenda of research which creates new knowledge and technology, but then moves it not only from the laboratory bench to the clinical bedside, but also to the curbside and to the countryside. At the bench, we have a dizzying array of new technologies and genomic discoveries to absorb, as well as new understanding of the pathophysiology and pharmacology of diseases. At the bedside, it is clear that clinical trials and new drug therapies can save lives. The most dramatic examples in the past three decades involve the robust and effective panoply of pharmacologic and technological options that we now use to improve outcomes in diabetes and cardiovascular disease, as well as in the treatment of HIV-AIDS.

Unfortunately, technology may take decades to diffuse from laboratory discovery to widespread adoption in usual practice settings. Even more troubling is that such breakthroughs may actually worsen inequalities in outcomes for high-disparity populations. The usual diffusion curve from early adopters to mainstream use can bypass entire segments of the population if dissemination only flows through mainstream channels or if there is broken trust between the medical-scientific enterprise producing the technology and segments of the community that have the greatest need for these breakthroughs.¹⁹ For example, although both African Americans and Whites have seen lower HIV-related death rates with the advent of highly active anti-retroviral therapy, the Black-White gap in HIV-mortality has actually widened.²⁰

Therefore, we need health services research, health outcomes and quality improvement research, and community-oriented primary care practice-based research to assure that advances in medicine benefit all populations equally and serve the cause of achieving health equity in America. However, we must continually push beyond the clinic walls, out into the community. This will often require non-clinical venues for community health interventions, such as barber-shops, hair salons, worship centers, or even in the home of a community health worker or *promotora*.

UNDERSTANDING CULTURE IS VITAL

Culture affects patients and healthcare professionals; with patients, culture makes a difference in how they manifest and describe illnesses, how they cope with illnesses, the types of stresses they experience, and whether they are willing to seek treatment. Culture also influences the way healthcare professionals diagnose patients, the kinds of treatments we offer to patients, and how we organize service

delivery. While no one individual will become an expert in another person's cultural beliefs and values, it is important for each healthcare professional to incorporate qualities of understanding into the care that we provide. In our recent book, *Multicultural Medicine and Health Disparities* (Satcher and Pamies),²¹ we have sought to help healthcare students and practitioners deliver skilled and appropriate care to all patients, no matter their ethnicity, country of origin, cultural history, or access to services. The 500-page book contains practical advice and case histories to increase the sensitivity of medical professionals to the needs of minorities.

Other programs offering approaches for cultural proficiency can assist in training healthcare professionals to provide culturally-appropriate health care. One such program is the CRASH-course in Cultural Competency offered by the National Center for Primary Care. The program emphasizes these steps, using CRAASSH as a mnemonic: consider Culture; Show Respect; Assess / Affirm differences; Exhibit Sensitivity and Self Awareness; and wrap it all up in true Humility.

HOW TO ACHIEVE HEALTH EQUITY IN AMERICA

The road to health equity will require multi-dimensional strategies working in tandem to address the many factors, levels, and systems that affect health outcomes. Our hope is that researchers, practitioners, policymakers, individuals, and communities will accept this challenge, and work specifically toward concrete objectives such as the following²²:

- Universal health insurance—access to health care for everyone;
- A primary “medical home” for every adult and child;
- Proportionate representation of all racial and ethnic minority groups in the health professions;

- Bias-free interventions;
- Non-violent and exercise-friendly neighborhoods;
- Nutritious food outlets;
- Educational equality;
- Career opportunities;
- Parity in income and wealth;
- Home ownership; and most importantly,
- Hope.

Disparities are both real and deadly, but disparities are not inevitable. We can achieve health equity in America, but first, we all must care enough, know enough, do enough, and persist long enough.

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