

# Layers of Inequality: Power, Policy, and Health

In her influential 1994 article, “Epidemiology and the Web of Causation: Has Anyone Seen the Spider?,” Nancy Krieger challenged epidemiologists to look beyond methodology in order to define a unifying theory of disease causation in human populations.<sup>1</sup> Her proposed ecosocial model explicitly involves simultaneous attention to causal factors acting at different levels, from the cellular to the societal. Any serious attempt to improve the relative health standing of Americans will need such a multilevel approach. This could take us beyond the risk factors of molecular genetic predisposition, personal health behaviors and family socioeconomic status to include the inadequately discussed topic of comparative social systems.

Infant mortality is a case in point. Despite leading the world in remarkable advances in newborn care, the United States has the highest infant mortality rate of all affluent industrialized nations. In fact, a growing number of not-so-affluent nations also outperform the United States in infant survival. As of 2010 our international ranking in infant mortality had fallen to 30th (from 26th in 2000).<sup>2,3</sup> Cuba, whose infant mortality rate has been lower than that of the United States since 2001,<sup>2</sup> is now ranked 24th, despite ranking 117th in per capita gross domestic product.<sup>3,4</sup> When confronted by this fact, many observers suggest that the statistics are misleading, that the United States is disadvantaged by a more complete reporting of deaths occurring at the threshold of viability. However, a sober evaluation of this assertion by MacDorman and Mathews shows



**An Afghan woman carries a child while waiting to receive medical treatment at a local hospital in Kabul, Afghanistan. Photograph by S. Sabawoon. Printed with permission of Creative Professionals.**

that the high rate of preterm birth in the United States rather than superior reporting explains the bulk of our country’s disappointing international standing.<sup>5</sup> Another frequently heard conjecture is that the heterogeneous ethnic/racial make-up of the US population explains our relatively high infant mortality rate. This is true, but not in the way many think.

### DISPARITIES: GROUP STRESS AND GROUP RISK

Indeed, African American infants currently experience more than twice the risk of dying in their first year of life compared with White infants. This mortality gap has widened over several decades.<sup>6,7</sup> Some would blame the high mortality rate of African Americans for raising the national average, but that’s assuming the White rate is low, which it is not. If one were to rank the mortality rate for White US infants as if they represented a country, their international standing would be 28th. So

our problem is not only to explain why an African American infant is 2.3 times more likely to die in the first year of life than a White infant, but also to explain why that White infant is 2.4 times as likely to die as an infant born in Finland or Japan.<sup>3</sup> We propose a causal link: the very existence of racial disparities also leads to poor outcomes for Whites.

To understand population health statistics we must focus above the biomedical level. Health care, such as neonatal intensive care, turns out to explain relatively little of the difference in mortality observed between different groups of people. Schroeder estimates that only 10% of population health differences can be attributed to health care.<sup>8</sup> He points to upstream causes, factors that influence people’s underlying health, in order to explain the bulk of health outcome differences among large social groups defined by race/ethnicity, class, or country. One proposed mechanism linking individual risk for disease to processes at the

social group level—beyond the effects of absolute need, such as lack of food—is socially mediated stress. The physiologic price of reacting to stress over time has been referred to as “allostatic load,” and it is associated with a variety of common, complex diseases.<sup>9</sup> Various sources of chronic stress, such as job strain (working under pressure with little control), are believed to explain the increasing morbidity and mortality at each step down the job status ladder in the Whitehall studies of British civil servants in six job grades.<sup>8,10</sup> We and others have hypothesized that chronic maternal stress, accumulated across the life course and across generations, could explain the increased risk of preterm birth observed in disadvantaged social groups.<sup>11,12</sup>

## RACE AND CLASS

Understanding the high rates of African American infant mortality in the United States requires analysis of the effects of race as a social construct, thus addressing discrimination and racism in its various forms.<sup>11,13,14</sup> Understanding the high rates of White infant mortality in the United States requires analysis of inequity based on class.<sup>15,16</sup> Braveman<sup>17</sup> showed increased risk of infant death in babies born to both White and African American women who had less than a high school education compared with more educated women of the same race. The relative risk of infant death for the least educated White women was 2.4 when compared with White college graduates. Race/ethnicity and class operate simultaneously, each exerting their own burden on health.<sup>18</sup> African American women are subjected to both race- and class-based stressors, but stress associated with a woman’s

social class potentially impacts a numerically larger group of women—nonaffluent women of all racial/ethnic groups. Such a class effect was demonstrated by researchers in Quebec who showed that job strain more than doubled a woman’s risk of giving birth preterm.<sup>19</sup> The segment of the population experiencing stress from their job—or their lack of one—is large and growing.

Stepping back once again, we now look through the ecosocial lens (at an even more macro level) at the relative levels of inequity seen in different countries. Income inequality in the United States is higher than that of 28 other nations in the Organization for Economic Cooperation and Development.<sup>20</sup> According to the National Poverty Center at the University of Michigan, 15.1% of Americans live in poverty.<sup>21</sup> Despite this high level of need, the United States spends a smaller percentage of gross domestic product on health-promoting social programs than other industrialized countries. The sum of tax breaks, social services, and cash benefits in the United States totaled about 1.2% of the gross domestic product compared with about 4% in the United Kingdom or France.<sup>22</sup> In international rankings of such spending, that places the United States 31st, just ahead of Mexico.

Why should access to desired goods and services by the nonelite members of society (which depends on their access to political power) have a different trajectory in the United States than in, say, France or the United Kingdom? Here is where we posit the particular role played by race in US political discourse. As Kawachi et al.<sup>18</sup> put it,

One of the main functions of racism in the United States has been to divide people so that they are less able to struggle

politically in their common interest.

As long as political and social identity is defined by race/ethnicity, the power of the majority—nonaffluent wage earners of various races—to unite politically is hobbled and they are unable to negotiate effectively for what they need. The wear and tear of daily stress and financial worry, like job strain, unemployment, food, housing and health insurance insecurity—and for minorities, discrimination—result in poor population health in general and high infant mortality in particular.

## 20th CENTURY HISTORY, 21st CENTURY POTENTIAL

Creative research that develops the evidence base for the social determinants of health (like in several studies in this issue) clarifies the direction of needed policy change. Sadly, current trends often seem to be heading in the opposite direction. Long-term trends since the late 20th century include increasing income inequality<sup>20</sup> and widespread neoliberal “reforms,” which translate as privatization of public resources and a dismantling of the welfare state.<sup>23–25</sup> Even in Sweden, 8% of the public hospitals were privatized by 2012.<sup>26</sup> But the deconstruction of the public sector did not start in Scandinavia any more than did socialized medicine. The first universal health care system was established decades before Sweden’s national health system when the Soviet Union made health care a right for all citizens.<sup>27</sup> The 20th century’s other major example of revolutionary social change impacting population health through improved nutrition, education, and basic medical and public health applied on a mass basis took place in China, where

life expectancy increased from 44.5 to 64.5 years between 1955 and 1975 during its socialist phase.<sup>28,29</sup> However, by the 1980s Russia and China had abandoned socialism. Universal health care gave way to market-oriented policies in both those countries. Life expectancy in China leveled out and male life expectancy in Russia fell by 6.6 years in the half decade after market capitalism was officially adopted there.<sup>30</sup> We speculate that these reversals in the countries that originated sweeping egalitarian changes to social and public health systems underlie current trends in the Western world. By eliminating the specter of a competing political–economic system, they facilitate the decline of the Western welfare state.

Does this mean that progress in reducing health disparities must wait for future social revolutions? Schroeder<sup>8</sup> notes that the 1998 Acheson Commission in the United Kingdom proposed 39 policies to reduce social inequities that cause health disparities, and a number have been implemented. He proposes a similar approach in the United States—health disparity impact assessments—to guide policy makers. However, the degree to which such initiatives will succeed in reducing inequality in the absence of socially progressive revolutions remains to be seen. ■

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### Contributors

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# Improving Birth Outcomes Requires Closing the Racial Gap

In 2013, the maternal and child health community received encouraging news from the Centers for Disease Control and Prevention (CDC). After having stalled from 2000 to 2005, our nation's infant mortality rate declined 12% from 2005 through 2011, to 6.05 infant deaths per 1000 live births.<sup>1</sup> The CDC also reported a significant decline in the infant mortality rate for African American mothers, as well as a slight narrowing of the longstanding two-to-one gap in rates between African Americans and whites.

## WE'VE COME A LONG WAY, BUT WE'RE NOT THERE YET

We applaud the latest declines in our nation's infant mortality

rates, but we remain deeply troubled by persistent and pronounced racial disparities in birth outcomes.

Our advanced health care system is capable of achieving birth outcomes associated with countries whose populations enjoy high overall levels of health and well-being. The 2010 infant mortality rates for California, Massachusetts, Minnesota, and Washington (4.75, 4.43, 4.49 and 4.50, respectively<sup>2</sup>), for instance, are in line with rates for Canada, the United Kingdom, and the European Union.<sup>3</sup> Yet as a nation, we cannot achieve these rates. Disparities in health care are a big reason why. The infant mortality

rate for African Americans nationwide is 12.4 infant deaths per 1000 live births,<sup>4</sup> and rates are greater than 7.0 in 15 states, contributing to our unacceptably high national rate.

Infant mortality rates are just one marker of birth outcomes and, in turn, our health as a nation, but they are a telling indicator. Numbers carried out two decimal points make it easy to gloss over the stark reality, so let's put it plainly: African American babies die before their first birthday at twice the rate of White babies. If we are to continue reducing infant mortality rates and improving birth outcomes for all, then we must address this racial gap head on.