



EDITORIAL

Rising Tides, Falling Fortunes

The analysis of secular trends in disease has long been an important part of the epidemiologist's toolbox. Being able to link major secular changes in disease rates to particular exposures is intellectually satisfying and presumably useful for prevention. However, the reasons underlying many secular trends remain impenetrable. Foremost among these has been the decline in mortality from cardiovascular causes. From the conference sponsored by the National Heart, Lung, and Blood Institute in 1978 (1) to a recent computer simulation of the role of risk factors and treatment, the debate over the reasons for the decline continues (2).

Although first noted over 10 years ago, there has been relatively little comment on the extent to which all groups have not equally benefited from the decline or the reasons for this differential benefit (3). For example, the average annual percent decline in age-adjusted (2000 standard) coronary heart disease (CHD) death rates for white males and females was larger than for black males and females from 1980 to 1996 (4). In some periods the differences were substantial—the annual percent decline for males was 50% greater (−3.6% vs. −2.4%) for Whites than for Blacks during 1980–1989.

Barnett et al. (5) in their analyses of 1984–1993 trends in CHD mortality in North Carolina add even more information concerning the uneven distribution of the decline in heart disease. Their results show that social class inequalities in CHD mortality widened during this period for both black and white men. What's more, whereas declines in mortality were experienced by white men of *all* social classes, with the greatest benefit among those in the highest social class, *only* the highest social class black men showed any decline at all.

These are striking findings. It is known from national data that for some indicators of health status the health of African Americans worsened and the black-white gap widened during the 1980s (6). For example, for five consecutive years after 1984, the life expectancy of both black males and females declined from the 1984 level (7). However, comprehensive indicators of SES are seldom collected in

vital statistics data and those that are collected are seldom utilized (8).

By disaggregating the trends by social class, Barnett et al. (5) show that inequalities, in the extent to which different groups benefited from the decline in CHD mortality, are even greater than had been imagined. For example, black men in social classes III and IV (e.g., occupations such as mechanic, butcher, janitor, welder, truck driver, laborer, animal caretaker) had average annual changes in CHD mortality of +0.8% and 0.0%, respectively, whereas white men in the same social classes had average annual changes of −2.1% and −1.6%, respectively. The population impact of these changes is even larger, as 70% of black men and 50% of white men are in these occupations. Over the 10-year period, black men in the lowest social class experienced an 8.0% *increase* in CHD mortality, and white men in the same social class experienced a 16% *decline*.

Interestingly, in the highest social class (e.g., manager, physician, computer programmer), representing 12% of black men and 30% of white men, both groups experienced the same average annual change of −4.7%. These data illustrate that socioeconomic data are needed to understand racial differences in health and to effectively identify and monitor the health status of vulnerable population groups over time. Two conferences organized by Federal health agencies have called for more routine presentation of racial data stratified by SES (9, 10).

What could account for these widening disparities in CHD mortality by social class? The standard approach would be to try and parcel out the contribution of various factors related to primary, secondary, and tertiary prevention (1, 11, 12). While there is much to be said for such an approach, it does not address the "causes of the causes," namely the upstream forces that might be associated with secular trends in risk factors and medical care. Such a focus is critical if we are to have a complete understanding of the dynamics of risk factors and diseases in populations (13–15).

What then could be the "upstream" causes of differential declines by social class in CHD mortality for both black and white men, widening inequalities in CHD mortality, and worsening rates of CHD mortality in all but the best-off African-American men in North Carolina? The strong

association between socioeconomic position and CHD (16, 17), the increasing evidence that macroeconomic trends influence health (18), and the unique socioeconomic position of African-Americans in the United States certainly suggest that attention to socioeconomic factors and to the economy is warranted.

The worsening health status of African Americans during the 1980s parallels worsening economic status for Blacks during that decade, both absolutely and relative to Whites (19). During the 1980's and mid-1990's the United States experienced an unprecedented increase in income inequality, with many groups having declines in real income and the economic distance between the rich and the poor increasing. Wealth inequality in the mid to late 1980's was at its highest level since the Great Depression of the 1930s and these changes were associated with actual declines in median wealth among African American households (20). Recent research reveals that levels of income inequality and secular increases in income inequality are linked to poorer health and to a deceleration of the secular decline in age-adjusted mortality (18, 21). It is also worth noting in the context of the Barnett et al. (5) findings that in 1990, North Carolina ranked in the lowest quartile of U.S. states with respect to the share of total household income going to the least well-off 20% of the population, a measure of income inequality.

It is important to underscore the extent to which African-American men are in an economically vulnerable position and how this vulnerability might interact with macroeconomic trends to adversely influence their health. On virtually every economic dimension one examines, African-Americans have benefited less from American prosperity. They are more likely to be unemployed, to earn less if employed, to work in less economically secure occupations, to inherit less, to have less financial assets, to have less valuable housing and less housing equity, to live in poorer neighborhoods-even if not poor themselves-and to get lower economic returns on their education.

The recent report by the President's Council of Economic Advisors (22) underscores the magnitude of these differences. For example, the earnings of black men are 74% of white men and the earnings of college-educated black relative to white men actually declined from 1979 to 1997. During this same period, unemployment rates were twice as high for black vs. white men. In 1993 median family income, in 1996 dollars, for black-non Hispanic families was approximately \$24,000, and for white families it was \$45,000. The poverty rates for persons aged 25 and over with a high school degree were twice as high for African-Americans as they were for non-Hispanic Whites. Reflecting the combined effect of less intergenerational transfers, lower incomes, and lower occupational status jobs among black families, white families were more much likely to own stock and mutual funds, have equity in their house, and have

IRA/Keogh accounts. Median liquid assets in black vs. white families were \$400 vs. 12,500 (23).

In 1995, black families were almost twice as likely as white families to pay more than 50% of their income for housing costs and were more than 2.5 times as likely to live in housing units with problems. The sociodemographic characteristics of the neighborhoods that Blacks and Whites live in are extraordinarily different, and these differences are large even among the poorest. Less than 7% of poor Whites live in areas of extreme poverty while 38% of poor Blacks live in such neighborhoods (24). According to Sampson and Wilson (25) there are no cities over 100,000 in population where Blacks live in ecological equality with Whites with respect to basic features of economic and family organization.

It is a reasonable hypothesis that the poorer CHD mortality trends among male African-Americans in North Carolina reflect the cumulative effects of lower and worsening economic position during the period studied by Barnett et al. (5). While drawing the links between these population health changes and socioeconomic factors is not necessarily easy, there is considerable evidence to suggest their existence (26). It seems very likely that we will not fully understand these worsening trends in CHD mortality for all but the best-off African-American men without a consideration of these links, as well as the upstream factors that are associated with the pattern of worsening economic status among African-American men.

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