Abstract on "The Difficulties of Interpreting Changing Racial and Socioeconomic Differences in Health Outcomes"

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In light of the creation of the National Center for Minority Health and Health Disparities, substantial resources will be devoted to measuring racial and socioeconomic disparities in health and to determining whether those disparities are increasing or decreasing. To date most of the research of this nature has focused on ratios of the morbidity or mortality rates among less-advantaged groups to those of more-advantaged groups. It has done so without apparent recognition of the statistical tendency whereby whenever two groups differ in their susceptibility to a particular outcome, the rarer the outcome, the greater will be the disparity in experiencing the outcome and the smaller will the disparity in avoiding the outcome. The tendency is evident in income data, which show that when poverty declines such as to remove from poverty all who are just below the poverty line, demographic disparities in experiencing poverty will increase while demographic disparities in avoiding poverty will decline. Similarly, test data show that when cutoff scores are lowered, demographic disparities in failure rates will increase while demographic disparities in pass rates will decline. The same result would occur if education were improved sufficiently to allow those previously scoring between the two cutoff points not to achieve the higher score.

A crucial implication of the tendency is that, as advances in health care cause mortality to decline, racial and socioeconomic disparities in mortality rates will tend to increase while such disparities in survival rates will decline. These changes will tend to occur regardless of whether there is any true change in the relative well being of the groups. On the other hand, where health-related disparities are measured in terms of the rates of receiving some benefit, such as prenatal care or immunization, racial and socioeconomic disparities will tend to decline as those benefits are made available to an increasing portion of the overall population; disparities in failing to receive the benefit, however, will increase.

Other implications of the tendency include that, absent strong countervailing factors, disparities in experiencing an outcome will be greatest where the outcome is rarest. Thus, for example, racial and socioeconomic disparities in mortality will tend to be greater (though survival disparities will be smaller) among the young than the old, among the more-educated than the less-educated, and in healthier geographic areas than in less healthy geographic areas.

There are means of interpreting the size of health disparities other than the ratios of mortality or survival rates that are subject to the contrasting tendencies noted above. These include odd ratios, absolute differences in mortality rates, and longevity differences. None, however, effectively distinguishes between changing demographic

disparities in experiencing (or avoiding) an outcome that are natural consequences of the changes in the frequency of the outcome and those that reflect some other changes in the relative well-being of two groups. Until such measures are developed, research in this area should proceed with caution.