[The material below was originally posted in December 2012 on the Health Affairs website as a response to Clemans-Cope L, Kenney GM, Buettgens M, et al. . The Affordable Care Act's coverage expansions will reduce differences in insurance rates by race and ethnicity. Health Aff (Millwood) 2012;31(5):920-930). The materials was accessible by the following URL: http://content.healthaffairs.org/content/31/5/920.abstract/reply#healthaff_el_476249 The material was cited in a December 2014 Urban Institute Research Report by Lisa Clemans-Cope, Matthew Buettgens, and Hannah Recht titled "Racial Differences in Uninsurance Rates under the ACA – Are Differences Projected to Narrow?" (at 45 n.15), which provided the above URL. But as a result of revisions to the Health Affairs website (which apparently resulted in the elimination of all previously published online responses), the response no longer appears on the webite. This version is accessible by means of the following URL: http://www.jpscanlan.com/images/Response_to_Clemans-Cope_.pdf]

How Measures Are Affected by the Prevalence of an Outcome

James P. Scanlan

Analyses of effects of the Affordable Care Act on healthcare disparities like that undertaken by Clemans-Cope et al.[1] must consider the ways standard measures of differences between rates of experiencing favorable or adverse outcomes tend to change as the prevalence of an outcome changes. For reasons related to the shapes of the underlying distributions of factors associated with risk of experiencing an outcome, when the outcome increases in overall prevalence, the group with the lower baseline rate will tend to undergo a larger proportionate increase in that rate than the group with the higher baseline rate while the latter group will tend to undergo a larger proportionate decrease in rates of failing to experience the outcome (and correspondingly the relative difference in experiencing the outcome will tend to decrease while the relative difference in failing to experience the outcome will tend to increase). Prevalence-related patterns of percentage point changes are more complicated. But generally in the rate ranges at issue in the Clemans-Cope study, as coverage increases the group with the lower baseline rate will tend to have a larger percentage point increase in coverage/decrease in non-coverage (with corresponding decrease in the absolute difference between rates).[2-4] These patterns are not always found, among other reasons, because there sometimes occur genuine changes in the comparative circumstances of two groups with respect to the outcome at issue. But in order to identify such changes by means of standard measures of differences between outcome rates one must understand the ways such measures tend to change simply because of changes in overall prevalence of an outcome.

All predicted patterns of percentage point changes in coverage shown in the study's Tables 1 and 2 accorded with the prevalence-related forces and hence would not indicate whether there occurred a meaningful change between the circumstances of the groups studied. But the study predicted that blacks would experience both a larger proportionate increase in insurance and a larger proportionate decrease in uninsurance than whites. The latter pattern, being contrary to the prevalence-related pattern, suggests that there would be a meaningful reduction in the forces causing black and white coverage rates to differ.

But in the case of the Hispanics-white and Asian/other-white comparisons, while the study estimated that Hispanics and Asians/others would experience smaller proportionate decreases in rates of uninsurance than whites, it also predicted that Hispanics and Asians/others would experience larger proportionate increases in coverage rates than whites.   Since these patterns would accord with those one would tend to observe simply because of overall increases in coverage, they would not provide a basis for determining whether a meaningful change occurred.

The best method for appraising the strength of the forces causing favorable or adverse outcome rates of advantaged and disadvantaged groups to differ involves deriving from outcome rates the differences between means of the hypothesized underlying distributions.[5] According to such procedure, the black-white difference would decrease from .30 to .22 standard deviations, while the Hispanic-white difference would increase from .65 to .71 standard deviations and the Asian-white difference would increase from .19 to .26 standard deviations.

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