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Recommendations to incorporate reductions in disparities in P4P programs cannot ignore measurement issues

Chien and Chin argue strongly for incorporating healthcare disparities reduction into pay-for-performance (P4P) programs.[1] Yet they give no attention at all to how disparities should be measured and do not even mention that disparities measurement involves complex issues.

Even the National Center for Health Statistics (NCHS), which has failed to recognize that each standard measure of differences between rates of experiencing an outcome is systematically affected by the overall prevalence of an outcome, recognizes that one may draw different conclusions about the direction of change in a disparity depending on whether one examines relative or absolute differences between rates, and, assuming one relies on relative differences, depending on whether one examines relative differences in a favorable outcome or relative differences in the (opposite) adverse outcome.[2,3] Thus, the NCHS has recommended that all disparities be measured in terms of relative differences in adverse outcome. On the other hand, the Massachusetts P4P program referenced by Chien and Chin will likely measure disparities in terms of absolute differences between rates.[4] Various of the references cited by Chien and Chin also employ different approaches to measuring disparities, very likely in circumstances where different approaches would yield different conclusions about the directions of changes in disparities.

Generally healthcare providers seek to improve overall healthcare, which means increasing favorable outcome rates (i.e., rates of receiving appropriate procedures or appropriate levels of care and rates of experiencing positive clinical outcomes). Solely for statistical reasons, such increases will tend to be associated with declining relative differences in favorable outcome rates and increasing relative differences in adverse outcome rates. Thus, as overall healthcare improves, the many researchers who rely on relative differences in favorable outcomes will tend to find decreasing disparities, while the NCHS and those who rely on its recommendations will tend to find increasing disparities. The Agency for Healthcare Research and Quality (AHRQ), which partially funded the Chien and Chin editorial, measures disparities in terms of the larger relative difference (in the favorable or the adverse outcome).[5] When favorable outcome rates are low, relative difference in the favorable outcome tend to be larger than relative differences in adverse outcome; when favorable outcome rates are high, relative differences in the adverse outcome tend to be larger. Thus, as uncommon favorable outcomes increase, AHRQ (relying on relative differences in the favorable outcome) will tend to find decreasing disparities; as common favorable outcomes increase, AHRQ (relying on relative differences in the adverse outcome) will tend to find increasing disparities. Absolute differences between rates tend to change in the same direction as the smaller of the two relative differences. This means that, as overall healthcare improves, those who measure disparities in terms of absolute differences will tend to find

increasing disparities in uncommon outcomes and decreasing disparities in common outcomes – the opposite of what AHRQ would tend to find.

In addition to references 6-11 below, over 90 references explaining these tendencies as they bear on flawed efforts to measure group differences in the law and the social and medical sciences may be found on the Measuring Health Disparities (MHD) page of jpscanlan.com. The nuances of the tendencies are described on the Scanlan's Rule page of the same site. The Pay for Performance sub-page of MHD addresses the tendencies as they bear on perceptions of the way P4P will tend to affect healthcare disparities and the wisdom and feasibility of incorporating disparities reductions into P4P programs.

Given the amount of health and healthcare disparities research that fails to recognize the extent to which observed patterns are functions of the above-described statistical tendencies, the authors are mistaken in their view that there exists a rich enough understanding of disparities issues to begin incorporating disparities reduction into P4P programs. And, regardless of whether there exist ways to measure healthcare disparities that are unaffected by the overall prevalence of an outcome, the authors are unwise to recommend such incorporation without addressing the measurement issues.

References

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