CONSIDERING HEALTH INEQUALITY

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There has recently been increased attention to the issue of inequalities in health care and health outcomes both in the United States and globally. Domestically, much of this has drawn on a growing literature documenting variations in medical care among racial and ethnic subgroups.12 A recent Institute of Medicine report brought much of this information together under the title “Unequal Treatment.” 4 Earlier, the US Department of Health and Human Services called for the “elimination of racial disparities” as the second goal of the Healthy People 2010, the nation’s health plan for the decade.5 The UnitedHealth Foundation has begun to address the issues of disparities in its annual state report cards,6 and the World Health Organization (WHO) highlighted health inequalities within and across nations as an important dimension of the performance of health care systems.7

At the same time that this issue is achieving necessary prominence, there is less clarity about what aspects of inequality are the most important to focus on and to measure. How, for example, should researchers choose among various health inequality measures available? A variety of indices have been routinely used for health inequality analysis, including range measures, the Gini coefficient, and the WHO health inequality index. Selection of a measure has often been driven by convenience rather than principle. But different measures can conclude different degrees of health inequality even when used for the same health distribution. Researchers and policymakers must know how to select an appropriate measure. Below, learning from extensive inequality studies in other fields (most notably, income inequality in economics), we present several issues for consideration.

The Unit of Analysis. Are we interested in the distribution of a certain service or outcome across all individuals in a population, or between subgroups? If we are interested in subgroup comparisons, which groups are of interest or policy relevance? Two figures illustrate this concept.8 In Figure 1, hypothetical distributions of an outcome like mortality rates across all individuals in two states are shown.

The overall frequency distributions are identical, perhaps leading to the conclusion that no difference exists between these two states in terms of health inequality. However, the dotted lines show the subgroup distributions within each state, showing that the same overall distribution is made up from quite different contributions. Several choices are involved here, but all revolve on which units of analysis to compare, including the choice of subgroups. Differences in racial and ethnic groups are important, but also are those between men and women, rich and poor, educated and uneducated, urban and rural, young and old, and between developed and developing countries. Neither the individual nor the subgroup approach is inherently superior, because each reveals different aspects of inequality.

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**Comparison Concepts.** This next choice deals with how many units are to be compared, and what is the basis of comparison? Figure 2 illustrates four different ways to make comparisons across individuals or groups. In 2A, the range between the highest and the lowest is considered, that is, the extremes of the distribution. In 2B, everyone is compared to an established norm, and differences are considered Shortfalls in Achievement. Concept 2C compares every unit against the mean, called an Index of Dissimilarity. Finally, in 2D every individual or group is compared to each other, such measures as the Gini coefficient and the WHO measure use this comparison concept. Again no one concept is superior, and each produces different results depending on the purpose of the comparison.

**Absolute or Relative Differences.** This is the third issue to be considered. Figure 3 illustrates this point; absolute gender differences in violence related deaths are the same in these two countries, but Country A has greater relative difference than Country B.

A fourth issue is that of Population Size. Most inequality comparisons do not take this into account. However, the same shortfall of 25% of the total population below a certain norm, for example, certainly makes up a different number of people in populations with different sizes: 25 persons below the norm in the population of 100 people, and 2,500 persons below the norm in the population of 10,000. Considering inequality from the perspective of those who suffer from inequality, we might judge that there is greater inequality in a larger population.\(^9\)

Underlying the decisions on these issues and others omitted here is the issue of **Inequality vs. Inequity.** While inequality measures demonstrate differences, differences alone are not necessarily inequitable; this step requires some judgment of unfairness or other moral consideration. It is beyond the scope of this Issue Brief to discuss all the possible value judgments,\(^10\) but they need to be considered across all the inequality measurement issues discussed above.

Many complicated policy choices arise from these considerations. We know that women have longer lives than men. This is an inequality. On what basis would it be considered inequitable? And if it were, what would an appropriate remedy be? Certainly allocating more of health determinants (such as medical care and education) to men than women would be controversial to say the least. What if high levels of certain treatments have no effect or even reduce health outcomes? Then if poor persons get fewer of such services, is this inequitable to them, or to the ones being overreated?

These examples are not in any way meant to devalue more traditional views of inequality in which certain groups in society have less health inputs and lower outcomes; there are most likely inequitable and deserving of policy remedy. But as we move more into the policy arena, it is important to understand that both measuring inequality and assessing inequity is a complicated task deserving of significant thought and analysis.

**References**

8. Reprinted from: Asada Y, Hedemann T. A Problem with the Individual Approach in the WHO Health Inequality Measurement. *International Journal for Equity in Health* (http://www.equityhealthj.com/content/1/1/2) 2002;1(2 (27 May)).