

What Is a “Health Disparity”?

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With the launch of Healthy People 2010 in January 2000, the Department of Health and Human Services (DHHS) committed the nation to an overarching goal, to “eliminate health disparities.”¹ Like the preceding Healthy People 2000 initiative, Healthy People 2010 outlines a comprehensive disease prevention and health promotion agenda. Although this goal has met with considerable support throughout the nation, upon further examination, it is clear that the term “health disparity” has been used with a number of very different meanings. Since the scope of the eliminating disparities goal for the DHHS Initiative to Eliminate Racial and Ethnic Disparities in Health is narrower than that of Healthy People 2010, discussion of the two goals in the same context can lead to confusion.

Disagreements exist regarding the definition and use of the terms “disparity,” “inequality,” and “inequity.” These disagreements center on which term to use, whether a judgment of what is avoidable and unfair is included, and how these judgments are made. These conflicting views have implications for resource allocation and reflect differing political ideologies. Sometimes the term “disparity” is used interchangeably with terms such as “racial/ethnic differences in health.” Those who work in public policy often refer to social class or racial/ethnic health disparities as “inequities,” using the term as shorthand in describing differences between better- and worse-off groups.²

Decisions that are made regarding what is avoidable and unjust are not simple, but are based upon what we currently know and are political decisions based upon resources and ideology. These discussions are dependent upon *who* is deciding what is avoidable and unjust, and *how* it is decided. For example, if you start with the premise that health is solely an individual’s responsibility, then you will not consider other factors that are amenable to intervention.

To explore these issues, this article discusses conceptual issues surrounding the term “disparity,” reviews approaches to measuring disparity, and discusses policy implications of definitions of disparity. The authors reviewed commonly

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used definitions of health disparity in the United States to see whether they differed by implied or stated comparison group, subpopulations of interest, and type of health outcome. These definitions were located by the authors using the search engine www.google.com, national 2000–2002 legislation as reported on the website www.thomas.gov, and MEDLINE; through contacts with state minority health and Healthy People 2010 representatives and DHHS Office of Minority Health regional staff; and through a request for information posted on the American Public Health Association's Spirit of 1848 listserv.

CONCEPTUAL ISSUES

Definition

The term "health disparity" is almost exclusively used in the United States, while the terms "health inequity" or "health inequality" are more commonly used outside of the United States. Most dictionary definitions define disparity as inequality; difference in age, rank, condition, or excellence; or dissimilitude.^{3,4} Inequality is similarly defined: "condition of being unequal" or "lack of equality as of opportunity, treatment or status."⁴ Inequity, though, signifies an ethical judgment: "an instance of unjustness or unfairness."⁴ More recent dictionaries include this ethical judgment in definitions of disparity, e.g.: "a lack of equality and similarity, esp. in a way that is not fair."⁵

"Disparity," in the context of public health and social science, therefore has begun to take on the implication of injustice, but nonetheless may be distinguished from the general term "inequality." A health disparity should be viewed as a chain of events signified by a difference in: (1) environment, (2) access to, utilization of, and quality of care, (3) health status, or (4) a particular health outcome that deserves scrutiny. Such a difference should be evaluated in terms of both inequality and inequity, since what is unequal is not necessarily inequitable.

Determination of inequality

If we assume that inequity cannot exist prior to, or without inequality, then the need to understand the underlying causes of inequality is self-evident. The bases for inequalities, or determinants of health, are many.

The United Kingdom has taken the policy position that all health differences between the better- and worse-off socioeconomic groups constitute inequities in health, based on the broad concept of health equity developed by Margaret Whitehead and adopted by EURO/WHO.² Whitehead defines health inequities

as "differences in health which are not only unnecessary and avoidable but, in addition, are considered unfair and unjust."⁶ She goes on to specify seven determinants of health disparities: (1) natural, biological variation; (2) health-damaging behavior that is freely chosen, such as participation in certain sports and pastimes; (3) the transient health advantage of one group over another when one group is first to adopt a health-promoting behavior (as long as other groups have the means to catch up fairly soon); (4) health-damaging behavior in which the degree of choice of lifestyles is severely restricted; (5) exposure to unhealthy, stressful living and working conditions; (6) inadequate access to essential health services and other basic services; (7) natural selection, or health-related social mobility, involving the tendency for sick people to move down the social scale.

According to Whitehead, health inequalities determined by the first three categories are more likely to be considered unavoidable or fair, while those related to the last four categories are more likely to be considered avoidable and unfair.

Health Canada considers 12 factors as determinants of health: (1) income and social status, (2) social support networks, (3) education, (4) employment and working conditions, (5) social environments, (6) physical environments, (7) personal health practices and coping skills, (8) healthy child development, (9) biology and genetic endowment, (10) health services, (11) gender, and (12) culture.⁷ A number of these factors are similar to those enumerated by Whitehead. Many other lists of determinants exist, some of which address factors such as health promotion, environmental sustainability, globalization, and the role of media in health perception.

Avoidability and ethical judgment

Aside from the realization that the determinants of health inequalities are many, there should be an understanding that some are more amenable to intervention than others.

Determination of what is avoidable and what is unavoidable is not simple since the state of knowledge, resource availability, public acceptance, and ideology play a role. Inequalities based on age are generally considered unavoidable. Other inequalities, such as those that are genetically based might be avoided to some degree, e.g., through gene therapy, but are for the most part restricted by economics and social acceptance. Still others, as Whitehead notes, such as freely chosen health-damaging behavior, are unavoidable despite efforts at promotion of healthy behavior.

In contrast, many determinants of poor health should be considered avoidable. Unsafe or unhealthy work and living environments are good examples of underlying causes of inequality that should be considered avoidable. Likewise, healthy childhood development, especially at early ages, which has been shown to affect brain development, predisposes children to success in education, problem solving, development of social networks, and adult health.

If evidence can be shown that an inequality is avoidable, then a judgment may be made as to whether it is unjust, and thus whether an inequity is present. The concept of a health disparity includes an ethical judgment of which conditions are considered unacceptable.

Conceptual limitations

There is considerable dispute regarding the conceptual issues presented here.^{8,9} Much of the disagreement centers on the meaning of the various terms: “disparity,” “inequality,” and “inequity.” But many will also disagree with the idea that some of the determinants of health are unavoidable. In our view, a more important limitation to the measurement of disparity is our lack of ability to identify with certainty which determinants of health underlie a given inequality and to quantify the magnitude of the determinants. Lack of certain knowledge about how to avoid a disparity, about which determinants are amenable to intervention, and/or about how to make changes based on what we do know are also important limitations.

Differences in health outcomes can usually be judged unavoidable or potentially avoidable. Those that are potentially avoidable could be deemed acceptable, or unacceptable and unfair (inequitable).¹⁰ Use of the term “health disparities” in the United States tends not to distinguish between those differences in health outcomes that are unavoidable, those that are potentially avoidable and acceptable, and those that are potentially avoidable, unfair, and unacceptable (inequitable). Many inequalities in the United States are avoidable. Health inequities exist largely because people have unequal access to resources such as education, health care, clean air, and water or live or work in unhealthy conditions.

APPROACHES TO MEASURING DISPARITY

Health disparities can be measured by comparing the health of one group that is defined as the reference group (external standard or frame of reference) with the health of other groups.¹¹ This provides a direct

measure of inequality between the groups, but use of this approach can lead to victim blaming through constructing the non-reference group as “the problem.”¹² Alternatively, an internal standard or frame of reference can be used to compare one group with itself.¹¹

The Rockefeller Foundation suggests taking five steps to select measures to assess health inequalities: (1) define which aspect(s) of health to measure (e.g., death, disability, access to care); (2) identify the relevant population groups across which to compare health status (e.g., groups defined by gender, level of education, ethnicity); (3) choose a reference group against which to compare the health of different groups (e.g., in considering mortality rates within a country, the reference group might be the highest income group); (4) decide whether to measure inequality using the absolute or relative difference in health status between population groups; and, if examining more than one health measure, (5) select among alternative “social weights” for preferences that are built into health measures (e.g., adult morbidity may be “weighted” to be more, less, or equally as important as child morbidity in a composite index of health).¹³ But Healthy People 2010, with 467 objectives, does not use social weights to identify which objectives should be given attention first.¹ All of the objectives are equally important since the goal is improvement in all of them.

Patterns of inequality vary by type of measure: absolute (e.g., rate difference) and relative (e.g., rate ratio). While ratio measures are more common, difference measures may be preferred since ratios depend on the baseline level of the variable whereas differences do not.¹¹ Since it reflects the actual (absolute) size of the disparity, the rate difference is generally more salient from a policy perspective.¹¹ Simple indicators may be sufficient to highlight inequalities and spur action. But, more complex measures and techniques are needed in order to disentangle the root causes of inequities in health.¹³ Availability of measures and policy makers’ ability to readily interpret the results are limiting factors in the use of the more complex measures and techniques. As stated by the New Zealand Ministry of Health, “ideally, both ratios and rate differences would be measured simultaneously to enable meaningful interpretation of trends in health disparity indicators.”¹¹ Absolute and relative measures may lead to the same conclusions when applied to the same objective at a given time, or may lead to different conclusions in comparisons over time or between objectives.¹⁴

A Healthy People 2010 workgroup chaired by the National Center for Health Statistics is currently ad-

addressing several important questions: (1) What are the contexts for measuring disparity? (2) Should progress and disparity be measured separately? (3) What is the reference population? (4) What is an absolute or relative comparison of interest? (5) Which statistics should be used? (6) Should positive or negative outcomes be measured?¹³ A three-part approach to measuring progress in Healthy People 2010 has been suggested that measures progress toward targets overall and for particular groups, measures disparity overall and for particular groups, and explores particular issues for specific groups. The workgroup is considering a recommendation that progress toward targets and elimination of disparity be measured separately since measuring the two dimensions together introduces confounding. In addition, the two goals are listed separately, and measuring the two dimensions allows each of the goals to be tracked separately. Relative measures of disparity can be compared across Healthy People 2010 objectives if all objectives are couched in terms of successes.

The inequalities revealed depend to a great extent upon the measure chosen. Policy recommendations may be affected by which measure is used to reveal the magnitude of inequalities between populations. Assessment of whether the gap in health status is improving or worsening over time and how policies and interventions are working to narrow the gap will be dependent upon which measures and techniques are selected. The Ministry of Health in New Zealand recommends that there be no more than 25 disparity indicators; otherwise the total number may be "unmanageable and fail to 'tell a story.'"¹⁴ To address this concern, Healthy People 2010 has identified 10 Leading Health Indicators with 21 measures.¹ The New Zealand Ministry of Health suggests considering validity, reliability, responsiveness, modifiability, accountability, monitorability, predictiveness, and acceptability and sustainability to narrow down the number of health disparity indicators.¹⁴

POLICY IMPLICATIONS OF DEFINITIONS OF DISPARITY

Before measurement of the gap in a given health outcome can occur, we must be clear as to what we are measuring. Eleven definitions of health disparity and health disparities were located by the authors (see Figure).¹⁵⁻²⁴ The National Institutes of Health (NIH) definition was obtained from the 2000 draft Strategic Research Plan to Reduce and Ultimately Eliminate Health Disparities, which was posted on the NIH

website for public comment. NIH is currently finalizing the strategic plan and its definition of health disparities. The revised definition should be available in early 2003 (Personal communication, John Ruffin, MD, National Center on Minority Health and Health Disparities, NIH, December 6, 2002). The most commonly used definitions of health disparity in the United States currently are those from Healthy People 2010, NIH (2000), and the Health Resources and Services Administration.

Specification of the comparison population in a definition of health disparities helps describe the method that will be used to identify health disparities. Three approaches were used for the 11 definitions identified: (1) comparison with the non-minority or majority population (e.g., Task Force on Black and Minority Health, Minnesota Department of Health, Institute of Medicine); (2) comparison with the general population (e.g., Washington State Board of Health, Minority Health and Health Disparities Research and Education Act of 2000); and (3) differences among segments of the population (e.g., North Carolina's 2010 Health Objectives, Resource Center for Adolescent Pregnancy, NIH). Other definitions were not clear what the comparison population was (e.g., Healthy People 2010, Maryland Department of Health and Mental Hygiene, Health Resources and Services Administration). When health disparity definitions do not clearly specify what the comparison population is, or state that the differences exist among segments or groups of the population, this postpones decisions regarding how disparities will be identified and monitored and how supporting data will be presented. Reference to health disparities "among" segments or groups of the population (e.g., "disparities among African Americans") may be confused with comparisons that are made within a subpopulation. Accompanying text for the definitions from Healthy People 2010, Maryland Department of Health and Mental Hygiene, and Health Resources and Services Administration, however, do not suggest that comparisons should be made within subpopulations.

Healthy People 2010 comparison groups could include subpopulations with the "best" rate, the average rate, the total population rate, or the year 2010 target rate. One of the difficulties in selecting a comparison group for Healthy People 2010 is that the year 2010 targets for the objectives were not set in the same manner.

A disadvantage of using the "best" rate, the average rate, and the total population rate is that they may change over time. In addition, the average rate does

Figure. Definitions of health disparity

SOURCE OF DEFINITION	DEFINITION
Secretary's Task Force on Black and Minority Health, Department of Health and Human Services (1985)	". . . the statistical technique of 'excess deaths,' that is, the difference between the number of deaths observed in minority populations and the number of deaths which would have been expected if the minority population had the same age- and sex-specific death rate as the non-minority population." ¹⁵
Healthy People 2010 (2000)	". . . differences that occur by gender, race or ethnicity, education or income, disability, living in rural localities or sexual orientation." ¹¹
North Carolina's 2010 Health Objectives	". . . differences in health status among distinct segments of the population including differences that occur by gender, race or ethnicity, education or income, disability, and geographic location." ¹⁶
Maryland Department of Health and Mental Hygiene, Community Health Administration	"Our definition of health disparities includes the principal groups outlined in the Healthy People 2010 report. These include: population segments categorized by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation." ¹⁷
Minnesota Department of Health	". . . difference in health status between a defined portion of the population and the majority. Disparities can exist because of socioeconomic status, age, geographic area, gender, race or ethnicity, language, customs and other cultural factors, disability or special health need. [The Office of Minority and Multicultural Health] focuses on racial/ethnic health disparities." ¹⁸
Washington State Board of Health	"Health disparities describe the disproportionate burden of disease, disability and death among a particular population or group when compared to the proportion of the population." ¹⁹
Resource Center for Adolescent Pregnancy Prevention, ETR Associates (a private nonprofit health education promotion organization in Santa Cruz, CA)	"Health disparities refer to differences in health status amongst different groups of people. In the United States, these differences are categorized by gender, race or ethnicity, education or income, disability, geographic location and sometimes sexual orientation." ²⁰
Health Resources and Services Administration (2000)	". . . a population-specific difference in the presence of disease, health outcomes, or access to care." ²¹
National Institutes of Health (2000)	". . . differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups in the United States. Research on health disparities related to socioeconomic status is also encompassed in the definition." ²²

(continued)

not consider the population distribution. The year 2010 target rate is a constant reference over time, but not all objectives used the same approach for target setting. This is also a disadvantage for the "best" rate comparison. Advantages of using the general popula-

tion for the comparison group is that it is relatively stable and the comparison population remains the same, regardless of the subgroup of interest. A disadvantage is that the estimate for the general population may be largely affected by one subpopulation with a

Figure (continued). Definitions of health disparity

SOURCE OF DEFINITION	DEFINITION
Minority Health and Health Disparities Research and Education Act of 2000	"A population is a health disparity population if, as determined by the Director of the [NIH National Center on Minority Health and Health Disparities] after consultation with the Director of the Agency for Healthcare Research and Quality, there is a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality, or survival rates in the population as compared to the health status of the general population. In addition . . . the Director [of the Agency for Healthcare Research and Quality] may determine that such term includes populations for which there is a considerable disparity in the quality, outcomes, cost, or use of health care services or access to, or satisfaction with such services as compared to the general population." ²³
Institute of Medicine (2002)	". . . racial or ethnic differences in the quality of health care that are not due to access-related factors or clinical needs, preferences and appropriateness of intervention." ²⁴

very high risk and the comparison may overlook an elevated risk in another subgroup. For example, in 2000, the gonorrhea incidence rates were 129 per 100,000 for the entire United States population, 827 per 100,000 for non-Hispanic blacks, 78 per 100,000 for Hispanics, and 28 per 100,000 for non-Hispanic whites.²⁵ Hispanics had a lower incidence rate of gonorrhea than the entire United States population, but a higher incidence rate than that of non-Hispanic whites. If the comparison population was the general population, then Hispanics would not be considered to be experiencing a disparity in gonorrhea relative to the comparison group. If the comparison population was the majority (non-Hispanic white) group, then Hispanics would be considered to have a higher rate (i.e., indicating a disparity).

Disparity definitions can also provide insight as to which health areas are of particular interest for policy makers and funding agencies. Only the Health Resources and Services Administration, the Minority Health and Health Disparities Research and Education Act of 2000, and the Institute of Medicine specified health care in their disparity definition. Healthy People 2010 contains 467 objectives in 28 focus areas that cover both health care and health status measures.¹ The Maryland Department of Health and Mental Hygiene's definition refers to the Healthy People 2010 definition. The Institute of Medicine's definition distinguishes between a difference in quality of health care and a disparity in quality of health care. A difference between minority and non-minority was defined

by the Institute of Medicine as taking into account: (1) clinical appropriateness and need and patient preferences; (2) operation of health care systems and the legal and regulatory climate in which health systems function; and (3) discrimination at the individual patient-provider level that results from biases, prejudices, stereotyping, and uncertainty in clinical communication and decision-making. Health care disparity was further defined as including only the last two aspects.

The Task Force on Black and Minority Health used excess death for six key areas (cancer, cardiovascular disease and stroke, cirrhosis, diabetes, homicide and unintentional injuries, and infant mortality) as the primary indicator of disparity in the accompanying report. The definitions for North Carolina's 2010 Health Objectives, the Minnesota Department of Health, the Washington State Board of Health, the Resource Center for Adolescent Pregnancy, NIH (2000), and the Minority Health and Health Disparities Research and Education Act of 2000 focus on health status, not just mortality.

Specification of certain segments of the population in a health disparity definition provides insight as to which segments of the population are of greatest interest for policy makers and funding agencies. In 1985, the Task Force on Black and Minority Health focused on racial and ethnic minority groups. The Institute of Medicine's report *Unequal Treatment*, also focused on racial or ethnic disparities. Healthy People 2010, the Maryland Department of Health and Mental Hygiene,

and the Resource Center for Adolescent Pregnancy Prevention have expanded their scope to include gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation. Although based on Healthy People 2010, sexual orientation was not included in the disparity definition in North Carolina's 2010 Health Objectives or in that of the Minnesota Department of Health. The Minnesota Department of Health's definition did not specifically mention disability and added age, language, customs and other cultural factors, or other special health need. Although the Washington State Board of Health, the Health Resources and Services Administration, NIH (2000), and the Minority Health and Health Disparities Research and Education Act of 2000 do not specify which segments of the population are of greatest interest in their definition, accompanying text does provide clarification. For example, the findings section of the Minority Health and Health Disparities Research and Education Act of 2000 discusses differences in health status and access to care as they relate to racial and ethnic minority, medically underserved, and poor rural white populations.

The National Institute of Health's draft Strategic Research Plan to Reduce and Ultimately Eliminate Health Disparities in 2000 gave one example of how the definition can impact funding: "With the issuance of this Strategic Research Plan, NIH began using a different definition of health disparities than it had previously. The change in definition has resulted in a change in the funding that NIH is reporting as focused on health disparities"²² (p. 4). The draft plan then went on to say that its initial attention would be focused on the health status, including socioeconomic factors, of specific racial and ethnic minority populations: African Americans, Asians, Pacific Islanders, Hispanics, Native Americans, and Alaska Natives. Although this draft version of the plan was still posted on the NIH website while the present article was in preparation, it is likely that the final version that will be submitted to Congress will be different.

CONCLUSIONS

Although the term "disparity" is widely used in public health in the United States, there is a difference of opinion about what is meant by disparity. These differing opinions are based on dictionary definitions as well as personal beliefs of what is avoidable and what is unfair. Confusion can arise from different operational

definitions adopted by various health organizations. What should be agreed upon is that a disparity acts like a signpost—indicating that something is wrong. If a disparity is identified and described, then the health community, policy makers, and the public can become more aware of it. If a disparity is determined to be avoidable and unfair, then it is considered an inequity. The allocation of resources to address a disparity implies that the disparity is thought to be avoidable and unfair. Some would argue that all inequalities are avoidable or potentially avoidable. But readers should not assume that inequity is implied with every use of the term disparity.

To make progress in reducing and ultimately eliminating disparities in health, policy makers should go beyond discussion of inequality and consider what is inequitable. Discussions of what is avoidable and unjust will be based on a determination of what we know now. These discussions will also be dependent upon *who* is deciding what is avoidable and unjust and *how* it is decided. Broad statements about reducing or eliminating inequality are not as helpful since there is sometimes disagreement about what is avoidable and unavoidable. Research priorities should focus on what we do not know regarding how to avoid a given disparity, what determinants are amenable to intervention, and how to make changes based on what we do know.

Mechanical aspects of the definition of health disparity have important resource implications. As demonstrated in this brief review of 11 definitions, there are small but important differences with reference to the comparison population, areas of health, and population subgroups. Advocates for certain population subgroups should pay attention to which subgroups are mentioned in health disparity definitions and accompanying texts used by funding agencies and policy makers. For example, sexual orientation is not included in North Carolina's 2010 Health Objectives or the Minnesota Department of Health's definition of health disparity. Lack of specification of which segment of the population is of greatest interest can, therefore, lead to inconsistency between funding priorities and program objectives.

This article does not fully address whether progress and disparity should be measured separately, whether an absolute or relative comparison should be used, which statistics should be used, and whether positive or negative outcomes should be used. These issues are currently being addressed by the Healthy People 2010 workgroup. For Healthy People 2010, a three-part ap-

proach to measuring progress is suggested: (1) measure progress toward targets overall and for particular groups, (2) measure disparity overall and for particular groups, and (3) explore and indicate any particular issue of concern for specific groups.

Since program objectives vary, there is no one "best" definition of health disparity. Readers are cautioned to avoid using "among" segments or subpopulations in their definition if they are interested in addressing disparities within a total population. When selecting one of the 11 health disparity definitions discussed here, or when developing one's own definition, take the time to ensure that the terminology, comparison population, health areas, and segments of the population in the definition reflect your priorities.

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