Transitioning from Health Disparities to a Health Equity Research Agenda: The Time Is Now

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ABSTRACT

Health disparities are real. The evidence base is large and irrefutable. As such, the time is now to shift the research emphasis away from solely documenting the pervasiveness of the health disparities problem and begin focusing on health equity, the highest level of health possible. The focus on health equity research will require investigators to propose projects that develop and evaluate evidence-based solutions to health differences that are driven largely by social, economic, and environmental factors. This article highlights ongoing research and programmatic efforts underway at the National Institutes of Health that hold promise for advancing population health and improving health equity.

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In the early 20th century, African American thought leaders and abolitionists first sounded the alarm that the United States was a nation divided—separate and unequal, with wide gaps in health and life expectancy between white and black people. William Edward Burghardt (W.E.B.) Du Bois,[1] Booker T. Washington,[2] the National Negro Business League,[3] and others lamented the lack of access to quality health care experienced by black people during the early emancipation period. Several decades later, researchers and scientists began again, in earnest, to extensively document the unequal care and disparity in life expectancy between white and black people in the U.S. The data were compelling.[4] Racial/ethnic minority groups experienced decreased access to health care, worse health outcomes, increased morbidity and mortality, and shorter life expectancy when compared with white people. Even worse, since that time, the racial/ethnic health disparity gaps have progressively widened.[5,6] For example, while the breast cancer mortality rates have fallen steadily since 1990 for all racial/ethnic groups, Native Americans' rates have remained the same. Additionally, while black people have a lower incidence of breast cancer than white people, their mortality rate remains higher.[7]

FROM A FOCUS ON INDIVIDUAL TO SOCIAL DETERMINANTS

In 1985, with the publication of the "Report of the Secretary's Task Force on Black and Minority Health," research focured singularly on documenting the magnitude and persistence of health disparities. The predominantly descriptive methodology included tracking health outcomes by race/ethnicity. The Task Force documented health disparities as excess deaths in black and minority populations, compared with white people, that were directly linked to six health outcomes—cancer, cardiovascular disease, cirrhosis of the liver, diabetes, homicides/suicides, and infant mortality.[4] However, most of the health disparity research in the 1980s and 1990s focused on individual-level factors that contributed to health disparities—such as cell mutations, individual health beliefs and behaviors, and, later in the 1990s, genetic susceptibility.

At the turn of the 21st century, there was growing recognition that the variation in health outcomes and widespread health disparities experienced by social groups in the U.S. could not be explained by individual-level determinants alone. As a consequence, there is increasing awareness that factors outside the individual's control, such as social, economic, and policy factors, contribute to persistent and disparate health outcomes.[8] The aforementioned racial/ethnic differences in health outcomes are now attributed largely to and further exacerbated by socioeconomic status.[9] This increased awareness of the role of socioeconomic factors has generated greater interest in social determinants and their effects on health outcomes, health promotion, and disease prevention.

Thus, social determinants of health (SDH) can be understood as the social conditions in which people are born, grow, live, work, and age (including the health system), and are shaped by the distribution of money, power, and resources at global, national, and local levels, which are themselves influenced by policy choices.[10] Research on SDH and their contribution to population health emphasizes the complex role that overlapping social structures and economic systems play in the health of populations. The World Health Organization confirmed in its 2008 Commission on the Social Determinants of Health report that SDH are mostly responsible for health inequities—the unfair and avoidable factors in health status—within and between countries.[11] However, in the U.S., health disparities continue to be framed as racial/ethnic disparities largely devoid of class differences or socioeconomic factors.

FROM A DISPARITY MODEL TO AN EQUITY MODEL

More recently, however, there has been some recognition in the U.S. that research focusing only on race/ethnicity does not provide a complete understanding of these health inequities. There is now a desire to shift the language and emphasis away from health disparities solely (i.e., a focus on problem identification) to a focus on health equity, the highest level of health possible (i.e., a focus on solutions).

The U.S. Department of Health and Human Services[12] and Healthy People 2020[8] define health equity as the "attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities." The consensus in the field is that, while there is overwhelming evidence that health disparities are real, there is limited research that supports the development of effective and sustainable strategies to reduce or eliminate these disparities. This new emphasis on equity is not just a shift in language; rather, it involves shifting the research agenda toward population-level solutions. Until recently, studies of health disparities have been largely descriptive and

focused on differences in population health that are closely linked with social advantage and disadvantage. The shift to health equity involves developing and implementing interventions at the neighborhood, local, community, state, and national levels.

IMPLICATIONS OF A SHIFT FROM A DISPARITY TO AN EQUITY MODEL

Several factors must be considered to shift the research agenda from a disparity model to an equity model, in which the central theme is achieving the highest level of health. The following, though not a comprehensive list, provides five initial steps to consider.

1. Consider the role of population health in research and interventions

Since SDH are inseparable from the health of populations, it is necessary to investigate factors operating not only at the individual level but also at the societal and structural levels.[13] Population health strategies and interventions allow for such investigation of individual and environmental effects simultaneously. This research agenda integrates the science across the lifespan and across multiple generations, while simultaneously accounting for multiple factors from biological, behavioral, social, and population levels. This approach is crucial to addressing the complex nature of public health challenges, as it simultaneously accounts for variables at the biological, behavioral, and social levels.

Specific components of integrative and multidisciplinary population-level research have seen some preliminary success in state and local studies and projects. One example is the Shape Up Somerville project[14] in Massachusetts. This citywide program aims to increase daily physical activity and promote healthy eating through the collaborative efforts of all segments of the community—schools, community and civic organizations, city government, and other community residents who live and work in Somerville. By affecting change in the built environment; recreation; and environmental, public safety, and food policies, this innovative program has seen a reduction in childhood obesity. As Somerville Mayor Joseph Curtatone succinctly stated in an interview on National Public Radio, the project is "not about losing weight, it's about how we live."[15] This research program exemplifies the kind of solutions-oriented, multidisciplinary research, accounting for individual and community levels simultaneously, that is critical to a sustainable, comprehensive health equity research agenda.

An effective approach to health equity research would utilize the current state-of-the-science to develop interventions that combine behavioral modifications with community-level interventions. An example of this type of individual-/community-level intervention is addressing the persistent rates and increased incidence of mortality from asthma experienced by impoverished children residing in inner-city public housing. We know that implementing individual-level strategies and interventions, such as asthma awareness and education, are important, but they have limited impact on families and populations.[16] So, besides the individual components, asthma interventions should also promote intervention strategies at the societal level—for instance, providing cleaner air technologies in public housing units, incorporating improvements to the built environment to increase physical activity, and achieving improved environmental abatement and greater environmental justice.

One such program is the Seattle-King County Healthy Homes Project, which sought to reduce exposure to allergens and irritants in low-income households of children with asthma. The researchers noted that single-trigger and single-component interventions were generally not effective and employed a multi-trigger and multicomponent intervention with home visits and improved housing, including options for remediation and new housing.[17] The project intervened minimally at two levels. First, it intervened at the behavioral level, providing individuals in public housing units materials to reduce exposures, such as bedding covers and low-emission vacuums, cleaning supplies, and provision of tools for roach and rodent eradication. Second, at the community level, the project built capacity in the community to advocate for improved housing conditions, in the process removing asthma triggers such as mold-contaminated wallboard and carpeting.[18]

Thus, an effective health equity research program should generate data that can address the broader structural factors affecting health, such as improving conditions in low-income housing, implementing strategies for better health education, eliminating environmental hazards, and improving the diversity and cultural sensitivity of health systems, while at the same time accounting for individual-level variables, such as genetic predisposition and health risks and behaviors.

2. Understand complex, multidisciplinary, multilevel, and multi-factorial interactions

A health equity research agenda requires multidisciplinary, multilevel, and multi-factorial research efforts that identify and account for the roles of multiple, complex, and interacting factors simultaneously. The difficulty in developing such an agenda stems from our limited understanding of the complex

interactions among various determinants, including genetic, biological, behavioral, socioeconomic, and environmental factors. Despite remarkable advances in our understanding of human biology and its interaction with behavioral and social factors, the impact of these discoveries will be constrained without an effective long-term strategy for linking the knowledge of disease biology and genomics with the knowledge of social and environmental factors that contribute to population-level health. Achieving these important research goals will require an integration of knowledge of the genetic, biological, behavioral, social, and population health sciences to create a more comprehensive understanding of disease pathways—from a molecular to a societal level. Such integration is necessary to identify effective measures to promote health, prevent disease, and enhance well-being in all populations, especially among those disadvantaged groups that experience the greatest burden of disease.

Specific components of integrative and multidisciplinary population-level research have seen some preliminary success in key National Institutes of Health (NIH) programs, such as the Transdisciplinary Research on Energetics and Cancer (TREC) Centers initiative. This kind of research fosters collaboration across multiple disciplines to look at impacts of nutrition, physical activity, weight, and energetics on cancer risk.[19] Another example of a program that pursues this kind of research is the NIH Centers for Population Health and Health Disparities (CPHHD), which focuses on population-level cardiovascular and cancer outcomes.[20] CPHHD comprises transdisciplinary research centers engaged in multilevel and multi-factorial social, behavioral, biological, and genetic research to better understand the causes of health disparities and to devise effective methods of promoting health by preventing, diagnosing, and treating disease. One of the studies showed that the level of neighborhood disadvantage was strongly associated with diagnosis of late-stage breast cancer. The researchers state, "Breast cancer patients residing in neighborhoods that became relatively more disadvantaged over the 1990–2000 decade experienced an additional risk of late-stage diagnosis." Furthermore, they noted that the benefits of immigrant enclaves are counterbalanced by the lack of structural capacity and, specifically, quality health-care resources to improve access to health care for breast cancer patients.[21]

3. Improve research methodologies and statistical analytical techniques

A robust health equity agenda would identify specific research measures and replicate promising models for reducing and eventually eliminating health disparities. Addressing persistent health challenges requires more concerted intervention research and implementation methods involving underserved communities that exist in small scattered groups and often in remote, isolated communities. Developing methodologies to address issues of power and quasi-experimental research designs that account for these small isolated groups are important steps in addressing challenges for health promotion and disease prevention. Methodological and statistical procedures—such as rank and propensity score methods—have been used in some studies to test, implement, and evaluate disparities-reducing interventions.[22,23] Recently, the American Statistical Association held a meeting on developing distinctive survey methods for hard-to-reach populations.[24] The *Journal of Official Statistics* is planning a special issue based on the proceedings at the conference, and additional submissions are being planned (Personal communication, Gordon Willis, PhD, Cognitive Psychologist, National Cancer Institute, and H2R Conference Committee Member, August 2013).

There have been pockets of isolated success in achieving local health equity (e.g., the Seattle-King County Healthy Homes Project[18]) that have achieved better health outcomes by removing environmental barriers to health promotion. Yet, there appear to be no active large-scale projects underway that aim to achieve health equity on a national scale. While large-scale health equity research projects are ambitious, one could conceivably start with developing funding streams for research in which smaller projects seek to identify common themes, metrics, and measures that could offer potential solutions to achieve health equity.

4. Build on community resiliency and partnerships

The shift from focusing on health disparities to health equity research must be paralleled by a move from a community deficit model to one of capitalizing on the community's strengths and resources. This shift allows for the research to be conducted with an eye toward sustainable change, which requires input and buy-in from the local community. Creating a community feedback loop, in which the community participates in developing and implementing health equity interventions and sustaining the health improvement as a result of the interventions, is essential. Even though these types of multilevel studies are costly and require more time and effort, it is possible to develop individual (i.e., biological and behavioral) and community interventions that focus on tangible health improvements as took place in the Seattle-King County Healthy Homes Project.[18] Likewise, the Shape Up Somerville project[14]

integrated changes in physical activity, nutrition, and energetics with community and civic organizations, businesses, city government, and schools. This inclusion of several relevant organizations, together with the incorporation of multiple factors, is what makes these programs so unique, innovative, and effective. Thus, to achieve health equity, intervention research should be designed to inform policies that stimulate and involve community participation.

5. Develop the research and professional workforce

A shift to an SDH perspective and a look at the larger context in which people are born, live, work, and play will give rise to research and a health-care system that increasingly focuses on prevention. This shift to an SDH prevention agenda requires training and enhancing the skill sets of the health research and care delivery workforce. Multilevel and multi-factorial health equity research promotes the building of research teams that are transdisciplinary and multi-professional. Both the CPHHD and TREC initiatives have a training core that promotes the building of such diverse research teams. These NIH-supported centers recognize the challenges faced by underserved, resource-poor communities, understand the constraints and health-care barriers these populations face, and, at the same time, acknowledge that these communities may also have health-promoting assets. Thus, these research centers train students across disciplines and professions to work in large scientific and research teams to address the goal of health equity.

In addition, new partnerships will have to be formed across federal agencies as well as with universities and colleges, health-care, and community organizations to adequately prepare a health workforce with the capacity to understand the role of social determinants on the health and health outcomes of populations. One of NIH's sister agencies is the Health Resources and Services Administration (HRSA). HRSA's Bureau of Health Professions workforce training programs demonstrate the agency's commitment to reducing disparities and improving health equity by increasing the proportion of racial/ethnic minority groups and people with educational and economic disadvantages in the health professions. The rationale of this program is that a culturally and linguistically diverse workforce with their scope for sensitivity would facilitate increased access to quality health care. Partnerships with agencies such as HRSA are critical to ensure that a health workforce is trained to recognize and address health disparities and drive toward health equity from the context of an SDH perspective.

CONCLUSION

To advance a health equity research agenda that extends beyond documenting the problem of health disparities, it is necessary to commit to a complex, multidisciplinary, multilevel approach to research. Ideally, the research methods would be able to investigate the complex interplay among individual/behavioral, social, and structural factors and their impact on population health. In addition, communities and researchers should work collaboratively to incorporate community input to develop a set of robust measures and methodologies that will enable discoveries to be translated into effective interventions and public policies for health equity.

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