ORIGINAL ARTICLE

Women's Health: Racial and Ethnic Health Inequities

女性健康：人种和种族的健康不平等状况

La salud de las mujeres: desigualdades raciales y étnicas en materia de salud

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INTRODUCTION

Starting in the late 1980s and throughout the 1990s, reports appeared in the literature describing the poor health status and poor health outcomes experienced by minority populations, especially blacks, in the United States. Additionally, attention was brought to the limited access to health services for minority populations. These reports prompted Congress to request the Institute of Medicine (IOM) to conduct a study to assess differences in the kinds and quality of healthcare received by US racial and ethnic minorities and nonminorities. The study culminated in the report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.*[1] Among the recommendations included in the report published in 2003 is a need for (1) change in legal, regulatory, and policy interventions and (2) health systems interventions. The committee extended the recommendations to include (3) implementation of programs to enhance individual education and empowerment, (4) a need for research into identifying racial and ethnic disparities and the development of and assessment of intervention strategies, and (5) a need to integrate cross-cultural education into the training of all health professionals.[1] Subsequent to this report, there has been an increase in efforts to increase diversity among healthcare providers and research investigators.[2] The American Association of Medical Colleges (AAMC) continues to encourage recruitment of minorities to careers in medicine, to stress the importance of a diverse medical school faculty and administration, and to graduate culturally competent healthcare providers who will decrease health disparities and improve health equity. Additionally, as noted by Ginther et al in 2011, there continues to be a need to increase diversity at the National Institutes of Health (NIH) not only among the workforce but also among the recipients of awards.[3] To this end, the NIH has established the Working Group on Diversity in the Biomedical Research Workforce to monitor the efforts of the NIH to increase diversity and to suggest remedies.[4]

Of importance in this regard is the following. Of the almost 157 million women living in the United States in 2010, racial and ethnic minority women comprised 55.3 million (35%), including African American women (13.5%); Hispanic women (16.2%); Asian American/Pacific Islander women (6.0%); and American Indian/Alaska Native women (1.3%).[5] One need only look at any one of several data books documenting women's health to see that with few exceptions, disparities in health status and health outcomes—with poorer health among minority populations—exist. Cardiovascular disease is the leading cause of death for women.[6] However, black women have the highest mortality rate from heart disease (197.5 per 100 000). In contrast, the mortality rate from heart disease for white, non-Hispanic women is 150.0 per 100,000; for Hispanic women, 104.6; American Indian/Alaskan Native women, 94.3; and Asian American/Pacific Islander, 81.7.[6] The breast cancer incidence rate in 2008 was 1.4 times higher for non-Hispanic white women than for black women[7]; however, black women have a 41% greater risk of dying from breast cancer than non-Hispanic white women.[7,8] Likewise, disparities in invasive cervical cancer exist.[9] While the incidence of invasive cancer of the cervix has decreased overall, the incidence in Hispanic women and African American women remains high. Hispanic women are at greatest risk.[7,9] Maternal mortality and infant mortality are other examples of marked disparities in health outcomes. Maternal mortality and infant mortality among black women is roughly three times that of the national rate for all women.[10]

SOURCES OF HEALTH INEQUITIES

While genetic and biologic factors contribute to health status and health outcomes, the health and well-being of an individual or a population is determined by a number of factors including income and education, the social and physical environments in which one resides, and access to quality healthcare.[11] It is in the areas of these additional factors that we can make an impact in decreasing health disparities.

Income and Education

Socioeconomic status is known to be correlated with health status, health outcomes, and longevity. Therefore, it is important to recognize the extent of existing poverty in the United States and the effects poverty has on health and well-being of the members of our society. In 2010, more than 46 million individuals in the United States lived with incomes below the poverty level,[8] which was $22 050 USD for a family of four.[12] More than 17 million of those were women aged 18 years and older. About 25% of non-Hispanic black and non-Hispanic American Indian/Alaskan Native women were living in poverty. In each instance, women aged 18 to 44 years and older than 65 were more likely to experience

poverty.[8] Additionally, among women 25 years or older without a high school diploma, 33% were living in poverty compared to 15.6% with a high school diploma or its equivalent.[8] The associated restrictions that poverty imparts on education, neighborhood conditions, and access to quality healthcare, among others, contributes to health disparities. Achieving income equality in the United States would decrease the inequities that poverty imposes and thus would decrease health disparities.

Life expectancy and health and well-being are positively associated with level of education as well. In 2008, women with fewer than 12 years of education had a life expectancy essentially unchanged from that noted for all women in the 1950s or 1960s,[12] and despite recent efforts addressing behavioral risk factors affecting health, the difference in life expectancies at birth between the most and least educated has not improved. The difference in life expectancy in 1990 was 7.7 years; in 2008, it was 10.3 years.[12] Within groups, the difference in life expectancy at birth between those with the most education and those with the least education among white women was 10.4 years; among black women, 6.5 years; and among Hispanic women, 2.9 years.[13] In 2006, the graduation rate from high school for white students was 83%; for black, Hispanic, and American Indian/Alaska Native women it was 64%, 66%, and 65%, respectively. As noted by Cutler and Lleras-Muney, relative to a base of 11%, an additional 4 years of schooling lowers the 5-year mortality by 1.8 percentage points and the probability of self-reporting as being in fair or poor health by 6 percentage points (the mean is 12%) and reduces lost days of work due to sickness.[14] Additionally, they found that individuals with an additional 4 years of education are less apt to smoke, use illegal drugs, and be overweight or obese.[15] There is a need to address high school dropout rates and to encourage higher education in an effort to reduce health disparities.

Social and Physical Environment

In addition to the focus on level of education, economic status, and individual behaviors as they relate to health inequities, there is a need to include conditions in which people are born and reside throughout their lifetimes. The physical aspects of neighborhoods, including availability of transportation, areas such as parks that promote physical activity, stores that provide nutritious food options, medical care, air quality, and level of violence, to name a few, influence health status and health outcomes. For example, birthplace has been associated with cardiovascular mortality,[16,17] and adolescents who reside in the stroke belt are at an increased risk of stroke in adulthood.[18] Children who reside in neighborhoods that are economically poor and have low levels of education have an increased risk for obesity regardless of their individual characteristics.[19] Alternatively, living in low-poverty neighborhoods and in neighborhoods with reasonable proximity to supermarkets has been associated with less obesity.[20-22] Segregation within itself also is associated with compromised health. Segregated areas often have fewer economic opportunities, worse physical environments, fewer public resources, and poorer-quality healthcare, which contribute to health inequities.[23-25] For example, growing up in a segregated environment is associated with significantly lower later academic performance[25] and worse health. Women who live in neighborhoods that do not have healthcare facilities within reasonable proximity are less apt to get cancer screening including mammography and screening for reproductive cancers.[26] There is ample evidence in the literature denoting the association of discrimination, whether direct, indirect, or at the population level, with adverse health status and health outcomes.[27-31] Perceived racial and ethnic discrimination in childhood has been shown to have negative effects on health,[30,31] including lower self-rated physical health as adults[32]; preterm birth, low birth weight, and very low birth weight[32,33]; and depressive symptoms,[34] among others. Addressing inequities in neighborhood and social environments would improve health and thus decrease health disparities.

Healthcare Inequity

While it is recognized that reducing disparities in health status and health outcomes requires expanding beyond the healthcare system to include the social determinants of health, differential access to quality healthcare within itself has been associated with disparate health outcomes. Barriers to access, whether perceived or actual, result in adverse health outcomes. Insurance status, perhaps more than any other demographic or economic factor, determines the timeliness and quality of healthcare received. Uninsured children suffer worse health and die sooner than those with insurance, and uninsured adults have a higher risk of dying before age 65 than do insured adults.[35-37] Approximately 48 million (15.6%) people in the United States in 2011 were without health insurance.[38] Eleven percent of non-Hispanic whites, 19% of non-Hispanic blacks, 16% of Asians, and 30% of Hispanics were without health insurance in 2011.[38] Uninsured individuals are less likely to have a usual source of medical care, a resource that can be very helpful in navigating the healthcare system. The uninsured also are less likely to have routine screening and less likely to be exposed to prevention programs stressing smoking cessation and the importance of exercise, lifestyle changes, and diet management.[39]

Though patient trust and doubts about medical care; patients' own values, fears and hopes; and a greater reluctance to accept physician recommendations and personal preferences can contribute to health disparities, there is increasing evidence that healthcare system and patient/provider factors during clinical encounters contribute to health disparities as well.[40] For example, differences in care may result from unconscious biases and stereotyping on the part of physicians and other healthcare providers.[41] In arriving at a conclusion that racial and ethnic disparities in healthcare exist, the IOM committee reviewed more than 600 publications in which there were differences in the quality of healthcare at a

healthcare system level and provider level.[1]

Geographic availability of healthcare services and other factors within the health system, including cultural and linguistic barriers, time pressures, and cost-control measures also are potential sources of disparities. Increasing diversity in the healthcare workforce and emphasizing the incorporation of culturally competent curriculum in medical education could be key in reducing minority health disparities.[40,42]

Global Health Inequities

Maintaining the health of girls and women worldwide is essential and cannot go unrecognized as an important goal to reduce health disparities among diverse populations of women. The gap between reproductive, maternal, newborn, and child health outcomes in rich and poor countries continues. Preventable complications during pregnancy and childbirth cause 1600 women and more than 10000 newborns to die daily. Approximately 99% of maternal and 90% of neonatal mortalities occur in the developing world.[43] Even though maternal deaths decreased by 47% during 1990 and 2010 globally, the lifetime risk of maternal death is still nearly 100 times greater in sub-Saharan Africa than in rich countries.[44] The under-5 mortality rate is almost 12 times higher in sub-Saharan Africa than in high income countries.[45] Sixty-one percent of the adults living with HIV in sub-Saharan Africa are women.[43] Of the 1.3 million women worldwide who die of chronic obstructive pulmonary disease, indoor smoke is responsible for half a million.[43]

Failure to address the inequities in health, social, and environment structures, and gender that exist in our poorest nations prevents girls and women from realizing their full potential. Educating girls up to at least secondary school level is causally linked to improved health outcomes for women and children.[46] When women are empowered educationally and are the income earners, it is known that they invest more in the health and well-being of their children and communities. Additionally, as noted by the World Health Organization, there is a need to address the power and resources at global, national, and local levels to address the inequities in the social determinants in health that are so necessary in decreasing disparities in health status and health outcomes among women.[13]

THE NEED FOR AN INTERDISCIPLINARY APPROACH

Reducing and eliminating racial and ethnic health disparities has become a national and worldwide priority. Though we are able to measure the existence of racial and ethnic disparities in health, there is a continuing need to address the causes of and solutions to reducing disparities. The complex nature and the many factors that contribute to health disparities require action on multiple levels and collaboration among all sectors of society. Research from a diverse cadre of disciplines—such as medicine, sociology, nursing, psychology, nutritional science, epidemiology, public policy research, and economics—is essential to help us fully understand the causes of and potential solutions to health disparities. Additionally, investigation into quality of care, including cost, access to, and satisfaction with services as well as attitudes toward health, language spoken, educational level, community profile, and socioeconomic status is necessary. Community collaborations and input from a wide array of community members and organizations should be a key component of health disparities research. Uniform data analyses are essential to identify health disparities, aid in selecting special initiatives targeted to minority populations, and measure progress. For the United States, the Affordable Care Act of 2010 should help with this endeavor. Section 4302 focuses on the standardization, collection, analysis, and reporting of health disparities data.[47] Finally, research should examine how the conditions in which people are born and reside throughout their lives can improve health equities rather than be a cause of health disparities. The challenge now is to move beyond documenting racial and ethnic disparities to determining why they exist and to identify and assess promising interventions to eliminate them worldwide.

REFERENCES

1. Smedley BD, Stith AY, Nelson AR, et al. Unequal treatment: confronting racial and ethnic disparities in healthcare. 1st ed. Washington, DC: National Academies Press; 2003.
2. Peek ME, Wilson SC, Bussey-Jones J, et al. A study of national physician organizations' efforts to reduce racial and ethnic health disparities in the United States. Acad Med. 2012;87(6):694-700.
3. Ginther DK, Schaffer TW, Schnell J, et al. Race, ethnicity, and NIH research awards. Science. 2011;333(5045):1015-9.
4. National Institutes of Health. Draft report of the Advisory Committee to the Director Working Group on Diversity in the Biomedical Research Workforce http://acd.od.nih.gov/Diversity%20in%20the%20Biomedical%20Research%20Workforce%20Report.pdf. Accessed August 26, 2013.
5. United States Census Bureau, Population Division. National intercensal estimates of the resident population by single year of age, sex, race, Hispanic origin for the United States: April 1 2000 to July 2010. http://www.census.gov/popest/data/intercensal/national/nat2010.html. Accessed July 18, 2013.
6. National Center for Health Statistics. Health, United States, 2011: with special feature on socioeconomic status and health. Hyattsville, MD: US Department of Health and Human Services; 2012.
7. Cronin KA, Richardson LC, Henley SJ, et al. Vital signs: racial disparities in breast cancer severity—United States, 2005-2009. MMWR Morb Mortal Wkly Rep. 2012; 61(45):922-26.
8. US Department of Health and Human Services, Health Resources and Services Administration. Women's health USA 2012. Rockville, MD: US Department of Health and Human Services; 2013.
9. Armstrong LR, Hall HI, Wingo PA, Kassim S. Invasive cervical cancer among Hispanic and non-Hispanic women—United States, 1992-1999. MMWR Morb Mortal Wkly Rep. 2002;51(47):1047-70.
10. National Center for Health Statistics. Women's health, United States, 2010 with chartbook. Hyattsville, MD: US Department of Health and Human Services; 2009.
11. World Health Organization. Social determinants of health. http://www.who.int/social_determinants/sdh_definition/en/index.html. Accessed July 18, 2013.
12. United States Office of the Federal Register. Department of Health and Human Services, Office of the Secretary. Delayed update of the HHS poverty guidelines for the remainder of 2010. Fed Regist. 2010;75(148):45628-29.
13. Olshansky SJ, Antonucci T, Berkman L, et al. Differences in life expectancy due to race and educational differences are widening, and many may not catch up. Health Aff (Millwood). 2012;31(8):1803-13.
14. Cutler DM, Lleras-Muney A. Policy brief: education and health. Ann Arbor, MI: National Poverty Center; 2007.
15. Stillwell R, Hoffman L. Public school graduates and dropouts from the common core of data: school year 2005-06. Washington, DC: National Center for Education Statistics; 2008.
16. Haas S. Trajectories of functional health: the 'long arm' of childhood health and socioeconomic factors. Soc Sci Med. 2008;66(4):849-61.

17. Guralnik JM, Butterworth S, Wadsworth ME, Kuh D. Childhood socioeconomic status predicts physical functioning a half century later. J Gerontol A Biol Sci Med Sci. 2006;61(7):694-701.
18. Howard VJ, McClure LA, Glymour MM, et al. Effect of duration and age at exposure to the Stroke Belt on incident stroke in adulthood. Neurology. 2013;80(18):1655-61.
19. Kimbro RT, Denney JT. Neighborhood context and racial/ethnic differences in young children's obesity: structural barriers to interventions. Soc Sci Med. 2012;pii:S0277-9536(12)00696-x.
20. Cubbin C, Pedregon V, Egerter S, Braveman P. Issue brief 3: neighborhoods and health. Princeton, NJ: Robert Wood Johnson Foundation; 2008.
21. Ludwig J, Sanbonmatsu, L, Gennetian L, et al. Neighborhoods, obesity, and diabetes—a randomized social experiment. N Engl J Med. 2011; 1509-19.
22. Ahmed AT, Mohammed SA, Williams DR. Racial discrimination & health: pathways & evidence. Indian J Med Res. 2007;126(4):318-27.
23. Williams DR, Collins C. Racial residential segregation: a fundamental cause of racial disparities in health. Public Health Rep. 2001;116(5):404-16.
24. Finch BK, Basurto-Davila R, Bird C, Escarce J, Lurie N. Does place explain racial health disparities? Quantifying the contribution of residential context to the black/white health gap in the United States. Soc Sci Med. 2008;67(8):1258-68.
25. Charles CZ. The dynamics of racial residential segregation. Annu Rev Sociol. 2003;29:167-207.
26. Dai D. Black residential segregation, disparities in spatial access to health care facilities, and late-stage breast cancer diagnosis in metropolitan Detroit. Health Place. 2010;16:1038-52.
27. Krieger N. Embodying inequality: a review of concepts, measures, and methods for studying health consequences of discrimination. Int J Health Serv. 1999;259(2):295-352.
28. Mays VM, Cochran SD, Barnes NW. Race, race-based discrimination, and health outcomes among African Americans. Annu Rev Psychol 2007;58:201-25.
29. Gilbert CG. A multilevel analysis of the relationship between institutional and individual racial discrimination and health status. Am J Public Health. 2002;92(4):615-23.
30. Williams DR, Mohammed SA. Discrimination and racial disparities in health: evidence and needed research. J Behav Med. 2009;32(1):20-47.
31. Williams DR, Neighbors HW, Jackson JS. Racial/ethnic discrimination and health: findings from community studies. Am J Public Health. 2003;93(2):200-8.
32. Giurgescu C, McFarlin BL, Lomax J, Craddock C, Albrecht A. Racial discrimination and the black-white gap in adverse birth outcomes: a review. J Midwifery Womens Health. 2011;56(4):362-70.
33. Carty DC, Kruger DJ, Turner TM, Campbell B, DeLoney EH, Lewis EY. Racism, health status, and birth outcomes: results of a participatory community-based intervention and health survey. J Urban Health. 2011;88(1):84-97.
34. Bennett IM, Culhane JF, Webb DA, et al. Perceived discrimination and depressive symptoms, smoking, and recent alcohol use in pregnancy. Birth. 2010; 37(2):90-7.
35. Kirby JB, Kaneda T. Unhealthy and uninsured: exploring racial differences in health and health insurance coverage using a life table approach. Demography. 2010;47(4):1035-51.
36. Hernandez VR, Montana S, Clarke K. Child health inequality: framing a social work response. Health Soc Work. 2010;35(4):291-301.
37. Devoe JE, Ray M, Krois L, Carlson MJ. Uncertain health insurance coverage and unmet children's health care needs. Fam Med. 2010;42(2):121-32.
38. DeNavas-Walt C, Proctor BD, Smith JC. Income, poverty, and health insurance coverage in the United States: 2011. Washington, DC: Census Bureau, US Department of Commerce; 2012.
39. Smolderen KG, Spertus JA, Tang F, et al. Treatment differences by health insurance among outpatients with coronary artery disease: insights from the national cardiovascular data registry. J Am Coll Cardiol. 2013;61(10):1069-75.
40. Sarto G. Of disparities and diversity: where are we? Am J Obstet Gynecol. 2005;192(4):1188-95.
41. Green AR, Carney DR, Pallin DJ, et al. Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. J Gen Intern Med. 2007;22(9):1231-38.
42. Krisberg K. Medical schools integrate health disparity education across curriculum. AAMC Reporter. https://www.aamc.org/newsroom/reporter/june2013/346366/health-disparity.html. Accessed August 26, 2013.
43. World Health Organization, Department of Gender, Women and Health. Ten facts on women's health. Geneva, Switzerland: World Health Organization; 2011.
44. United Nations Population Fund. Trends in maternal mortality: 1990-2010. Geneva, Switzerland: World Health Organization; 2012.
45. UNICEF, WHO, World Bank, UN DESA/Population Division. Levels and trends in child mortality. New York: United Nations Children's Fund; 2011.
46. Hannum E, Buchmann C. Global educational expansion and socio-economic development: an assessment of findings from the social sciences. World Dev. 2005;33(3):333-54.
47. US Department of Health and Human Services. Implementation guidance on data collection standards for race, ethnicity, sex, primary language, and disability status. http://aspe.hhs.gov/datacncl/standards/ACA/4302/index.shtml. Accessed August 26, 2013.