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INTRODUCTORY STATEMENT

JANET HEINRICH, DrPH, RN, FAAN

As Associate Administrator of the Bureau of Health Professions (BHPr) within the Health Resources and Services Administration (HRSA), I welcome you to this special supplement that focuses on the accomplishments and lessons learned from the summit Nursing in 3D: Workforce Diversity, Health Disparities, and Social Determinants of Health. The topics featured during the Nursing in 3D summit and in this supplement are inextricably linked to health equity, a critical component of HRSA’s mission. HRSA is committed to improving access to quality health-care services, cultivating a skilled health workforce, and fostering innovative programs, with the ultimate goal of improving health and achieving health equity.

Health disparities—the differences in adverse health conditions that exist among specific population groups—prevent us from reaching the highest level of wellness possible across our nation. It has been shown that racial/ethnic minority groups receive a lower quality of care and are less likely to receive routine care.\(^1\) Increasing diversity in the workforce is an evidence-based strategy to reduce and eliminate adverse health disparities and move our nation one step closer to health equity. Health-care professionals who identify themselves as part of racial/ethnic minority groups are more likely to serve in areas of the greatest need. Only with a diverse workforce can we strive to improve health outcomes among populations with racial/ethnic or socioeconomic disadvantages.

BHPr’s Division of Nursing has been a champion in spearheading HRSA’s mission to achieve health equity. The division has implemented targeted initiatives, such as adding health equity criteria to its Nursing Workforce Diversity (NWD) funding opportunity announcement, an intentional strategy to move toward health equity.\(^2\) A second key initiative focuses on the evaluation of the NWD program. The NWD program works to increase nursing education opportunities for individuals from disadvantaged backgrounds. The 2008 National Sample Survey of Registered Nurses reports that only 17% of the nursing workforce comes from racial/ethnic minority groups.\(^3\) The NWD program seeks to increase this proportion by supporting nursing education opportunities for individuals from disadvantaged backgrounds. The program provides nursing students with stipends and scholarships—including stipends for diploma or associate degree nurses—to enter a degree completion program, and scholarships or stipends for accelerated nursing degree programs, pre-entry preparation, advanced education preparation, and retention efforts. In fiscal year 2010, HRSA grantees graduated 1,051 nursing students and provided enrichment support, financial assistance, and coaching and mentoring services to more than 10,000 additional disadvantaged individuals under the NWD program.\(^4\) This effort highlights HRSA’s capacity to inspire positive change throughout the nursing education system, with immense potential results.

Increasingly, BHPr has focused on diversity across all program areas. Our programs are dedicated to increasing the cultural competency training of health professionals to identify and address health-care disparities. In particular, BHPr maintains a strong focus on reducing disparities in the workforce through its Scholarships for Disadvantaged Students (SDS) program. This program increases diversity in the health professions and nursing workforce by providing grants to eligible health professions and nursing schools for use in awarding scholarships to students from disadvantaged backgrounds and those who have financial need, many of whom are from underrepresented minority groups. The goals of the SDS program are threefold: (1) to increase the number of graduates practicing in primary care, (2) to bolster enrollment and retention of underrepresented minority groups, and (3) to augment the number of graduates working in medically underserved communities. In the 2010–2011 academic year, 50% of health professions graduates who received SDS funding entered service in medically underserved communities—five times the national average.\(^4\) Additionally, 59% of students receiving SDS support were from underrepresented minority groups. In fiscal year 2012, BHPr reformed the SDS program to make grant awards through a competitive process instead of using a formula to distribute grant award amounts. The new competitive approach will increase the amount awarded to students. We anticipate that the increased student award will lead to an increase in the percentage of graduates completing their education and receiving degrees, and, ultimately, an increased number of primary care professionals working in underserved areas.

Across other programs, BHPr has expanded its focus on diversity through such strategies as recruiting racially/ethnically diverse students, supporting cultural competency training, and prioritizing program applicants who demonstrate a commitment to serving underserved populations. For example, the Primary...
Care Training and Enhancement program gives funding priority to applicants who have a record of training individuals from underrepresented minority groups or from rural or disadvantaged backgrounds, or who establish formal relationships with clinics in underserved areas or serving underserved populations. Connecting health professions trainees with underserved individuals and communities is essential to creating a health workforce that is culturally competent and diverse.

This special supplement of Public Health Reports features essays of transformation, innovation, and expert commentary to paint the big picture of health equity. It shows our positive transition from the focus on disparities to the focus on equity. It shows how far we have come on the road to increasing diversity in the nursing workforce and the important work yet to be done. The key insights and themes contained in these articles are valuable for informing the evolution of HRSA’s programs and, more broadly, the development of the next generation of the health workforce. The featured articles of this supplement help to pave the way for a health workforce that is fueled by a common goal: health equity.

Janet Heinrich is the Associate Administrator of the Bureau of Health Professions at the Health Resources and Services Administration (HRSA) within the U.S. Department of Health and Human Services (HHS). The views expressed in this article are those of the author and do not necessarily represent those of HRSA or HHS.

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REFERENCES
Improving the Health of the Nation: HRSA’s Mission to Achieve Health Equity

Mary Wakefield, PhD, RN

Improving the health status of the United States is predicated on reducing and eventually eliminating health disparities and achieving health equity. Meaningfully addressing health disparities is complex work and involves considering what are, at times, seemingly unrelated factors. Recognizing this challenge, the Health Resources and Services Administration (HRSA) recently hosted an inter-professional summit titled Nursing in 3D: Workforce Diversity, Health Disparities, and Social Determinants of Health. The speakers included experts in nursing, health workforce, epidemiology, and public health who presented recent findings on complex connections among workforce diversity, health disparities, and social determinants of health. The interplay of these factors is not a new focus for HRSA; in fact, the basis for some of the meeting’s agenda was drawn from an earlier HRSA report titled “The Rationale for Diversity in the Health Professions: A Review of the Evidence.”\(^1\) The report shows that patients are best served by providers who are knowledgeable and conversant in the background and culture of the patients for whom they care. Through these and many other related efforts, HRSA has engaged a sharp focus on eliminating disparities in health outcomes and enhancing health equity across the populations served by our programs.

An essential element in this effort is building a culturally and linguistically diverse health workforce by increasing both minority participation in the health professions and the cultural competency of all health professionals. Increased diversity among health professionals leads to improved patient satisfaction, patient-clinician communication, and access to care for racial/ethnic minority patients.\(^2\) Consequently, for many of HRSA’s health professions training grants, the agency requires grant applicants (generally health professions schools) to identify in their applications innovative programs and institutional strategies to effectively develop and retain a diverse and culturally competent workforce. Such strategies often include supporting activities to recruit diverse students and provide cultural competency training. During academic year 2011–2012, 46% of graduates and individuals who completed training and received direct financial support through one of HRSA’s Title VII or Title VIII programs were from underrepresented minority groups and/or disadvantaged backgrounds.\(^3\) HRSA is evaluating these strategies and incentives to identify and expand on

\(^{1}\)U.S. Department of Health and Human Services, Health Resources and Services Administration, Rockville, MD

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successful models for diversifying our nation’s health-care workforce. Indeed, this special supplement of Public Health Reports includes an article on HRSA’s efforts to evaluate the Nursing Workforce Diversity program to identify best practices for diversifying the nursing workforce.\(^4\)

Additionally, HRSA is addressing health disparities through new strategies provided by the enactment of the Patient Protection and Affordable Care Act\(^5\) (hereafter, ACA), which, while celebrating only its third anniversary this past March, has already asserted positive changes in the trajectory of the country’s health care. For example, the ACA addresses health disparities head-on by confronting a primary social determinant of poor health—lack of access to high-quality health care. HRSA’s part in this work has been executed through the expansion of the community health center system that delivers primary care to vulnerable populations. The health center sites and the number of patients served have expanded markedly across the nation as a result of ACA investments. Additionally, the National Health Service Corps, which places health-care providers in underserved rural and urban communities in exchange for scholarships and loan repayments, more than doubled in size from 2008 to 2013—to almost 8,900 clinicians (Unpublished data, Department of Health and Human Services [US], Health Resources and Services Administration, 2013).

The aforementioned programs provide only a few examples of important efforts underway at HRSA to meaningfully address health disparities. Within this special supplement, readers will find timely and compelling articles by authors who also presented at the Nursing in 3D summit. The articles highlight relevant work currently underway in federal and private sectors and also present various pathways and partnerships that show strong potential in helping to achieve health equity. At HRSA, we are committed to achieving health equity for the populations we serve, and we are excited about this supplement and its potential to help all of us push forward toward achieving this shared goal.

The views expressed in this article are those of the author and do not necessarily represent those of the Health Resources and Services Administration or the U.S. Department of Health and Human Services.

REFERENCES

What Are Health Disparities and Health Equity? We Need to Be Clear

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ABSTRACT

“Health disparities” and “health equity” have become increasingly familiar terms in public health, but rarely are they defined explicitly. Ambiguity in the definitions of these terms could lead to misdirection of resources. This article discusses the need for greater clarity about the concepts of health disparities and health equity, proposes definitions, and explains the rationale based on principles from the fields of ethics and human rights.
If you look up the word “disparity” in a dictionary, you will most likely find it defined simply as difference, variation, or, perhaps, inequality, without further specification. But when the term “health disparity” was coined in the United States around 1990, it was not meant to refer to all possible health differences among all possible groups of people. Rather, it was intended to denote a specific kind of difference, namely, worse health among socially disadvantaged people and, in particular, members of disadvantaged racial/ethnic groups and economically disadvantaged people within any racial/ethnic group. However, this specificity has generally not been made explicit. Until the release of Healthy People 2020 in 2010, federal agencies had officially defined health disparities in very general terms, as differences in health among different population groups, without further specification.1,2 This article as differences in health among different population groups and proposes definitions based on concepts from the fields of ethics and human rights.

WHY EXPLICIT DEFINITIONS ARE NEEDED

Not all health differences are health disparities. Examples of health differences that are not health disparities include worse health among the elderly compared with young adults, a higher rate of arm injuries among professional tennis players than in the general population, or, hypothetically, a higher rate of a particular disease among millionaires than non-millionaires. While these differences are unlikely to occupy prominent places in a public health agenda, there are many health differences that are important for a society to address but are not health disparities. For example, if the health of an entire population seemed to be getting worse over time, or if there were a serious disease outbreak in an affluent community not seen in less affluent communities, these health differences would merit attention, but for reasons other than relevance to health disparities or equity. None of these examples reflects what is at the heart of the concept of health disparities: concerns about social justice—that is, justice with respect to the treatment of more advantaged vs. less advantaged socioeconomic groups when it comes to health and health care.

Ambiguity about the meaning of health disparities and health equity could permit limited resources to be directed away from the intended purposes. For example, if these terms remain vaguely defined, socially and economically advantaged groups could co-opt the terms and advocate for resources to address their advantaged social group’s health needs.

DEFINING HEALTH DISPARITY AND HEALTH EQUITY

Recognizing the need for clarity, Healthy People 2020 defined a health disparity as:

“...a particular type of health difference that is closely linked with economic, social, or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater social or economic obstacles to health based on their racial or ethnic group, religion, socioeconomic status, gender, age, or mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”

In this definition, economic disadvantage refers to lack of material resources and opportunities—for example, low income or lack of wealth, and the consequent inability to purchase goods, services, and influence. Social disadvantage is a broader concept. While it includes economic disadvantage, it also refers more generally to someone’s relative position in a social pecking order—an order in which individuals or groups can be stratified by their economic resources, as well as by race, ethnicity, religion, gender, sexual orientation, and disability. These characteristics can influence how people are treated in a society. In the Healthy People definition, environmental disadvantage refers to residing in a neighborhood where there is concentrated poverty and/or the social disadvantages that often accompany it.

Health equity is the principle underlying a commitment to reduce—and, ultimately, eliminate—disparities in health and in its determinants, including social determinants. Pursuing health equity means striving for the highest possible standard of health for all people and giving special attention to the needs of those at greatest risk of poor health, based on social conditions.

What is the basis for these definitions? More specifically, what is the basis for singling out a certain category of health differences, those linked with economic/social disadvantage, for special attention? There are multiple reasons. First, a massive body of evidence strongly links economic/social disadvantage with avoidable illness, disability, suffering, and premature death.1-3 Another article in this supplement4 discusses some of that evidence. Second, economic/social disadvantage can be ameliorated by social policies, such as minimum wage laws, progressive taxation, and statutes barring discrimination in housing or employment based on race, gender, disability, or sexual orientation.

In addition, these definitions have a basis in principles from the fields of ethics and human rights.5
Daniels and other ethicists have pointed out that health is needed for functioning in every sphere of life. Therefore, the resources needed to be healthy—including not only medical care but also health-promoting living and working conditions—should not be treated as commodities such as designer clothing or luxury cars. Rather, they should be distributed according to need. An aversion to health disparities reflects widely held social values that call for everyone to have a fair chance to be healthy, given that health is crucial for well-being, a long life, and economic and social opportunity.

Laws, treaties, and principles from the field of human rights also provide a basis for these definitions. By now, a vast majority of countries have signed (if not ratified) major human rights agreements that are of great relevance to health disparities; signing implies agreement in principle. While human rights agreements are all too often violated, this global consensus on fundamental values, developed over a period of years, greatly strengthens the basis for defining the concept of health disparities. Under international human rights laws and agreements, countries are obligated to protect, promote, and fulfill the human rights of everyone in their populations. Recognizing that many countries lack the resources to remove all obstacles to all rights for everyone immediately, human rights agreements require that countries demonstrate “progressive realization;” i.e., they are making gradual progress toward realizing the rights of their populations. Of particular relevance for understanding health disparities and health equity is the implicit obligation to pay particular attention to those segments of the population who experience the most social obstacles.

Most likely, the principle that first comes to mind when considering human rights in relation to health is the “right to health,” defined as the right to attain the highest possible standard of health. I have argued elsewhere that, for the purpose of measurement, the highest possible standard of health can be reflected by the level of health among the most economically and socially privileged group in a society. One could argue that this standard is conservative. The right to health, however, is not only a right to health care. A large body of knowledge, including sources cited previously, indicates that the resources needed to be healthy include not only quality medical care, but also education and health-promoting physical and social conditions in homes, neighborhoods, and workplaces. Human rights principles call for countries to remove obstacles to health in any sector—for example, in education, housing, or transportation—and they explicitly call for the right to a standard of living necessary to protect and promote health.

Equally relevant to health disparities are the human rights principles of nondiscrimination and equality. According to these principles, everyone has equal rights, and states are obligated to prohibit policies that have either the intention or the effect of discriminating against particular social groups. It is often very difficult to prove what a person’s (or institution’s) intentions—vs. actions—were. In addition, at a population level, greater harm to health may be done as a result of unintentionally discriminatory processes and structures, even when conscious intent to discriminate no longer exists or can be documented. Examples of such processes and structures—which persist as the legacy of slavery and “Jim Crow,” both of which were legal and intentionally discriminatory—include racial segregation, criminal justice codes and patterns of enforcing them, and tax policies that make schools dependent on local funding. These examples may no longer reflect conscious intent to discriminate, but nevertheless persist and transmit economic and social disadvantage—with health consequences—across generations. Because human rights agreements and principles prohibit de facto (unintentional or structural) as well as intentional discrimination, we do not have to know the causes of a health difference to call it a health disparity. Health disparities are inequitable, even when we do not know the causes, because they put an already economically/socially disadvantaged group at further disadvantage with respect to their health. Furthermore, health is necessary to overcome economic/social disadvantage.

Health equity and health disparities are intertwined. Health equity means social justice in health (i.e., no one is denied the possibility to be healthy for belonging to a group that has historically been economically/socially disadvantaged). Health disparities are the metric we use to measure progress toward achieving health equity. A reduction in health disparities (in absolute and relative terms) is evidence that we are moving toward greater health equity. Moving toward greater equity is achieved by selectively improving the health of those who are economically/socially disadvantaged, not by a worsening of the health of those in advantaged groups.

The most intuitive and clear definition of health inequalities (the term used in most countries, where it is generally assumed to refer to socioeconomic differences in health) was developed by Margaret Whitehead in the United Kingdom. She defined health inequalities as health differences that are avoidable, unnecessary, and unjust. The more technical definition presented here was developed in response to experience revealing that different people may have very different ideas of what is avoidable, unnecessary, and unjust, and that
additional guidance is often needed to keep policies and programs on track. The Whitehead definition, however, concisely and eloquently captures the essence of what health disparities and health equity are, and why we are committed to eliminating them.

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Integrating the 3Ds—Social Determinants, Health Disparities, and Health-Care Workforce Diversity

ABSTRACT

The established relationships among social determinants of health (SDH), health disparities, and race/ethnicity highlight the need for health-care professionals to adequately address SDH in their encounters with patients. The ethnic demographic transition slated to occur during the next several decades in the United States will have numerous effects on the health-care sector, particularly as it pertains to the need for a more diverse and culturally aware workforce. In recent years, a substantial body of literature has developed, exploring the extent to which diversity in the health-care workforce may be used as a tool to eliminate racial/ethnic disparities in health and health care in the U.S. We explore existing literature on this topic, propose a conceptual framework, and identify next steps in health-care policy for reducing and eliminating health disparities by addressing SDH and diversification of the health-care workforce.
The profound effects social determinants have on health have received wide acceptance in recent years. Such venerable organizations as the World Health Organization (WHO) and the Centers for Disease Control and Prevention have published work on the topic.\textsuperscript{1–3} Racism, environment, and socioeconomic status (SES) are just a few determinants that continuously have been found to be related to each other, as well as correlated to health. For example, racial/ethnic minority groups encounter disproportionately poorer environmental conditions, segregation, discrimination, and physician bias in medical treatment compared with white people.\textsuperscript{4} These interactions lead to racial/ethnic minority groups experiencing substandard access to health care and poor health outcomes compared with their white counterparts. Those in minority groups are also more likely to be in lower SES groups, making them vulnerable to the effects of multiple social determinants of health (SDH).\textsuperscript{5}

At the midpoint of the 20th century, U.S.-born white people comprised about 90% of the U.S. population.\textsuperscript{6} By the year 2010, the percentage of white Americans declined to about 64%.\textsuperscript{7} The U.S. Census Bureau projects that, by the middle of the 21st century, ethnic groups now referred to as minority groups will be a numerical majority of the nation.\textsuperscript{8} The ethnic demographic transition will likely have numerous consequences for the health-care sector, including an increase in the demand for minority health-care workers. Other social and economic trends threaten the likelihood that the supply of minority health-care providers will meet the demand unless we successfully intervene. According to the Association of American Medical Colleges, black people, Hispanic people, and American Indian/Alaska Natives represented only 12% of the total physician workforce in 2010, while their share of the general population is about 30%.\textsuperscript{9} In 2010, non-Hispanic white people comprised 83% of licensed registered nurses, with black and Hispanic/Latino people accounting for a combined 9% of licensed registered nurses.\textsuperscript{10}

In addition to the small proportion of minority physicians and nurses, additional shortcomings in workforce diversity exist across the country. Faculty shortages have been reported at nursing schools during the past several years. U.S. nursing schools turned away 75,587 qualified applicants from baccalaureate and graduate nursing programs in 2011 due to an insufficient number of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints. The U.S. nursing shortage is expected to intensify as baby boomers age, resulting in increasing demand for health-care services.\textsuperscript{11}

**SDH, HEALTH DISPARITIES, AND WORKFORCE DIVERSITY: THE 3Ds**

The research literature yields evidence of integration among the 3Ds—SDH, health disparities, and workforce diversity. A 2002 article by Cohen and colleagues introduced the notion that greater diversity in the workforce can advance cultural competency by allowing individuals from varied racial/ethnic backgrounds to interact with each other. By helping to establish a firm understanding of how and why culturally determined factors affect illness, medical adherence, and response to treatment, diversity can, in turn, translate to improved health for patients.\textsuperscript{12} A second article uncovered that the lack of a diverse workforce has the potential to foster lingual and cultural barriers, bias, and clinical uncertainty—leading to barriers in access to high-quality care for socially vulnerable populations.\textsuperscript{13} This integration is depicted in the conceptual framework outlined in Figure 1. This framework is based on the growing field of investigation that has unveiled the potential of a diverse workforce to improve access, increase patient satisfaction, and ensure culturally competent care by adequately addressing social determinants that impact health during medical interactions with patients.\textsuperscript{14} While we recognize that workforce diversity will not fully solve the problem of disparities, it is clear that a diverse health-care workforce can mitigate the negative effects of social determinants on health. By expanding the universe of health-care professionals from different parts of the country and world who speak varied languages and can relate to patients across cultural, economic, and political lines, we will better understand and address social issues related to access to care, including cultural practices, language barriers, and stigma. Health-care providers will be able to provide more appropriate prevention and treatment recommendations, even if they are unable to directly address determinants such as environment, racism, and SES.\textsuperscript{12}

The term “health disparities” has generally been used to reference health or health-care differences among racial/ethnic groups. The term also refers to differences in morbidity, mortality, and access to health care among population groups defined by factors such as SES, gender, residence, and especially race/ethnicity.\textsuperscript{13} Research has revealed that correlations between health disparities and race/ethnicity are in part fueled by SDH experienced by these populations.\textsuperscript{14,15} According to WHO, “social determinants” refer to the conditions in which people are born, grow, live, work, and age.\textsuperscript{16} Social determinants influence an individual’s social and economic opportunities. These determinants are often dictated by the distribution of money, power,
and resources across a multitude of levels, and directly impact health-care access and outcomes.

WHO’s Social Determinants of Health Conceptual Framework depicts the relationship among socioeconomic and political context, social position, conditions of daily life, the health-care system, and health and well-being.\(^2\) We suggest that the place for health-care professionals to take action is in the SDH health and well-being pathway, by impacting the composition of the health-care system. By increasing the diversity of the health-care workforce, research supports our belief that barriers to access to care for many individuals can be eliminated, and, more appropriately, quality health care can be provided. We depict this assertion in a new conceptual model presented in Figure 2.

**Figure 1. Social determinants of health conceptual framework**


**WORKFORCE DIVERSITY AND HEALTH DISPARITIES**

In recent years, a substantial body of literature has explored the extent to which diversity in the composition of the health-care workforce may be used as a tool to enhance interactions and, therefore, reduce disparities in health and health care in the United States. For example, in 2004, the Sullivan Commission on Diversity in the HealthCare Workforce—composed of a highly diverse and experienced body of commissioners—issued 37 landmark recommendations, broadly supported by stakeholders to address the crisis of a lack of diversity in the health-care workforce in the U.S. After a comprehensive review of studies, reports, testimonies, and other information-gathering sessions, the commissioners presented evidence that eliminating racial/ethnic inequalities in health and health care could be achieved by increasing the diversity of the health-care workforce.\(^19\)

Studies have shown that racial/ethnic minority patients are more likely to report lower quality in their overall interaction with their providers because of reduced consulting time, diminished trust, less respect by providers, and poorer communication compared with their white counterparts.\(^20\) Provider-patient
communication has been linked to patient satisfaction, adherence to medical instructions, and health outcomes. Moreover, researchers suggest that poorer health outcomes may result when socio-cultural differences between patients and providers are not reconciled in the clinic encounter. There is also significant evidence connecting patient-physician race concordance with patient office visit experience and health. A study by Cooper and colleagues found that race-concordant visits were longer and had higher ratings of patient positive effect compared with race-discordant visits. Patients were also more satisfied and rated physicians as more participatory in their encounters. Another study found that patients who were race concordant with physicians reported greater satisfaction with their providers.

We suggest that there are six public health benefits associated with increased racial/ethnic diversity in the health workforce. A more racially/ethnically diverse workforce would: (1) improve overall quality of care through higher levels of patient satisfaction and trust; (2) enhance the level of cultural competency in health care by improving patient-provider relationships (which is associated with better patient-provider communication, greater trust due to race and language concordance, and the overall influence minority providers exert on their white colleagues and health-care organizations to provide culturally sensitive and appropriate care for minority patients); (3) expand minority patients’ access to and utilization of health services and, consequently, improve their health outcomes; (4) increase access to care for geographically underserved minority and white communities, as minority physicians are more likely to locate in underserved communities; (5) improve health and health-care research by enhancing the breadth and scope of research with a broader range of racial/ethnic perspectives and by encouraging greater inclusion of racial/ethnic minority patients/subjects in biomedical and clinical trials research; and (6) yield other societal benefits, including minority providers operating their own practices. Economically, this increasing diversity will be beneficial to communities not only in the form of new job opportunities, but also through improved health access and reduced morbidity and mortality. A 2009 report found the cost of health disparities, including those related to access, to be more than $1.2 trillion. By intervening in the SDH health pathway, diverse providers have the potential to reduce health-care disparities and decrease this economic burden.

In addition, health providers’ civic involvement will improve the quality of life of their neighbors and residents of the communities they serve through their political, social, and service activities.

LESSONS LEARNED AND NEXT STEPS

Because racial/ethnic groups are expected to comprise a majority of the U.S. population by the middle of this century, an important strategy in the next several years will be expanding the minority health-care workforce in an effort to better address racial/ethnic disparities in health and health care. Diversification of the health-care workforce must be considered, not only in terms of race/ethnicity, but also from a social, economic, and cultural perspective. Considering other forms of diversity will help to address the needs of all populations whose health is impacted by social, environmental, and economic determinants.

One of the most recent policy actions in addressing diversity in the health-care workforce comes from the Patient Protection and Affordable Care Act of 2010 (hereafter, ACA). There are numerous provisions in the ACA that promote the elimination of health disparities through impacting the SDH health disparities pathway. Organizations should be sure to take advantage of these new opportunities in an effort to reduce health disparities through increased workforce diversity. These provisions include:

1. Improving the collection and reporting of data by race/ethnicity and language;

2. Strengthening workforce diversity by:
   a. Increasing diversity among primary care providers, nurses, long-term care providers, dentists, and mental health providers;
   b. Providing grants and assistance to health-care professionals at institutions with a history of serving diverse populations, including historically black colleges and universities;
   c. Supporting the use of cultural and linguistically appropriate services and information; and

Figure 2. Conceptual framework integrating social determinants of health, health disparities, and workforce diversity
d. Providing more than $85 million to train low-income individuals as community-based health-care professionals;

3. Enforcing cultural competence education and organizational support, including:
   a. Development and evaluation of a cultural competency model,
   b. Dissemination of cultural competency curricula through online clearinghouses,
   c. Cultural competency training for home care aides, and
   d. Loan repayment preference for experience in cultural competency;

4. Elevating or establishing offices of minority health in various agencies within the U.S. Department of Health and Human Services;

5. Encouraging research in health disparities and the development of strategies to reduce them, particularly prevention; and

6. Addressing health disparities in health insurance reform.26,27

The ACA contains several additional workforce provisions for nurses, including the provision of loan forgiveness and grant opportunities for nursing students and faculty, as well as for practicing nurses. The law also provides support for nursing demonstration projects and increased funding for nurse-managed health clinics.27,28 Other programs exist nationally to promote the diversification of the health-care workforce, particularly for physicians and nurses. The Foreign-Educated Physician to Nursing Program, started by Florida International University, trains non-U.S. physicians to become nurses, reducing the nursing shortages in many hospitals and clinics that need the most help.29

While these providers are unable to practice in the U.S., their ability to interact and communicate with diverse patients makes these providers a useful addition to the medical system.

In addition, a redesign of primary care delivery is underway to improve quality of care and reduce costs and waste through new models such as accountable care organizations and patient-centered medical homes, supported by the U.S. Department of Health and Human Services and the Agency for Healthcare Research and Quality. These models have the potential to encourage care delivery through integrated and coordinated teams that emphasize patient-centeredness and cultural competency in the delivery of care. In addition, the Johns Hopkins Bloomberg School of Public Health (JHSPH) is active on this front. The Culture-Quality-Collaborative is a network of leading health-care organizations that have come together to share ideas, experiences, and solutions to problems that arise as a result of cross-cultural interactions within health-care settings.30

Clearview Organizational Assessments-360 is a multidimensional online tool developed by JHSPH researchers to assess the cultural competency of a health-care organization, rather than a single health-care provider, by evaluating how well the institution manages issues related to the diversity of its workforce and its patients.31

Optimally, all health-care delivery should follow the 3D framework—through the promotion of workforce diversity in an effort to address SDH and eliminate racial/ethnic and socioeconomic disparities in health care across America. Health-care researchers, professionals, and policy makers must work collaboratively in attempting to address social determinants in medical encounters in an effort to improve the health of individuals during the course of their lives.

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Workforce Diversity and Community-Responsive Health-Care Institutions

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ABSTRACT

While the levers for the social determinants of health reside largely outside institutional walls, this does not absolve health professional schools from exercising their influence to improve the communities in which they are located. Fulfilling this charge will require a departure from conventional thinking, particularly when it comes to educating future health professionals. We describe efforts within medical education to transform recruitment, admissions, and classroom environments to emphasize diversity and inclusion. The aim is to cultivate a workforce with the perspectives, aptitudes, and skills needed to fuel community-responsive health-care institutions.
There is a growing consensus around the origins of health inequity, setting the stage for more effective countermeasures. Access and affordability issues are still recognized for their role in the persistence of health disparities, but the story doesn’t end there. Barriers to wellness that stem from structural inequities lingering across our societies and institutions and tracking individuals into disadvantage are gaining broader recognition for their significant role as upstream influencers of unfair variations in quality of care. These social determinants accumulate to hinder individuals and communities from benefiting from the full range of health promotion strategies, from healthy eating to safe living conditions and empowering educational opportunities. The social dynamics that undergird and perpetuate health disparities require a multisystem, multilevel intervention, and many of the levers for change reside outside the realm of health care. However, that fact does not absolve health professional schools from exercising their influence over these broader social issues as a reflection of their roles as anchor institutions in the communities they serve. One way for academic institutions to better understand and address community health needs and the social determinants of health (SDH) is to partner with public health practitioners, including those in governmental public health and community agencies.

As a nation, we are grappling with the pressing need to improve health-care quality while controlling costs. But, without an intentional focus on health equity, our reform efforts will not result in meaningful improvements for the most vulnerable among us. Since 2003, when the Agency for Healthcare Research and Quality began publishing evidence via its annual “National Healthcare Disparities Report,” we’ve seen no improvements and actually a worsening of some indicators of health disparities. Some scholars have made the case that this growing gap in outcomes is attributable to disparities in access to medical advancements—in other words, individuals who are affluent, health literate, insured, and otherwise enfranchised in the mainstream health system are more likely to benefit from improvements in diagnostics and treatments than low-income, uninsured, or health illiterate individuals at the margins. Likewise, while our base of knowledge on how to prevent and control the chronic diseases that plague our nation has grown, not all segments of the population have equal exposure to guide health-enhancing choices.

Therefore, continued innovations in biomedical science and care delivery are just part of fulfilling our charge in the academic health enterprise. We also need to focus on influencing the upstream SDH and bringing advances in care and prevention into communities where they are lacking. This undertaking calls for culturally sensitive, community-oriented health practitioners grounded in the principles of SDH. More than ever, our efforts to improve our health-care system’s quality and effectiveness through innovation depend upon a health workforce that comes from a diversity of backgrounds and experiences, with a mix of research and practice orientations.

It is evident that we can’t accelerate our pace of change without diversifying racial/ethnic, socioeconomic, or otherwise culturally monolithic learning environments. During the past decade, support for and recognition of the educational dividends of diversity have grown. Educational research has produced compelling evidence that intentionally integrating diversity into formal and informal learning environments—while creating and fostering cultures of inclusion—benefits the intellectual development, service orientation, critical thinking, and cultural competence of all involved. Further, we are beginning to understand how powerful the experience with counter-stereotypes, and social and academic interaction with others of different backgrounds, can be in the battle to disarm detrimental unconscious biases. An analysis of results from the Association of American Medical Colleges Graduation Questionnaire serves as further evidence that exposing students to backgrounds and perspectives different from their own has direct positive effects on intentions to treat underserved patients.

In medicine specifically, this recognition is accelerating our efforts to transform the applicant pool from the bottom up. There is renewed attention to the importance of broadening and enhancing pipeline programs, which provide pathways into the health professions for groups underrepresented in medicine. We are beginning to see promisingly positive trends in the diversity of admitted students as the principles of holistic review are more broadly adopted. Holistic review recasts the admissions process so it is not solely about selecting students with the requisite academic readiness but also about identifying those essential traits and attitudes that are predictive of a caring bedside manner and patient-centeredness. In this same vein, a growing number of institutions are employing multiple “mini-interviews,” standardized patients, and other simulations to evaluate the interpersonal skills and character of potential future physicians.

In addition, competency in the psychological, social, and behavioral sciences has been elevated alongside physical science aptitude as the marker of a qualified future physician. The new Medical College Admission Test, which launches in 2015, will assess students’
understanding of behavior change, cultural and social differences that affect health, and the relationship among socioeconomic status, access to resources, and well-being.

These initiatives represent a notable shift toward a more proactive approach to developing the type of physicians we desperately need. Moving away from the status quo toward a health system that produces more equitable, higher quality, and more efficient care means we cannot be complacent as the passive recipients of talent. Instead, we must actively and specifically communicate what traits and experiences are required and valued from future health-care professionals. Further, we must seek out and cultivate service orientation, passion for community health promotion, and cross-cultural experience, and channel young people with these interests into careers in the health professions the same way we currently do for those students who display ability in the natural sciences. To accomplish this goal requires targeting future health providers early along their scholastic paths through pipeline programs, ensuring that future applicants to health professional schools have ample time to cultivate the expanding list of required capacities and experiences. Specifically, we must increase the scope and effectiveness of our pipeline programs targeting minority and socioeconomically disadvantaged young people for careers in a health system designed to better serve the needs of all. Academic enrichment, preparation for standardized tests, career fairs and counseling, peer-to-peer advising, exposure to research methods, and financial planning assistance are just a few of the critical services that pipeline programs deliver to young people in the community. Interventions of this nature, such as the Robert Wood Johnson Foundation’s Summer Medical and Dental Education Program,12 with its 12 university-based sites and in existence since 1989, have demonstrated that attending to the whole individual—not solely the individual’s academic needs—yields significant, positive educational and career outcomes that benefit the individual and the institutions supporting these programs, and send a message to communities about an institution’s commitment to cultivating local talent and creating pathways to opportunity.

Expanding workforce diversity is an essential, yet insufficient, approach to retooling our health professional schools to act as stewards within the community. If we change who is going into the health professions without shifting the climate of our institutions, we’ll see limited dividends in the form of equitable and socially responsive health care. To achieve the desired result and reap the benefits, increases in diversity must be accompanied by a climate of inclusion. A climate of inclusion allows diverse talents to flourish and fosters personal investment in the institution’s mission and vision. Inclusion promotes the emergence of innovative problem solving that occurs at the intersections of perspectives, experiences, and disciplines. In this sense, a spirit of inclusiveness can support the integration of public health knowledge, skills, and partnerships into the practice of medicine. In short, inclusion is the key to unlocking the potential of the diversity of traits, aptitudes, and backgrounds that we seek to attract into health careers. These changes have powerful implications for population health: cultivating a diverse health-care workforce with aptitudes and motivations that gel with the ideal of an equitable, team-based, and community-oriented health-care system will ultimately result in better health outcomes and reduced disparities. Promoting health care as both a hard and a soft science will reconnect medicine to its roots as a humanistic endeavor and a public service.

Surmounting a challenge this big will require unprecedented inter-professional collaboration, innovative thinking, and systems-level action. It also demands that we join our public health colleagues to seek synergies among the investments of the U.S. Department of Health and Human Services and other federal agencies with leverage over SDH, such as the U.S. Department of Education and the U.S. Department of Housing and Urban Development, to build a comprehensive and aligned strategy.

Marc Nivet is the co-principal investigator of the Summer Medical and Dental Education Program grant from the Robert Wood Johnson Foundation mentioned in this article.

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The Social Determinants of Health: It’s Time to Consider the Causes of the Causes

ABSTRACT

During the past two decades, the public health community’s attention has been drawn increasingly to the social determinants of health (SDH)—the factors apart from medical care that can be influenced by social policies and shape health in powerful ways. We use “medical care” rather than “health care” to refer to clinical services, to avoid potential confusion between “health” and “health care.” The World Health Organization’s Commission on the Social Determinants of Health has defined SDH as “the conditions in which people are born, grow, live, work and age” and “the fundamental drivers of these conditions.” The term “social determinants” often evokes factors such as health-related features of neighborhoods (e.g., walkability, recreational areas, and accessibility of healthful foods), which can influence health-related behaviors. Evidence has accumulated, however, pointing to socioeconomic factors such as income, wealth, and education as the fundamental causes of a wide range of health outcomes. This article broadly reviews some of the knowledge accumulated to date that highlights the importance of social—and particularly socioeconomic—factors in shaping health, and plausible pathways and biological mechanisms that may explain their effects. We also discuss challenges to advancing this knowledge and how they might be overcome.
A large and compelling body of evidence has accumulated, particularly during the last two decades, that reveals a powerful role for social factors—apart from medical care—in shaping health across a wide range of health indicators, settings, and populations. This evidence does not deny that medical care influences health; rather, it indicates that medical care is not the only influence on health and suggests that the effects of medical care may be more limited than commonly thought, particularly in determining who becomes sick or injured in the first place. The relationships between social factors and health, however, are not simple, and there are active controversies regarding the strength of the evidence supporting a causal role of some social factors. Meanwhile, researchers increasingly are calling into question the appropriateness of traditional criteria for assessing the evidence.

McKeown attributed the dramatic increases in life expectancy since the 19th century primarily to improved living conditions, including nutrition, sanitation, and clean water. While advances in medical care also may have contributed, most authors believe that nonmedical factors, including conditions within the purview of traditional public health, were probably more important. Public health nursing, including its role in advocacy, may have played an important role in improved living standards. Another example of the limits of medical care is the widening of mortality disparities between social classes in the United Kingdom in the decades following the creation of the National Health Service in 1948, which made medical care universally accessible. Using more recent data, Martinson found that although health overall was better in the United Kingdom than in the United States, which lacks universal coverage, disparities in health by income were similar in the two countries. Large inequalities in health according to social class have been documented repeatedly across different European countries, again despite more universal access to medical care.

Another often-cited example of the limits of medical care is the fact that, although spending on medical care in the U.S. is far higher than in any other nation, the U.S. has consistently ranked at or near the bottom among affluent nations on key measures of health, such as life expectancy and infant mortality; furthermore, the country’s relative ranking has fallen over time. A recent report from the National Research Council and Institute of Medicine has documented that the U.S. health disadvantage in both morbidity and mortality applies across most health indicators and all age groups except those older than 75 years of age; it applies to affluent as well as poor Americans, and to non-Latino white people when examined separately. Other U.S. examples include the observation that, while expansions of Medicaid maternity care around 1990 resulted in increased receipt of prenatal care by African American women, racial disparities in the key birth outcomes of low birthweight and preterm delivery were not reduced. Although important for maternal health, traditional clinical prenatal care generally has not been shown to improve outcomes in newborns.

The impacts of socioeconomic and other social factors on most health outcomes

A number of studies have attempted to assess the impact of social factors on health. A review by McGinnis et al. estimated that medical care was responsible for only 10%–15% of preventable mortality in the U.S.; while Mackenbach’s studies suggest that this percentage may be an underestimate, they affirm the overwhelming importance of social factors. McGinnis and Foege concluded that half of all deaths in the U.S. involve behavioral causes; other evidence has shown that health-related behaviors are strongly shaped by social factors, including income, education, and employment. Jemal et al., studying 2001 U.S. death data, concluded that “potentially avoidable factors associated with lower educational status account for almost half of all deaths among working-age adults in the U.S.” Galea and colleagues conducted a meta-analysis, concluding that the number of U.S. deaths in 2000 attributable to low education, racial segregation, and low social support was comparable with the number of deaths attributable to myocardial infarction, cerebrovascular disease, and lung cancer, respectively.

The health impact of social factors also is supported by the strong and widely observed associations between a wide range of health indicators and measures of individuals’ socioeconomic resources or social position, typically income, educational attainment, or rank in an occupational hierarchy. In U.S. as well as European data, this association often follows a stepwise gradient pattern, with health improving incrementally as social position rises. This stepwise gradient pattern was first noted in the United Kingdom. Although research
on the socioeconomic gradient has been more limited in the U.S., the results of U.S. studies have mirrored the European findings. Figures 1–5 illustrate a few examples using U.S. data, with social position reflected by income or by educational attainment. Using national data, the National Center for Health Statistics’ “Health, United States, 1998” documented socioeconomic gradients in the majority of numerous health indicators measured across different life stages.51 Braveman and colleagues confirmed those findings using recent U.S. data.52 Both Pamuk et al.51 and Braveman et al.52 found that socioeconomic gradient patterns predominated when examining non-Latino black and white groups but were less consistent among Latino people. Minkler and colleagues found dramatic socioeconomic gradients in functional limitations among people aged 65–74 years. This finding is particularly remarkable because income gradients generally tend to flatten in old age.53 As illustrated in Figure 5, and in both Pamuk et al.51 and Braveman et al.,52 these socioeconomic gradients in health have been observed not only in the U.S. population overall, but within different racial/ethnic groups, demonstrating that the socioeconomic differences are not explained by underlying racial/ethnic differences. Indeed, most studies that have examined racial/ethnic differences in health after adjusting for socioeconomic factors have found that the racial/ethnic differences disappeared or were substantially reduced.54–56 This does not imply that the only differences in experiences between racial/ethnic groups are socioeconomic; for example, racial discrimination could harm the health of individuals of all socioeconomic levels by acting as a pervasive stressor in social interactions, even in the absence of anyone’s conscious intent to discriminate.57,58 Furthermore, the black-white disparity in birth outcomes is largest among highly educated women.59 Living in a society with a strong legacy of racial discrimination could damage health through psychobiologic pathways, even without overtly discriminatory incidents.60–62

How do widespread and persistent socioeconomic gradients in health add to evidence that social factors are important influences on health? Strong links between poverty and health have been observed for centuries.63–65 Observing a graded relationship (as opposed to a simple threshold, for instance at the poverty line) of socioeconomic factors with many different health indicators suggests a possible dose-response relationship, adding to the likelihood that socioeconomic factors—or factors closely associated with them—play a causal role. Although the effects of abject poverty on health are rarely disputed, not everyone concurs about the effects of income and education on health across the socioeconomic spectrum. Some have argued that income-health or education-health relationships reflect reverse causation (i.e., sickness leading to income loss and/or lower educational achievement).66 Although ill health often results in lost income, and a child’s poor

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**Figure 1. Life expectancy in the U.S. at age 25, by education and gender, 2006**

![Life expectancy graph](https://example.com/life-expectancy-graph.png)

health could limit educational achievement, evidence from longitudinal and cross-sectional studies indicate that these do not account for the strong, pervasive relationships observed.67 Links between education and health, furthermore, cannot be explained by reverse causation because once attained, educational attainment is never reduced.

The aforementioned evidence reflects associations that by themselves do not establish causation. However, the observational examples cited as illustrations are backed up by extensive literature employing a range of techniques (e.g., multiple regression, instrumental variables, matched case-control designs, and propensity score matching) to reduce bias and confounding due to unmeasured variables.3,4,7,17,19 This knowledge base is also enriched by natural experiments,3,36,68,69 quasi-experiments,70 and some, albeit limited, randomized controlled experiments.71–74 The overwhelming weight of evidence demonstrates the powerful effects of socioeconomic and related social factors on health, even when definitive knowledge of specific mechanisms and effective interventions is limited. Accumulated knowledge also reveals, however, that the effects of any given social (including socioeconomic) factor are often contingent on a host of other factors.17,75 The third section of this article discusses challenges in studying the effects of socioeconomic factors that are relatively “upstream” (i.e., closer to underlying or fundamental causes)70 from their health effects located “downstream” (i.e., near where health effects are observed).

**MULTIPLE MECHANISMS EXPLAIN IMPACTS OF SOCIOECONOMIC AND OTHER SOCIAL FACTORS ON HEALTH**

Despite countless unanswered questions, knowledge of the pathways and biological mechanisms connecting social factors with health has increased exponentially during the past 25 years. Mounting evidence supports causal relationships between many social—including socioeconomic—factors and many health outcomes, not only through direct relationships but also through more complex pathways often involving biopsychosocial processes.77

Some aspects of socioeconomic factors are connected to health via responses to relatively direct and rapid-acting exposures. For instance, lead ingestion in substandard housing contributes to low cognitive function and stunted physical development in exposed children;78,79 pollution and allergens, also more common in disadvantaged neighborhoods, can exacerbate asthma;80,81 Socioeconomic and other social factors also

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**Figure 2. Infant mortality rate in the U.S., by mother’s education, 2009**

![Infant mortality rate in the U.S., by mother’s education, 2009](image-url)
may contribute to worse health through pathways that play out over relatively short time frames (e.g., months to a few years) but are somewhat more indirect. Factors affecting the social acceptability of risky health behaviors are a case in point. For instance, exposure to violence can increase the likelihood that young people will perpetrate gun violence;82 and the availability of alcohol in disadvantaged neighborhoods can influence its use among young people, affecting rates of alcohol-related traumatic injury.83 Socioeconomic factors can influence sleep, which can be affected by work, home, and neighborhood environments, and which can have short-term health effects.84,85 Working conditions can shape health-related behaviors, which, in turn, may impact others; for example, workers without sick leave are more likely to go to work when ill, increasing the likelihood of disease spread to coworkers or customers.86

In addition to these relatively rapid health impacts, the effects of socioeconomic and other social factors on health-related behaviors can influence disease outcomes that only manifest much later in life. Neighborhood socioeconomic disadvantage and higher concentration of convenience stores have been linked to tobacco use, even after adjusting for several individual-level characteristics, such as educational attainment and household income.87 Lower availability of fresh produce, combined with concentrated fast-food outlets and few recreational opportunities, can lead to poorer nutrition and less physical activity.88,89 The health consequences of the chronic diseases related to these conditions generally will not appear for decades.

The strong and pervasive relationships between socioeconomic factors and physical health outcomes can reflect even more complex and long causal pathways, which may or may not involve health behaviors as key mediators or moderators. Evans and Schramberg showed that the association between duration of childhood poverty and adult cognitive function appears to be explained not only by poverty-related material deficits, but also partly by chronic childhood stress.90 Cutler et al. described widening mortality disparities by educational achievement that are not explained by behavioral risk factors such as tobacco use or obesity.91 Children growing up in socioeconomically disadvantaged neighborhoods face greater direct physical challenges to health status and health-promoting behaviors; they also often experience emotional and psychological stressors, such as family conflict and instability arising from chronically inadequate resources. Adjusting for depression, anxiety, and other negative emotional states, however, has not completely explained the effects of social factors on health.92

Several recent reviews93–98 have described the biological “wear-and-tear” resulting from chronic exposure to social and environmental stressors, commonly


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*Percent of children <17 years of age with less than very good health

<table>
<thead>
<tr>
<th>Family income (Percent of federal poverty level)</th>
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</thead>
<tbody>
<tr>
<td>&lt;100%</td>
</tr>
<tr>
<td>100–199%</td>
</tr>
<tr>
<td>200–399%</td>
</tr>
<tr>
<td>≥400%</td>
</tr>
</tbody>
</table>

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referred to as allostatic load.\textsuperscript{99} Allostatic load is a multicomponent construct that reflects physiologic changes across different biological regulatory systems in response to chronic social and environmental stress. Examples include observations that stress can induce pro-inflammatory responses, including production of IL-6\textsuperscript{100} and C-reactive protein,\textsuperscript{101} and that lower income and educational achievement contribute to higher blood pressure and unfavorable cholesterol profiles.\textsuperscript{102} Physiological regulatory systems thought to be affected by social and environmental stressors have included the hypothalamic-pituitary-adrenal axis; sympathetic (autonomic) nervous system; and immune/inflammatory, cardiovascular, and metabolic systems.\textsuperscript{93,95} These systems overlap peripherally and in the brain.

Another area of rapidly evolving knowledge involves the role of socioeconomic and other social factors in epigenetic processes that regulate whether genes are expressed or suppressed.\textsuperscript{103} Evidence from primate studies suggests that social status can affect the regulation of genes controlling physiologic functions (e.g., immune functioning).\textsuperscript{104} In addition, educational attainment,\textsuperscript{105,106} occupational class (e.g., manual vs. non-manual work),\textsuperscript{107} work schedules,\textsuperscript{108} perceived stress,\textsuperscript{109,110} and intimate partner violence\textsuperscript{111} have all been linked with changes in telomere length.\textsuperscript{112} Telomeres are DNA-protein complexes capping the ends of chromosomes, protecting them against damage. Telomere shortening is considered a marker of cellular aging\textsuperscript{115} that is controlled by both genetic and epigenetic factors. Multiple biological mechanisms appear to be involved in causal pathways from social factors to health outcomes. For example, an allostatic load index combining information on multiple biomarkers of health risk appears to explain more of the impact of education on mortality than any single biological indicator alone.\textsuperscript{114} Associations between psychosocial processes and physiology are further complicated by the effects of timing, such as when and for how long a stressor is experienced in an individual’s lifespan.\textsuperscript{115,116} Early-life socioeconomic disadvantage has been repeatedly associated with vulnerability to a range of adolescent and adult diseases,\textsuperscript{117} independent of adolescent or adult socioeconomic status/position.\textsuperscript{118–121} Overall, there appear to be both cumulative effects of socioeconomic and related social stressors across the lifespan, manifesting in chronic disease in later adulthood, and heightened effects of experiences occurring at particularly sensitive periods in life (e.g., before age 5). The physiologic effects of chronic stress is an area of active biological, psychological, and social research that seeks to explain the impact of many social factors on health outcomes.

Despite considerable evidence indicating important

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**Figure 4.** Percent of U.S. adults aged ≥25 years with activity-limiting chronic disease, by family income, 1988–1998\textsuperscript{a}

<table>
<thead>
<tr>
<th>Family income</th>
<th>Percent of adults ≥25 years of age with activity-limiting chronic disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100%</td>
<td>32.2</td>
</tr>
<tr>
<td>100–199%</td>
<td>22.4</td>
</tr>
<tr>
<td>200–299%</td>
<td>16.0</td>
</tr>
<tr>
<td>300–399%</td>
<td>12.9</td>
</tr>
<tr>
<td>≥400%</td>
<td>9.4</td>
</tr>
</tbody>
</table>

effects of social factors on health, however, not every individual exposed to socioeconomic or other adversity develops disease. Protective social factors, such as social support, self-esteem, and self-efficacy, may mitigate the deleterious effects of adverse social conditions.

Income and education have not predicted health as consistently among Latino immigrants in the U.S. as among other groups; hypothesized explanations have included protective factors such as social support or attitudes and norms that confer resilience. Similarly, low income may have less impact on the health of individuals in settings in which basic needs—including food, housing, education, and/or medical care—are met by the state or family. This may be due partly to access to needed goods and services through routes other than income, and also to an alleviation of insecurity about meeting basic needs. Income may have less health impact where there is less social stigma associated with having limited economic means. Genetics also may play a role in an individual’s vulnerability or resilience to socioeconomic adversity: different individuals’ biological responses to the same socioeconomic trigger can vary markedly according to specific genetic polymorphisms. At the same time, as noted, research has demonstrated that socioeconomic and related social factors can alter whether a deleterious (or protective) gene is expressed or suppressed.

The graded relationships repeatedly observed (and illustrated in Figures 1–5) between socioeconomic factors and diverse health outcomes may reflect gradients in resources and exposures associated with socioeconomic factors. They also may reflect the impact of subjective social status (i.e., where one perceives oneself as fitting relative to others in a social hierarchy determined by wealth, influence, and prestige). A growing body of research in multiple disciplines—including psychology, neurology, immunology, education, child development, demography, economics, sociology, and epidemiology—examines the interplay of socioeconomic factors, psychological and other mediating factors, and biology. Evidence has clearly demonstrated that relationships between socioeconomic factors and health are complex, dynamic, and interactive; that they may involve multiple mechanisms including epigenetic processes that alter gene expression; and that, at times, they may only manifest decades after exposure.

CHALLENGES OF STUDYING HOW SOCIOECONOMIC AND OTHER UPSTREAM SOCIAL FACTORS AFFECT HEALTH

While great advances in documenting and understanding the social, including socioeconomic, determinants of health have been made, unanswered questions about the mechanisms underlying their effects on health are at least as plentiful as the answers we have to date. All
rigorous research is challenging, but research on the upstream social determinants of health (SDH) faces particular challenges, based in part on the complexity of the causal pathways and the long time periods during which they often play out.17,127–131 Some of these barriers are illustrated by the following example.

Figure 6 presents very simply three general pathways through which education can influence many health outcomes, reflecting links that have been described in the literature. While there is not necessarily a consensus about each step depicted here, all are plausible in light of current knowledge, including biological knowledge.132 The first pathway is widely accepted: education increases knowledge and skills and, thus, can facilitate healthier behaviors. The second pathway also is biologically plausible. However, while its left-sided branches (i.e., education leading to better, higher-paid work) are not disputed, subsequent links from income to health through various pathways, such as work-related benefits, neighborhood opportunities, and stress, are not typically considered as education effects. The third pathway depicts health effects of education through psychobiological processes such as control beliefs, subjective social status, and social networks, again based on existing literature.125 Figure 6 illustrates two of the most daunting challenges facing research on the socioeconomic and other upstream determinants of health:

1. Complex, multifactorial causal pathways do not lend themselves to testing with randomized experiments. This diagram is greatly oversimplified: the pathways appear linear, and the diagram does not include the multitude of arrows representing how the factors depicted may interact with each other and with other variables not depicted, such as genetic and epigenetic factors. Despite the oversimplification, it illustrates how

Figure 6. Pathways through which education can affect health

How could education affect health?

- Educational attainment
  - Health knowledge, literacy, coping, and problem solving
  - Working conditions
  - Work-related resources
  - Income
  - Control beliefs
  - Social standing
  - Social networks

- Diet
- Exercise
- Smoking
- Health/disease
- Exposure to hazards
- Control/demand imbalance
- Stress
- Health insurance
- Sick leave
- Wellness programs
- Stress
- Housing
- Neighborhood environment
- Diet and exercise options
- Stress

- Coping and problem solving
- Response to stressors
- Health-related behaviors
- Social and economic resources
- Perceived status
- Social and economic resources
- Social support
- Norms for healthy behavior
- Stress

upstream socioeconomic determinants such as income, wealth, and education could exert their effects over complicated multifactorial pathways. At each juncture, there are opportunities for confounding and interactions. A glance at this diagram should make it clear that this intricate series of causal relationships does not lend itself to testing with randomized controlled trials. Nevertheless, it may be possible to study small pieces of the causal web with randomized experiments, making incremental contributions to understanding the overall pathways. Innovative approaches to modeling complex, dynamic systems are being developed to address these challenges; however, it is uncertain whether these systems will live up to expectations.

2. There are long time lags for health effects to manifest. The links between social factors and health often play out over decades or generations; for example, chronic disease often takes multiple decades to develop. Although we may be able to use intermediate biomarkers (such as C-reactive protein or IL-6) or certain behaviors as proxies for health outcomes, it could be two decades or more after the relevant exposures (e.g., childhood adversity) before even these intermediate markers manifest. Few studies are able to follow participants for more than a few years. The long time lag between independent and dependent variables represents both a scientific and a political challenge. Funders and politicians want results within timeframes for which they can take credit. The Office of Management and Budget generally requires a five-year-or-less time window for assessing policy impact.

Another barrier to understanding the effects of social factors on health is the difficulty of obtaining information across multiple sectors (e.g., as education, planning, housing, labor, and health) and even across multiple programs within a given sector. Access to cross-sectoral information could improve our understanding and ability to intervene effectively. However, cross-sectoral collaborations face multiple barriers, including differing priorities, funding streams, and timelines across agencies; overcoming these barriers will require a major shift in financial and political incentives. Some institutions, nevertheless, have begun to encourage these collaborations. For example, the U.S. Department of Housing and Urban Development has developed a health council to incorporate health considerations into federal housing policy. The Robert Wood Johnson Foundation (RWJF) Commission to Build a Healthier America has issued recommendations for several nonmedical care initiatives to improve health overall while reducing health disparities, including a strong emphasis on high-quality early child-care programs. The Federal Reserve Bank has recently collaborated with RWJF to convene a series of national and regional forums to discuss intersections between community development and health improvement.

CONCLUSIONS

Despite challenges, controversies, and unanswered questions, the tremendous advances in knowledge that have occurred in the past 25 years leave little room for doubt that social factors are powerful determinants of health. The consistency and reproducibility of strong associations between social (including socioeconomic) factors and a multitude of health outcomes in diverse settings and populations have been well documented, and the biological plausibility of the influence of social factors on health has been established. It is not surprising that exceptional examples of health indicators, settings, and subgroups in which health does not necessarily improve with greater social advantage can be found. There may be thresholds above which a higher degree of a given social factor (e.g., income) no longer yields better health. Exceptions would also be expected as the effects of any given factor are contingent upon the presence of myriad other factors—social, economic, psychological, environmental, genetic, and epigenetic. Considering the long, complex causal pathways leading from social factors—particularly upstream ones such as income and education—to health, with opportunities for countless interactions at each step, it is indeed remarkable that there are so few exceptions to the general rule.

The relative importance of social vs. genetic factors is often debated. The emerging awareness of gene-environment interactions, however, has drastically altered nature-vs.-nurture debates. Social and genetic causes of disease can no longer be seen as mutually exclusive. We now know that adverse genetic endowment is not necessarily unalterable, that a “bad” (or “good”) gene may be expressed only in the presence of triggers in the social or physical environment, and that these environments potentially can be modified by social policies.

Despite gaps in current knowledge, the case for needing to address upstream socioeconomic factors is strong, and enough is known to inform interventions, which must be rigorously evaluated. Given that SDH—including socioeconomic conditions such as income, wealth, and education—are by definition
outside the realm of standard medical care, what is the relevance to public health practitioners and medical care providers? Many public health practitioners have little experience in sectors outside public health-care delivery. Medical care providers, including nurses, physicians, and others, undergo intensive training in medicine, not in social work, and we believe in the power of medical care to heal, alleviate suffering, and save lives. Nevertheless, the knowledge indicating a crucial role for socioeconomic and related social factors in shaping health has become so compelling that it cannot be ignored insofar as public health and health-care personnel are committed to health.

Current knowledge suggests ways to collaborate with others to improve health outcomes for socially disadvantaged populations. At a minimum, appreciation of some of the social factors that influence health-related behaviors and health status itself can help clinical providers develop more effective treatment plans. Clinical and public health practitioners can strengthen routine procedures to assess and respond to social needs through referrals and/or on-site social and legal services. Public health workers and clinicians also can develop health-promotion strategies that reach beyond individual clinical and social services to communities, to influence living and working conditions that are generally the strongest determinants of whether people are healthy or become sick in the first place. They can participate in or promote research adding to the understanding of the mechanisms by which social factors influence health, and test which strategies appear most effective and efficient. Finally, clinicians and public health practitioners can be key resources for local, state, and national policy makers on the crucial issue of health equity for all Americans, including those facing the greatest social obstacles.

The authors thank Kaitlin Arena and Rabia Aslam for their outstanding research assistance.

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Using Social Determinants of Health to Link Health Workforce Diversity, Care Quality and Access, and Health Disparities to Achieve Health Equity in Nursing

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ABSTRACT

It is widely accepted that diversifying the nation’s health-care workforce is a necessary strategy to increase access to quality health care for all populations, reduce health disparities, and achieve health equity. In this article, we present a conceptual model that utilizes the social determinants of health framework to link nursing workforce diversity and care quality and access to two critical population health indicators—health disparities and health equity. Our proposed model suggests that a diverse nursing workforce can provide increased access to quality health care and health resources for all populations, and is a necessary precursor to reduce health disparities and achieve health equity. With this conceptual model as a foundation, we aim to stimulate the conceptual and analytical work—both within and outside the nursing field—that is necessary to answer these important but largely unanswered questions.
Today, in the United States and throughout the world, an individual’s ability to reach his or her full health potential is severely constrained by the individual’s social group and economic status. Indeed, the evidence is overwhelming—the advantaged in society experience better and longer health when compared with the disadvantaged—and this stepwise health advantage is patterned along a social and class gradient that results in systemic and pervasive health disparities. One proposed approach to maximizing the health potential of every member of society and reducing health disparities is to increase access to quality health care and health-care resources.

Achieving health equity is a goal that cascades down through each of the Health Resources and Services Administration’s (HRSA’s) six bureaus and nine offices. HRSA’s Bureau of Health Professions (BHPr) demonstrates its shared commitment to health equity by ensuring fair and equitable access to the resources necessary to achieve optimal health, regardless of a population’s social or economic status. BHPr has contributed an evidence-based conceptual framework to the limited but encouraging literature that supports a positive correlation between a racially/ethnically diverse health workforce and improved patient outcomes. Two evidence-based assumptions in the BHPr framework linking health professions diversity to health outcomes are: (1) health professionals who are from racial/ethnic minority groups and come from socio-economically disadvantaged backgrounds are more likely to serve in resource-poor and rural communities, where racial/ethnic minority groups and the poor are overrepresented; and (2) racial/ethnic and language concordance will improve patient-provider communication, tolerance, trust, and decision-making, thereby increasing access to, and quality of, the interaction that would result in improved health outcomes (Figure 1).

The Division of Nursing (DN), located within BHPr, aims to extend the conceptual framework linking health-care workforce diversity to increased access and quality to include its potential impact on population health by describing a potential pathway connecting a diverse nursing workforce to decreased health disparities and improved health equity (Figure 2). The DN supports programs that ensure the adequate supply and distribution of nursing professionals prepared to deliver high-quality, competent care. The nursing workforce ideally should reflect the cultural and social needs and values of the communities in which they serve. Furthermore, we believe that equitable access to quality health care and health resources is critical to reducing health disparities and achieving health equity. Given this orientation, we suggest that nursing workforce diversity is not an end unto itself; rather, we envision nursing workforce diversity as a key strategy for increasing access to quality health care and health-care resources.

**Figure 1. Conceptual framework linking health professions diversity to health outcomes, 2006**

<table>
<thead>
<tr>
<th>Increased diversity in health professions</th>
<th>More patient-provider racial/ethnic and language concordance for racial/ethnic minority groups</th>
<th>More effective patient-provider communication and trust among racial/ethnic minority patients</th>
<th>Improved access to care and use of health services</th>
<th>Improved quality of care</th>
<th>Improved health outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>More health-care practitioners from disadvantaged groups</td>
<td>More service in underserved communities</td>
<td>Greater trust in health-care system by disadvantaged groups</td>
<td>Greater advocacy/programs for disadvantaged groups</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Expanded conceptual model linking health professions diversity to health disparity and health equity outcomes, 2012

THE NURSING WORKFORCE DIVERSITY PROGRAM

The primary lever in which the DN implements its diversity agenda is through its Nursing Workforce Diversity (NWD) program. The NWD program was legislatively mandated under Title VIII of the 1989 Public Health Service Act, with authority to increase nursing education opportunities for individuals from disadvantaged backgrounds (including racial/ethnic minority groups) who historically have been underrepresented among registered nurses. The NWD legislation authorized individual-level financial instruments (e.g., scholarships and stipends), mentoring, and social support strategies as targeted approaches to address the gaps in nursing workforce achievement between historically advantaged and disadvantaged populations. As of 2013, the NWD program had awarded approximately $160 million in institutional grants to U.S. schools of nursing to facilitate disadvantaged individuals’ navigation through the nursing pipeline. The Patient Protection and Affordable Care Act of 2010 expanded the NWD program’s authority to increase the workforce of registered nurses with advanced degrees by assisting registered nurses with diplomas or associate degrees to become baccalaureate-prepared registered nurses, and by preparing practicing registered nurses for advanced nursing education.

In 2011, the DN began a comprehensive two-year evaluation of the NWD program grant portfolio to reassess the relative impact of the program’s individual-level strategies and incentives—scholarships and loans, mentoring and social support in nursing school enrollment, retention, and graduation. One objective of the program evaluation is to identify grantee projects that could serve as best-practice models for diversifying the workforce. The completed program evaluation is expected to yield a catalogue of successful workforce diversity strategies that could be modeled and scaled throughout the country. We hope to also gain a greater understanding of the seemingly intransigent multilevel factors that impede our ability to advance a robust workforce diversity agenda. In fact, the evaluation data should provide critical insights regarding the program’s effectiveness and will inform our future investments in the nursing workforce diversity portfolio.

This initial program evaluation work redirected and expanded the DN’s thinking to consider innovative strategies to address the larger social and structural forces that provide context for the underrepresentation of disadvantaged social groups in the registered nurse workforce. The division is convinced that additional social- and structural-level strategies, such as institutional leadership buy-in and multi-sector partnerships, should complement and support—not supplant—existing legislation that directs individual-level strategies such as scholarships, loans, mentoring, and social support activities.

CONCEPTUAL MODEL

As part of the initial NWD program evaluation, DN staff reviewed the literature within the overarching domains of workforce diversity, health-care access and quality, health disparities, health equity, and the social determinants of health (SDH). The purpose of the literature review was to gain an overall sense of which programs and strategies were achieving the greatest gains in workforce diversity and why those programs and strategies were successful. Based on the review of the literature, we inductively developed a conceptual model with four basic constructs comprising a sequential set of linear relational statements. The three-dimensional (3D) conceptual model—diversity, disparities, and determinants (Figure 3)—depicts a stepwise relationship among nursing workforce diversity, health-care access and quality, health disparities, and health equity, all within the context of an SDH framework.

The first construct of the model is nursing workforce diversity. Diversity includes those historically underrepresented groups in nursing—racial/ethnic minority groups, men, people with disabilities, and the educationally and economically disadvantaged—as key social groups requiring targeted efforts and dedicated resources to close the achievement gap and increase their proportional representation in nursing. The second 3D construct is access to quality health care. Admittedly, health-care access and health-care quality are two separate conceptual domains; in the 3D conceptual model, the two concepts have been linked. The model hypothesizes that access to quality care implies safe, timely, efficient, effective, equitable, respectful, and culturally aligned care that meets a health need. The third construct is health disparities. Health disparities are those entrenched variations in health and health-care outcomes that are closely linked with economic, social, and environmental disadvantage. The fourth construct is health equity. Health equity is conceptualized as that highest standard of health attainable for all populations, regardless of social group status or historical disadvantage. In the conceptual framework linking health professions diversity to health outcomes, health outcomes are presented as an individual-level construct. In the 3D model, health outcomes are framed at the population level as health disparities and health equity. The 3D model is proposed as one potential pathway to achieving health equity from the starting point of a diverse nursing workforce strategy.

In August 2012, the DN sponsored an invitational interdisciplinary summit entitled Nursing in 3D: Workforce Diversity, Health Disparities, and Social Determinants of Health. The summit’s mission and goals emerged from the constructs articulated in the 3D conceptual model. The overarching goal of the summit was to provide our nursing stakeholders and grantee communities with the intellectual and conceptual tools necessary to apply the SDH framework to advance the agenda for nursing workforce diversity and health equity. Experts in the fields of nursing workforce diversity, health-care quality and access, health disparities, and SDH were convened by HRSA to detail the full range of academic and health system factors, as well as the social, economic, and environmental determinants that influence health workforce diversity and health equity.

At the conclusion of the summit, there was sufficient momentum to forge ahead with using the 3D conceptual model to frame the DN’s nursing workforce diversity agenda. Moreover, we believed that approaching nursing workforce diversity through the lens of SDH would spawn innovations and facilitate the development of effective approaches to reduce, and eventually eliminate, health disparities to achieve population health equity.

With the publication of this special supplement dedicated to the 3Ds, the DN hopes to advance the scholarly inquiry around the intersecting goals of increased workforce diversity, fair and equal access to quality health care and health-care resources, elimination of health disparities, and achievement of health equity. To that end, we aim to expand our DN grant portfolio to include an organized and coherent set of strategies and programs to address the needs of diverse populations.

Figure 3. Nursing in 3D conceptual model depicting the stepwise relationship among nursing workforce diversity, health-care access and quality, health disparities, and health equity

3D = diversity, disparities, and social determinants
of novel and innovative projects that test the assumptions and constructs in the 3D conceptual model with a deliberate attempt to further refine and expand the model and its utility in nursing. Middle-range theories both within and outside of nursing that are compatible with the 3D model will need to be utilized to test the model’s basic theoretical statements and assumptions, establish priorities for future work, and further refine the research methods and measures in the intersecting fields of workforce diversity, health-care quality and access, health disparities and health equity, and SDH.9

For example, the exploratory and confirmatory work that is underway to test the linkage assumption that increasing workforce diversity does indeed have a quantifiable impact on health-care quality and access needs to be expanded. Similarly, while there is fairly consistent evidence to support the theory that increasing access to quality health care for the most vulnerable among us leads to a reduction in health disparities,3,10 there is also a competing literature that presents compelling evidence that health disparities are an entrenched feature of our social fabric and, despite increased access to health care, health disparities among advantaged and disadvantaged populations remain.1,2,11–13 While work has already begun in the field to understand the relative impact of decreasing health disparities on achieving health equity, this work is still underdeveloped. Until now, the consensus in the field has been that the relationship between health disparities and health equity is inverse and proportional, and, as the rates of health disparities decreased, a commensurate and proportional increase in the rates of health equity would occur. In other words, when health disparities are eliminated, health equity would be achieved.1,14

Meanwhile, to demonstrate the DN’s focus and commitment to SDH and health equity, a funding opportunity was released in January 2013 that requires NWD applicants to propose innovative workforce diversity projects that offer multilevel, evidence-based approaches that incorporate SDH into strategies to diversify the nursing workforce with a goal of improving population health equity. The release of the 2013 funding opportunity makes the urgency to simultaneously develop the relevant measures and metrics to chart progress toward our goal of health equity all the more relevant.

CONCLUSION

In summary, the DN aims to create synergistic work and active engagement among our professional peers and multiple stakeholder communities who share a commitment to increase workforce diversity, ensure access to quality health care and health-care resources, and reduce—and eventually eliminate—health disparities as a means of achieving population health equity.

The views expressed in this article are those of the authors and do not necessarily represent those of the Health Resources and Services Administration or the U.S. Department of Health and Human Services.

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Integrating the 3Ds: A Nursing Perspective

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ABSTRACT

The 3Ds (diversity, disparities, and determinants) that serve as a framework for this supplement are concepts that are key foundations of nursing education, practice, and research. Despite this fact, however, the nursing profession has faced challenges recognizing the full potential of these concepts. While their importance is documented and acknowledged, they are not clearly evident or easily recognized within the nursing profession. In fact, there are many barriers to the integration of these concepts. We identify and address two barriers to addressing health disparities and increasing diversity: disconnects and discrimination. Furthermore, we discuss three factors—dissemination, durability, and data—that may facilitate nursing’s efforts to integrate the 3Ds into the profession. Five pivotal models that address these barriers and facilitators are presented as exemplars that have the potential to guide efforts to address diversity, disparities, and social determinants of health and act as catalysts for change within the nursing profession.
Despite the centrality of the concepts of diversity, disparities, and social determinants of health (SDH) in nursing education and practice, there have been challenges to diversifying the workforce, addressing disparities, and widening nursing’s influence in policy arenas to effectively address SDH. In this article, we build on the 3D (i.e., diversity, disparities, and social determinants) framework by addressing two factors that serve as barriers to addressing health disparities and increasing diversity. We also discuss three factors that may serve as facilitators to addressing the 3Ds. Finally, we present several exemplars that demonstrate success and hold promise for addressing diversity, disparities, and SDH.

2Ds: BARRIERS TO OVERCOME
Several major challenges affect nursing’s issues in effectively addressing disparities, SDH, and diversity. We address two challenges—disconnects and discrimination—that serve as barriers to addressing disparities and SDH.

Disconnects
The first disconnect is what the nursing profession says about the value of diversity and what the nursing profession has been able to achieve in relation to a diverse workforce. The high value placed on a diverse workforce is evident from examining mission, value, and position statements of major professional nursing associations, schools and colleges, and healthcare systems. For example, the American Association of Colleges of Nursing states that “racial and ethnic diversity of health professions faculty and students helps to ensure that all students will develop the cultural competencies necessary for treating patients in an increasingly diverse nation.”1 Similarly, the National Advisory Council for Nursing Education and Practice affirmed that minority nurses are significant contributors and leaders in the development of models of care that address the unique needs of racial/ethnic minority populations.2 Further, increasing their numbers is viewed as a major strategy in reducing the health disparities that exist within the nation’s population.3

Similarly, numerous researchers and policy makers have recognized the practice, research, and educational benefits of racial/ethnic diversity and the adverse consequences that the absence of diversity poses for patients and communities.4,5 The disparity is even starker with regard to representation of specific subgroups. For example, Hispanic and African American people comprise 3.6% and 5.4% of the RN population, respectively, compared with 15.4% and 12.2%, respectively, of the U.S. population. The underrepresentation also exists in graduate education: Latino and African American people comprise only 3.5% and 6.3% of advance practice RNs, respectively.6

The disconnect between what has been said about diversity and what has been achieved begs several questions. What do existing nursing workforce data tell us about nursing’s commitment and capacity to address issues of equity and social justice? Does the nursing profession lack the capacity or the commitment to diversify the nursing workforce? Are the benefits of a diverse health professions workforce perceived as only impacting minority populations? Most importantly, if nursing cannot diversify the workforce in contexts in which they lead (e.g., schools of nursing, health-care settings, and professional organizations), how can we demonstrate to others that the nursing profession is prepared to lead in such areas as education, research, and practice, which focus on health disparities and SDH?

While the focus on diversity has been centered primarily on numbers, attention to diversity in both educational and practice approaches must also be addressed. Nursing must focus on substance; that is to say, the quality of the experience, the cultural humility that must be taught to all nurses and, thus, integrated into nursing practice, and the cultural safety that must be provided to all providers and recipients of nursing care.7 Further, nursing education and the delivery of clinical practice must be reframed to address the health and health-care needs of underserved and minority populations. Aside from immediate health concerns, underserved populations often contend with myriad issues that challenge access to health care, timely utilization of health-care services, and proper management of morbidities.8 Some of these issues include poor health literacy,9 lack of transportation,10 poor access to healthful foods, and lack of safe environments for physical activity.9 Consequently, direct primary care can be only partly successful if these other barriers—and other SDH—are not addressed.

Yet, addressing SDH in nursing curricula remains a challenge. A major disconnect lies in the changing health-care needs of the country and the persistent grounding in classic or “textbook” presentations of patients and common chronic diseases. For example, a student may learn that therapeutic lifestyle changes (e.g., diet, physical activity, and smoking cessation) are a necessary, and often primary, component of
hypertension management. A client without stable housing, however, may have competing demands, no steady source of food, or bigger concerns than daily exercise.

Traditional modes of graduate education, mainly the preceptorship model where students are paired with one health-care clinician (usually within a health system), provide students with the foundation and tools necessary to care for patients’ health. However, they might not stress the role of the nurse within the community or a community health center (CHC) where the health-care needs of patients with complex comorbidities and influences may be different. While the preceptorship model remains the key component for providing experiential learning opportunities in nursing education, clinical sites are limited in both quality and quantity. In many instances, these limitations can impede students’ opportunities to understand the influence of social determinants on health in a meaningful way. Students’ exposure to SDH often occurs in the classroom setting, without the clinical experience necessary to integrate and apply foundational learning.

**Discrimination**

Another barrier to addressing diversity, disparities, and SDH in nursing and other health professions is discrimination. As noted civil rights leader, Dorothy Height, states:

> “...covert discrimination is the problem ... and it is more difficult than ... overt. Unless we acknowledge that racism exits, we will never eliminate it ... If people define racism only as certain attitudes, then the only solutions they will seek are ... ways of changing these attitudes. If ... racism is seen as pervasive, fundamental, and systemic, then the solutions sought will be different and deeper in character.”

While not unique to nursing, examples of covert discrimination persist in part because of a common belief that educational merit can be fairly and objectively assessed, and because of the lack of research that predicts educational and practice outcomes. The failure to challenge these beliefs and assumptions gives rise to practices and guidelines that perpetuate the lack of diversity in educational settings.

The development of practices and guidelines to promote diversity in educational settings is complicated by conflicting perspectives about the causes of and solutions to addressing educational disparities. Numerous polls highlight the differences in perspectives between majority (white) and minority (Hispanic and African American) individuals on issues such as whether discrimination persists and whether it is a barrier to educational and economic mobility. There are also different perspectives on the role of government in providing educational and economic opportunities, as well as assistance for minority groups and immigrants to reduce educational and other disparities (e.g., merit scholarships, community service, and affirmative action). These differences illustrate the fundamental gap between the powerful hope for a society in which race does not influence one’s opportunities in life and the reality of a society where race/ethnicity still organize society and individual experience for most people.

**3 MORE Ds**

The consensus and commitment of many in the nursing profession to diversity and addressing health disparities calls for reframing the question, “Does diversity matter?” to action, “How do we diversify the nursing workforce?” and “How do we improve health outcomes among racial/ethnic and socially and economically disadvantaged populations?” Three factors can facilitate this movement: dissemination, durability, and data.

**Dissemination**

The longstanding funding by the Health Resources and Services Administration’s (HRSA’s) Nursing Workforce Diversity Program, as well as other sources, supports our understanding of health disparities and the influence of SDH, and provides a strong basis for continued action. For example, many successful models and strategies necessary to ensure success in recruiting and retaining racial/ethnic minority students and those from disadvantaged populations have been identified. These strategies include mentoring, financial and social support, developing supportive environments that include a critical mass of underrepresented minority health professions students and faculty, and consistent policies and leadership to expand diversity efforts beyond recruitment. Successful models of dissemination, replication, and scale-up have been established. For example, the Agency for Healthcare Research and Quality has established an Innovations Exchange, a comprehensive website that provides quality tools, evidence-based innovations, and insights from experts designed to address issues, improve health-care quality, and reduce disparities. The Centers for Disease Control and Prevention, through its Diffusion of Effective Behavioral Interventions project, provides information on evidence-based interventions and supports the use of interventions with demonstrated potential to reduce...
new human immunodeficiency virus (HIV) infections. The National Cancer Institute, through its Research-Tested Intervention Programs, provides useful information about cancer control interventions and access to research-tested materials. These resources have two important elements in common: the promotion of evidence-based approaches to end users and a focus on racial/ethnic minority and disadvantaged populations. Similar strategies aimed at increasing access, diffusion, and scale-up of evidence-based approaches to increase diversity of the nursing workforce and the care delivered to diverse populations should be considered.

Durability

The first step in addressing disparities and SDH is understanding that there are no easy answers or quick fixes. Overcoming these challenges requires sustained efforts and strategies that move beyond funded programs and institutions into expanded use of innovative programs. Programs can be catalysts to create new partnerships and alliances that cross institutional and professional boundaries and should be used to develop infrastructures needed to sustain efforts to address disparities and increase diversity. Nurses need to focus not only on improving patient outcomes but also on improving the capacity of their institutions and/or settings to address disparities and SDH. Collectively, nurses can and should garner their expertise to create standards, norms, and policies that support addressing diversity and SDH.

An important resource in addressing disparities and SDH lies in professional nursing racial/ethnic minority nursing associations, such as the American Assembly for Men in Nursing, the Asian American/Pacific Islander Nurses Association, the National Alaska Native American Indian Nurses Association, the National Association of Hispanic Nurses, the National Black Nurses Association, and the Philippine Nurses Association of America. For decades, these national associations and their local chapters have worked in their respective communities and within nursing to address health disparities and increase diversity. Already, there is a wealth of expertise within coalitions and networks whose prioritization of efforts and approaches can inform and inspire similar efforts by others. These associations have demonstrated their durability through their longstanding commitment to addressing issues of diversity and disparities.

Data

The collection and use of data to inform and evaluate our approaches to advancing diversity and reducing disparities are critical. However, there are significant obstacles to obtaining relevant data—particularly data related to the categorization of race/ethnicity—and reluctance in some cases to self-report. Moreover, while such data are necessary to address and advance diversity and eliminate disparities, there are often political barriers to collecting race/ethnicity data.

For example, specific data needed to advance diversity include workforce data by gender and race/ethnicity, and also include predictors of academic success for all students, as well as those who are underrepresented in nursing. From a disparities and SDH perspective, we need to examine the impact of providers’ race/ethnicity as it affects health outcomes, as well as the effects and impact of the nursing workforce in reducing/eliminating disparities in care, access to care, outcomes of care, and cost. Ultimately, racial/ethnic minority nurses are not the only ones who should be held accountable for improving health outcomes for the underserved; the responsibility falls to all health professionals. Finally, in relation to specific funded programs, improvements are needed in the evaluation of and accountability for outcomes of funded programs, as well as the predictors of practicing in underserved areas. Recent changes in reporting requirements to address these data needs by HRSA, including the Division of Nursing, are a step in the right direction.

EXEMPLARS AND OPPORTUNITIES

A number of programs and innovations, while complex, serve as exemplars of promoting diversity and addressing health disparities and SDH. In addition, opportunities are taking shape that can continue to advance work in this direction. We describe exemplars and opportunities that not only address the 3Ds but have incorporated some of the factors identified as facilitators.

Addressing data needs

The Oregon Center for Nursing (OCN), a nonprofit coalition, promotes a robust workforce of well-prepared nursing professionals who are dedicated to providing care and leading change to meet the health needs of our communities. As part of its efforts to ensure nursing school applicants and enrolled student pools were representative of the general population, OCN created the Nursing Student Admissions Database (NSAD) Project. The purpose of this annual data collection of all Associate Degree in Nursing and Bachelor of Science in Nursing programs throughout the state was to accurately track and report admissions and enrollment trends at the applicant (vs. the program) level. This collaborative effort provides a source of accurate and rich data to inform policy and programmatic interventions.
An important first step the OCN took to increase diversity in the nursing workforce was to ensure that the nursing school applicant and enrolled student pools were representative of the general population. Data from the NSAD revealed that applicants from underrepresented racial/ethnic minority groups who met qualifications for nursing schools were admitted at rates similar to white students. These data were critical to inform future action to promote diversity in the workforce. Importantly, this effort demonstrates how, working in a broad-based coalition, the OCN was able to collect data that many had deemed impossible to collect. The establishment of the NSAD is an example of an action that will lead to ensuring that these efforts are sustainable and durable.

**Addressing durability/sustainability of funded programs**

The *Juntos Podemos* (“Together we can”) program at the University of Texas Health Science Center at San Antonio (UTHSCSA) is designed to reduce the negative effects of some of the educational and social disparities students may be experiencing in nursing school. This program, funded by a Nursing Workforce Diversity grant from HRSA’s Division of Nursing, has many components that have been successful in other diversity programs. Central to the program is a protégé-to-mentor model, in which students progress in their roles. In addition to providing learning and social support, *Juntos Podemos* has been successful in engaging families and community leaders in different aspects of programmatic and advisory efforts. The outcomes of the program are impressive: more than 300 students participate; there is a 100% National Council Licensure Examination pass rate, and, importantly, 43% of *Juntos Podemos* students are enrolled in graduate school. While initially targeting minority and disadvantaged students, *Juntos Podemos* has now opened its programs to all UTHSCSA students who express interest in the programs. The program has become a central resource for all of the school’s students. As a result, efforts are underway to sustain the project once funding has ended, including developing an endowment fund and a minority faculty recruitment plan. The involvement of nontraditional stakeholders (e.g., families and community leaders), the demonstrated success of the data-driven program, and the school’s investment in the program continue to support the sustainability of this important resource.

**Addressing SDH in practice settings**

Adequate access to preventive care is a critical factor in reducing health-care disparities. The potential for reducing these disparities exists not only in the expansion of physical access but also in diversifying the delivery of care. The Institute of Medicine’s (IOM’s) “Crossing the Quality Chasm: A New Health System for the 21st Century” report identified patient-centered care (PCC) as an indicator of quality care. PCC was defined as “providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.” As advocates of health promotion and risk reduction, nurses can work as leaders in patients’ care to address issues that impact health. In fact, PCC obligates nurses to work as teams to meet the health-care needs of their clients. A true commitment to PCC and decreasing health-care disparities would be reflected in practices that expand beyond the traditional model of primary care in which clinics maintain “regular business hours,” providers dictate plans of care, and the burden of accessing care is entirely on the patient. Following are examples of different models of health-care delivery.

Dedicated to delivering PCC are CHCs such as nurse-managed health centers and federally qualified health clinics (FQHCs). Even caring for more complicated patients with fewer resources, CHCs have demonstrated delivery of high-quality care to underserved populations. CHCs uniquely serve uninsured and Medicaid recipients by increasing access (e.g., offering extended hours) and providing diverse support services to enhance primary and preventive care services. For example, some FQHCs provide nutrition counseling, social workers, community health workers, and legal services. Learning how to best collaborate with these services can increase the likelihood of attaining the goals of providing quality and efficient primary care.

Another critical component of PCC is empowering patients to be in charge of their health. One means of supporting patient empowerment is through shared medical appointments (SMAs). This model provides for longer periods of patient-provider contact and creates an environment in which patients problem-solve their challenges either individually or in collaboration with group members. The SMA model has shown promise with group prenatal care, as well as with chronic diseases such as diabetes and osteoporosis. The positive health outcomes from this health-care delivery model exemplify how diversifying delivery of primary care can be beneficial.

Delivering care through mobile vans is another avenue for expanding and diversifying health care. Mobile vans have been used to deliver primary care in rural areas, reproductive health services, prenatal care, breast cancer screening, and HIV testing. The advent...
of electronic medical records and telecommunications can support the feasibility of increasing the use of mobile vans to deliver quality, routine care in medically underserved areas. Delivering care by mobile vans not only expands access but also creates opportunity for providers to gain perspective into their patients’ environments, and to work accordingly with their patients in developing personalized plans of care. Maintaining consistent presence in a community can also help to build trusting relationships that support the development of population-based solutions for sustainable healthy living.

Addressing SDH in educational settings
To address health disparities, it is necessary for all providers to be aware of and understand the impact of social determinants on health. Educating providers in health-care settings and communities dedicated to delivering care to the underserved, such as in CHCs, is one way to increase providers’ awareness of the types of collaboration needed to address the complexities of health and health care in underserved communities. Clinical experiences in CHCs support the development of a comprehensive set of clinical assessment skills. Because of lack of insurance or underinsurance of patients, students are encouraged to develop treatment plans that are truly individualized. Furthermore, the complexity of patients and patient populations enhances and strengthens students’ physical assessment and history taking. Without the ability to refer to other resources immediately, students must create a prioritized list of problems and determine the best approach and order of treatment. In addition, the frequent exposure to unmanaged mental illness and substance use provides students with sharpened motivational interviewing and counseling skills. The competing demands of patients may impede adherence to traditional treatment plans; thus, students are encouraged to become resourceful in creating treatment plans that take into account the unique demands and priorities of patients when “optimal health” may not be attainable.

Experience with vulnerable individuals and populations, and clinical experiences within these sites, can encourage lifelong community partnership and engagement. In an effort to provide graduate students these types of real-world experiences, the University of Michigan uses clinical preceptors in a variety of community settings. At one clinical site, students are placed with nurse practitioners who have a clinical practice in a local homeless shelter. Students are exposed to patients with complex medical concerns that are complicated by lack of insurance or under-insurance and other social concerns such as unstable housing, unemployment, or unsafe social situations. Students spend time with patients to truly understand their competing demands and create individualized treatment plans. They are also encouraged to spend time with patients outside of traditional clinical hours by attending court cases for Social Security disability claims, psychiatric care appointments, and social work sessions. At another site, students are paired with a nurse practitioner who provides care to homeless or runaway teenagers. Students are integrated into the multidisciplinary team and actively participate in managing many social issues. Finally, at another site, students are paired with a nurse practitioner who makes “house calls” to those patients who are underinsured or uninsured. Evaluating patients outside of a clinical examination room provides a unique experience and challenges students to hone their examination and clinical decision-making skills.

In addition to one-on-one clinical experiences in community settings, students are also able to interact with patients in groups or at the community or population level. They have organized and participated in community health fairs, tuberculosis screening and treatment, and clinical trips to local jails and health departments. These community-based clinical experiences at all levels of nursing preparation are imperative to prepare future clinicians to provide exceptional care to patients, regardless of social circumstance. As Hunt suggests, students’ experiences with diverse and underserved populations allow them to “observe firsthand the health-care issues facing those who live in poverty.” Ideally, it is this firsthand experience that would serve as a catalyst for nurses to remain committed to providing clinical services for the underserved populations and propel them to advocate for policies that support healthy communities for all people.

Addressing the 3Ds: an opportunity
The Campaign for Action is a collaborative effort supported by the Robert Wood Johnson Foundation and the American Association of Retired Persons designed to advance the recommendations of the landmark IOM report, “The Future of Nursing: Leading Change, Advancing Health.” The Campaign focuses on three pillars for action: advancing education transformation, removing barriers to practice and care, and nursing leadership. Cross-cutting strategies or threads that will be addressed in these pillars include inter-professional collaboration, diversity, and data. The work of the Campaign is facilitated by state action coalitions, which are composed of a nurse and non-nurse leader. Each state determines the specific area and strategies
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it will address, and the Campaign provides technical assistance and support.

While specific strategies to advance diversity were not explicit in the IOM report, the Campaign established a Diversity Steering Committee to advise the Campaign on diversity strategies and the development of a national diversity action plan, and to provide targeted technical assistance to state action coalitions. A central Campaign dashboard will track several diversity indicators. A central tenet of the Diversity Steering Committee is that increasing the diversity of the nursing workforce and faculty will narrow the health disparities gap. Further, diversity should be integrated as a central component of all initiatives: a focus on nursing with diversity, not nursing and diversity.

The Campaign for Action and the Diversity Steering Committee are building on a strong and diverse infrastructure that provides opportunities for collaboration among an array of diverse partners at the local and national level to address diversity and health disparities. There are numerous opportunities and support being afforded by the Campaign, including data monitoring, dissemination of best practices, and targeted action that can be leveraged to advance the 3Ds.

CONCLUSION

Health disparities, the lack of diversity in nursing, and continued discrimination are daunting issues. Despite a lack of significant progress, there are exemplars illustrative of many efforts by nurses and others to address SDH and health disparities. They provide hope and evidence of nursing’s ability and leadership potential to address these important issues.

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Increasing Racial/Ethnic Diversity in Nursing to Reduce Health Disparities and Achieve Health Equity

ABSTRACT

As nursing continues to advance health care in the 21st century, the current shift in demographics, coupled with the ongoing disparities in health care and health outcomes, will warrant our ongoing attention and action. As within all health professions, concerted efforts are needed to diversify the nation’s health-care workforce. The nursing profession in particular will be challenged to recruit and retain a culturally diverse workforce that mirrors the nation’s change in demographics. This increased need to enhance diversity in nursing is not new to the profession; however, the need to successfully address this issue has never been greater. This article discusses increasing the diversity in nursing and its importance in reducing health disparities. We highlight characteristics of successful recruitment and retention efforts targeting racial/ethnic minority nurses and conclude with recommendations to strengthen the development and evaluation of their contributions to eliminating health disparities.
The disparities in health care and health outcomes between majority and racial/ethnic minority and underserved populations are well documented.\textsuperscript{1,2} Multiple reports and other sources of evidence support the urgent need to reduce and, ultimately, eliminate health disparities. To illustrate, findings from the 2012 Agency for Healthcare Research and Quality’s “National Healthcare Disparities Report” showed that health-care quality and access for minority groups and low-income populations continues to lag behind other groups. Diabetes care, maternal and child health care, adverse events, cancer screening, and access to care are just a few examples in which persistent disparities exist for minority and low-income populations. While quality of care is slowly improving for some groups, quality measures of disparities related to age, race/ethnicity, and income are not improving.\textsuperscript{2}

\section*{SHIFT IN THE NATION’S DEMOGRAPHICS}

Demographic trends predict a rapid growth in racial/ethnic minority populations by 2060. The United States is projected to become a majority-minority nation for the first time in 2043. To illustrate, the Hispanic population is expected to more than double, increasing from 53.3 million in 2012 to 128.8 million in 2060. Notably, by the end of 2060, approximately one in three U.S. residents will be Hispanic, compared with one in six in 2012. The African American population will increase from 41.2 million in 2012 to 61.8 million in 2060, comprising 14.7\% of the population in 2060, compared with 13.1\% in 2012. The Asian population is expected to more than double, increasing from 15.9 million in 2012 to 34.4 million in 2060, an increase from 5.1\% of the population in 2012 to 8.2\% of the population in 2060. The number of American Indian and Alaska Native people will increase from 3.9 million to 6.3 million during this same time period, while the Native Hawaiian and other Pacific Islander population will more than double, from 706,000 to 1.4 million. Notable projections reveal that the number of people who identify as belonging to two or more races will triple from 7.5 million to 26.7 million during this same time period. The non-Hispanic population will reach its peak in 2024 at 199.6 million, compared with 157.8 million in 2012.\textsuperscript{3} This projected growth in minority populations, coupled with the growing disparities in health care and health outcomes, underscores the need to recruit and retain a diverse nursing workforce that mirrors the nation’s culturally diverse population.\textsuperscript{4}

\section*{DIVERSITY IN THE NURSING WORKFORCE}

Data from the initial findings of the 2008 National Survey of Registered Nurses showed that, as of March 2008, there were an estimated 3.0 million registered nurses (RNs) residing in the U.S. Of these RNs, approximately 84.8\% were employed in nursing positions. Noteworthy, 65.6\% of the U.S. population was non-Hispanic white, and 83.2\% of RNs were non-Hispanic white. Although the RN population is growing in diversity, minority nurses remain underrepresented. Findings show that nurses from minority backgrounds represent 16.8\% of the RN workforce. More specifically, in 2008, the RN population comprised 5.4\% African American, 3.6\% Hispanic, 5.8\% Asian/Native Hawaiian, 0.3\% American Indian/Alaska Native, and 1.7\% multiracial nurses.\textsuperscript{5}

Similar to the low percentages of racial/ethnic minority groups in the nursing workforce, the number of racial/ethnic minority individuals enrolled in nursing schools is suboptimal to meet the diversity needs of the future. However, some progress has been made. For example, in 2011, among nursing students from minority backgrounds, 26.8\% were enrolled in entry-level Bachelor of Science in Nursing programs, 26.1\% in master’s nursing programs, and 23.3\% in research-focused doctoral nursing programs. Also noteworthy is the shortage of men in schools of nursing. This group is also underrepresented in the nursing workforce.\textsuperscript{6}

Nurse leaders, leading national nursing organizations, and the Health Resources and Services Administration’s (HRSA’s) Division of Nursing, along with other stakeholders, have articulated the need for more diversity in nursing and are responding to this need by implementing and evaluating initiatives that focus on recruiting and retaining underrepresented minority groups in the nursing field. While a detailed discussion of these initiatives is beyond the scope of this article, select examples are presented.

In a recent review of the literature on recruiting and retaining underrepresented minority groups in undergraduate nursing programs, Dapremont evaluated seven peer-reviewed articles published from 2003 to 2010 and identified key characteristics for successful recruitment and retention. Factors such as providing academic and financial support, mentoring students, and working with community partners were all deemed important to the successful recruitment and retention of underrepresented minority groups in nursing. The availability of minority faculty to provide support, along with peer and social support, was deemed beneficial as well. Support prior to admission into a nursing program was viewed as very valuable, as was the ongoing support one receives during one’s academic progression.\textsuperscript{7}
Loftin and colleagues reported findings consistent with Dapremont in their integrative review of recruiting underrepresented minority groups into nursing. The authors concluded that, in addition to addressing the financial barriers for minority students, programs focused specifically on recruitment, retention, and graduation should address needs such as computer literacy, professional socialization, and supportive environments. Given that a considerable amount of focus has already been placed on successful students, these authors assert that efforts are needed to understand barriers to successful entry and graduation among students who are unsuccessful in nursing programs or who have left a nursing program. Others report similar factors for successful recruitment and retention, including tutoring by faculty and peers, counseling, and cultural competency training.

Efforts to diversify the nursing workforce should include a robust and measurable strategic plan for recruiting and retaining racial/ethnic minority individuals in nursing programs. For example, recognizing the need to enhance the diversity of its student population, one Midwestern college of nursing created and instituted a diversity strategic plan in response to its commitment to attract and support a diverse student nursing population. This strategic plan, titled The Diversity Pyramid, includes a three-pronged approach focused on securing and demonstrating organizational commitment, providing financial support to students in need, and targeting resources to meet the needs of a diverse student population, all of which include measurable objectives. The organizational commitment is reflected in the university’s overall strategic plan, complete with measurable diversity goals at the highest level of leadership, culminating at the faculty and staff level. All personnel in the organization are accountable for pursuing or attaining a diversity goal in their annual performance reviews. Admission criteria, policies, and procedures reflect the university’s commitment to ensuring a diverse student population. Individuals facing financial constraints have opportunities to apply for support through a number of grants, scholarships, and other financial set-asides. Finally, the recruitment and retention plan builds on strong partnerships with high schools, colleges, and professional organizations with diverse representation. Collectively, these efforts are beginning to show favorable results. Nursing leadership for this initiative emphasized the invaluable role of institutional commitment in ensuring successful recruitment and success in nursing programs.

Minority nurse faculty underrepresentation is yet another concern. Recent findings revealed that 12.6% of full-time nursing school faculty come from minority backgrounds, and approximately 6.2% are male. The limited number of minority nurse faculty to serve as role models and mentors creates an additional barrier to the successful recruitment and retention of underrepresented minority groups in nursing. The American Academy of Nursing, the American Association of Colleges of Nursing, Johnson & Johnson, the National League for Nursing, and HRSA’s Division of Nursing, among others, are actively working to alleviate this shortage by supporting minority nurse faculty scholarships, loan repayment programs, and ongoing professional development opportunities. Selected resources on this topic are included in the Figure.

Jacob and Sanchez support the urgent need to recruit and retain minority nursing faculty. Noting their experience in recruiting Hispanic nursing faculty through a HRSA-supported minority fellowship program, the authors reported that programs that facilitate minority faculty success are critical to the successful recruitment and retention of minority nursing faculty. The authors concluded that opportunities for faculty professional development should focus on program administration, leadership development, grant writing, and scientific writing for publication, all of which show promise for increasing the productivity and success of minority nursing faculty.

Figure. Selected resources devoted to enhancing diversity in nursing

- New Careers in Nursing scholarship program supported by the Robert Wood Johnson Foundation and the American Association of Colleges of Nursing http://www.newcareersinnursing.org
- Johnson & Johnson Campaign for Nursing’s Future/American Association of Colleges of Nursing Minority Nurse Faculty Scholars Program http://www.aacn.nche.edu/students/scholarships/minority
- MinorityNurse.com http://www.minoritynurse.com
- Association of Black Nursing Faculty, Inc. http://www.abnf.net
- National Association of Hispanic Nurses http://www.nahnet.org
- National Coalition of Ethnic Minority Nurse Associations http://www.ncemna.org
- U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions diversity grant programs http://bhpr.hrsa.gov/grants/diversity
THE ROLE OF NURSING WORKFORCE DIVERSITY IN REDUCING HEALTH DISPARITIES

There is an unspoken assumption that underlies nursing workforce diversity efforts—that increasing workforce diversity will lead to decreased health disparities among racial/ethnic minority populations. In fact, this assumption is embedded in the conceptual framework in which this supplement is grounded.14 Yet, while numerous authors have reported on the various strategies and outcomes related to enhancing workforce diversity, the contributions of minority nurses in eliminating health disparities are not well documented. One indication of minority nurses’ contributions to eliminating health disparities is reflected in the growing number of minority nurse scientists actively engaged in health disparities research. This increase can be attributed in part to the substantive grant opportunities made possible by the National Institute of Nursing Research (NINR).15 NINR has a long and dedicated history of advancing the health of all populations, with substantive investments devoted to promoting health equity and eliminating health disparities. These goals are being accomplished through a number of mechanisms that support research funding and career development.15–17

Racial/ethnic minority nurses have made great strides in advancing knowledge about health disparities and related interventions.18,19 Goeppinger and colleagues reported on building nursing research capacity to address health disparities targeting minority baccalaureate and graduate students.20 Similarly, Underwood and colleagues reported on the contributions of minority nurse scientists to addressing health disparities.19 However, more data and opportunities to link such research to reductions in health disparities are needed. Gillis et al. echoed this call for additional data by suggesting that there are limited data linking nursing workforce diversification to reductions in health disparities:

“In a time when the hallmark of best practice is predicated on the basis of evidence, we have not carefully examined the impact of diversity of nursing workforce. Instead of assuming the value, we would do well to systematically examine the impact of workforce diversity on patient outcomes and the healthcare delivery system.”4

The authors call for a systematic review examining the impact of nursing workforce diversity on outcomes of care within institutions and population health. Specifically, they suggest an agenda that will (1) determine whether a diverse nursing workforce distributes itself to care for minority populations, (2) determine whether nurse-patient concordance on race/ethnicity influences health-care outcomes, and (3) evaluate the role of diversity in trust and willingness to advocate. In addition to a systematic investigation on diversification and outcomes, Gillis and colleagues call for more funding to support nursing careers at the entry level, similar to the degree of funding for advanced practice nursing education. They propose that accrediting bodies assume responsibility for evaluating retention efforts and for any initiatives designed to facilitate student success. Finally, they underscore the value of HRSA programs that fund initiatives to diversify the nursing workforce.4

The underrepresentation of racial/ethnic minority nurses in influential leadership roles creates yet another concern with regard to eliminating health disparities. Racial/ethnic minority nurses should not bear the responsibility of addressing health disparities in isolation, or alone for that matter. However, a contemporary understanding of their positions and contributions in this regard is needed.

Minority nurses in influential leadership roles are more likely to be better positioned to directly influence resource allocation and the recruitment and retention of a diverse workforce, and shape organizational and national policies aimed at eliminating health disparities. Thus, preparing racial/ethnic minority individuals to assume greater leadership roles in reducing health disparities should remain a high priority. Given the urgent need to reduce health disparities, it seems logical that now is the time to take inventory of the roles and positions of racial/ethnic minority nurses. This type of inventory should include a current-day assessment of influential positions—within academia (e.g., deans and faculty), all levels of government (including the military), the health policy arena, societies and professional organizations, and nursing and healthcare organizations—along with descriptions of their contributions to eliminating health disparities. This assessment would build on similar findings provided by Schmieding in her inventory on minority nurse leadership. Schmieding captured the percentages and positions of minority nurses in leadership positions and called attention to the need for more minority nurses in influential leadership positions.21 Bessent and Fleming provided guidance for addressing the underrepresentation of minority nurses in leadership positions.22 Efforts to reduce health disparities will not be realized fully without successfully addressing the underrepresentation of minority nurse leaders in today’s health-care arena.

Bull and Miller suggest that greater emphasis is needed to design curricula that will strengthen doctoral
students’ knowledge of disparities and vulnerable populations. Their revised Doctor of Philosophy curriculum is designed to prepare doctoral nurse scholars across demographic backgrounds to assume leadership roles in reducing health disparities.23

The role of racial/ethnic minority nursing organizations in reducing health disparities also cannot be overemphasized. Racial/ethnic minority nursing organizations such as the National Black Nurses Association, the National Association of Hispanic Nurses, the Association of Black Nursing Faculty, the National Coalition of Ethnic Minority Nurse Associations (comprising the Asian American/Pacific Islander Nurses Association, National Alaska Native American Indian Nurses Association, National Association of Hispanic Nurses, National Black Nurses Association, and Philippine Nurses Association of America) have a long, rich, demonstrated commitment to reducing health disparities. These organizations have worked passionately to recruit and support underrepresented minority groups in nursing by providing mentoring, financial resources, ongoing professional development opportunities, and role modeling for racial/ethnic minority nurses. Eliminating health disparities is of highest concern for these organizations and their members. Their research agendas, professional development activities, community service programming, policy advocacy, and political activism all reflect their commitment to eliminating health disparities.

Minority nursing organizations have frequently collaborated with other stakeholders to achieve mutually determined diversity goals and are often called upon to sit on influential bodies and committees whose expressed mission is to enhance diversity and eliminate health disparities. Members of these organizations hold influential positions throughout the nation and have consistently mentored others in achieving higher levels of involvement in the health-care arenas.

**MOVING FORWARD**

The goal of eliminating health disparities and, ultimately, achieving health equity, will not be realized without the ongoing engagement of racial/ethnic minority nurses. Enhancing workforce diversity is needed at all levels—in nursing and in all health-care practice and research arenas. Responding to the need to enhance workforce diversity, we offer the following recommendations. These recommendations are not listed in any particular order and are not meant to be inclusive or restrictive. Rather, they are presented to stimulate more discussion on this topic and help create a plan for future action.

**Recommendations**

- Fund nurse-led efforts aimed at eliminating health disparities in academic, clinical, and community-based settings.
- Create and disseminate evaluation measures and metrics that assess the contributions of a diverse workforce toward eliminating health disparities.
- Establish stronger linkages between nursing practice and the social determinants of health in nursing education and clinical practice.
- Expand service-learning activities focused on reducing health disparities and achieving health equity in nursing programs at the graduate and undergraduate levels.
- Create special fellowships or additional training opportunities to support a concentration in health equity and health disparities for advanced practice nurses.
- Support more inter-professional centers of excellence with shared responsibilities and required opportunities for minority nurse leadership and involvement.
- Support a national repository to collect nurse-led activities and nurse-collaborative efforts devoted to eliminating health disparities and ensuring health equity.
- Intensify efforts to establish core competencies relative to reducing health disparities and achieving health equity for nursing’s involvement in the practice, education, and policy arena.

**CONCLUSION**

Moving forward, it is critically important to provide funding, as well as create and support policies, to ensure that we continue to enhance workforce diversity in the nursing profession. Ensuring workforce diversity and leadership development opportunities for racial/ethnic minority nurses must remain a high priority if we are to realize the goal of eliminating health disparities, and, ultimately, achieving health equity.

**REFERENCES**


The Health Resources and Services Administration Diversity Data Collection

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ABSTRACT

The Health Resources and Services Administration maintains a strong emphasis on increasing the diversity of the health-care workforce through its grant programs. Increasing the diversity of the workforce is important for reducing health disparities in the population caused by socioeconomic, geographic, and race/ethnicity factors because evidence suggests that minority health professionals are more likely to serve in areas with a high proportion of underrepresented racial and ethnic minority groups. The data show success in increasing the diversity of enrollees in five nursing programs.
The Health Resources and Services Administration (HRSA) aims to improve access to health care in numerous ways by providing national leadership in the development and distribution of a diverse, culturally competent health workforce that can adapt to the population’s changing health-care needs and offer the highest quality care. The evidence suggests that minority health professionals are more likely to serve in areas with a high proportion of underrepresented racial and ethnic minority groups. HRSA’s programs, aimed at increasing the diversity of the health workforce, contribute to reducing the health disparities in the population.1

In 2002, the Institute of Medicine (IOM) released the report, “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.”2 It was the first detailed, systematic examination of racial/ethnic disparities in health care, and made a series of recommendations on how to address them. The panel reviewed more than 100 studies that assessed variations in health-care delivery to racial and ethnic minority groups and found that those in minority groups who have preventable and treatable conditions, such as cardiovascular disease, diabetes, asthma, cancer, and human immunodeficiency virus/acquired immunodeficiency syndrome, have poorer health outcomes compared with white people. This report was the first published evidence to demonstrate that racial and ethnic disparities occurred not only in health, but also in the care delivered by health-care organizations and providers.

The topic received further attention in 2004, when the Sullivan Commission on Diversity in the Health-care Workforce was established to assess balance in the makeup of the health-care workforce in the United States. The Commission’s report, “Missing Persons: Minorities in the Health Professions,” concluded that the face of the U.S. health professions has not kept pace with the changing demographics of the U.S. population, stating “today’s physicians, nurses, and dentists have too little resemblance to the diverse populations they serve,” and called for changes to education in the health professions.3

In an attempt to understand the evidence supporting the link between the diversity of the health-care workforce and health disparities, HRSA reported the results of a literature search to examine the evidence addressing the contention that increased diversity in the health professions would lead to improved population health outcomes, ultimately reviewing 55 studies written between 1985 and 2005. The evidence from this review showed that underrepresented minority health professionals, particularly physicians, serve minority and other medical underserved populations disproportionately; that minority patients tend to receive better interpersonal care from practitioners of their own race or ethnicity, particularly in primary care and mental health settings; and that non-English-speaking patients experience better interpersonal care, greater medical comprehension, and greater likelihood of keeping follow-up appointments when they see a language-concordant practitioner, particularly in mental health.1

Because of this continuing concern about the link between health disparities and the composition of the health-care workforce, IOM asked the Agency for Healthcare Research and Quality to include a specific section on workforce data in its annual “National Healthcare Disparities Report.”4 For the last nine years, this report has summarized the health-care quality and access among various racial, ethnic, and income groups and other priority populations, such as residents of rural areas and people with disabilities. The report includes “State Snapshots” and state-specific health-care quality information, including strengths, weaknesses, and opportunities for improvement. The goal of the State Snapshots is to help state officials and their public and private-sector partners better understand health-care quality and disparities in their states. Previous reports have presented data on diversity among the physician, nursing, dental, pharmacy, physical therapy, occupational therapy, and speech-language pathology professions.

DEMOGRAPHICS

According to the U.S. Census Bureau, 97% of Americans report being of one race. Of those reporting being of one race, 72% report being white (n=223.6 million), 13% report being African American (n=38.8 million), 5% report being Asian (n=14.7 million), 0.9% report being American Indian/Alaska Native (n=2.9 million), 0.2% report being Other Pacific Islander (n=0.5 million), and another 6% of the population report other race (n=19.1 million). Hispanic ethnicity was claimed by 50.5 million or 16% of the U.S. population in 2010.5 The American Association of Colleges of Nursing (AACN) reported that, in 2012, students from minority backgrounds comprised 28% of students in its entry-level baccalaureate programs, 26.6% of master’s students, 24.7% of students in its research-focused doctoral programs, and 22.0% of practice-focused doctoral students.6 In terms of gender, men comprised 11.4% of students in baccalaureate programs, 9.9% of master’s students, 6.8% of research-focused doctoral students, and 9.4% of
practice-focused doctoral students. Additionally, 11.8% of full-time nursing school faculty come from minority backgrounds, and 5.1% are male. These data are improving for the nursing profession, according to results from HRSA’s 2008 National Sample Survey of Registered Nurses (NSSRN). Nurses from minority backgrounds represented 16.8% of the registered nurse workforce, up from 12.2% in the 2004 NSSRN. HRSA will no longer conduct the NSSRN but, through the National Center on Health Workforce Analysis, will compile and report information about the registered nursing and other health workforce professions through more timely analysis of public databases, such as the American Community Survey, and targeted periodic surveys. In addition, HRSA collects demographic data on all nurses who are supported by HRSA funding in schools of nursing across the country.

**HRSA PERFORMANCE DATA**

The improved data-collection efforts described previously are a deliberate new initiative for HRSA to measure the impact of its workforce development programs. Five nursing programs funded by HRSA—the Advanced Education Nurse Traineeship, the Advanced Nursing Education Expansion, the Nurse Anesthetist Traineeship, the Nurse Faculty Loan Program, and the Nursing Workforce Diversity program—were chosen for this analysis, with the intention of evaluating participant diversity. The Figure outlines the legislative purpose and goals of these programs. Each program provides funding to academic institutions, and the grantees (schools or other institutions) are required to report individual trainee-level data on those supported. The time frame for the analysis was the academic year 2011–2012.

As shown in Table 1, across all nursing programs, a clear majority (83.6%) of students were female. In terms of race and ethnicity across all nursing programs (Table 2), more than 33% of participants were from racial and ethnic minority backgrounds. The Nursing Workforce Diversity program reported the highest percentage of black/African American minority participants (39.0%), and the Nurse Faculty Loan Program reported the second highest percentage of black participants (16.9%). Generally, the participation level in these HRSA-sponsored nursing programs was the same or even higher than the national averages at schools of nursing, as reported to the AACN. Of particular note is the Nursing Workforce Diversity program, which aims to increase nursing education opportunities for individuals from disadvantaged backgrounds. The racial and ethnic minority composition of its participants was generally well above the reported national averages for comparable nursing programs.

Table 3 shows that more than one-third (34.4%) of participants were reported to come from a disadvantaged background. HRSA defines disadvantaged background as either an environment where it was not possible to obtain the prerequisite requirements to enroll in a health profession or nursing program or a family whose annual income was below a low-level threshold established by the U.S. Census Bureau. The Nursing Workforce Diversity program reported the highest rate of disadvantaged participants (88.6%). The Advanced Nursing Education Expansion program also reported a relatively large percentage of its students (24.7%) as having a disadvantaged background.
In addition to their workforce diversity contributions, the HRSA nursing programs contributed to the education and output of more than 18,000 primary care providers. Further, because the programs target individuals from economically disadvantaged backgrounds, they are most likely providing an education to people who might not otherwise afford it. As a result, HRSA nursing programs have helped several thousand individuals meet their professional potential; and because they are from disadvantaged communities, these individuals are most likely to return to them, thereby contributing to the health of the public by supporting efforts to diversify our health workforce by meeting the needs of an increasingly diverse population.

### IMPULATIONS FOR PUBLIC HEALTH

In addition to their workforce diversity contributions, the HRSA nursing programs contributed to the education and output of more than 18,000 primary care providers. Further, because the programs target individuals from economically disadvantaged backgrounds, they are most likely providing an education to people who might not otherwise afford it. As a result, HRSA nursing programs have helped several thousand individuals meet their professional potential; and because they are from disadvantaged communities, these individuals are most likely to return to them, thereby contributing to the health of the public by supporting efforts to diversify our health workforce by meeting the needs of an increasingly diverse population.

### Table 1. Gender of HRSA Division of Nursing workforce development program participants, academic year 2011–2012

<table>
<thead>
<tr>
<th>Program</th>
<th>Female (N)</th>
<th>Male (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Education Nurse Traineeship</td>
<td>7,842 (86.9)</td>
<td>1,184 (13.1)</td>
</tr>
<tr>
<td>Advanced Nursing Education Expansion</td>
<td>336 (91.1)</td>
<td>33 (8.9)</td>
</tr>
<tr>
<td>Nurse Anesthetist Traineeship</td>
<td>1,653 (64.8)</td>
<td>898 (35.2)</td>
</tr>
<tr>
<td>Nurse Faculty Loan Program</td>
<td>2,058 (92.4)</td>
<td>170 (7.6)</td>
</tr>
<tr>
<td>Nursing Workforce Diversity</td>
<td>3,310 (82.6)</td>
<td>696 (17.4)</td>
</tr>
<tr>
<td><strong>Total across all programs</strong></td>
<td>15,200 (83.6)</td>
<td>2,981 (16.4)</td>
</tr>
</tbody>
</table>

HRSA = Health Resources and Services Administration
<table>
<thead>
<tr>
<th>Program</th>
<th>Hispanic (all races) N (percent)</th>
<th>American Indian/Alaska Native N (percent)</th>
<th>Asian N (percent)</th>
<th>Black/African American N (percent)</th>
<th>Native Hawaiian/Other Pacific Islander N (percent)</th>
<th>White N (percent)</th>
<th>Multiracial N (percent)</th>
<th>Unknown N (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Education Nurse Traineeship</td>
<td>470 (5.2)</td>
<td>66 (0.7)</td>
<td>398 (4.4)</td>
<td>1,143 (12.7)</td>
<td>35 (0.4)</td>
<td>6,456 (71.5)</td>
<td>64 (0.7)</td>
<td>395 (4.4)</td>
</tr>
<tr>
<td>Advanced Nursing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Expansion</td>
<td>29 (7.9)</td>
<td>5 (1.4)</td>
<td>23 (6.2)</td>
<td>46 (12.5)</td>
<td>0 (0.0)</td>
<td>246 (66.7)</td>
<td>13 (3.5)</td>
<td>7 (1.9)</td>
</tr>
<tr>
<td>Nurse Anesthetist Traineeship</td>
<td>101 (4.0)</td>
<td>10 (0.4)</td>
<td>145 (5.7)</td>
<td>140 (5.5)</td>
<td>11 (0.4)</td>
<td>2,065 (80.9)</td>
<td>21 (0.8)</td>
<td>58 (2.3)</td>
</tr>
<tr>
<td>Nurse Faculty Loan Program</td>
<td>111 (5.0)</td>
<td>15 (0.7)</td>
<td>78 (3.5)</td>
<td>376 (16.9)</td>
<td>4 (0.2)</td>
<td>1,580 (70.9)</td>
<td>6 (0.3)</td>
<td>58 (2.6)</td>
</tr>
<tr>
<td>Nursing Workforce Diversity</td>
<td>732 (18.3)</td>
<td>139 (3.5)</td>
<td>214 (5.3)</td>
<td>1,561 (39.0)</td>
<td>7 (0.2)</td>
<td>1,044 (26.1)</td>
<td>75 (1.9)</td>
<td>234 (5.8)</td>
</tr>
<tr>
<td>Total across all programs</td>
<td>1,443 (7.9)</td>
<td>235 (1.3)</td>
<td>858 (4.7)</td>
<td>3,266 (18.0)</td>
<td>57 (0.3)</td>
<td>11,391 (62.7)</td>
<td>179 (1.0)</td>
<td>752 (4.1)</td>
</tr>
</tbody>
</table>

HRSA = Health Resources and Services Administration

*Some percentages do not total 100 due to rounding.
programs as a whole had higher percentages of minority enrollees compared with national workforce averages. The potential increase in health-care providers who are practicing in diverse, rural, and health-care-underserved areas contributes to the public’s health through direct provision of health-care services and by increasing comfort levels of future providers in these areas of critical need.

CONCLUSION

Although the nursing profession has made strides in recruiting and graduating nurses who more accurately mirror the diversity of the population, much more must be done before adequate minority representation becomes a reality. Further study of the impact of nursing workforce diversity on health disparities is also needed. Through programmatic and financial support, HRSA continues to increase nursing educational opportunities for individuals from diverse and disadvantaged backgrounds. HRSA’s enhanced data-collection and performance measurement and management efforts to assess the impact of programs designed to increase the diversity of the health-care workforce will continue as a priority and inform future policies in this critical national effort.

Table 3. Disadvantaged background status of HRSA Division of Nursing workforce development program participants, academic year 2011–2012

<table>
<thead>
<tr>
<th>Program</th>
<th>Participant from disadvantaged background</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (percent)</td>
</tr>
<tr>
<td>Advanced Education Nurse Traineeship</td>
<td>2,016 (22.3)</td>
</tr>
<tr>
<td>Advanced Nursing Education Expansion</td>
<td>91 (24.7)</td>
</tr>
<tr>
<td>Nurse Anesthetist Traineeship</td>
<td>300 (11.8)</td>
</tr>
<tr>
<td>Nurse Faculty Loan Program</td>
<td>304 (13.6)</td>
</tr>
<tr>
<td>Nursing Workforce Diversity</td>
<td>3,549 (88.6)</td>
</tr>
<tr>
<td>Total across all programs</td>
<td>6,260 (34.4)</td>
</tr>
</tbody>
</table>

HRSA = Health Resources and Services Administration

The views expressed in this article are those of the authors and do not necessarily represent the official policies of the U.S. Department of Health and Human Services or the Health Resources and Services Administration.

REFERENCES

Addressing Health and Health-Care Disparities: The Role of a Diverse Workforce and the Social Determinants of Health

Chazeman S. Jackson, PhD, MA
J. Nadine Gracia, MD, MSCE

ABSTRACT

Despite major advances in medicine and public health during the past few decades, disparities in health and health care persist. Racial/ethnic minority groups in the United States are at disproportionate risk of being uninsured, lacking access to care, and experiencing worse health outcomes from preventable and treatable conditions. As reducing these disparities has become a national priority, insight into the social determinants of health has become increasingly important. This article offers a rationale for increasing the diversity and cultural competency of the health and health-care workforce, and describes key strategies led by the U.S. Department of Health and Human Services’ Office of Minority Health to promote cultural competency in the health-care system and strengthen community-level approaches to improving health and health care for all.
The U.S. population faces many health challenges, including rising health-care costs, the need for a strong public health workforce, and persistent disparities among racial/ethnic minority groups and underserved populations. Despite major medical advances, critical threats to U.S. public health remain. In particular, the looming workforce shortages in medicine, nursing, laboratory sciences, and environmental health present serious threats to protecting the health of individuals, families, and communities, especially those who are most vulnerable and least able to help themselves.1 Compounding this issue, national data indicate that, compared with the general population, racial/ethnic minority populations have poorer health outcomes from preventable and treatable diseases, such as cardiovascular disease, cancer, asthma, and human immunodeficiency virus/acquired immunodeficiency syndrome than those in the majority.2,3 Additionally, there is a growing body of evidence documenting the differences in access to health care, the quality of care, and health measures, including life expectancy and infant mortality, among these groups.4,5 Public health experts ascertain that the social environment in which people live, learn, work, and play contributes to disparities and is among the most important determinants of health throughout the course of life.6 Increasingly, the idea that health is determined by factors outside the traditional health-care setting has become a recognized approach to improving public health and addressing health disparities.8 The social determinants of health (SDH)—including such factors as housing quality, access to healthy foods, and education—emphasize the importance of considering nonclinical conditions when providing quality care within the health-care system.9 Racial/ethnic minority groups experience adverse SDH and are also disproportionately represented among the uninsured. The Institute of Medicine report “Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care” showed that racial/ethnic disparities in health care do exist.10 Key recommendations from this landmark study described the need to increase the proportion of underrepresented minority groups in the health-care workforce, integrate cross-cultural education into health-care training, and advance research efforts to identify sources of disparities and promising interventions.

Reflecting the national recognition and importance of workforce diversity and SDH in the reduction of racial/ethnic disparities, the U.S. Department of Health and Human Services (HHS) launched the HHS Action Plan to Reduce Racial and Ethnic Health Disparities (hereafter, HHS Disparities Action Plan),11 the most comprehensive federal commitment to date to reduce health disparities, which builds on the foundation of the Patient Protection and Affordable Care Act.12 The HHS Disparities Action Plan advances five major goals: (1) transforming health care; (2) strengthening the infrastructure and workforce of the nation’s health and human services; (3) advancing the health, safety, and well-being of the American people; (4) advancing scientific knowledge and innovation; and (5) increasing the efficiency, transparency, and accountability of HHS programs.

Strengthening the nation’s health by improving the diversity of the health and human services workforce calls for a multipronged approach that adopts an understanding of SDH, applies community-level engagement as a core principle, and emphasizes cultural and linguistic competency in health and health care. Considering this approach, this article highlights two of several HHS Office of Minority Health strategies that align with the HHS Disparities Action Plan, bridging workforce diversity and SDH to address disparity reduction efforts: (1) prioritizing cultural competence of health-care providers and systems to better serve patients with diverse cultural, social, and linguistic backgrounds; and (2) supporting initiatives that increase diversity within the workforce and promote community-based models to improve access to and quality of health care for all.

PROMOTING CULTURAL COMPETENCY TRAINING: A SAMPLE CASE
As the U.S. population becomes more diverse, pursuing the goal of cultural competence in the workforce and health-care system emerges as a leading strategy in reducing disparities.13 Cultural competency, defined as the ability of health-care providers to function effectively in the context of cultural differences, has been shown to improve the quality of health care received by racial/ethnic minority groups.14 For example, a culturally competent approach establishes ways to address communication barriers with people of limited English proficiency or low health literacy. Racial/ethnic diversity in the health-care workforce, a type of organizational cultural competence,15 has also been well correlated with the delivery of quality care to minority populations. Increasing underrepresented groups within the health-care workforce supports the diversity of values and beliefs of the entire population and heightens cultural awareness in health-care service delivery.

Strengthening the nation’s workforce by improving cultural competency and increasing diversity is an
important part of the HHS Disparities Action Plan. Education, training, and development of the workforce—including both professionals and lay community health workers—are essential in meeting the health and service needs of communities of color. U.S. government agencies, academic institutions, and private organizations provide the educational resources and disseminate information to enable health-care providers to acquire and apply cultural competency skills for the benefit of the patients and communities they serve.

In addition, the HHS Office of Minority Health developed Think Cultural Health, a resource center that offers users the ability to earn continuing education credits in cultural competency through online training. Think Cultural Health was designed as a resource to improve quality of care through cultural and linguistic competencies and provides continuing education programs accredited for a variety of health-care providers (Figure). Model programs included on the Think Cultural Health website provide education and training, using case studies, pre- and posttests, and self-assessment exercises. The programs embed the principles outlined in the National Standards for Culturally and Linguistically Appropriate Services in Health Care (hereafter, CLAS Standards).

For example, Culturally Competent Nursing Modules (CCNM) is one of the model programs that health-care providers, such as nurses and social workers, are using through Think Cultural Health (Table). The CCNM training curricula enables providers to improve self-awareness and adopt best practices when navigating the cultural attitudes, beliefs, and behaviors that influence the care and services they deliver. Through case studies that highlight potential cross-cultural scenarios in their day-to-day practices, the program emphasizes cultural and linguistic competency at every point of contact. Using the CLAS Standards as a framework, the modules also offer an overview of guidelines for providing language-access services in health-care settings and promoting strategies for integrating cultural competence into health-care organizations. This resource is one example of emerging tools available to help the health-care workforce develop the skills and knowledge necessary for providing services to an increasingly diverse nation.

### HHS PROMOTORES DE SALUD INITIATIVE: A COMMUNITY HEALTH WORKFORCE MODEL

A growing number of evidence-based initiatives apply community-level approaches to improve health and health care and reduce health disparities. The Promotores de Salud initiative, led by the HHS Office of Minority Health, promotes the increased engagement of promotores de salud (also known as community health workers) in health education, outreach, and access to health care for racial/ethnic populations and their communities. These promotores de salud are defined as “volunteer community members and paid frontline public health workers who are trusted members of communities.”

**Figure. Think Cultural Health programs and resources: U.S. Department of Health and Human Services, Office of Minority Health**

<table>
<thead>
<tr>
<th>TCH program</th>
<th>Resources</th>
</tr>
</thead>
</table>

TCH = Think Cultural Health
and/or have an unusually close understanding of the community served.” Community health workers are identified as trusted community members who can provide the needed support to address SDH at the community level. Evidence of the promotores model has shown improvement in health-care access and outcomes and enhancement in quality of life for people in poor, underserved, and minority communities.10–21 Bringing together multiple partners, including federal, community, and advocacy organizations, the initiative is poised to expand the use of promotores and community health workers as an integral part of the workforce to promote health education, prevention, and other targeted efforts for populations experiencing health disparities. The initiative includes a National Promotores de Salud Steering Committee and supporting and linking promotores networks across the nation. The HHS Promotores de Salud initiative recognizes the role promotores and community health workers play in identifying and developing solutions to the health challenges faced by minority communities.

CONCLUSION

The unprecedented strain on health-care resources demands a coordinated national response to improving the health of all Americans. Progress toward reducing health disparities will involve support for community-based strategies, enhanced the understanding of SDH, and increased diversity of the health-care workforce. Examples of this recognition on the national level are evident with initiatives such as Healthy People 2020,3 the National Prevention Strategy,22 and the National Partnership for Action to End Health Disparities.23 The coordinated efforts to address disparities take into account strategies and actions that build on community infrastructure and an increasingly diverse and culturally competent workforce. It is with these types of investments that our nation will achieve the vision of “a nation free of health and health-care disparities.”

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REFERENCES


Federal Investments to Eliminate Racial/Ethnic Health-Care Disparities

ABSTRACT

Health care is an important lever for moderating the effects of social determinants on health. We present a model that describes the relationships among social disadvantage, health-care disparities, and health disparities. Improving access to health care and enhancing patient-provider interaction are critical pathways for reducing disparities. Increasing the diversity of the public health and health-care workforces is an efficient strategy for reducing disparities because it impacts both access to care and patient-provider communication. Federal policy makers should continue interest in workforce diversity to optimize the health of all Americans.
Health disparities are a serious problem for our nation. Health should be achievable by the vast majority of Americans rather than distributed based on one’s race/ethnicity, and socioeconomic status. The annual costs of health disparities are measured in hundreds of billions of dollars. Ensuring that all Americans, including those born into social and economic disadvantage, lead healthy lives is a priority of the U.S. Department of Health and Human Services (HHS).

To combat health disparities and move the nation toward health equity, the National Partnership for Action to End Health Disparities was established, with the goal of developing a nationwide, comprehensive plan. The Partnership developed the National Stakeholder Strategy for Achieving Health Equity (hereafter, Stakeholder Strategy), which calls for increasing awareness of health disparities, strengthening leadership to address disparities, improving health outcomes for underserved populations, improving cultural and linguistic competency and diversity of the health-care workforce, and improving data and research on disparities. The HHS Action Plan to Reduce Racial and Ethnic Health Disparities (hereafter, HHS Disparities Action Plan) complements the Stakeholder Strategy and identifies goals, strategies, and actions (Figure 1) for HHS to undertake to achieve “a nation free of disparities in health and health care.” These goals provide the framework for federal investments in initiatives to eliminate health disparities.

Health derives from a variety of factors, including genes and biology, health behaviors, the social environment, the physical environment, and health care. The estimated influence of health care on the health of a population is relatively modest, accounting for only one-fifth relative to the other determinants. However, health care can interact with other determinants to improve population health. For example, preventive care can support healthy lifestyles and attenuate some of the risks of unhealthy genes, while health counseling can help patients avoid dangers in the physical and social environments. Reflecting these influences, two of the five goals of the HHS Disparities Action Plan depend upon the health-care system—transforming health care and strengthening the nation’s health-care workforce.

This article focuses on federal efforts to reduce health disparities by improving health care. We present a model that examines the relationship among social determinants of health (SDH), health disparities, and health-care disparities. We discuss the unique role of workforce diversity in attenuating the effects of social disadvantage on health and health-care disparities.

**SDH AND HEALTH DISPARITIES**

A conceptual framework illustrates how disparities in health care relate to SDH and disparities in health. SDH have a direct effect on health disparities and

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**Figure 1. Goals and strategies of the HHS Action Plan to Reduce Racial and Ethnic Health Disparities**

<table>
<thead>
<tr>
<th>Goal</th>
<th>Strategies</th>
</tr>
</thead>
</table>
| Transform health care. | • Reduce disparities in health insurance coverage and access to care.  
| | • Reduce disparities in access to primary care services and care coordination.  
| | • Reduce disparities in quality of health care.  |
| Strengthen the nation’s health and human services infrastructure and workforce. | • Increase the ability of all health professions and the health-care system to identify and address racial/ethnic health disparities.  
| | • Promote the use of community health workers and promotores de salud.  
| | • Increase the diversity of the health-care and public health workforces.  |
| Advance the health, safety, and well-being of the American people. | • Reduce disparities in population health by increasing the availability and effectiveness of community-based programs and policies.  
| | • Conduct and evaluate pilot tests of health disparity impact assessments of selected proposed national policies and programs.  |
| Advance scientific knowledge and innovation. | • Increase the availability and quality of data collected and reported on racial/ethnic minority populations.  
| | • Conduct and support research to inform disparities reduction initiatives.  |
| Increase efficiency, transparency, and accountability of HHS programs. | • Streamline grant administration for health disparities funding.  
| | • Monitor and evaluate implementation of the HHS Disparities Action Plan.  
| | • Conduct goal-level disparities monitoring and surveillance.  
| | • Evaluate programs at the strategy level.  
| | • Monitor programs at the action level.  |

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HHS = U.S. Department of Health and Human Services
inequities (Figure 2, A). This relationship has been well described elsewhere.²³

The availability of resources to support health at the family and community levels affects the length and quality of life. Families with limited financial resources cannot afford to purchase commodities needed to maintain health, such as healthy food and safe housing. When family members work long hours and multiple jobs to survive from paycheck to paycheck, time to exercise is scarce. Analogously, poor communities can only afford minimal investments in parks and playgrounds, clean water and sanitation, and police and fire departments that citizens need to be healthy. But it is not just about money. Families also need knowledge and discipline to adopt healthy lifestyles. Communities need social cohesion and trust to receive public health messages and to coordinate effective responses to public health threats. Inadequate knowledge, combined with inadequate financial resources, can generate distress in families and communities, which leads to stress-related illnesses such as high blood pressure, heart disease, anxiety, depression, and substance abuse.

In turn, health disparities have direct reciprocal effects on SDH. Families touched by premature death or chronic illness have less capacity to earn income and complete education. Moreover, communities with excess morbidity and mortality have diminished tax bases and human capital reserves. This connection between SDH and health disparities creates a cycle that perpetuates the combination of poverty, low education, and poor health.

**SDH AND HEALTH-CARE DISPARITIES: ACCESS TO CARE**

SDH have even stronger effects on disparities in health care (Figure 2, B). Access to health care is largely determined by family and community financial resources. Seemingly inexorable annual increases in health-care costs have made health insurance unaffordable for many Americans; poor families are the least likely to have health insurance coverage. When insured, even middle-income families have difficulty paying for deductibles, copayments, and uncovered services and medications. Likewise, poor communities, which often must use lower-quality health-care providers and facilities, have witnessed the closure of a disproportionate share of emergency departments. Again, knowledge resources are also critical. Understanding how to navigate complex health-care systems and how to coordinate services from multiple providers is challenging, especially for low-income and less educated patients whose health literacy is often limited. These patients must often rely on more knowledgeable family members and neighbors to receive necessary health care.

For 10 years, the Agency for Healthcare Research...
and Quality (AHRQ), through its work on the National Healthcare Quality and Disparities Reports, has tracked disparities in health care related to income, education, and insurance. We observe many disparities in measures of access to and quality of health care related to SDH. For example, while disparities related to race/ethnicity are common—affecting 25% to 42% of measures tracked in the reports—disparities related to income are even more prevalent, affecting more than half of the measures (Figure 3). Moreover, we observe little evidence that disparities related to SDH are getting smaller. Only about 10% of health-care disparities related to race/ethnicity or income have shown significant improvement in recent years (Figure 4).  

Because SDH have significant effects on health-care disparities by helping or hindering access to quality health care, reducing and removing barriers to care can effectively attenuate the impact of social determinants on health. The Patient Protection and Affordable Care Act of 2010 (hereafter, ACA) will greatly expand insurance coverage by encouraging employers to provide health insurance, giving credits to many uninsured families to help buy coverage through health insurance marketplaces, and expanding eligibility for Medicaid. Already, the ACA has reduced overall uninsured rates from 16.0% in 2010 to 15.1% in 2011 by allowing coverage, under their parents’ policies, of young adults aged 19–25 years, whose uninsured rates fell from 33.9% to 27.9%. The ACA also makes health care more affordable by reducing the cost of prescription drugs and making preventive services free to Medicare beneficiaries; limiting the overhead and profits of insurance companies; simplifying health insurance administration; and reducing waste, fraud, and abuse. We anticipate that, in the future, the annual National Healthcare Quality and Disparities Reports will document the ACA’s effects in improving access to care and reducing disparities related to SDH.

HEALTH-CARE DISPARITIES AND HEALTH DISPARITIES: PATIENT-PROVIDER COMMUNICATION

Gaining entry into the health-care system via enhanced insurance coverage does not ensure that all patients will derive equal benefit from health-care services. Disparities in the quality of specific health-care services received can lead to disparities in health (Figure 2, C). Of problems related to health-care quality, disadvantaged populations may be most vulnerable to deficiencies in patient-provider communications. Even a simple misunderstanding between a patient and a health-care provider can hamper medical care. Low-income and less educated patients may be reluctant to participate in dialogue and medical decision-making, which may lead to treatment recommendations that
clash with patients’ cultural beliefs or become difficult for patients to follow. Obviously, these communications can reduce efficacy and increase the risk of prescribed therapies. Unconscious bias may also lead providers to manage disease differently in patients with different backgrounds and lead unintentionally to suboptimal health outcomes.9

Fortunately, AHRQ and HHS have supported and performed extensive work to understand and improve patient-provider communication. While an AHRQ review of quality improvement interventions to address health disparities did not find sufficient evidence to conclude that such interventions are effective at reducing disparities, it did identify several promising approaches.10 Patient-provider communication was at the center of all of these strategies, which included collaborative care, targeted patient education, and improved language concordance.

Health literacy provides another perspective on patient-provider communication. An AHRQ review of health literacy interventions and outcomes highlighted the problem of misunderstanding between patients and providers leading to nonadherence with treatment recommendations.11 Among seniors, low health literacy was associated with a reduced ability to take medications appropriately, interpret labels, and understand health messages, as well as poorer health status and higher mortality. Health literacy interventions successfully improved health-care use and outcomes, including lower disease prevalence and severity, fewer emergency room visits, fewer hospitalizations, and greater self-management behavior and cancer screening.

AHRQ has developed tools to allow providers to assess and track patient-provider communication. The Consumer Assessment of Healthcare Providers and Systems program surveys patients to measure their perceptions of care and to advance patient-centered care. Responses capture the quality of patient-provider communication and overall ratings of care administered in a variety of clinical settings, including health plans, hospitals, dialysis centers, providers’ offices, and home health settings. Specific modules focus on issues related to cultural competency and health literacy. AHRQ has also supported the development of tools to quantify health literacy, such as the Rapid Estimate of Adult Literacy in Medicine—Short Form and the Short Assessment of Health Literacy for Spanish Adults.12

To improve patient-provider understanding, HHS developed the National Standards for Culturally and Linguistically Appropriate Services in health care (hereafter, CLAS Standards). The CLAS Standards outline language access services that must be provided by recipients of federal funds. Further, the CLAS Standards make recommendations for culturally competent

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**Figure 4. Number and proportion of measures of quality and access to health care tracked in the “2011 National Healthcare Disparities Report” for which disparities are improving, not changing, or worsening**

<table>
<thead>
<tr>
<th>Category</th>
<th>Improving</th>
<th>No change</th>
<th>Worsening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black vs. white</td>
<td>5</td>
<td>147</td>
<td>5</td>
</tr>
<tr>
<td>Asian vs. white</td>
<td>5</td>
<td>115</td>
<td>5</td>
</tr>
<tr>
<td>AI/AN vs. white</td>
<td>5</td>
<td>65</td>
<td>5</td>
</tr>
<tr>
<td>Hispanic vs. NHW</td>
<td>3</td>
<td>137</td>
<td>5</td>
</tr>
<tr>
<td>Poor vs. high income</td>
<td>9</td>
<td>80</td>
<td></td>
</tr>
</tbody>
</table>

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*n = number of measures; improving = disparity is getting smaller at a rate greater than 1% per year; no change = disparity is not changing or is changing at a rate less than 1% per year; worsening = disparity is getting larger at a rate greater than 1% per year

AI/AN = American Indian/Alaska Native
NHW = non-Hispanic white
care and organizational supports for cultural competence. To help managed care plans understand and meet these standards, AHRQ supported the development of two guides: Providing Oral Linguistic Services and Planning Culturally and Linguistically Appropriate Services. AHRQ has also supported work to identify cutting-edge state initiatives that improve access to language services in health care.

To improve patient-provider understanding by accommodating patients with limited health literacy, AHRQ has supported the development of several tools. The Health Literacy Universal Precautions Toolkit provides step-by-step guidance and tools for primary care practices to assess and improve communication with patients of all levels of health literacy. Because providers cannot always identify patients with limited health literacy, this toolkit helps practices build systems that promote better understanding for all patients, not just those believed to need extra assistance. The Pharmacy Health Literacy Center is a repository of tools to help pharmacies ensure that patients adequately understand their medications. It includes assessment tools, training programs for pharmacy staff, and guides for creating “pill cards” to help patients keep track of medications and for developing automated telephone systems to remind patients to refill medications on time. AHRQ has also supported the development of a guide for developers and purchasers of health information technology to ensure such technology can be used by patients with limited literacy.

Despite these efforts, problems with patient-provider communication persist. The “2011 National Healthcare Disparities Report” found that about 10% of adults report poor communication with their providers, and about 15% report that their usual provider sometimes or never solicited their involvement in making treatment decisions. Not surprisingly, disadvantaged populations are most affected. Among measures of patient-centeredness—including patient perceptions of care, involvement in decision-making, and ability to get language assistance—disparities related to income were observed (Figure 5).

**PATHWAY TO EQUITY: IMPROVING WORKFORCE DIVERSITY TO REDUCE DISPARITIES**

In our model, diversity of the health-care workforce is uniquely positioned to blunt health-care disparities and their effects on health disparities. As diversity in the U.S. population grows, increasing workforce diversity improves the likelihood that patients will find providers who speak their language and share their culture and values. In turn, improved patient-provider

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**Figure 5. Number and proportion of measures of patient-centeredness tracked in the “2011 National Healthcare Disparities Report” for which members of selected groups experienced better, same, or worse quality of care compared with reference group**

<table>
<thead>
<tr>
<th>Group Comparison</th>
<th>Better</th>
<th>Same</th>
<th>Worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black vs. white</td>
<td>7</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Asian vs. white</td>
<td>8</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>AI/AN vs. white</td>
<td>1</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Hispanic vs. NHW</td>
<td>10</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>


**n** = number of measures; better = population received better quality of care than reference group; same = population and reference group received about the same quality of care; worse = population received worse quality of care than reference group

AI/AN = American Indian/Alaska Native

NHW = non-Hispanic white
communication leads to better adherence to treatment recommendations and, ultimately, better health outcomes. Providers from diverse backgrounds, who are more likely to have observed prejudice in their own lives, may be more vigilant about preventing bias and more able to assist with the cross-cultural education of professional colleagues.

Workforce diversity also improves SDH that lead to health-care and health disparities. Minority health-care providers are often more willing to work in underserved communities and to provide care to low-income and minority patients.20 Health-care providers living in the communities they serve bring income and knowledge about health and health care into the daily life of the neighborhood. They serve as and advise community leaders to invest health-care resources prudently and to bring additional health-care resources into the community. When disputes arise, they serve as liaisons to bridge the gap in understanding between communities and health-care facilities.

Another way to improve understanding between communities and health-care providers is through community health workers.21 Community health worker interventions can improve knowledge of screening, prevention, and self-management, resulting in more appropriate utilization of services and significantly better outcomes—which have been demonstrated across a wide range of diseases and conditions, including asthma, diabetes, tuberculosis, and back pain.

The critical role of the health-care workforce in improving quality and reducing disparities is widely recognized in HHS. The National Strategy for Quality Improvement in Health Care,22 our nation’s strategic plan for achieving high-quality, affordable care for all Americans, identifies placing providers in workforce shortage areas and training health-care professionals in quality improvement and patient safety principles as essential elements for realizing its goals. Healthy People 2020 includes increasing the numbers of practicing primary care providers and training providers about cultural diversity as important objectives.23 Increasing the diversity of the health-care and public health workforces and promoting community health workers are key strategies of the HHS Disparities Action Plan.3

**TRACKING WORKFORCE DIVERSITY**

Unfortunately, America’s health-care workforce often fails to match the diversity of its population. Since 2006, the National Healthcare Quality and Disparities Reports have tracked the diversity of U.S. nurses, physicians, dental professionals, pharmacists, and physical, occupational, and speech therapists and found inequities in all health-care professions. For example, the 2010 nursing workforce did not mirror the U.S. population (Figure 6). Among advance practice nurses, including nurse anesthetists, nurse-midwives, and nurse practitioners, white people are overrepresented relative to the overall U.S. population, and racial/ethnic minority groups are underrepresented. Among registered nurses, white and Asian people are overrepresented, while other racial/ethnic minority groups are underrepresented. Among licensed practical and vocational nurses, black people are overrepresented, while other racial/ethnic minority groups are underrepresented. Among nursing aides, black people are overrepresented, and white, Asian, and Hispanic people are underrepresented. Thus, white people tend to dominate nursing positions that require higher levels of education and generate higher incomes, while black people are overrepresented in nursing positions with less education and income. This finding suggests that one approach to improving the nursing workforce diversity may be to retrain licensed practical nurses to become registered and advanced practice nurses. Other approaches to improving nursing workforce diversity are addressed in other articles in this supplement.24–26

Improving the diversity of the health services research workforce is equally important. AHRQ grants support the conduct of health services research and the training and development of health services researchers. Of principal investigators on health services research grant applications to AHRQ, about 5% are nurses. Overall, the health services research workforce lacks diversity. Among health services researchers, white and Asian people are overrepresented relative to the U.S. population, while black and Hispanic people are underrepresented.27 Improving the diversity of the health services research workforce has been identified as an important priority.28

AHRQ has funded programs aimed at diversifying the health services research workforce. The Minority Research Infrastructure and Support Program focused on building capacity at minority-serving institutions. The Building Research Infrastructure and Capacity Program focused on building infrastructure at institutions that did not traditionally receive AHRQ research grants. A Predoctoral Fellowship Awards for Minority Students program provided support for health-care-related research training leading to a Doctor of Philosophy or equivalent research degree to students from underrepresented racial/ethnic groups. Currently, AHRQ participates in the National Research Service Award program, which aims to diversify the research
workforce and encourages diversity among trainees. All funding opportunities encourage applications from minority-serving institutions and individuals.

**IMPLICATIONS FOR PUBLIC HEALTH AND HEALTH CARE**

In an ideal world, all children would be born into families with ample social and economic resources to support healthy development. They would grow up in surroundings devoid of toxins and threats. They would learn healthy behaviors by example from all adults around them and receive timely, high-quality health care when ill. Defective genes could be excised and replaced by genes for long, healthy lives.

In our world, behavioral counseling and medical care are deemed more malleable than the environment or DNA, so they are relied upon to compensate for deficiencies in these other determinants. Unfortunately, barriers prevent public health and health-care workers from leading more patients to better health. Problems with access to care delay patients from receiving care when disease is preventable until disease causes permanent damage to the body and treatment is often hazardous, costly, and less effective. Problems with patient-provider communication prevent patients from adopting healthy lifestyles and adhering to treatment recommendations.

Taxonomically, public health workers improve the health of populations by preventing disease, while health-care workers improve the health of individuals by treating illness and managing chronic conditions. In practice, new models of health-care delivery, such as accountable care organizations, hold providers responsible for populations of patients and share savings with them for keeping patient populations healthy. As health care has become unaffordable for many, public health organizations have developed the capacity to deliver needed care to individuals who would otherwise not receive it. Hence, problems with access to care and communication with patients affect public health and health-care workers alike. The uninsured are forced to seek care from those few providers that will see them, including public health departments and emergency rooms. Public health messages and health-care instructions fail when people do not understand the information, do not trust the source of the information, or lack the self-efficacy to act upon the information.

A more diverse public health and health-care workforce can protect against these problems. Minority public health and health-care workers may be more willing to serve in neighborhoods where barriers to care are prevalent and more adept at surmounting cultural and language barriers. Minority investigators are better positioned to engage disadvantaged communities in health services research. Efforts to improve workforce diversity, such as those described in this supplement, are key to overcoming health and health-care disparities.
and achieving health equity. Federal initiatives such as the HHS Disparities Action Plan and the ACA need to continue to spotlight the salience of workforce diversity for maximizing the health of all Americans. Organizations that recruit, educate, and hire public health and health-care workers need to reaffirm their commitment to supporting the diverse workforce that best serves society’s needs. Each year, the “National Healthcare Disparities Report” will track the success of these activities against disparities until this public health menace is eliminated.

The views expressed in this article are those of the authors and do not necessarily reflect those of the Agency for Healthcare Research and Quality or the U.S. Department of Health and Human Services.

REFERENCES

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

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.
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, Booker T. Washington, the National Negro Business League, 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. The data were compelling. 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. 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.

**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 focused 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. 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. The aforementioned racial/ethnic differences in health outcomes are now attributed largely to and further exacerbated by socioeconomic status. 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.

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. 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 and Healthy People 2020 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. Population health strategies and interventions allow for such investigation of individual and environmental effects simultaneously. This research agenda integrates the science across the life-span 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 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.” 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. 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. 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.

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. 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. 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.

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. Recently, the American Statistical Association held a meeting on developing distinctive survey methods for hard-to-reach populations. 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) 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. Likewise, the Shape Up Somerville project
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.

The views expressed in this article are those of the authors and do not necessarily represent those of the National Cancer Institute, the Health Resources and Services Administration, or the U.S. Department of Health and Human Services.

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