

NIH Centers of Excellence

National Center on Minority Health and Health Disparities Centers of Excellence Program

Overview

The National Center on Minority Health and Health Disparities (NCMHD) promotes the health of minorities as well as of other populations that experience health disparities and leads, coordinates, supports, and assesses NIH efforts to eliminate health disparities. To accomplish these goals, NCMHD:

- Conducts and supports basic, clinical, social sciences, and behavioral research
- Promotes research infrastructure and training
- Fosters emerging programs
- Disseminates information
- Reaches out to minority and other communities that experience health disparities

The Centers of Excellence program is one of several programs central to NCMHD's scientific investment strategy for addressing and ultimately eliminating health disparities.

Why the NCMHD Centers of Excellence Were Established

The NCMHD Centers of Excellence were mandated by Pub. L. No. 106-525, the Minority Health and Health Disparities Research and Education Act of 2000, which also established NCMHD. Solicitations for proposals for the NCMHD Centers of Excellence were first published in the NIH Guide in 2001, and the first awards were made in FY 2002. When the program was launched, it was referred to as the Centers of Excellence in Partnerships for Community Outreach, Research on Health Disparities and Training (Project EXPORT). With the FY 2007 re-competition, the program was renamed the NCMHD Centers of Excellence.

The NCMHD Centers of Excellence were established to develop novel programs across the country that would make significant advances and contributions in preventing, reducing, and ultimately eliminating health disparities in several priority diseases and conditions. The centers are helping to build the Nation's research capacity by establishing novel partnerships between different types of institutions—for example, Historically Black Colleges and Universities (HBCUs) and research-intensive institutions—and by engaging the efforts of community and faith-based organizations. The NCMHD centers provide opportunities to partner in the conduct of rigorous basic scientific research, human and animal subject-based research, and applied population and community-based research. The centers program also provides opportunities for increasing the pool of investigators from populations that experience health disparities through research training, faculty development, disseminating health information, and increasing the participation of these populations in clinical trials.

Since 2002, NCMHD has established a total of 88 centers of excellence located in 31 states, the District of

Columbia, Puerto Rico, and the U.S. Virgin Islands. The program began using three different funding mechanisms for Resource-Related Centers, Exploratory Centers, and Comprehensive Centers. The use of these different funding mechanisms has allowed NCMHD to help level the playing field among institutions with varying experience in biomedical research and to leverage the different skills and capabilities of the Nation's geographically and culturally diverse institutions. In FY 2007, 50 NCMHD Centers of Excellence were active (see Table 4-4). The Resource-Related Centers funding mechanism has been discontinued. The types of institutions are broad and include majority research institutions, medical schools, HBCUs, Hispanic-serving institutions, Tribal colleges, and liberal arts colleges.

How the NCMHD Centers of Excellence Function Within the NIH Framework

The NCMHD centers are managed in accordance with NIH policies and procedures for all funded research grants awarded through the R24, P20, and P60 mechanisms. Their progress is assessed annually, and updates are provided to the NCMHD Advisory Council. Like many other NIH Centers of Excellence that are supported through these mechanisms, a typical project period runs for 4-5 years. The project periods for NCMHD centers (P20s and P60s) that were established in 2002 and 2003 ended in 2007, and many of them recompleted in FY 2007.

Description of Disease or Condition

As described in various solicitations published in the *NIH Guide*, the NCMHD centers conduct research on the following priority diseases and conditions: cardiovascular disease, stroke (ischemic and intracerebral), cancer (all cancers, including breast, prostate, and cervical), diabetes, HIV/AIDS, infant mortality, mental health, and obesity (in men and women). In FY 2006, with the release of the new solicitations for the NCMHD centers program, research on lung disease, liver disease, psoriasis, scleroderma, and glomerular (kidney) injury was encouraged as a result of congressional interest and the fact that these diseases and conditions disproportionately affect racial and ethnic minorities but had not been widely studied.

Burden of Illness

Recent statistics on disparities for select diseases and conditions are provided in the following tables, which highlight the need for research on minority health and health disparities.

<i>Ischemic Stroke Death Rates</i>²⁰	
<i>Race/Ethnicity</i>	<i>Rate (per 100,000)</i>
White	73.7
African American	95.8
American Indian/Alaska Native	48.6
Asian/Pacific Islander	45.8
Hispanic	39.7

²⁰ [Ayala C, et al. Am J Epidemiol 2001;154:1057-63](#), PMID: 11724723

Intracerebral Stroke Death Rates ²¹	
Race/Ethnicity	Rate (per 100,000)
White	13.2
African American	22.5
Asian/Pacific Islander	20.1
American Indian/Alaska Native	10.4
Hispanic	12.0

Breast Cancer Death Rates by Race/Ethnicity ²²	
Race/Ethnicity	Rate (per 100,000 Women)
All Races	25.0
White	24.4
African American	33.5
Asian/Pacific Islander	12.6
American Indian/Alaska Native	17.1
Hispanic	15.8

Prostate Cancer Rates by Race/Ethnicity ²³	
Race/Ethnicity	Rate (per 100,000 Men)
All Races	26.7
White	24.6
African American	59.4
Asian/Pacific Islander	11.0
American Indian/Alaska Native	21.1
Hispanic	20.6

²¹ Ibid

²² Ibid. For more information, see http://seer.cancer.gov/statfacts/html/breast.html?statfacts_page=breast.html&x=16&y=16

²³ For more information, see http://seer.cancer.gov/statfacts/html/prost.html?statfacts_page=prost.html&x=18&y=17

Obesity in Men ²⁴	
Group	Percent
All	30.2
White	31.0
African American	31.2
Mexican	30.5

Obesity in Women ²⁵	
Group	Percent
All	34.0
White	31.5
African American	51.6
Mexican	40.3

Scope of NIH Activities: Research and Programmatic

The scope of activities at NCMHD centers includes the conduct of original and innovative basic, behavioral, clinical, or population-based research directed toward improving minority health, eliminating health disparities, or both. Support is provided for full-length research and pilot projects, research training, student and faculty development activities, and outreach and community engagement. Special emphasis has been placed on research addressing comorbidities within populations with health disparities.

NIH Funding for FY 2006 and FY 2007

NIH funding for the NCMHD Centers of Excellence Program was \$53.7 million in FY 2006 and \$59.9 million in FY 2007.

Outcomes: FY 2006 and FY 2007 Progress Report

Programmatic Accomplishments

Significant programmatic accomplishments include increases in the number of training programs for students and junior faculty; the number of partnerships between universities and colleges and communities with health disparities; the number of senior racial and ethnic minority investigators from major research institutions, HBCUs,

²⁴ For more information, see Table 73 at <http://www.cdc.gov/nchs/data/hus/hus06.pdf>

²⁵ Ibid

Hispanic-serving institutions, and Native American institutions engaged in minority health and health disparities research; and the number of individuals and community organizations from health disparity communities engaged in research. NCMHD Centers of Excellence have been successful in leveraging their NIH funding to attract new dollars from other government agencies and private foundations to support research on minority health and health disparities.

Research Accomplishments

Funding of the NCMHD centers has resulted in many research accomplishments. The centers conduct research on minority health and the biologic and nonbiologic factors contributing to health disparities. For example, a review by researchers at the University of California at Los Angeles Center for Research, Education and Training and Strategic Communication on Minority Health Disparities examined the role of discrimination on health and the causes of race-based disparities. Researchers at the University of Puerto Rico-Medical Sciences Campus, in partnership with the Cambridge Health Alliance—an NCMHD-funded partnership—have developed a new theoretical mechanistic model accounting for the asthma disparities observed in minority children, particularly within subgroups of Latino children. The researchers applied a modified Institute of Medicine model to explain asthma disparities as a complex interaction among four major factors: (1) the health care system, (2) the practices and beliefs of primary care providers, (3) patient-based individual variables (i.e., physical factors such as genetic factors and sociocultural factors such as beliefs and practices), and (4) external environmental factors. This model has been used to guide the development of the comprehensive, multilevel, community-based intervention program²⁶.

In addition to these and other published scientific articles, NCMHD centers are also making significant gains in their communities by increasing awareness of the existence of health disparities and of the need to increase efforts to improve minority health and eliminate health disparities. The examples below highlight some of these efforts. In particular, NCMHD centers are creating new health-related messages and disseminating them to their communities through radio, public and cable TV, newsletters, Web sites, and even YouTube. Some centers produce bilingual versions of all of their messages. Many innovative approaches are being undertaken. For example, one center has produced two plays testing the role of the arts in bringing about change in health behaviors. Other centers are using immersion experiences in urban settings as a means to develop cultural competency and increase awareness and understanding of health disparities issues.

Additional examples of research accomplishments include the following:

- Researchers at the New York University NCMHD EXPORT Center for the Study of Asian American Health and the NYC Asian American Hepatitis B Program reported that approximately 15 percent of Asians living in New York City are chronically infected with the hepatitis B virus. Between January 22 and June 30, 2005, they tested 1,836 individuals for hepatitis B virus through collaborating clinics. The prevalence rate of chronic hepatitis infection was higher for males than females, higher for persons ages 20-39 years than for those age 40 years and older, and higher for those individuals born in China than for those born in other Asian countries²⁷.
- The findings from a study conducted at the Mount Sinai NCMHD center show that the inferior survival of minority women with breast cancer is in part due to racial disparities in the use of adjuvant treatments for

²⁶ [Canino G, et al. *Soc Sci Med* 2006;63:2926-37, PMID: 16956704](#)

²⁷ For more information, see <http://www.ncbi.nlm.nih.gov/sites/entrez?Db=PubMed&Cmd=ShowDetailView&TermToSearch=16691180&>

early-stage breast cancer (underuse for minority women). Women referred to medical oncologists were less likely to experience underuse of necessary adjuvant treatments. However, women who were minorities, lacked insurance, and had higher levels of comorbidity were at greater risk for underuse. The researchers concluded: “Minority women with early-stage breast cancer have double the risk of white women for failing to receive necessary adjuvant treatments despite rates of oncologic consultation similar to those for white women. Oncology referrals are necessary to reduce treatment disparities but are not sufficient to ensure patients' receipt of efficacious adjuvant treatment.”²⁸

- A recent cross-sectional survey of a community-based random sample of 230 African American and Hispanic female heads of household living in a geographically defined area (the three urban public housing communities in Los Angeles County, CA) documents significant disparity in screening for cervical cancer among underserved minorities, particularly Hispanic, uninsured, and older women. The continuity of obtaining medical services and receiving from physicians remains the core factor significantly associated with obtaining cervical cancer screening. The results underscore the need for continued efforts to ensure that medically underserved minority women have access to cancer screening services²⁹.
- The Connecticut Center for Eliminating Health Disparities among Latinos, funded by NCMHD, is conducting a Diabetes Peer Counseling Study. Following are the specific aims of the study:
 - Develop a comprehensive, culturally tailored model of diabetes management that integrates the work of community-based peer counselors and clinical specialists into a multidisciplinary health care team in order to directly respond to factors limiting successful diabetes management identified through an intensive needs assessment conducted in the Hispanic community
 - Implement an intervention that provides education and support to Hispanic adults diagnosed with type 2 diabetes in clinical and home settings
 - Evaluate this intervention for its impact on program adherence and improved clinical, cognitive, and behavioral outcomes sustained over time
 - Modify the peer counseling service based on the evaluation and implement it as a best-practices model for diabetes management support of diabetic Hispanics

Recommendations for Improving the Effectiveness, Efficiency, and Outcomes of the NCMHD Centers of Excellence

The NCMHD Centers of Excellence have evolved and increased in number since they were first established in 2002. In 2004, NCMHD convened a meeting of center directors and grants management staff to network, learn more about NCMHD, and share common interests and challenges in health disparities research. From this meeting emerged a number of recommendations and ideas that either have been incorporated in the NCMHD Centers of Excellence RFAs or continue to guide NCMHD in developing future program components and activities for the centers.

To improve the effectiveness of the NCMHD centers, NCMHD decreased the required number of cores (discrete components that together make up a center) from four (research, administrative, training, and community engagement) to two (research and administrative) but allowed additional cores to be added with appropriate justification. To ensure research leadership and excellence, NCMHD required the development of full research

²⁸ [Bickell NA, J Clin Oncol 2006;24:1357-62](#), PMID: 16549830

²⁹ [Bazargan M, et al. Prev Med 2004;39:465-73](#), PMID: 15313085

projects, provided funding for pilot projects, required that the plan for selecting pilots be peer reviewed, and allowed for the solicitation of pilot projects from health disparity researchers at other institutions. To increase outcomes contributing to minority health or the elimination of health disparities, NCMHD encouraged a multidisciplinary approach to conducting research. This approach emphasizes research on the biological, behavioral, and social determinants of health across the lifespan and includes individual, family, and population studies on factors that are relevant to one, or more, disease or condition. Each NCMHD Center of Excellence is required to develop and maintain a Web site to assist in building collaborations and in disseminating findings and information to health disparity researchers and individuals from health disparity populations.

Evaluation Plans

The NCMHD Centers of Excellence will be evaluated biennially by NCMHD program and evaluation staff by examining the number and type of peer-reviewed publications, books and book chapters, and conferences and presentations on health disparities; community engagement, such as health fairs and other types of dissemination of health promotion materials; community participation in research and clinical trials (if applicable); and training of minority junior faculty, postdoctoral fellows, and graduate and undergraduate students.

Future Directions

Future directions of the NCMHD centers will focus on intensifying research efforts to reduce health disparities with an emphasis on increased partnerships, as described below.

Scientific Knowledge To Be Gained Through the NCMHD Centers

It is expected that new biomedical and behavioral knowledge will be discovered for improving minority health and for eliminating health disparities within and across the priority areas of cardiovascular disease, stroke, cancer, diabetes, HIV/AIDS, infant mortality, mental health, and obesity, as well as lung and liver diseases, psoriasis, scleroderma, and glomerular injury. An important area of emphasis is reducing comorbidities in populations that experience health disparities.

The national health program “Healthy People 2010” identified six critical determinants of health: biology, behaviors, social environment, physical environment, policies, and access to care. It is expected that research conducted at NCMHD Centers of Excellence will generate new knowledge about the interactions of significant biological factors with behavioral and social variables, how they affect each other, and how these interactions influence and contribute to minority health conditions and health disparities. This new knowledge is expected to lead to the development of biopsychosocial interventions and strategies for improving minority health and eliminating health disparities.

Possible Themes for Future Research

Themes for future research directions are the continuation of interdisciplinary minority health and health disparities research, including basic, clinical, and behavioral and social sciences research, to advance understanding of disease development and progression and the development of interventions for preventing or delaying the onset and progression of disease. Another theme is designing studies to improve approaches for disease prevention, diagnosis, and treatment. Researchers at the NCMHD centers also plan to study how disparities in health outcomes occur, including but not limited to behavioral and social factors; genetic variations; underlying biological factors; gender, ethnic, and familial factors; environmental exposures; and policy and social factors. The latter include, for example, exposure of children or adults to abuse, discrimination, or other potential stressors. These studies would seek to identify the biological underpinnings of differential responses to stressors and to therapies (e.g., for hypertension, diabetes, renal transplantation, depression) and the differential prevalence of

disease and comorbidities.

The success of future research conducted at NCMHD Centers of Excellence will depend in part on the development of improved methodological tools, measures, validated instruments, and novel research designs for disentangling the contribution to health disparities of biologic factors, behaviors, and social factors. Also important will be population-based studies for reducing the incidence and prevalence of health disparities among individuals living in different geographical regions of the United States, in particular, the Mississippi Delta, Appalachia, the U.S.-Mexico border region, and tribal communities. Also important will be studies to eliminate or decrease the impact of factors, including natural disasters, that contribute to the excess risks, morbidity, and mortality associated with living in such regions.