The NHLBI’s Health Disparities Efforts

Helena O. Mishoe, Ph.D., M.P.H.
NHLBI
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NHLBI Strategic Plan

Goal 1: Form to Function
To improve understanding of the molecular and physiological basis of health and disease and to use that understanding to develop improved approaches to disease diagnosis, treatment, and prevention.
NHLBI Strategic Plan

Goal 2: Function to Causes

To improve understanding of the clinical mechanisms of disease and thereby enable better prevention, diagnosis, and treatment.

Goal 3: Causes to Cures

To generate an improved understanding of the processes involved in translating research into practice and use that understanding to enable improvements in public health and to stimulate further scientific discovery.
NIH Director’s Research Opportunities

- High Throughput Technologies
- Translational Medicine
- Benefiting Health Care Reform: Comparative effectiveness research, Prevention and personalized medicine, Health disparities research, Pharmacogenomics, Health research economics
- Focus more on Global Health
- Reinvigorating and Empowering Biomedical Research Community
Scope of the NHLBI’s Responsibilities

Preventing, treating, and curing diseases of the

- Heart
- Lung
- Blood Vessels
- Blood

Ensuring safe blood resources
Combating sleep disorders
Prevalence of Hypertension
NHANES 1999-2000

Women

Men

Age: 18-29 30-39 40-49 50-59 60-74

Percent

- Non-Hispanic Black
- Non-Hispanic White
- Mexican American
Interventions to Improve Hypertension Control Rates in African Americans

RFA-HL-04-007  (Release Date: September 2, 2003)

Purpose: To evaluate clinically feasible interventions to effect changes in medical care delivery leading to an increase in the proportion of treated hypertensive African American patients whose blood pressure is controlled to levels specified by JNC guidelines.

The ultimate goal is to prevent complications of hypertension, and thus increase quality and years of healthy life in African Americans - a group with highest prevalence and earliest onset of hypertension, and disparately high premature cardiovascular mortality and morbidity.

5 applications funded in September 2004
Interventions to Improve Hypertension Control Rates in African Americans

Interventions tested in cluster-randomized, concurrently controlled, community-based trials

- multi-component, multi-level intervention involving life-style and medications in 990 patients treated in 30+ health care centers;
- multi-component internet-based home automated tele-management system targeting both patients and providers (50 clinics, 550 patients);
- multi-component organization-level intervention in community pharmacies targeting both patients and physicians (28 pharmacy sites, 600 patients)
Interventions to Improve Hypertension Control Rates in African Americans

Interventions tested in cluster-randomized, concurrently controlled, community-based trials

Continued

- Information, monitoring, and feedback for patients and physicians delivered by visiting nurses in home care settings (300 nurses, 850 patients)

- A diffusion of information theory-based intervention targeting provider treatment actions using uncertainty reduction tools, including 24-hour ambulatory BP monitoring, electronic bottle caps, and medication and life-style counseling (10 clinics, 700 patients)
Interventions to Improve Hypertension Control Rates in African Americans

Background and design papers published
Circulation: Cardiovascular Quality and Outcomes. May 2009

Results manuscripts in preparation
Jackson Heart Study

- Investigate the causes and means of prevention of CVD in African-Americans

- 6,500 African-Americans between the ages of 35 and 84

(continued)
Jackson Heart Study

- Largest study of CVD ever undertaken in an African-American population 6,500

- Partnership (NHLBI, NCMHD) and Jackson State University, Tougaloo College, and the University of Mississippi Medical Center
Strong Heart Study

Objective: investigate CVD and its risk factors
- Had a particular focus on the effects of diabetes on CVD and its risk factors for CVD

NHLBI initiated in 1988

Conducted in 13 American Indian Tribes

Major Finding: AIs are at lower risk of developing CVD compared to general population was wrong

Confirmed diabetes as a major risk factor for CVD
New Initiatives to address CVD Health Disparities

-A request for applications (RFA) sponsored jointly with the National Cancer Institute and the NIH Office of Behavioral and Social Science Research solicited grant applications for Centers for Population Health and Health Disparities.

-This program is designed to promote trans-disciplinary research on health inequities with the intent of developing interventions to improve health outcomes and quality of life in underprivileged segments of the population.

-The NHLBI intends to support 5 centers on cardiovascular diseases in California, Illinois, Maryland, Massachusetts, and North Carolina.
Challenge Grants: For the NHLBI challenge topic “Develop tools to detect early indicators of health disparities, and to test collaborative interventions to reduce differential health care or outcomes for heart, lung, and blood diseases” one award was made to conduct a randomized clinical trial of stress reduction for secondary prevention of coronary heart disease in African Americans in New York.

Grand Opportunities Grants: For the NHLBI topic area “Novel Methods of Measuring Health Disparities,” support was provided for three projects—in Massachusetts, Washington, and Wisconsin—to develop approaches to track disparities in cardiovascular disease risk factors and outcomes.
New Initiatives to address CVD Health Disparities

- An RFA titled “NHLBI Centers for Cardiovascular Outcomes Research” has solicited applications to establish centers that will conduct research focused on cardiovascular outcomes of health care and their determinants. The goal is to inform public policy and clinical practice. It is expected that projects funded via this solicitation will address health disparities.

- The NHLBI plans to award up to 3 centers in the fall of 2010.
THE red dress PIN
The national symbol for women and heart disease awareness

The Red Dress is the centerpiece of The Heart Truth, a national awareness campaign that warns women about heart disease and the need to take action against its risk factors.

For more information on how to reduce your risk, visit www.hearttruth.gov

Heart disease doesn’t care what you wear. It’s the #1 killer of American women.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute
Hispanic Community Health Study

Identify the prevalence of and risk factors for diseases, disorders, and conditions in Hispanic/Latino populations

Determine the role of acculturation and disparities in their presence and development

Study is broad based - includes CVD, asthma, COPD, sleep disorders, hearing impairments, diabetes, kidney and liver disease, and cognitive impairment
Hispanic Community Health Study

Field Centers
- San Diego
- Chicago
- New York
- Miami

Coordinating Center - UNC

Other Centers (NWU, U of MS medical center, Columbia, Case Western, U of MN, Wake Forest U, U of Wisconsin)
Opportunities for Primary Care Physicians

Explore geographic areas where primary care networks and other networks exist for exchange of information and potential collaborations.

Primary care networks consider conducting studies to improve implementation and adherence to relevant treatment guidelines.

Enhance the development of a clinical research workforce.
Increases in Life Expectancies of Patients with Sickle Cell Anemia

- Year 1900: Sickle cell disease identified
- 1910: National Sickle Cell Anemia Control Act passed
- 1920: Comprehensive Sickle Cell Centers established
- 1930: First statewide newborn screening program implemented
- 1940: PROPS results published
- 1950: MSH trial results published
- 1960: STOP results published
- 1970: Bone marrow transplantation shows promise

Life Expectancy (Years)

0 10 20 30 40 50 60 70 80


All Americans
Sickle Cell Anemia

Bone marrow transplantation shows promise
Overview of NHLBI CHW Initiative

- **Goal:** Increase the use of Community Health Workers (CHWs) in addressing cardiovascular health and asthma in low-income and high risk communities.

- **Objectives:**
  - Train and equip CHWs to conduct appropriate heart health/asthma education using cardiovascular health/asthma curricula and other heart health resources created by the National Heart, Lung and Blood Institute
  - Implement interventions to promote asthma/cardiovascular health by improving knowledge, attitudes and promoting lifestyle behavior change
  - Impetus to address health disparities:
    - Department of Health and Human Service
      - Healthy People 2010’s and 2020 goal of ‘eliminating health disparities’
    - NHLBI’s Strategic Plan on Health Disparities
      - Facilitate knowledge-sharing and collaboration with key stakeholder group
      - Reach out to people in high risk, low-income, and minority communities
Why CHWs?

- Studies show CHWs are effective in educating the community in many health issues including CVD and asthma.

- CHWs help decrease health care costs, increase access to adequate health care and health information, and strengthen the family, the community, and the local economy. ²

- Community-based interventions show positive effects on communities and on CHWs themselves. ³

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³ HRSA (2007) Community Health Worker National Workforce Study
CHW Training and Education Heart Health Curricula

- The curricula are designed for CHWs to promote heart healthy behaviors among Latinos, African Americans, American Indians and Alaska Natives and Filipinos.
CHW Programs: Implementation to Date

• Four primary domestic programs (SPSC, HGHH, WEHL, HHHF) and an international program adaptation of SPSC have:
  • Established strategic partnerships (at various levels)
  • Developed or adapted health education materials
  • Trained a cadre of CHWs
  • Implemented programs and utilized materials
  • Collected initial evaluation data
  • Utilize various implementation options
  • Expansion to Asthma/Latinos and CVD/Vietnamese
CHW Cardiovascular Health Resources

American Indian

Latino

Filipino

African American
Dr. Collin’s Opportunity #4: Encouraging a Greater Focus on Global Health

Feature Story: Millions Still Suffer From Leishmaniasis

Spread via the bite of a sandfly, infections by leishmania parasites bring disfigurement, disability, and death.
Office of Global Health (OGH)

Director for OGH: Arun Chockalingum, MD

NHLBI and UnitedHealth Collaborating Centers of Excellence: Public-Private Partnership

Global Alliance for Chronic Diseases: 8 Public Funders of Biomedical Research
NHLBI and UnitedHealth Collaborating Centers of Excellence

Legend:
- Center of Excellence Country
- Developed Country Partner
- Administrative Coordinator Partner

Kenya
Eldoret

U.S.-Mexico Border
Whittier Institute
University of Arizona
University of Texas
Tulane University
Argentina
Peru
Guatemala
China
India
Bangladesh
Bangalore
New Delhi
India
Tunisia
South Africa
National Public Health Institute of Helsinki
Westat
Duke University Emory University
Johns Hopkins University
Harvard Medical School
McMaster University

Map showing collaborations with various universities and institutions around the world.
Global Alliance for Chronic Disease

1\textsuperscript{st} collaboration of government research funding agencies to address the needs of chronic noncommunicable diseases

- Charter members – Australia, Canada, China, India, United Kingdom & United States
- New members – South Africa, Qatar
Global Alliance for Chronic Disease

Three priorities

- Hypertension
- Tobacco use
- Indoor air pollution cooking stoves