

Environmental Health Information Partnership

From TIOOP to EnHIP:

Evolution of Environmental Justice

March 14-15, 2011



Proceedings

**NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE**

**ENVIRONMENTAL HEALTH
INFORMATION PARTNERSHIP**

PROCEEDINGS

National Library of Medicine
Bethesda, Maryland
March 14-15, 2011

From TIOP to EnHIP: Evolution of Environmental Justice

Prepared for
Division of Specialized Information Services
National Library of Medicine

Prepared by
Health Promotion and Outreach Group
Oak Ridge Institute for Science and Education

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FEATURE NATIONAL LIBRARY OF MEDICINE 175TH ANNIVERSARY



By Dr. Donald A.B. Lindberg, M.D., Director,
National Library of Medicine

In 1836, the library of the U.S. Army Surgeon General consisted of a small collection of medical books on one shelf. Today, the National Library of Medicine (NLM) is the world's largest biomedical library. With some 14 million items in more than 150 languages, it is the worldwide leader in trusted medical and health information and innovation.

But this unique library is about much more than books. Every day it delivers trillions of bytes of data crucial to the lives of millions everywhere. NLM-designed databases and tools

lead people to helpful medical literature and health information; help researchers study genes and their role in disease; provide emergency responders with critical information on hazardous substances, and much, much more.

The Library is a leader in biomedical informatics, which is the use of computers and communications technology in biology, medicine, and health. NLM conducts and funds informatics research and trains future generations of scientists and information specialists. It plays an essential role in the



The first three buildings that housed the National Library of Medicine, beginning in 1836: (clockwise from top) the U.S. Army Surgeon General's Office, Ford's Theatre, and the Army Medical Library

All Photos: National Library of Medicine



development of electronic health records, health data standards, and the exchange of health information.

In this and coming issues, we will highlight some of NLM's most important contributions to its mission to acquire, organize, and disseminate biomedical information for the betterment of American—and global—human health.

Creating Information Resources for Researchers

Since the dawn of the computer age, some 50 years ago, NLM has been at the forefront, delivering specific, trusted information in timely, innovative ways. In 1971, for example, NLM created Medline, an online database of references to the biomedical literature. Completely free access to Medline began in 1997 through PubMed, a new access system.

Today, PubMed/Medline (<http://www.ncbi.nlm.nih.gov/pubmed/>) contains over 20 million references to articles published in more than 5,300 current biomedical journals from the U.S. and over 80 foreign countries. It is approaching one billion searches a year from users worldwide.

Much of the research and development at NLM is done at its Lister Hill National Center for Biomedical Communications (LHNCBC) and the National Center for Biotechnology Information (NCBI). NCBI is meeting the challenge of organizing, analyzing, and disseminating scientific research data with a suite of more than 40 integrated databases and software technologies that are enabling the genetic discoveries of the 21st century.

Lister Hill researchers use computer and communications technologies to improve the way information is organized, stored, retrieved, and preserved. One of its most well-used databases is ClinicalTrials.gov (www.clinicaltrials.gov), launched in 2000. ClinicalTrials.gov is the world's largest clinical trials database,

including registration data for nearly 100,000 clinical studies with sites in 174 countries. It recently has been expanded to include summary results and information about any adverse events.

Dozens of other NLM Web-based information resources also are available. For a list of all NLM resources, go to www.nlm.nih.gov/databases.

Serving the Public with Up-to-Date Information

Through consumer-friendly sites, such as MedlinePlus (www.medlineplus.gov) and NIHSeniorHealth (www.nihseniorhealth.gov), NLM provides timely, accurate, and understandable information to help patients, their families, and the public play a more active role in managing their health and health care.

MedlinePlus has over 700,000 Web visits every day from visitors in all but a handful of the world's 194 countries. In addition to covering more than 800 health topics, MedlinePlus offers interactive tutorials, medical dictionaries, a medical encyclopedia, directories of hospitals and providers, and the latest health news.

To reach the rapidly exploding mobile Internet audience around the world, NLM recently launched Mobile MedlinePlus (<http://m.medlineplus.gov>), in English and Spanish, which delivers the same high quality, trusted consumer health information to cell phones and other mobile devices.

www.medlineplus.gov Winter 2011 27

FEATURE NATIONAL LIBRARY OF MEDICINE 175TH ANNIVERSARY

Developing Electronic Health Records for 21st Century Medicine

For more than three decades, NLM has supported pioneering research on electronic health records, clinical decision-making support, and health information exchange. The Library produces, supports, and disseminates the key clinical terminology standards used in electronic health data. NLM has also recently released the

Within a week of the Haiti earthquake tragedy, NLM launched a Health Resources for Haiti Web page, with information in English and Haitian Creole. Working with libraries and American publishers, NLM made available free, full-text articles from hundreds of biomedical journals and reference books for medical teams responding to the disaster.

Going Beyond Bricks and Mortar

The NLM has many programs that fall outside the traditional role of a library as a repository of published works. For instance, in a 1990s project called The Visible Human, Lister Hill scientists built a library of digital images of the complete anatomy of a normal male and female. Almost 3,200 individuals and institutions in 61 countries have licensed the data for a wide range of educational, diagnostic, treatment planning, virtual reality, and industrial uses.

The Library maintains PubMedCentral, which provides free, unrestricted access to a Web-based bank of more than two million full-text articles from newly published material based on NIH-supported research projects, as well as from digitized older material previously available only in printed form.

NLM's historical resources form the basis for a continuing program of exhibitions that may be visited in person or online. Smaller, traveling exhibitions—on topics as diverse as Charles Darwin, Harry Potter, Frankenstein, and America's women physicians—tour throughout the United States thanks to partnerships with the American Library Association, the National Endowment for the Humanities, and others.

Poised for the Future

NLM's information services and research programs serve the nation and the world by supporting scientific discovery, clinical research, education, health care delivery, public health response, and the empowerment of people to improve personal health.

The Library is committed to the innovative use of computing and communications to enhance effective public access to understanding and discovery in human health.



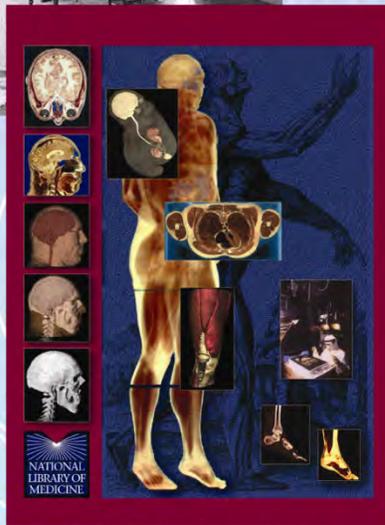
All Photos: National Library of Medicine

Library Hall on a quiet afternoon in the late 1880s, shortly after the Library was relocated from Ford's Theatre to the National Mall.

MedlinePlus Connect feature, to enable patients, hospital discharge nurses, or physicians to link directly from problems and medications in a patient's record to explanations of these same terms in MedlinePlus.

Assisting in Emergencies

When disasters strike, the Library moves swiftly to meet people's needs through its Disaster Information Management Research Center (DIMRC), which facilitates access to disaster information, promotes effective use of libraries and disaster information specialists for disaster management, and supports initiatives to ensure uninterrupted access to critical health information resources when disasters occur.



A poster of NLM's Visible Human Project, which created complete, anatomically detailed, three-dimensional representations of the normal male and female human bodies.

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**NATIONAL LIBRARY OF MEDICINE
ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP MEETING
Board of Regents Room
Mezzanine, Building 38
March 14-15, 2011
Henry Lewis, III, PharmD, Presiding**

AGENDA

MONDAY—MARCH 14, 2011

- | | |
|-------------------------|---|
| 8:15 a.m. – 8:45 a.m. | Registration and Continental Breakfast |
| 8:45 a.m. – 9:00 a.m. | Meeting Opening and Welcome
Henry Lewis, III, PharmD
Chairman, EnHIP |
| 9:00 a.m. – 9:10 a.m. | Remarks
Donald A.B. Lindberg, MD
Director, NLM |
| 9:10 a.m. – 9:20 a.m. | Introductions
Henry Lewis, III, PharmD
Chairman, EnHIP |
| 9:20 a.m. – 9:45 a.m. | From TIOP to EnHIP
Melvin L. Spann, PhD
NLM Associate Director (Retired) |
| 9:45 a.m. – 10:20 a.m. | Is It Nature or Nurture? A Bioethical Dilemma
Rueben C. Warren, DDS, MPH, DrPH, M.Div.
Director of the National Center for Bioethics in Research
and Health Care
Tuskegee University |
| 10:20 a.m. – 10:30 a.m. | Environmental Justice Discussion and Q&A
Facilitated by Judith Mazique, JD, MPH
Texas Southern University |
| 10:30 a.m. – 10:45 a.m. | BREAK |
| 10:45 a.m. – 11:30 a.m. | The Quest for Environmental Justice: Human Rights and
the Politics of Pollution
Robert D. Bullard, PhD
Environmental Justice Resource Center |

**NATIONAL LIBRARY OF MEDICINE
ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP MEETING**

**Board of Regents Room
Mezzanine, Building 38**

- 11:30 a.m. – 11:45 a.m. **Discussion Q&A**
Facilitated by Bailus Walker, PhD, and Melvin Spann, PhD
- 11:45 a.m. – 12:00 Noon **Video: *From TIOP to EnHIP***
- 12:00 Noon – 1:30 p.m. **Lunch: NN/LM Update**
Angela Ruffin, PhD
Head, NN/LM National Network Office
Library Operations, NLM
- 1:30 p.m. – 2:00 p.m. **EnHIP Group Picture**
Michael Spencer, Photographer, NIH
Lister Hill Lobby, Building 38-A
- 2:00 p.m. – 3:00 p.m. **Environmental Health and Toxicology: the Role of the
National Research Council**
James J. Reisa, PhD
Director Environmental Studies and Toxicology
National Research Council
Keck Center of the National Academies
- 3:00 p.m. – 3:15 p.m. BREAK
- 3:15 p.m. – 4:00 p.m. **Building Stronger Communities for Better Health: Moving
from Science to Policy and Practice**
Brian Smedley, PhD
Vice President and Director of Health Policy Institute
Joint Center for Political and Economic Studies
- 4:00 p.m. – 4:15 p.m. **Discussion and Q&A**
Facilitated by Bailus Walker, Jr., PhD
- 4:15 p.m. – 4:40 p.m. **Environmental Justice from a Native American Perspective**
Terrance (Terry) Williams
Tulalip Tribe – Natural Resources Program
- 4:40 p.m. – 4:45 p.m. **Memorial Tribute to Theodore (Ted) R. Bates**
Charter Member of TIOP and Representative of
Texas Southern University
Henry Lewis, III, PharmD
- 4:45 p.m. – 5:00 p.m. **Wrap-up and Day 2 Overview**
Henry Lewis, III, PharmD
- 6:00 p.m. – 8:00 p.m. **Evening Session at Hyatt Hotel**

**NATIONAL LIBRARY OF MEDICINE
ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP MEETING**

**Board of Regents Room
Mezzanine, Bldg. 38**

AGENDA

TUESDAY—MARCH 15, 2011

8:30 a.m. – 9:00 a.m.	Registration and Continental Breakfast
9:00 a.m. – 9:05 a.m.	Welcome and Introductions Henry Lewis, III, PharmD Chairman, EnHIP
9:05 a.m. – 9:30 a.m.	NLM Role in Haiti Steven Phillips, MD Associate Director, SIS National Library of Medicine
9:30 a.m. – 9:50 a.m.	Discussion and Q&A
9:50 a.m. – 10:00 a.m.	Discussion on EnHIP Outreach Awards Facilitated by Gale Dutcher, MS, MLS Deputy Associate Director, SIS
10:00 a.m. – 10:30 a.m.	EnHIP Outreach Awards Presentations <ul style="list-style-type: none">• Milton Morris, MPH, DAAS, CFSP, <i>Benedict College</i>• Patricia Matthews-Juarez, PhD, <i>Meharry Medical College</i>
10:30 a.m. – 10:45 a.m.	BREAK
10:45 a.m. – 11:35 a.m.	Continuation of EnHIP Outreach Awards Presentations <ul style="list-style-type: none">• Evonne Manybeads, <i>Diné College</i>• João Ferriera-Pinto, PhD, <i>UTEP</i>• T. Joan Robinson, PhD, <i>Morgan State University</i>
11:35 a.m. – 11:50 a.m.	Environmental Justice Summary Henry Lewis, III, PharmD
11:50 a.m. – 12:00 Noon	Closing Remarks Henry Lewis, III, PharmD

From TIOP to EnHIP: Evolution of Environmental Justice

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE**

**PROCEEDINGS OF THE ENVIRONMENTAL HEALTH
INFORMATION PARTNERSHIP (EnHIP) MEETING
March 14-15, 2011**

The Environmental Health Information Partnership (EnHIP) convened for its first session on March 14, 2011, at 8:15 a.m. in the National Library of Medicine (NLM) Board of Regents Room, National Institutes of Health, Bethesda, Maryland. The theme of the meeting was “From TIOP to EnHIP: Evolution of Environmental Justice”. The evening session meeting continued at 6:00 p.m. in the Ambassador/Diplomat Room, Hyatt Regency Bethesda Hotel. The evening keynote speaker, Dr. Milton Corn, Deputy Director, Research and Education, NLM, gave an overview of the 175th anniversary of NLM. Representatives convened again March 15, 2011, at 8:30 a.m. in the Board of Regents Room until adjournment at 12:00 p.m. Dr. Henry Lewis, III, President, Florida Memorial University, and EnHIP Chairman, presided.

ATTENDEES

Representatives from Participating Institutions

Dr. Raymond Anthony, University of Alaska Anchorage (Representative attending for Primary/Alternate)
Dr. Ann Barbre, Xavier University of Louisiana
Dr. Robert Copeland, Jr., Howard University College of Medicine
Dr. João Ferreira-Pinto, The University of Texas at El Paso (Alternate)
Dr. Diógenes Herreño-Sáenz, University of Puerto Rico Medical Sciences Campus
Dr. Doris Holeman, Tuskegee University
Dr. Henry Lewis, III, Florida Memorial University formerly with Florida A&M University
Ms. Benita Litson, Diné College (Alternate)
Dr. Judith Mazique, Texas Southern University
Dr. Arlene Montgomery, Hampton University
Dr. Milton Morris, Benedict College
Ms. Joan Nelson, Oglala Lakota College
Dr. Gail Orum-Alexander, Charles Drew University of Medicine and Science (Alternate)
Dr. T. Joan Robinson, Morgan State University
Dr. Jonathan Stiles, Morehouse School of Medicine (Alternate)
Dr. Michael Sullivan, California State University, Northridge (Alternate)
Dr. Cheryl Taylor, Southern University at Baton Rouge (Alternate)
Dr. Paul B. Tchounwou, Jackson State University
Dr. Daniel Wildcat, Haskell Indian Nations University
Dr. Doris Withers, Medgar Evers College

Consultants to the EnHIP

Dr. Melvin L. Spann, NLM, Retired (EnHIP Executive Secretary)
Dr. Bailus Walker, Jr., Howard University College of Medicine (Senior Scientific Advisor)

Speakers

Dr. Robert D. Bullard, Environmental Justice Resource Center, Clark Atlanta University
Dr. Milton Corn, Deputy Director of Research and Education, National Library of Medicine
Dr. Melissa Littlefield, Associate Professor, Morgan State University
Ms. Evonne Manybeads, Diné Environmental Institute, Diné College
Dr. James J. Reisa, National Research Council
Dr. Angela Ruffin, Library Operations, Head of NN/LM, National Library of Medicine
Dr. Brian D. Smedley, Health Policy Institute, Joint Center for Political and Economic Studies
Dr. Rueben C. Warren, Director of the National Center for Bioethics, Tuskegee University
Mr. Terrance (Terry) Williams, Tulalip Tribes, Natural Resources Program

Invited Guests

Mrs. Mary Lindberg
Dr. Ted Blakeney, National Institutes of Health (Retired)
Ms. Robin Hope, Contract Specialist, National Library of Medicine
Dr. Matthew Kinnard, National Institutes of Health (Retired)
Mr. Roy Lewis, Freelance Writer and Photographer
Mr. Dylan Raintree, Consultant, National Library of Medicine

NLM Staff

Dr. Donald A.B. Lindberg, Director, NLM
Ms. Betsy Humphreys, Deputy Director, NLM
Ms. Julia Royall, Office of the Director, NLM
Dr. Frederick Wood, Office of the Director, NLM
Dr. Steven Phillips, Division of Specialized Information Services, NLM
Ms. Gale Dutcher, Division of Specialized Information Services, NLM
Ms. Janice Kelly, Division of Specialized Information Services, NLM
Ms. Cynthia Gaines, Division of Specialized Information Services, NLM
Ms. Stacey Arnesen, Division of Specialized Information Services, NLM
Ms. Laura Bartlett, Division of Specialized Information Services, NLM
Mr. James Charuhas, Division of Specialized Information Services, NLM
Ms. Nicole Dancy, Division of Specialized Information Services, NLM
Ms. Judy Kramer, Division of Specialized Information Services, NLM
Ms. Cindy Love, Division of Specialized Information Services, NLM
Ms. Deborah Lockett-Jordan, Division of Specialized Information Services, NLM
Dr. Rob Logan, Office of the Director, NLM
Ms. Gale Lucase, Division of Specialized Information Services, NLM
Ms. Karen Matzkin, Division of Specialized Information Services, NLM
Ms. Jamie Peacock, Division of Specialized Information Services, NLM
Ms. Deena Pers, Division of Specialized Information Services, NLM
Ms. Rose White, Division of Specialized Information Services, NLM
Mr. David Nash, Office of the Director, NLM
Mr. George Franklin, Office of the Director, NLM

ORISE Staff

Ms. Rose Foster, Oak Ridge Institute for Science and Education
Ms. Linda Lange, Oak Ridge Institute for Science and Education
Ms. Romona (Mona) Carrasco, Oak Ridge Institute for Science and Education

I. Meeting Opening and Welcome

Dr. Henry Lewis, III, President, Florida Memorial University, and EnHIP Chairman, opened the meeting on March 15, 2011, at 8:15 a.m. in the National Library of Medicine (NLM) Board of Regents Room, National Institutes of Health, Bethesda, Maryland. Calling it a celebratory day, he noted the significance of the date. This very special meeting marked the 20th year of existence for EnHIP and its predecessors, and it coincided with the 175th year for NLM. Dr. Lewis recognized Dr. Donald A.B. Lindberg as chief architect of EnHIP and thanked him for his continued support.

Dr. Lewis thanked the EnHIP Executive Committee for its vision and leadership in selecting outstanding program speakers. The theme “From TIOP to EnHIP: Evolution of Environmental Justice” has been regarded as a very relevant topic in connection to NLM and EnHIP missions.

II. Remarks

Dr. Donald A.B. Lindberg, Director, National Library of Medicine, reviewed the Partnership’s beginnings and acknowledged its involvement and contributions in the fields of toxicology, environmental health, environmental justice, and emergency preparedness. He praised the wisdom shown in the expansion of EnHIP with the inclusion of Native American tribal colleges, Alaska Native-serving institutions, and Hispanic-serving institutions.

Dr. Lewis added to Dr. Lindberg’s remarks with praise for the vision and achievements of EnHIP members through the years. Dr. Lewis emphasized their role as connectors between NLM and their respective institutions. Furthermore, members carried knowledge and information to their communities for the greater good.

Dr. Lewis welcomed representatives and invited guests and asked all attendees to introduce themselves. He asked Dr. Melvin L. Spann, NLM (retired) and EnHIP Executive Secretary, to introduce a newscast video about a Texarkana, Texas, neighborhood located atop an Environmental Protection Agency (EPA) Superfund toxic waste site. With little action taken over the years, despite several studies showing serious health impacts, EPA was accused of “governmental foot-dragging” in addressing residents’ concerns. Residents called it “environmental racism.” After showing the video, Dr. Spann highlighted two decades of TIOP-EnHIP history.

III. From TIOP to EnHIP

Dr. Spann, former Associate Director (retired), described the evolution of EnHIP from a pilot project in 1991 to a partnership of 21 member institutions serving a nation. Members of the pilot project recognized the need for toxicology and environmental health information to be more readily accessible to health professionals serving minority and socioeconomically deprived communities.

Dr. Spann discussed articles written in the late 1980s and early 1990s in national publications. The articles exposed the disproportionate burden placed on poor, often black communities by toxic waste sites. Leaders at Historically Black Colleges and Universities (HBCUs) sought to help communities address these disparities by encouraging student involvement and linking students to useful information. In 1991 Dr. Spann initiated the Toxicology Information Outreach Panel (TIOP) project at NLM to strengthen the capacity of HBCUs to train medical and other health professionals in the use of toxicology, environmental, occupational, and hazardous waste information resources. Dr. Bailus Walker, Jr., served as the first chairman. Nine schools affiliated with the Association of Minority Health Professions Schools, the University of Arkansas at Pine Bluff, and representatives from pertinent government offices were involved in the pilot program. Its goals were to increase awareness and use of NLM files, provide instruction in the use of NLM resources, enhance usage of NLM resources, distribute information, and evaluate effectiveness of the program. Computer workstations were shipped to about nine schools, and training on accessing NLM databases began.

The scope of training and number of schools increased year by year. In 2004, the panel evolved from TIOP to Environmental Health Information Outreach Program (EnHIOP) to reflect a wider outreach program as more schools were added to the program in order to reflect more diversity in participating institutions. These goals included institutionalizing NLM resources, strengthening institutional partnerships with libraries and other information centers, strengthening and developing community-based and faith-based organizations to extend health-related outreach to communities surrounding participating institutions, and increasing participation within the schools through professional meetings, presentations, and panel discussions. As more institutions joined the program, a name change to Environmental Health Information Partnership (EnHIP) defined the program's true status as a partnership between NLM and leading educational institutions, serving a diverse population. The Partnership now reflects a broader focus on the multicultural dimensions of environmental health, environmental health sciences, and health disparities.

Dr. Lewis acknowledged Dr. Spann's 35 years of service at NLM and his role in founding TIOP and developing EnHIOP and EnHIP. He emphasized the magnitude of Dr. Spann's contributions. Dr. Lewis noted the continuing development of the Partnership, indicating it continues to grow bigger and better. It has broadened its breadth, depth, and outreach. Dr. Lewis indicated the pilot project's maturation has served many communities on different issues. Dr. Walker recognized the work of Ms. Rose Foster of Oak Ridge Institute for Science and Education (ORISE) for successfully conducting and managing the NLM database training for partner institutions for 20 years.

IV. Is It Nature or Nurture? A Bioethical Dilemma

Dr. Rueben C. Warren, Director, National Center for Bioethics in Research and Health Care and Professor of Bioethics, Tuskegee University, emphasized the interdependent relationship

between the environment and human health. From the beginning of his career, he has worked in the forefront of the environmental justice movement and has raised awareness of and found solutions for inequities on national and international levels. His fieldwork showed the adverse human health effects of toxins. African-Americans and Hispanics were four to five times more likely to live within a five-mile radius of a toxic or hazardous waste site. Many public schools serving minority populations were in close proximity to toxic and hazardous waste sites. “Nobody is free from risk; we are all vulnerable,” Dr. Warren said. “We have spent time and, in my view, too much time trying to answer the questions of nature or nurture instead of doing good for the most vulnerable and most susceptible among us. That, I believe, poses a bioethics dilemma.”

Practitioners in the fields of medicine and public health take different approaches to the sphere of bioethics. Dr. Warren explained the Authentic Culturecology Model of Dr. Lewis M. King and described its context in relation to environmental justice. The Authentic Culturecology Model asserts that the public health approach should move away from its emphasis on individuals, scientific rationalism, and knowledge gained from objects. The focus should be on the study of relationships.

According to Dr. Lewis M. King and Dr. Wade Nobles, there are four primary assumptions of an Authentic Culturecology Model. The first assumption is that public health is a cultural phenomenon. The second assumption is that bonds are the dimensions internal to culture. The third assumption is that there are four primary bonds: affinity bonds, obligation bonds, assurance bonds, and harmony bonds. The fourth assumption is that the essence of an event/phenomenon is not the phenomenon itself but its web of relationships.

The Authentic Culturecology Model framework promotes a continuous critique to validate the importance of cultural understanding in the promotion of health. Dr. Warren cited an article by Lawrence O. Gostin and Madison Powers (What Does Social Justice Require For The Public’s Health? Public Health Ethics And Policy Imperatives, *Health Affairs*, 25, no. 4 (2006) 1053-1060 doi: 10.1377/hlthaff.25.4.1053):

Justice is so central to the mission of public health that it has been described as the field’s core value. This account of justice stresses the fair distribution of common advantages and the sharing of common burdens. It captures the twin moral impulses that animate public health: to advance human well-being by improving health and to do so particularly by focusing on the needs of the most disadvantaged.

The ethical principle of utilitarianism—to provide the greatest good for the greatest number of people—also drives the public agenda. Another ethical principle that challenges public health is the existentialist view of free choice by every human being, regardless of how it impacts the whole of society. “I believe the right thinking is the ethics choice, and the right action is the justice choice,” stated Dr. Warren.

In his closing remarks, Dr. Warren addressed the impact of natural disasters on low-income communities. “Maybe we cannot prevent natural disasters, but surely we can prepare and protect the people we care about. I need to say loud and clear to those of you engaged in environmental justice: do not stop what you are doing. Do not even slow down. Do not stop until justice has been realized.”

Dr. Warren’s presentation was well received and led to an extended question-and-answer session facilitated by Dr. Walker and Dr. Spann. Dr. Warren was asked about genetics, environmental triggers, processed foods, and unequal distribution of poverty. Dr. Walker evoked the words of the late Minnesota Senator Hubert H. Humphrey, Jr.: “Poverty may never appear on a death certificate, but it is the leading cause of death.”

V. The Quest for Environmental Justice: Human Rights and the Politics of Pollution

Dr. Lewis introduced the next speaker as one of the most prominent leaders in the fight for environmental justice, saying that many consider Dr. Robert D. Bullard to be the Father of Environmental Justice. Dr. Bullard, Founding Director, Environmental Justice Resource Center, and Edmund Asa Ware Distinguished Professor of Sociology, Clark Atlanta University, has dedicated his life to the fight for environmental justice. He has documented many cases where environmental laws have been inconsistently applied so that people of color suffer disproportionately from public health hazards. He brings awareness to environmental justice issues and provides strategies for building community coalitions.

The environmental justice movement must progress with speed and dedication, according to Dr. Bullard who asked attendees to expand their definition of environment. To reference environment in terms of wilderness or wetlands is very Eurocentric. Dr. Bullard indicated that environment is where we live, work, play, learn, and worship as well as the physical and natural world. “Where you live can impact your health. Place does matter. One of the best predictors of a person’s health is zip code, neighborhood, or community,” he said. The poorest of the poor have the worst health and the most degraded environments.

Dr. Bullard said health is a state of complete physical, mental, and social well-being and not merely the absence of disease. Environmental justice embraces the principle that all people and communities are entitled to equal protection of environmental, health, employment, education, housing, transportation, and civil rights laws.

During the nearly 35 years of his professional career, Dr. Bullard has collected data to document environmental injustices. More than 100 studies link racism to poor health, and over 200 environmental studies have shown race and class disparities. In 1990, Dr. Bullard wrote *Dumping in Dixie: Race, Class, and Environmental Quality*, an early environmental justice book that was adopted by universities across the country as a textbook. In 1994 the Toxic Wastes and Race study found that people of color in the United States were 47% more likely to live near a hazardous waste facility than white people were. In 1996 a study by the Institute of Medicine of

the National Academy of Sciences confirmed that people of color and low-income communities were exposed to higher levels of pollution than the rest of the nation. In 2007 people of color were more concentrated in areas with commercial hazardous sites than in 1987.

By using Geographic Information Systems and computerized databases, incidences of poverty, disease, and environmental hazards are mapped to show disparities. Researchers can track, plot, and map the most vulnerable places. Seven of the ten unhealthiest states in the country are located in the South. Many of these same states also have high incidence of poverty, obesity, diabetes, and stroke.

In many places, poor neighborhoods face discrimination because retail and service businesses do not locate there. Residents live in “food deserts,” areas with no grocery stores and a proliferation of fast-food outlets and liquor stores. Unless they own a car or have public transportation, these residents do not have access to quality foods, particularly fresh fruits and vegetables. He cited statistics of six major cities regarding no car ownership among blacks: Pittsburgh, 48.6%; Baltimore, 44.4%; Washington, DC, 42.1%; St. Louis, 36.2%; New Orleans, 34.8%, Atlanta, 34.6%. People of color make up 60% of US transit riders; African-Americans are almost six times as likely as whites to use transit in their day-to-day lives.

Dr. Bullard emphasized people’s right to clean air. African-Americans are 79% more likely than whites to live in neighborhoods where industrial pollution is suspected of posing the greatest health danger. Asthma is one of the nation’s most common and costly diseases, affecting an estimated 20 million (1 in 15) Americans. Poor air quality in schools has been linked to higher absenteeism and increased respiratory ailments, lower teacher and staff productivity, lower student motivation, slower learning, lower test scores, increased medical costs, and lower lifelong achievement and earnings.

Dr. Bullard said Southern states are lagging behind in dealing with transportation issues and clean energy issues. “Instead of building roads and highways, let us put money in transit. Instead of building coal-fired power plants, let us put money in renewable, clean energy,” he said. Seventy-nine percent of blacks live within 30 miles of a coal-fired power plant versus 56% of whites.

The environmental justice movement started off dealing with toxic waste, but it has now expanded to deal with the full range of issues. It is not just the negative; it is also the benefits and how they will be shared. Dr. Bullard called for “smart growth,” defined as growth that is economically sound, environmentally friendly, and supportive of community livability.

VI. Discussion Q&A with Dr. Robert D. Bullard

Dr. Judith Mazique, Texas Southern University, praised Dr. Bullard’s groundbreaking efforts to call attention to Houston’s 50 Superfund sites. She led the members in a question-and-answer discussion. Dr. Bullard addressed questions about the placement of environmental justice studies

in the academic curriculum, getting students more involved in the politics of pollution, and the need for motivated leadership. Dr. Bullard said he follows the model of W.E.B. Du Bois, a scholar, writer, analyst, and, most importantly, an activist. Using this model is one way HBCUs can move from information sharing to becoming more actively involved with their communities.

At the end of the discussion, Dr. Lewis introduced the *From TIOP to EnHIP* video presentation of the Partnership's first 20 years. Following the presentation Dr. Lewis acknowledged the video production efforts of Mr. James Churuhas and Ms. Cynthia Gaines, SIS, NLM, and Ms. Rose Foster, ORISE.

VII. NN/LM Update

Dr. Angela Ruffin, Head, National Network of Libraries of Medicine (NN/LM) Office, Library Operations, NLM, gave an overview of NN/LM services and goals. The Network is made up of eight regional medical libraries, three national centers, 149 resource libraries, and 6,013 network members.

Goals include (1) developing collaborations with NN/LM libraries to improve access to and sharing of biomedical information resources throughout the nation; (2) promoting awareness and access to biomedical information resources for health professionals and the public; and (3) developing, promoting, and improving access to electronic health information resources by member libraries, health professionals, and organizations providing health information to the public.

Dr. Ruffin emphasized the contributions of NN/LM to the Healthy People 2010 goal of eliminating health disparities and its upcoming work with the Healthy People 2020 goals. Reaching special populations is a prime objective. Funding outreach projects to these populations is one important service offered by regional medical libraries. At this time, 212 projects with a minority focus have been funded.

Examples of projects were given to illustrate programs reaching diverse populations, including African-Americans, Hispanic Americans, Native Americans, Asian-Americans, Alaska Natives, Native Hawaiians, and Pacific Islanders. The Mass General Hospital project provided outreach to a largely Latino community in East Boston and two surrounding counties by aiding a health information center. An outreach project by George Washington University served the needs of Hispanic and Latino populations. An initiative with the University of North Dakota provided training and computer workstations to Native Americans. The Racial and Ethnic Approaches to Community Health Project in South Carolina engaged about 11,000 African-Americans on the subjects of diabetes, advocacy, and empowerment.

Dr. Ruffin urged attendees to seek NN/LM membership for their institutions and community-based organizations. Membership benefits include funding, access to training opportunities, health-related information, promotional materials, and interlibrary loan systems.

VIII. Environmental Health and Toxicology: The Role of the National Research Council

Dr. James J. Reisa, Director, Environmental Studies and Toxicology, U.S. National Research Council, National Academy of Sciences and National Academy of Engineering, shared ways in which activists for environmental justice can use the services and resources of the National Research Council.

Industry and commercial interests have enormous financial stakes in how environmental decisions are made and advocate heavily for favorable outcomes. “The National Research Council exists for one reason: It is all about truth. We do not deal with policy recommendations. We deal with trying to ascertain the facts that bear upon those future decisions,” said Dr. Reisa.

Dr. Reisa outlined the National Research Council’s thorough process that begins with selecting 15 or 20 internationally recognized subject matter experts. These nominations are scrutinized for any potential conflicts of interest or bias. The experts survey the facts, come to a consensus, and draft a report. Before the report is released to the public, it goes through a rigorous peer-review process, followed by a final review by an independent group. About 80–85% of study requests come from federal agencies; the remainder originate from state agencies or foundations.

Findings credited to the National Research Council have fostered changes in many areas, such as banning smoking on airplanes. The Council’s work has called attention to undesirable pesticides found in the diets of infants and children, effects of methylmercury on pregnant women, arsenic in drinking water, and complexities of toxicological risk assessment. The direction for the 21st century is to develop a framework and guidance for health impact assessments, a progression beyond environmental impact assessments. Dr. Reisa stated a need for an evaluation of the enormous cost to the United States of the adverse health impacts caused by ignoring environmental justice issues.

IX. Building Stronger Communities for Better Health: Moving from Science to Policy and Practice

Dr. Brian D. Smedley, Vice President and Director, Health Policy Institute, the Joint Center for Political and Economic Studies, addressed the unique role of the Joint Center, a think tank focused on the needs of African-American communities and other communities of color. The Health Policy Institute’s focus is on equitable opportunities for good health.

He reviewed research that concluded that patients of color, on average, received a lower quality of health care than white patients did, even when insurance status, health problems, and health providers were equal.

“In trying to advance an agenda for health equity, we face a number challenges. Certainly the first is that we expect that health inequities will get worse as a result of the economic downturn,” said Dr. Smedley. He indicated that race is a marker for a host of risk factors for poor health because of persistent social and economic inequality. The “individual determinist” orientation

remains predominant and obscures the importance of communities and community context. The importance of community context is not valued and understood in terms of shaping health behavior and direct risks for poor health.

Dr. Smedley outlined economic reasons why we need to address health inequities. In 2009, the Joint Center released a report, titled *The Economic Burden of Health Inequities in the United States*. It tabulated the direct medical costs associated with a higher burden of disease and disabilities among African-Americans, Asian-Americans, and Hispanic Americans. The report also estimated the indirect costs of health inequities and the costs of premature death. Research showed that eliminating health inequalities for minorities would have reduced direct medical care expenditures by \$229.4 billion for the four-year period, 2003–2006. The combined costs of health inequities and premature death (direct and indirect) were \$1.24 trillion. Dr. Smedley emphasized that, if we do nothing to address health inequities, not only is there a tremendous human and moral toll but also an economic cost that we pay in terms of direct medical costs and the costs to our economy.

Factors that contribute to racial and ethnic health disparities include the following:

- Socioeconomic position,
- Residential segregation and environmental living conditions,
- Occupational risks and exposures,
- Health risk and health-seeking behaviors,
- Differences in access to health care, and
- Differences in health care quality.

Neighborhoods have a powerful influence on health. Research shows that residential segregation determines much about racial and ethnic health inequities. Geographic barriers to health care exist in addition to financial and cultural barriers. Communities of color have fewer health care resources, such as primary care providers and specialists.

He mentioned the following negative effects of segregation on health and human development:

- Racial segregation concentrates poverty. It excludes and isolates communities of color from the mainstream resources needed for success: good schools, jobs, housing, and transportation.
- Segregation restricts socioeconomic opportunity by channeling nonwhites into neighborhoods with poorer public schools, fewer employment opportunities, and smaller returns on real estate.

- African-Americans are five times less likely than whites to live in census tracts with supermarkets, and African-Americans are more likely to live in communities with a high percentage of fast-food outlets, liquor stores, and convenience stores.
- African-American and Latino neighborhoods have fewer parks, green spaces, and recreation centers than white neighborhoods do.
- Low-income communities and communities of color are more likely to be exposed to environmental hazards.
- Residents of poor communities pay more for consumer products than residents in higher-income neighborhoods do.

Dr. Smedley called for multiple strategies across many sectors, sustained investment, and a long-term policy agenda. “Everybody’s health suffers when we have tremendous inequality as we do today, so we have to convey that our fates are intertwined,” he said.

To create healthier communities, we have to improve food and nutritional options and regulate the incidence of fast-food outlets and liquor stores. We have to institute health impact assessments to determine the public health consequences of any new housing, transportation, labor, and education policies. Dr. Smedley outlined place-based investments to improve the physical environments, such as better air quality and more open spaces, and the education opportunities, such as equalizing school funding and expanding preschool programs. Also, we need people-based investments, including housing mobility strategies, in order to allow people to move out of distressed communities and into communities with higher opportunities.

The Joint Center Place Matters Initiative addresses neighborhood conditions and their relationship to health. Teams help community leaders identify social determinants and health outcomes and use evidence-based data to engage policy makers and other key stakeholders to bring about improvements. “Our team members are volunteers. They are very committed to their communities and are working very hard to try to create social change. So, I have lots of reasons to be optimistic. The arc of history is long, but it always bends toward justice.”

X. Environmental Justice from a Native-American Perspective

Mr. Terrance (Terry) Williams, Commissioner, Fisheries and Natural Resources, Tulalip Tribes of Washington, gave background information about the ancient Native Americans of the Northwest. They were resourceful people in tune with their environment and in control of extensive, profitable trade routes along the Pacific Coast and inland to Montana. They were accomplished builders, fishermen, hunters, and artists. The arrival of Europeans and subsequent wars and diseases diminished the Native Americans’ way of life. The tribes lost their leadership, teachers, carvers, knowledge, and language. “We lost everything,” Mr. Williams lamented.

Speaking of his own upbringing, Mr. Williams recalled a life of poverty on the reservation and indicated change for the better came only after the Tulalip Tribes removed the Bureau of Indian Affairs from the reservation. In the more than 30 years since this decisive action, tribal leaders have regained some traditional ways. They have worked to revitalize their forests and streams. These natural elements are entwined in the tribes' cultural heritage.

As Mr. Williams traveled across the country and abroad, he had conversations with Native People to find ways to solve common problems. He realized their stories were the same. Laws were ineffective, and environments were exploited and ruined. "We know there is a lot of injustice in this country. We started getting motivated because we recognized the difference between where we are and where we should be. Somehow we need to get connected in a way where we do make a difference," Mr. Williams said. He urged people to do more than talk about problems. They need to take action to bring about positive change.

XI. Memorial Tribute to Dr. Theodore (Ted) R. Bates

Dr. Lewis acknowledged the contributions of Dr. Theodore (Ted) R. Bates, who passed away recently and was a charter member of the NLM Toxicology Information Outreach Panel (TIOP), 1991–1999, and the Environmental Health Information Outreach Program (EnHIOP), 2000–2005. Dr. Bates held academic appointments at the University of Connecticut, State University of New York at Buffalo, University of Pittsburgh, University of Houston, and Texas Southern University.

Dr. Lewis presented a memorial plaque to Texas Southern University on behalf of EnHIP as an acknowledgement of Dr. Bates' contributions to his institution, TIOP, EnHIOP, and NLM. It was accepted by Dr. Judith Mazique, EnHIP representative from Texas Southern University.

Below is a copy of the inscription on the plaque:

*In Memory of Dr. Theodore Bates
Distinguished Member of
The NLM Toxicology Information Outreach Panel 1991–1999
and Environmental Health Information Outreach Program 2000–2005
for contributions and special efforts to assist
the National Library of Medicine, Texas Southern University, and
HBCUs address health disparities and access health information.*

Dr. Richard Ochillo of Morgan State University also died recently. He was a member of the EnHIOP panel, 2006–2008. Dr. Lewis asked attendees to pause for a moment of silence in remembrance of these individuals and others who have previously served and passed.

XII. Wrap-up and Day 2 Overview

Dr. Lewis thanked guest speakers for their insightful presentations. He said more work remains to be done in the quest for environmental justice and it is up to members, their institutions, and communities to keep a constant commitment so that efforts are unwavering in the years to come. He gave an overview of the activities scheduled for March 15, 2011. He closed the afternoon session and invited everyone to attend the evening session at the Hyatt Regency Bethesda Hotel. The guest speaker for the evening session was Dr. Milton Corn, Deputy Director, Research and Education, NLM.

Evening Session at the Hyatt Regency Bethesda Hotel

XIII. Welcome and Introductions

The EnHIP Meeting on the evolution of environmental justice continued with an evening session, beginning March 14, 2011, at 6:00 p.m. at the Hyatt Regency Bethesda Hotel. Dr. Steven J. Phillips, Associate Director, NLM, Division of Specialized Information Services (SIS), welcomed attendees, guests, and speakers and urged them to use the wealth of information presented earlier in the day to seek environmental justice.

Dr. Henry Lewis, III, gave opening remarks and introduced Ms. Janice Kelly, newly appointed Chief, Outreach and Special Populations Branch, NLM, SIS. Ms. Kelly introduced the guest speaker, Dr. Milton Corn, Chairman, NLMs 175th Anniversary Steering Committee.

XIV. Overview of 175th Anniversary of NLM

Dr. Corn, Deputy Director, Research and Education, NLM, expressed gratitude about the opportunity to share highlights about the 175th anniversary of NLM. He gave many reasons to justify a celebration, noting the last 25 years were phenomenal as NLM embraced information technology. He introduced the video *175 Years: A Fantastic Voyage*, a review of the history of the august institution and the many services it offers.

Dr. Corn credited information technology with managing the enormous load of information and enabling the production of information. As an example, Dr. Corn mentioned genomics, a branch of biotechnology heavily reliant on information technology.

NLM databases supply the world with specialized information. PubMed® is the digital descendant of Lt. Col. John Shaw Billings' library of medical journals. NLM expanded its reach by serving the needs of consumers in addition to serving the medical profession. MedlinePlus® supplies jargon-free information to patients and their families. ClinicalTrials.gov gives everyone access to studies conducted on diseases or conditions. Dr. Corn predicted ClinicalTrials.gov will begin a new era in open information and research, and it will help researchers recruit for their studies.

The establishment of the Disaster Information Management Research Center and the National Center for Biotechnology Information proved the ability of NLM to respond aggressively to the nation's priority issues. NLM grant programs pioneered research in electronic medical records, and the institution promoted the Visible Human Project. Dr. Corn explained the Profiles in Science, a database highlighting the career accomplishments of 20th century leaders in biomedical research and public health. A speculative glance at the future showed the use of computer-generated artificial intelligence.

After highlighting the important milestones of NLM, Dr. Corn reviewed key 175th anniversary events involving government leaders, members of the scientific and medical communities, NLM staff, and the general public. The occasions would supply opportunities for showing appreciation for past support and building awareness in the larger community.

XV. Presentation of Award to Dr. Donald A.B. Lindberg, Director, National Library of Medicine

Dr. Lewis acknowledged Dr. Lindberg for his vision to promote information technology and his many years of service at NLM. He presented Dr. Lindberg with an award for his 20-year assistance to EnHIP efforts to address health disparities and keep environmental justice in the forefront. Dr. Lindberg thanked members for their support of NLM programs through their work with EnHIP.

Below is a copy of the inscription on the award:

In appreciation for long-standing efforts to assist the Environmental Health Information Partnership (EnHIP), HBCUs, Tribal Colleges and Hispanic Serving Institutions address health disparities.

XVI. Wrap-up of Day 1—Evening Session

Dr. Lewis thanked Dr. Corn for his thoughtful, informative presentation and closed the meeting at 8:30 p.m. to give attendees the opportunity to hold informal conversations about projects and programs at their respective schools.

Day 2

XVII. Welcome and Introductions

EnHIP reconvened March 15, 2011, at 8:30 a.m. in the NLM Board of Regents Room. Dr. Henry Lewis, III, presided. He welcomed attendees and invited them to introduce themselves for the benefit of those who were unable to attend the previous sessions.

XVIII. Haiti Recovery and Reconstruction: NLM Efforts and Collaborations

Dr. Lewis introduced Dr. Steven J. Phillips, Associate Director, NLM, Division of Specialized Information Services (SIS), who provided information about his recent trip to Haiti for meetings with the Minister of Health and other officials. He went to Haiti with representatives from the Pan American Health Organization (PAHO) to assess information collection, determine lessons learned, and learn about the sharing and management of information. The recovery efforts following the 2010 massive earthquake and subsequent cholera outbreak benefited from resources provided by the Disaster Information Management Research Center. Librarians were very proactive in gathering information and making it easily accessible.

NLM created a Web page containing information about Haiti and earthquakes. At the request of the U.S. Department of Health and Human Services, NLM created a “Health Resources for Haiti” widget to help others. As part of a partnership between the NLM NN/LM and journal publishers, free full-text articles from more than 200 journals were made available to medical teams responding to the earthquake. Multilanguage resources (French, Haitian Creole, and Spanish) were created for information exchange. In addition, The Lost Person Finder System of NLM was adapted for Haiti, thus enabling people to post pictures of lost and found earthquake victims in a searchable online system. NLM also developed a “Found in Haiti” iPhone application. The digital pen proved very useful by capturing patient assessment data during triage and the mass casualty event. The information was transferred to laptops, BlackBerry® Smartphones, and other mobile devices and shared within seconds to hospital staff. Dr. Phillips indicated that the next step involved building information infrastructure by providing workstations and training.

The chaotic aftermath of Hurricane Mitch’s devastation in Honduras, Guatemala, and Nicaragua in 1998 led to the development of NLM disaster recovery initiatives. NLM and PAHO created Disaster Reduction Centers to maintain infrastructure resources in Central and South America.

At the closing of Dr. Phillips’ presentation, members shared information about their involvement in projects related to Haiti’s earthquake recovery efforts.

XIX. Discussion on EnHIP Outreach Awards

Ms. Gale Dutcher, Deputy Associate Director, NLM, SIS, updated members on EnHIP Outreach Awards that are available to EnHIP institutions. The EnHIP Outreach Awards began in 2005. She praised the success of the projects and indicated they represented a substantial body of work, even though the funding is limited to only \$5,000 per award. She spoke approvingly about the diversity of current projects. Descriptions of the projects will be posted on the EnHIP Web site, <http://sis.nlm.nih.gov/outreach/enhip.html>. Ms. Dutcher asked the members to ensure that she has their correct e-mail addresses for forwarding the solicitation.

In 2009 and 2010, many projects were often tied to the EnHIP Strategic Plan because its flexibility allowed for a full range of subjects. Ms. Dutcher suggested that new project proposals consider using social media.

Ms. Dutcher introduced Ms. Janice Kelly, newly appointed Chief, Outreach and Populations Branch, NLM, SIS. Ms. Kelly has assumed the duties of the project officer. As in the previous year, the Contracts Office will review proposals.

Ms. Dutcher announced a second funding opportunity available to member institutions. Awards of the AIDS Community Information Outreach Program are in two tiers: up to \$60,000 for projects and \$10,000 for smaller programs.

XX. EnHIP Outreach Awards Presentations

Benedict College, Columbia, South Carolina

Incorporating Competitive Team Presentations to Improve Minority-Serving Institutions' Knowledge of National Library of Medicine Resources of Information for Understanding Animal Contributions to Human Disease

Presented by: Dr. Milton Morris

Dr. Morris, Director, Department of Environmental Health Sciences, Benedict College, described the NLM online database training undertaken by members of the Benedict College Student Environmental Health Association, an organization with about 50 members.

Students presented their findings to faculty, staff, and students. The goals of the project were to increase awareness of important NLM resources and to improve students' ability to detail both orally and graphically important contributions of NLM databases. Dr. Morris highlighted presentations created by two upperclassmen on zoonotic diseases. Research articles accessed from NLM databases were part of their projects.

Meharry Medical College, Nashville, Tennessee

Promote and Encourage the Use of the National Library of Medicine's Resources as "Trusted Health Electronic/Internet Information" That Promotes Health Literacy and the Reduction of Health Disparities

Presented by: Dr. Cheryl Taylor

Dr. Taylor, Director and Associate Professor, Office of Nursing Research, Southern University at Baton Rouge, Baton Rouge, Louisiana, gave a presentation about the project directed by Dr. Patricia Matthews-Juarez, Associate Vice President and Professor, Faculty Affairs and Development, Department of Family and Community Medicine, Meharry Medical College. Dr. Taylor serves as a consultant on an initiative that is part of this project at Meharry Medical College.

The goal of the project was to provide technical assistance and related resources to assist faith-based organizations in increasing the knowledge and use of NLM programs and services within communities.

The objectives of the project were to (1) increase the awareness of the faith-based network about health literacy, health disparities, and the importance of electronic health records by offering four sessions on how to use the NLM databases, and (2) support three focus meetings with the lay public about the free consumer information resources of NLM, health literacy, health disparities, and the importance of electronic medical records.

These goal and objectives were realized by using EnHIP Outreach Awards funds as seed money. Grant funding from other initiatives and in-kind resources also contributed to the project. Participating organizations included the academic health sciences centers, churches, community organizations, government agencies, and the public library system. The project was evaluated by using questionnaires, surveys, attendance figures, and feedback from coordinators.

Disaster preparedness became part of the project with the development of the Web portal, Gulf Coast Health Port. The homepage features direct links to NLM and NLM Disaster Information Management Research Center. Users can link to information about their communities. Dr. Taylor indicated that the portal is a work in progress and plans are in place to evaluate its usability and effectiveness.

Diné College, Shiprock, New Mexico

Using Database Research Regarding Environmental Health, Climate Change Impacts, and Animal-Human Connections to Educate Tribal Communities and Reduce Health Disparities

Presented by: Ms. Evonne Manybeads

Ms. Manybeads, Assistant Program Coordinator, Diné College, created a visual for the Tox Town® Web site. Utilizing a Google™ Map aerial view of Shiprock, New Mexico, she adapted it into an illustration to identify the following community environmental issues:

- Electromagnetic radiation (power lines, transformers),
- Uranium tailing site (inactive, radioactive, ground-water),
- Oil fields (volatile organic compounds, water quality, radioactivity),
- Illegal dumping sites (tires, abandoned vehicles, carcasses, solid waste),
- Outdoor air pollution (vehicle exhaust, coal-fired power plants, solid waste, coal for heating),
- Indoor air pollution (unregulated coal usage, particulate matter, increased upper respiratory infections among children and elderly),

- Contaminated water (unregulated windmills/wells, arsenic, mercury, total uranium, bacterial contamination),
- Contaminated homes (uranium, radioactivity, birth defects, genetics),
- Agricultural runoff (animal waste, pesticides, insecticides, fungicides), and
- Farm animals (over-grazing, erosion, depletion of forage).

The Navajo Indian population has an upper respiratory infection rate five times greater than other populations in the surrounding area. Many elders have chronic obstructive pulmonary disease, and many children have birth defects and leukemia. Navajo people are suffering from the psychosocial impact of deception by government agencies and industry and the lack of cultural sensitivity for traditional Navajo ways. The Navajo population lacks economic development, education, and drug- and alcohol-abuse programs. Members of the community who worked in the uranium mine have great difficulty receiving compensation through the Radiation Exposure Compensation Act.

The University of Texas at El Paso, El Paso, Texas

Rehabilitation and Global Health: Guatemala

Presented by: Dr. João Ferriera-Pinto

Dr. Ferriera-Pinto, Director of Research and Special Projects, College of Health Sciences, UTEP, made a presentation for the project directed by professors Stephanie Capshaw, OTD, OTR, and Celia Pechak, PT, PhD, MPH.

Four students participated in a structured learning experience in Guatemala: pre-experience, field immersion, and post-experience. Before departure they prepared by gaining an understanding of the country's culture, and recognizing the complexities of providing services in a less-developed country. During their week-long stay, they provided direct rehabilitation services, local needs assessment, program evaluation, and strategic planning.

Students laid the foundation for a consortium of schools in the United States to increase consistency of care and provide continuing education in Guatemala. It will serve the two universities in Guatemala.

Morgan State University, Baltimore, Maryland

Success Through Access: The Morgan State University Outreach Program to Help to Disseminate Information on Environmental Health Disparities

Presented by: Dr. T. Joan Robinson

Dr. Robinson, Provost and Vice President, Academic Affairs, Morgan State University, reported on a project under the direction of Dr. Richard Bradberry, Director, Library Services, Morgan State University. In coordination with the University's School of Community Health and Policy, monthly instructional workshops will be offered to students, faculty, staff, and community

members. They will utilize workstations at the library to access and use environmental health information contained in databases available through the portal Research Port. Dr. Bradberry plans to have workshops for individuals on environmental issues. A grant from the Centers for Disease Control and Prevention supplement the funds from the EnHIP Outreach Award.

Morgan State University, Baltimore, Maryland

Project 3E: Enable, Engage, and Empower HBCUs with Health Information Technology

Presented by: Dr. Melissa Littlefield

Dr. Littlefield, Associate Professor, Morgan State University, gave a summary of the MINDS eHealth project, supported by United Negro College Fund Special Programs Corporation and HBCU Access Project. The University's School of Social Work, School of Community Health and Planning, and School of Computer Mathematics and Natural Sciences worked together on this project.

Project goals were as follows:

- Collaborate with campus and community partners to disseminate high-quality health information on campus and in the surrounding community via peer-based training,
- Increase knowledge of evidence-based data sources of risky behaviors and healthy lifestyles among campus and community residents through access to high-quality health information, and
- Integrate NLM databases into social work and public health curriculums.

This project focused on six major health disparities: obesity, breast cancer, domestic and gang violence, substance abuse, HIV/AIDS, and stress/depression. Twenty-two people went through training conducted by ORISE; 158 people were trained by students and peer educators; 19 people were trained at faculty gatherings; and 268 people were trained in the community.

XXI. Environmental Justice Summary

Dr. Lewis thanked everyone for their participation and attendance at this EnHIP meeting marking the 20th anniversary of its founding. Members should feel ownership in the Partnership's accomplishments. What began as a pilot project focused on the adverse effects of environmental hazards on minority communities has turned into a Partnership with many achievements to its credit. The work for environmental justice must continue with renewed dedication. He indicated that one of the intents of this meeting was to provide EnHIP members with factual information relative to solving instances of environmental injustice.

Special appreciation was extended to Dr. Bullard for his presentation on the evolution of environmental justice. Dr. Lewis showed acknowledgement to Dr. Warren for his presentation on the bioethical dilemma. Their factual presentations provided members with a sense of history and an impetus to move forward in the ongoing struggle for environmental justice.

Dr. Lewis also expressed appreciation to Dr. Reisa and Dr. Smedley for outstanding contributions furthering the understanding of environmental justice. He thanked Mr. Williams for his insightful presentation on the Native American perspective of environmental justice issues.

Dr. Lewis expressed optimism about the many ongoing projects at EnHIP member schools that are researching environmental justice and health disparities and preparing the next generation of scientists to address these important concerns. He challenged EnHIP representatives to initiate dialogue of environmental justice issues on their campuses and in their communities so that the public can be better informed.

XXII. Closing Remarks

Dr. Lewis urged member schools to correlate EnHIP Outreach Awards to the strategic plans of NLM and EnHIP so both may reach their goals and objectives. The EnHIP Strategic Plan gives directives for the Partnership to be accountable to NLM as well as for EnHIP to play an integral role as an adviser to and supporter of NLM. The interconnectivity of EnHIP and NLM remains important, especially during the financial downturn predicted for the FY2011 budget. Strategic plans are posted on respective Web sites.

Dr. Taylor, Partner member, expressed the need for a collective evaluation of EnHIP Outreach Awards projects to measure the impact of the work, outcomes, and cost benefits. Dr. Lewis agreed to bring this request to the Executive Council and formulate a recommendation along with a resolution.

Dr. Lewis indicated that the executive committee will make a recommendation for date and location of the next meeting. Members discussed several options for dates and locations, and they explored the possibility of having their meeting in conjunction with the annual International Symposium on Recent Advances in Environmental Health Research, under the direction of Dr. Paul B. Tchounwou, Jackson State University. The eighth symposium is scheduled for September 18–21, 2011, in Jackson, Mississippi.

In referencing the 175th anniversary of NLM, Dr. Lewis indicated the executive committee will develop a resolution for EnHIP participation in the celebration. He noted the expansion of the Partnership, expressing appreciation that Dr. Raymond Anthony, University of Alaska Anchorage, was able to attend this meeting. Dr. Lewis, who is the newly appointed President of Florida Memorial University, a nonmember institution, will submit a candidate to replace him as the representative from Florida A&M University.

Dr. Lewis indicated that EnHIP representatives looked forward to working with Ms. Janice Kelly, Chief, Outreach and Special Populations Branch, NLM, SIS. He expressed appreciation to Ms. Cynthia Gaines, and to the ORISE team for their contributions to EnHIP. Dr. Lewis adjourned the meeting at 12:00 p.m.

APPENDICES

APPENDIX A

Environmental Health Information Partnership Meeting—March 14-15, 2011

National Library of Medicine
Division of Specialized Information Services
Environmental Health Information Partnership
Charting a Course for the 21st Century
Environmental Health Information Partnership Strategic Plan

INTRODUCTION

Environmental Health Information Partnership

The Environmental Health Information Partnership (EnHIP) was established by the National Library of Medicine (NLM) in 1991 as the Toxicology Information Outreach Panel (TIOP). This group was started at a time in which the issue of racial and ethnic health disparities in a myriad of conditions had been elevated into sharp visibility. There was also concern about disparities in potential and real exposure to environmental toxicants and their contribution to disparities in morbidity and mortality. At the same time there was an increase in the complex literature of toxicological science. The Panel then evolved into the Environmental Health Information Outreach Program and subsequently refined into the current state, the Environmental Information Outreach Partnership. This Partnership reflects a broader focus on the multiple dimensions of environmental health, the environmental health sciences, and health disparities. The objective is to assist in addressing disparities among academic institutions in access to information technology and related pedagogical and research resources.

In this context, it was increasingly recognized that modern instruction, research, and service to communities, students, and professions—the core mission of academic institutions—were nearly impossible without computers and related technologies. Indeed, evidence abounds that the addition of computer science and bioinformatics to the arsenal of environmental health, biomedical, social, behavioral, and clinical research holds enormous promise and continues to stir considerable excitement among researchers, academicians, practitioners, and the entire health services community.

These were among the developments that prompted the NLM to initiate a series of programs and services specifically designed to expand and strengthen its partnership with Minority-Serving Institutions (MSIs) and, in the process, enhance the efforts of these schools to increase the number of racial and ethnic minorities in the environmental health, biomedical research, and health care workforce. The NLM was also interested in ensuring that, through planned outreach efforts, both lay and professional groups were aware of, had ready access to, and utilized the NLMs rapidly expanding collections of medical and health information.

Working together, the NLM and the participating colleges and universities continue to apply themselves to these efforts as the 21st century becomes the digital era, creating a better and a more innovative and collaborative future.

APPENDIX A

Environmental Health Information Partnership Meeting—March 14-15, 2011

Rationale and Process

The Environmental Health Information Partnership has made substantial progress during the past decade in achieving its initial objectives. A prominent feature of this progress has been information sharing, including regular NLM staff reports on the continuous expansion of the Library databases and programs, as well as presentations from other National Institutes of Health (NIH) Institutes and Centers on development in other areas of the NIH, which supports research and discovery that ultimately improves the methods and outcomes of public health services and personal health care. These discussions have added to the substrate of information which academicians need to bring to full fruition the core functions of academic institutions.

The challenge for the Partnership is not only to maintain its role as a progressive component of NLMs outreach efforts, but to advance to even higher levels of productivity consistent with the NLM Long Range Plan (2006–2016) (*Charting a Course for the 21st Century: NLMs Long Range Plan 2006–2016*; http://www.nlm.nih.gov/pubs/plan/lrp06/NLM_LRP2006_WEB.pdf). That plan includes four overall objectives that serve as the reference frame for the Partnership strategic planning process.

The process began with a number of discussions within the Executive Committee, the administrative arm of the Partnership. These discussions, by teleconference as well as face-to-face interactions at the Library on the NIH campus, culminated in a comprehensive review of the NLM Board of Regents-endorsed new 10-year Long Range Plan.

Later, in meetings at the Library, the Partnership organized into four working group, consistent with the NLM plan's four goals. Each group was charged with sorting from the 66-page Library plan challenges and strategies for the partnership—all within the context of the overarching mission of the Library.

The outcome was a report of each working group's deliberations. As with any broad-ranging discussion among multidisciplinary academicians with differing perspectives, numerous important and relevant topics were discussed, a number of which were beyond the boundaries of NLMs statutory responsibilities. The Executive Committee attempted to capture the key themes of all of the working group reports. The results of that effort are reflected in the plan that follows.

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Chairman, National Library of Medicine Environmental Health Information Partnership

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VISION

EnHIP will be a strong, stable, and effective partner of NLM as the Library becomes even more central to scientific discovery and treatment and prevention of disease. Through this partnership, NLMs programs and services, adapted to 21st century health and health sciences developments, will further strengthen the capacity of MSIs to perform three important and fundamental functions within the public health and health care system. These are: (1) educate and train health professionals; (2) conduct basic and applied research in disciplines pertinent to biomedicine, health services, health care, and health disparities; and (3) engage in community, public, and professional services.

MISSION

The mission of the Environmental Health Information Partnership is to enhance the capacity of minority serving academic institutions to reduce health disparities through the access, use and delivery of environmental health information on their campuses and in their communities.

Assumptions: Environmental health refers to the impact of chemical, microbial, physical, and radiological agents on the health of living organisms.

Minority serving educational institutions are those served by programs funded under Title III Historically Black Colleges and Universities, American Indian Tribally Controlled Colleges and Universities, Alaska Native and Native Hawaiian Serving Institutions, and Title V Hispanic Serving Institutions. (Reference: U.S. Department of Education, <http://www.ed.gov/about/offices/list/ope/index.html>).

STRATEGIC GOALS

Goal 1. Seamless, Uninterrupted Access to Expanding Collections of Biomedical Data, Medical Knowledge, and Health Information

Objectives of the Partnership for Achieving Goal 1

- Assess the current capacity of MSIs to access NLM databases and related Library resources that can enhance efforts of these colleges and universities to carry out their fundamental mission.
- Use the above-cited assessment to develop a program that will address the deficiencies revealed in the survey.
- Expand and intensify efforts to ensure that MSI faculty and students are thoroughly knowledgeable of detailed aspects of NLMs collections of health and biomedical information.
- Provide technical assistance and related resources to aid MSIs in increasing knowledge and use of NLM programs and services by lay and professional groups within their surrounding communities.

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- Initiate appropriate action to include selected MSI libraries in the National Network of Libraries of Medicine (NN/LM).
- Initiate the necessary administrative and logistical procedures to ensure that future NLM exhibits are available for display in MSI communities.
- Convene a seminar, first at NLM and then at MSIs, on the “hows and whys” of disaster management information.
- Determine the extent of instruction in disaster management at MSIs and potential interest in disaster management information research consistent with the research agenda that may emerge from the NLM Disaster Information Management Research Center (DIMRC).

Goal 2. Trusted Information Services That Promote Health Literacy and the Reduction of Health Disparities

Objectives of the Partnership for Achieving Goal 2

- Structure a program (i.e., internships) to provide opportunities for interested students from MSIs to gain “field experience” in the operational aspects of NLM, including the management of the expansive databases and related activities.
- Initiate discussions with consumer advocacy groups in MSI communities to plan an intensive consumer awareness campaign designed to increase the number of consumers who are aware of and use NLMs free high quality consumer information resources.
- Develop specific recommendations for increasing the number of underrepresented minorities in the library sciences workforce.
- Convene a symposium on research advances in environmental health, climate change effects, and the animal-human connection as it relates to disease, designed to enhance the understanding of librarians of the multiple dimensions of the confederations of disciplines that comprise the environmental health sciences and the implications of these advances for both NLM programs and services and for those of local library services.
- Emphasize and promote the importance of MSI community high school teachers’ and students’ understanding of environmental health, climate change, and the animal-human connection as it relates to disease, as well as knowledge and use of NLM environmental health databases.

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Goal 3. Integrated Biomedical, Clinical, and Public Health Information Systems That Promote Scientific Discovery and Speed the Translation of Research into Practice

Objectives of the Partnership for Achieving Goal 3

- Determine the extent of electronic medical records use by physicians, hospitals, and clinics in MSI communities.
- Use data from the preceding objective as [a] basis for a seminar/discussion on the development of electronic health records, including presentations of case studies in which health records were [an] essential source of data.
- Increase MSI faculty members' awareness of the value of electronic health records in environmental health and related research.
- Enhance MSI faculty involvement in translation of public health research findings and knowledge to evidence-based practice.
- Expand Partnership understanding of the NLM online resources and their relevance to the mission of MSIs. Increase MSI students' and communities' knowledge of [the] hows and whys of the NLM online resources and their relevance to consumer and academic services.
- Attract new students to the field of environmental health research, including the study of climate change effects, comparative medicine, and vector-borne diseases.
- Play a leadership role in encouraging community engagement in research activities of MSIs.
- Increase research productivity and, in the process, increase contributions of MSI faculty members to professional journals.

Goal 4. A Strong and Diverse Workforce for Biomedical Informatics Research, Systems Development, and Innovative Service Delivery

Objectives of the Partnership for Achieving Goal 4

- Increase NLM/Partnership visibility in MSI communities.
- Increase Partnership knowledge of NLMs programs and services designed to shape biomedical informatics education and training.
- Play a leadership role in initiating discussions of career opportunities in biomedical informatics and library science, including the promotion of interest in these careers.
- Ensure a prominent role for the NLM/Partnership in “career day” or similar programs at MSIs.
- Attract new MSI students to health sciences librarianship through NLMs postgraduate Associate Fellowship Program.

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ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP MEETING

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ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP 2010–2011

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ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP

EnHIP PROJECTS 2010–2011

Benedict College, Columbia, South Carolina

Incorporating Competitive Team Presentations to Improve Minority-Serving Institutions' Knowledge of National Library of Medicine Resources of Information for Understanding Animal Contributions to Human Disease

This project improves on previously funded informational efforts by requiring four teams of two to four students at Benedict College to research the National Library of Medicine (NLM) online databases and make presentations on their findings. The students have multidisciplinary majors; all are members of the Student Environmental Health Association (SEHA). Teams will be required to make PowerPoint presentations and provide narrative summaries to seminar courses. Approximately 400 students will benefit from the presentations. The NLM databases on which teams must present are as follows:

- ClinicalTrials.gov
- DIRLINE®
- MedlinePlus®
 - African-American Health
 - Interactive Health Tutorials
- PubMed®/MEDLINE®
- PubMed Central®

The goals of this project are to (1) increase awareness of NLM resources among students within the college's science and public health programs; and (2) improve students' ability to explain NLM databases. The project's objectives are as follows:

- Provide information to a core group of students about the resources of NLM, including how those resources help in understanding animal contributions to human illness.
- Assist approximately 40 SEHA members in preparing presentations.
- Identify the top teams that will make presentations to students within junior- and senior-level seminar courses and that will receive monetary prizes.
- Conduct team presentations.

Charles Drew University of Medicine and Science, Los Angeles, California

Environmental Health Outreach and Education Project

The goals of this project are to (1) increase the awareness of NLM online resources related to the use of toxicological, environmental, occupational, and hazardous materials/waste at Charles Drew University, Martin Luther King, Jr. Multi-Service Ambulatory Care Center, and other agencies serving the south Los Angeles area; (2) provide instruction in the use of NLM Web-based resources; and (3) enhance the use and distribution of health-related information to the

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Charles Drew University faculty, staff, and students and the staff of agencies serving the south Los Angeles area.

Training will be delivered to approximately 300 employees, professional staff, and students of Charles Drew University and its affiliated training sites and to the staff and clients of agencies serving the south Los Angeles area. Experts in the fields of toxicology, environmental health, and informational and instructional technology will provide the training. It will focus on the scientific literature in the fields of medicine, nursing, dentistry, and health care systems; TOXNET® for information on toxicological profiles on hazardous chemicals that cause health and environmental effects; Haz-Map® for specific information about the possible effects of exposure to chemicals and biological agents; and Tox Town® for information on common toxic substances encountered in everyday life.

Diné College, Shiprock, New Mexico

Navajo Ethno-Medical Encyclopedia (NEME) Project

The Navajo Ethno-Medical Encyclopedia (NEME) was envisioned as a 10-volume compendium and repository of traditional Navajo Indian medical and healing knowledge accumulated over many centuries. This project, which was begun in the 1970s and suspended in 1981 due to a lack of funding, has been restarted in recent years. It holds great significance to the Navajo People because it provides the greatest hope for substantial preservation of a significant body of important cultural knowledge. NLM funding will enable the conversion of original material, using modern optical scanning and optical character recognition technology, into word processing software and the creation of electronic files for permanent, accessible, and transferable storage.

This project is intended for the Navajo People and clinical medical practitioners in the U.S. Indian Health Service and elsewhere who provide medical services to Navajos. Completion of the NEME will have a substantial impact in enabling clinicians to become more culturally competent for treatment of Navajo and other Native American patients.

This ambitious project, begun with funding from the National Institute of Mental Health, involves the recording, transcription, and translation of interviews with Navajo traditional medicine practitioners and then organizing the information into a 10-volume set.

Preserving the language is a key component of the project because language loss means loss of knowledge. To date, hundreds of tapes have been transcribed and many have been translated.

The goals of this project are to (1) provide new technical skills to advance students majoring in the Navajo Language degree program at Diné College, (2) identify corrections to make for errors in optical character recognition (OCR) conversions following a review of electronic documenting, and (3) identify the specific locations where each such converted document would best fit into the NEME.

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The objectives of this project are as follows:

- Develop new skills by utilizing optical scanning and OCR technology in order to bring greater efficiency to the task of converting Navajo texts into word processing program documents.
- Allow students to become familiar with the actual content of the NEME materials. Ensure students develop a more global understanding of the endeavor.

Diné College, Shiprock, New Mexico

Using Database Research Regarding Environmental Health, Climate Change Impacts, and Animal-Human Connections to Educate Tribal Communities and Reduce Health Disparities

This project will focus on promoting health literacy and providing access to medical and health information to Diné College as well as community members and stakeholders at large. To promote these efforts, an internship position will be offered. The student must develop a report, PowerPoint presentation, poster, and workshop. This project includes the following objectives:

- Provide an internship to allow training and access to an expansive database related to (1) environmental health, (2) climate change impacts on tribal lands, and (3) connections between animals and human health.
- Host a workshop at Diné College for community members and stakeholders based on information obtained in the project's efforts to promote health literacy.

Florida A&M University, Tallahassee, Florida

Improving Health Literacy and Access to National Library of Medicine Resources in Disadvantaged Communities

This project addresses the issue of decreased health literacy and health information technology access in two disadvantaged communities in Florida. This project proposes to work with the county libraries and their branches in Hillsborough (Tampa) and Leon (Tallahassee) in developing a health literacy program. As part of Florida A&M University's Community Outreach and Services Learning Program, senior students in the doctoral program of the College of Pharmacy and Pharmaceutical Sciences will be trained to provide health literacy classes one evening per week in four library branches in each city. The health literacy program will reach 400 disadvantaged patrons during the 2010–2011 academic year. The curriculum will be developed in accordance with standards of the Medical Library Association.

The second component of this project entails increasing access to NLM resources. Training will be provided to library patrons who participated in health literacy classes.

Hampton University, Hampton, Virginia

Center for Minority Family Health—Environmental Health Information Partnership: Research, Education, and Disparities Initiative (EnHIP: READ-IN,) August 2010–July 2011

The goal of this project is to develop an infrastructure at Hampton University School of Nursing to support the costs of increasing resources on environmental health information and health disparities among populations in Southeast Virginia.

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This project proposes the following:

- Convene a national plenary session in conjunction with Hampton University’s annual Conference on the Black Family to disseminate environmental health information at a health promotion program, including the “hows and whys” of disaster management.
- Initiate discussions with consumer groups served by Minority Serving Institutions to plan a campaign designed to increase the number of consumers who use NLM information resources and inform the School of Nursing community population about evidence-based interventions, health promotion, and prevention programs developed by faculty and students.
- Increase NLM/Partnership visibility in the School of Nursing community as a means of enhancing community involvement in research studies, utilization of health information, and career day programs.

Jackson State University, Jackson, Mississippi

NLM Web-Based Resources: A Catalyst for Biomedical and Environmental Health Research and Education

The goal of this project is to continue the enhancement of environmental health and biomedical sciences research and education at Jackson State University and around the world by hosting a presymposium workshop in conjunction with the university’s yearly *International Symposium on Recent Advances in Environmental Health Research*. The presymposium workshop, titled “The National Library of Medicine Web Resources for Environmental Health Research,” is provided for attendees who need information on health issues related to exposure to environmental substances—including those that are naturally occurring—and environmental agents known to induce illnesses, including cancer and health disparities. The NLM Toxicology and Environmental Health Information Program (TEHIP) databases provide an invaluable resource to address these issues. Major emphasis will be placed on navigating through TEHIP’s TOXNET® (Toxicology Data Network) databases and related resources. Workshop participants will (1) learn how to access the NLM toxicology and environmental health databases on the Internet, (2) learn how to find valuable information on environmental contaminants, and (3) explore other environmental health information resources on the Internet. Attendees of the presymposium workshop, slated for September 2011, will include the university’s faculty and students who are involved in biomedical sciences and environmental health research, as well as students, faculty, and scientists from around the world who will be participating in the symposium.

Meharry Medical College, Nashville, Tennessee

Promote and Encourage the Use of the National Library of Medicine’s Resources as “Trusted Health Electronic/Internet Information” That Promotes Health Literacy and the Reduction of Health Disparities

This project in Nashville and Davidson County, Tennessee, builds on Meharry Medical College’s efforts to collaborate with four local churches in developing faith-based partnerships with community-based public libraries. The collaboration promotes the importance of health

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literacy in relation to health disparities and the connection to community health. It especially emphasizes the use of NLM databases and the electronic medical record. Meetings will initiate discussions with the lay public through the “Faith-based Network” (Network) about NLM information resources, health literacy, health disparities, and the importance of the electronic medical record in patient care. The next step will be to increase the awareness of 500 members of the Network regarding these issues by offering sessions on how to use NLM and other federal agencies’ databases and resources. This will empower individuals and families in the Network to gain information through trusted online databases and to reinforce searching skills and knowledge in their explorations.

Morgan State University, Baltimore, Maryland

Project 3E: Enable, Engage, and Empower HBCUs with Health Information Technology

The purpose of the project is to provide Master of Public Health students at Morgan State University an integrating experience that will provide knowledge and proficiency on public health issues through access to resources and databases. Four interns will use the NLM online databases and other reference databases in their literature searches. Interns will document their experiences by using the following criteria:

- Ease of use (user-friendliness and intuitiveness),
- Adequacy of resources, and
- Access and availability.

Interns will assemble a forum to present and discuss their findings and demonstrate how to navigate the NLM databases. Heads of health and sciences departments, library personnel, health and sciences faculty, and students will be encouraged to attend the forum.

Morgan State University, Baltimore, Maryland

Success Through Access: The Morgan State University Outreach Program to Help to Disseminate Information on Environmental Health Disparities

The goal of this project is to offer to Morgan State University students, faculty, staff, and the greater Baltimore community monthly instructional workshops on how to access and use health information contained in databases available through the portal Research Port. The workshops will be promoted through announcements and flyers on the Morgan State University campus, on its Web site, and through collaborative arrangements with the Enoch Pratt Free Library, the

University of Maryland Health Sciences and Human Services Library, and the Morgan State University School of Community Health and Public Policy.

Oglala Lakota College, Pine Ridge, South Dakota

Cache Project

The Cache Project of Oglala Lakota College will use education and direct assistance to address family-level crisis planning. This crisis planning will help families cope with emergency

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situations, such as the blizzards that impact their lives three or four times a year. The first goal is to educate people about the importance of creating family emergency kits.

As a first step, students from the nursing department in cooperation with students from the business department will conduct research, followed by a hazard analysis. Based on research and analysis, the students will put together a list of materials to include in the Crisis Kit. Supplies, food, and other items must be geographically and culturally appropriate.

They will produce a booklet and checklist that is user-friendly and realistic for the demographics of the reservation. The information will be placed in the Oglala Lakota College's libraries for dissemination to the communities. Students will begin a social marketing campaign to promote the project. This will be done by giving presentations to groups and placing public service announcements on radio and organizational Web sites. Also, students will contact retailers in the Rapid City, South Dakota, area to ask for assistance in creating a Crisis Kit. This assistance may be in the form of discounts or benefits in pricing for buying the needed materials.

The second goal is for students to discuss with community groups how to access emergency survival supplies that are affordable and pertinent.

University of Puerto Rico, Medical Sciences Campus, San Juan, Puerto Rico

Outreach Project in Environmental Health Information Path, 2010–2011

Continuing the University of Puerto Rico's commitment to increase awareness about health and environmental concerns, the goals of this project are to reduce the inequality in the access to information related to health among minority groups, disadvantaged communities, and health students and to increase the awareness of addressing health literacy among groups of students, librarians, school faculty, and community leaders. Customized training in the effective use of NLM online databases will be provided to the following groups:

- Graduate students in the programs of pharmacy, nursing, and basic sciences (microbiology, anatomy, pharmacology and toxicology, biochemistry) and faculties of the Medical Sciences Campus,
- Students of the ASPIRA Association's Alternative School (CASA—Spanish acronym for Help and Student Services Centers) in subjects related to health and environment that impact their lives (sexually transmitted diseases and HIV), and
- A graduate student's project on the quantization and toxic effects characterization of xylazine (a veterinary anesthetic) mixed with recreational drugs by substance abuse addicts in Puerto Rico.

The University of Texas at El Paso, El Paso, Texas

Infrastructure Capacity-Building for the School of Medical Technology in the Faculty of Medical Sciences of the Universidad Central del Ecuador to Access Information Technology for Library Research and Postgraduate Program Instructional Delivery and Evaluation

The goal of this project is to increase the capacity of the faculty of the School of Medical Technology at the Universidad Central del Ecuador to enhance its information technology

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infrastructure and to develop and deliver a graduate degree curriculum. This curriculum will prepare the faculty to offer advanced education to rehabilitation professionals serving community members in need of rehabilitation services.

The objectives of this project are as follows:

- To conduct an on-site needs assessment of the technical capacity of the faculty to access educational and research-based materials in English and Spanish from databases of NLM, Pan American Health Organization, and other European and Latin American academic sources,
- To assess the existing information technology infrastructure of the School of Medical Technology and the Universidad Central del Ecuador campus, and
- Report on the findings and make recommendations on how to enhance the technical capacity of the faculty to access databases, also including findings and recommendations related to existing information technology infrastructure and the future needs of the campus in regard to participation in distance-based learning instructional delivery.

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Pictorial History - From TIOP to EnHIP

On the following pages is a pictorial history of the TIOP Project that began in 1991 and grew into the EnHIP Program with NLM. Below is the timeline of how this program developed over the years and the changes that took place over the 20 year history.

Historical Account

The advisory body of the NLM, the Board of Regents, enthusiastically endorsed and encouraged the creation of the TIOP as the most effective way to get the appropriate biomedical information into the communities that so desperately needed it. Nine Historically Black Colleges and Universities (HBCUs) were selected, based on their strong programs in biomedical and health care as well as their membership in the Association of Minority Health Professions Schools. Representatives from the Occupational Safety and Health Administration, the National Science Foundation, and the Agency for Toxic Substances and Disease Registry lent their expertise in minority outreach programs as a part of the panel. The HBCUs were Charles Drew University of Medicine and Science, Florida A&M University, Howard University, Meharry Medical School, Morehouse School of Medicine, Texas Southern University, Tuskegee University, Xavier University of Louisiana, and also the University of Arkansas at Pine Bluff.

The goals of the TIOP were two-fold: (1) to increase awareness of the NLM resources within the participating institutions and their communities through providing training and (2) to evaluate the effectiveness of the project and its impact on minority health. The training, provided by the Oak Ridge Institute for Science and Education (ORISE), was accompanied by unlimited free access to the NLM databases—which at that time was not free to anyone—and desperately needed computer workstations. Appropriate training ensured that there were individuals at each institution who could train others, thus expanding the project reach.

The growth of the program began in 1997 with the addition of Hampton University. In 2001, the addition of Oglala Lakota College and the University of Puerto Rico Medical Sciences Campus broadened the scope of the group to include Tribal Colleges and Hispanic Serving Institutions and communities. That trend was continued in 2004 when the size of the group was expanded to 20 institutions and the scope was broadened to include environmental health disparities. At this time, the name of the group was changed to the Environmental Health Information Outreach Program (EnHIOP) to reflect its new direction. The schools added in 2004 were Benedict College, California State University at Northridge, Dine College, Haskell Indian Nations University, Medgar Evers College, Morgan State University, Southern University at Baton Rouge, The University of Texas at El Paso, and Jackson State University in Jackson, Mississippi.

Growth continued with the transition of the group to its current designation of Environmental Health Information Partnership (EnHIP), which occurred in January 2008. The current number of member institutions is 21 with the addition of the University of Alaska Anchorage, in 2009 and represents the diversity of its focus, with HBCUs, Tribal Colleges, and Hispanic-serving Institutions located across the country. Representatives from those institutions' medical schools, dental schools, pharmacy schools, nursing schools, and science programs serve in the program.



TIOP Meeting, Dr. Melvin Spann and Dr. Charles Walker, April, 1992



TIOP Training, ORISE, March, 1993



TIOP Training, Howard University, College of Medicine, May, 1993



TIOP Members, May, 1993



TIOP Training, ORISE, May, 1994



TIOP Training poster presentation, February, 1995



Presentation of computer given to Meharry Medical College by NLM, September, 1996



TIOP Training, University of Puerto Rico, School of Medicine, April, 2001



EnHIOP Training, Jackson State University, November, 2004



EnHIOP Training, Diné College, July, 2004



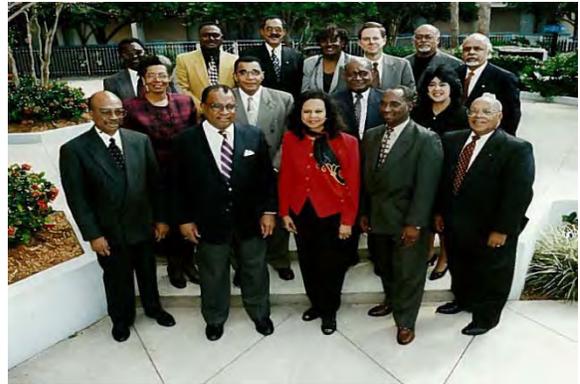
EnHIOP Training, Diné College, July, 2004



Diné College, Shiprock Campus



TIOP Meeting, Lake Buena Vista, Florida



TIOP Members, Lake Buena Vista, Florida



Dr. Louis Sullivan, Morehouse School of Medicine, and Dr. Melvin Spann, January, 2007



EnHIOP Meeting, Morehouse School of Medicine, January, 2007



EnHIOP Members, Crazy Horse Memorial, June, 2007



EnHIOP Members, Crazy Horse Memorial, June, 2007



Native American Healer at Oglala Lakota College, presenting to EnHIOP, June, 2007



EnHIOP Members, Crazy Horse Memorial, June, 2007



Dr. James Herrington, NIH Fogarty International Center, November, 2008



Ms. Martha Austin-Garrison, Diné College, June 2009



EnHIP Members, The University of Texas at El Paso, June, 2009



Dr. Daniel Wildcat, Haskell Indian Nations University, June, 2009



Dr. Ralph J. Cicerone, National Academy of Sciences, March, 2010



Mr. Christopher Lopez, Executive Editor of the El Paso Times, June, 2009



Dr. Nancy G. Maynard, NASA, March, 2010



Dr. Daniel Wildcat, (right) presents his book, *Red Alert!*, to Dr. Donald A.B. Lindberg, Director, NLM, March, 2010

**Pictorial – 2011 Meeting Celebrating the 20th
Anniversary of the EnHIP Program**



Dr. Rueben C. Warren, National Center for Bioethics, Tuskegee University, and Dr. Robert D. Bullard, Environmental Justice Center, Clark Atlanta University



Ms. Evonne Manybeads, Diné College



Dr. Henry Lewis, III, EnHIP Chairman, Ms. Cynthia Gaines, NLM, and Dr. Melvin Spann, NLM (retired), EnHIP Executive Secretary



Dr. Joao Ferreira-Pinto, The University of Texas at El Paso, and Dr. Donald A.B. Lindberg, Director, NLM



Dr. Doris Withers, Medgar Evers College, City University of New York



Dr. Bailus Walker, EnHIP Senior Advisor, and Ms. Betsy Humphreys, Deputy Director, NLM



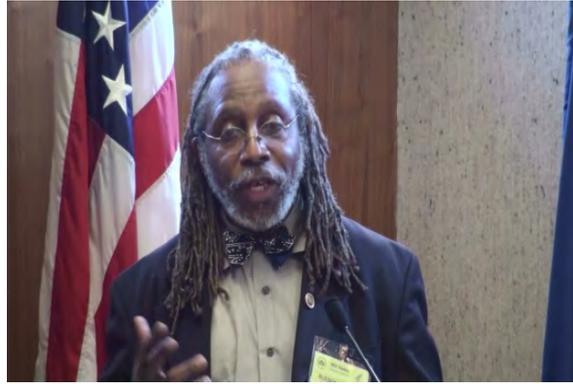
EnHIP Members, Bethesda, Maryland



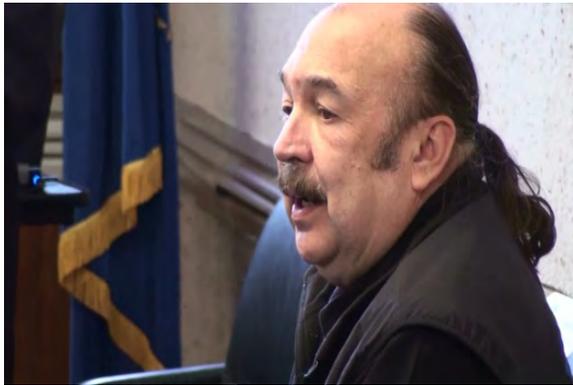
EnHIP Members, Bethesda, Maryland



Dr. Robert D. Bullard, Clark Atlanta University



Dr. Rueben C. Warren, Tuskegee University



Mr. Terrance (Terry) Williams, Commissioner, Tulalip Tribe



Dr. Brian D. Smedley, Joint Center for Political and Economic Studies



Dr. James J. Reisa, National Research Council



Dr. Donald A.B. Lindberg and Dr. Steven Phillips, NLM



Dr. Raymond Anthony, University of Alaska Anchorage, Dr. Robert Copeland, and Dr. Bailus Walker



Dr. Paul Tchounwou, Jackson State University, and Dr. T. Joan Robinson, Morgan State University



Dr. Henry Lewis, III, Dr. Bailus Walker, Dr. Melvin Spann (seated), and Dr. James J. Reisa



Ms. Gale Dutcher, Associate Director, NLM, and Dr. Melvin Spann



Ms. Joan Nelson, Oglala Lakota College, and Mr. Terrance (Terry) Williams



Dr. Henry Lewis, III, presents a memorial tribute for Dr. Theodore (Ted) Bates, Texas Southern University, to Dr. Judith Mazique, Texas Southern University



Dr. Robert D. Bullard



Dr. Bailus Walker and Dr. Rueben C. Warren



(Pictured L to R) Dr. Bailus Walker, Dr. Daniel Wildcat, Haskell Indian Nations, Dr. Donald A.B. Lindberg and Dr. Steven Phillips, NLM



Dr. Arlene Montgomery and Dr. Robert Copeland



Dr. Angela Ruffin, NN/LM, NLM



Dr. Diógenes Herreño-Sáenz, University of Puerto Rico, School of Medicine



Dr. Ann Barbre, Xavier University of Louisiana



Dr. Milton Morris, Benedict College and Ms. Benita Litson, Diné College



Dr. Donald A.B. Lindberg and Dr. Henry Lewis, III



Dr. Milton Corn, Deputy Director, Research and Education, NLM



Dr. Donald A.B. Lindberg receives an award from Dr. Henry Lewis, III, for his 20-year support to EnHIP



Ms. Janice Kelly, Chief, Outreach and Special Populations Branch, NLM