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of Medicine  
Environmental Health  
Information Outreach  
Program

Proceedings

June 22, 2005



**THE NATIONAL LIBRARY OF MEDICINE**

**ENVIRONMENTAL HEALTH  
INFORMATION OUTREACH PROGRAM**

**PROCEEDINGS**

National Library of Medicine  
Bethesda, Maryland

June 22, 2005

Prepared for  
Specialized Information Services Division  
National Library of Medicine

Prepared by  
Medical Education and Outreach Group  
Oak Ridge Institute for Science and Education

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The **Oak Ridge Institute for Science and Education** (ORISE) is a U.S. Department of Energy facility focusing on scientific initiatives to research health risks from occupational hazards, assess environmental cleanup, respond to radiation medical emergencies, support national security and emergency preparedness, and educate the next generation of scientists. ORISE is managed by Oak Ridge Associated Universities.

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**NATIONAL LIBRARY OF MEDICINE  
ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM MEETING**

**Board Room  
Mezzanine, Bldg. 38  
Bethesda, Maryland  
June 22, 2005  
8:15 a.m. - 4:45 p.m.**

AGENDA

- 8:15 a.m. – 8:45 a.m. Registration and Continental Breakfast
- 8:45 a.m. – 9:00 a.m. **Welcome and Greeting**  
Donald A.B. Lindberg, M.D.  
Director, NLM
- 9:00 a.m. – 9:10 a.m. **Opening Remarks**  
Jack Snyder, M.D.  
Associate Director, SIS, NLM
- 9:10 a.m. – 9:15 a.m. **Memorial Presentation in Honor of Kathy Block**  
Donald A.B. Lindberg, M.D. and Henry Lewis III, Pharm.D.
- 9:15 a.m. – 9:30 a.m. **Introductions**  
Henry Lewis III, Pharm.D.  
Chairman, EnHIOP
- 9:30 a.m. – 10:00 a.m. **CHRIS Pilot/Program Overview**  
Rose Marie Womble  
Oak Ridge Institute for Science and Education
- 10:00 a.m. – 10:20 a.m. **Group Picture**  
HMD Reading Room
- 10:20 a.m. – 10:30 a.m. BREAK
- 10:30 a.m. – 11:15 a.m. **NIAMS, Community Health Center Project**  
Gregory Dennis, M.D.  
Director, Clinical Care and Training  
National Institute of Arthritis and Musculoskeletal  
and Skin Diseases

- 11:15 a.m. – 11:45 a.m.      **Health Literacy**  
Sharon Allison-Ottey, M.D.  
Chief Executive Officer, COSHAR Medical Inc.  
Lanham, Maryland
- 11:45 a.m. – 12:30 p.m.      **HHS Perspective on Health Literacy**  
Rob Logan, Ph.D., NLM
- 12:30 p.m. – 2:00 p.m.      **Working Lunch**  
**Presentations/Discussions on NLM Small Awards  
to EnHIOP Schools**  
**Daniel Wildcat**, *Haskell Indian Nations University*  
**Joseph McQuirter, D.D.S.**, *Charles R. Drew Univ. of Medicine and  
Science*  
**David Hurley**, *Diné College*  
**Perry Riggins**, *Morehouse School of Medicine*  
**Patricia Matthews-Juarez, Ph.D.**, *Meharry Medical College*  
**Diogenes Herreño-Sáenz, Ph.D.**, *Univ. of Puerto Rico Medical  
Sciences Campus*  
**Milton Morris, Ph.D.**, *Benedict College*
- 2:00 p.m. – 2:15 p.m.      **WISER Presentation**  
Marti Szczur  
Deputy Associate Director, SIS
- 2:15 p.m. – 3:00 p.m.      **Group Discussion: Planning for Next EnHIOP Meeting**  
Henry Lewis III, Pharm.D.
- 3:00 p.m. – 3:15 p.m.      BREAK
- 3:15 p.m. – 4:00 p.m.      **Group Discussion: Utilizing Health Information to Address  
Health Disparities**  
Henry Lewis III, Pharm.D.
- 4:00 p.m. – 4:30 p.m.      **Group Discussion: EnHIOP Strategic Direction**  
Henry Lewis III, Pharm.D.
- 4:30 p.m. – 4:45 p.m.      **Wrap-up**  
Henry Lewis III, Pharm.D.

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

**PROCEEDINGS OF THE ENVIRONMENTAL HEALTH  
INFORMATION OUTREACH PROGRAM (EnHIOP) MEETING  
June 22, 2005**

The Environmental Health Information Outreach Program (EnHIOP) panel convened on June 22, 2005, at 8:30 a.m. in the NLM Board Room. Distinguished presidents, deans, and professors representing 17 of the nation's Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), and Tribal Colleges and Universities attended the meeting to discuss issues and outreach activities in environmental health with staff from the National Library of Medicine's Division of Specialized Information Services and distinguished guest speakers. Members from California State University Northridge, Morgan State University, and Texas Southern University were unable to attend.

**ATTENDEES**

**Members from Participating Institutions:**

Dr. Ann Barbre, Xavier University of Louisiana  
Dr. Robert Copeland, Howard University  
Dr. Constance Hendricks, Hampton University (NEW)  
Dr. Diogenes Herreño-Sáenz, University of Puerto Rico Medical Sciences Campus  
Mr. David Hurley, Diné College (Alternate)  
Dr. Henry Lewis III, Florida A&M University and EnHIOP Chairman  
Dr. Patricia Matthews-Juarez, Meharry Medical College (Alternate)  
Dr. Joseph McQuirter, Charles R. Drew University of Medicine and Science  
Dr. Milton Morris, Benedict College  
Mr. Perry Riggins, Morehouse School of Medicine  
Dr. Deig Sandoval, Oglala Lakota College (Alternate - New)  
Dr. Leslie Schulz, University of Texas at El Paso (New)  
Dr. Cheryl Taylor, Southern University, Baton Rouge (Alternate)  
Dr. Paul Tchounwou, Jackson State University  
Dr. James Webster, Tuskegee University  
Mr. Daniel Wildcat, Haskell Indian Nations University  
Dr. Doris Withers, Medgar Evers College

**Consultants to the EnHIOP:**

Mr. John Scott, Center for Public Service Communications  
Dr. Melvin Spann, NLM retired (EnHIOP Executive Secretary)  
Dr. Bailus Walker, Howard University (EnHIOP Senior Scientific Advisor)

**Speakers and Guests:**

Dr. Sharon Allison-Otley, COSHAR Medical, Inc.  
Ms. Kamyil Brite, daughter of former EnHIOP member Kathy Block  
Dr. Gregory Dennis, National Institute of Arthritis and Musculoskeletal and Skin Diseases, NIH  
Dr. Rob Logan, Lister Hill National Center for Biomedical Communications, NLM  
Ms. Rose Marie Womble, Oak Ridge Institute for Science and Education

**NLM Staff:**

Dr. Donald A.B. Lindberg, Director, NLM  
Ms. Cassandra Allen, Division of Specialized Information Services, NLM  
Ms. Stacey Arnesen, Division of Specialized Information Services, NLM  
Ms. Nicole Dancy, Division of Specialized Information Services, NLM  
Ms. Gale Dutcher, Division of Specialized Information Services, NLM  
Ms. Cynthia Gaines, Division of Specialized Information Services, NLM (EnHIOP Project Officer)  
Ms. Cindy Love, Division of Specialized Information Services, NLM  
Ms. Mahate Parker, NLM Tribal Intern (Chickasaw Nation)  
Ms. Deena Pers, Division of Specialized Information Services, NLM  
Ms. Richelle Porter, Division of Specialized Information Services, NLM  
Dr. Elliott Siegel, Office of Health Information Programs Development, NLM  
Dr. Jack Snyder, Division of Specialized Information Services, NLM  
Ms. Marti Szczur, Division of Specialized Information Services, NLM  
Ms. Rose White, Division of Specialized Information Services, NLM  
Ms. Sydnee Winston, Division of Specialized Information Services, NLM  
Ms. Catherine Craven, Informatics Fellow, Lister Hill National Center for Biomedical Communications, NLM  
Mr. Ed Bunker, Informatics Fellow, Lister Hill National Center for Biomedical Communications, NLM

**NLM/SIS Contractor Employees:**

Ms. Diane De Binder, Oak Ridge Institute for Science and Education  
Ms. Rose Foster, Oak Ridge Institute for Science and Education (EnHIOP Project Advisor)

**I. WELCOME AND GREETING**

Dr. Donald A.B. Lindberg, Director, NLM, welcomed the members, alternates, consultants, and guests to the meeting, expressing his pride in the important work EnHIOP has accomplished over the years. In discussing the budget situation, Dr. Lindberg assured the members that NLM would do everything in its power to honor its commitment to funding the EnHIOP.

Dr. Lindberg highlighted the work of the human genome project and genetic medicine as a major focus of the NIH and NLM, asserting how it is redefining how we practice medicine and preserve health. It is also providing insights into why one person will respond to a drug and another will not. The general thrust at NLM continues to be trying to put good scientific information in the hands of patients, families, and the public. The best examples of this, he said,

are MedlinePlus, which is available in both English and Spanish and includes exceptional audiovisual elements, and the NIH Senior Health Web site, which will actually “read itself” to the user.

In closing, Dr. Lindberg requested the assistance of the EnHIOP members in providing feedback on NLM activities that are working well and making recommendations for new activities they feel NLM should try.

## **II. MEMORIAL PRESENTATION IN HONOR OF KATHY BLOCK**

Dr. Henry Lewis III, EnHIOP chairman and professor at the College of Pharmacy and Pharmaceutical Sciences, Florida A&M University, introduced Kamy Brite, daughter of Kathy Block, a longtime member of the EnHIOP representing Hampton University, who recently passed away. Ms. Brite is now a nursing student at Hampton. Dr. Lewis and Dr. Lindberg presented Ms. Brite with a special plaque in recognition of her mother’s enduring contributions to NLM and the Hampton, Virginia community as a member of the EnHIOP since 1998. Both Dr. Lewis and Dr. Lindberg stated that Ms. Block would certainly be missed.

Below is a copy of the inscription on the plaque presented to Ms. Brite:

**In Memory of Kathy M. Block**  
Distinguished Member of the NLM Toxicology Information Outreach Panel and  
Environmental Health Information Outreach Program  
For contributions and special efforts to assist the National Library of Medicine,  
Hampton University, and  
HBCUs address health disparities and access health information

## **III. OPENING REMARKS**

Dr. Jack Snyder, Associate Director, Specialized Information Services Division (SIS), NLM, greeted the members and guests, stating that environmental health is still very much in the public mind. He announced that Dr. David A. Schwarz is the new director at the National Institute for Environmental Health Sciences (NIEHS). Dr. Schwarz comes to NIEHS from Duke University, where he demonstrated an intense interest in air quality and asthma. SIS will be engaging Dr. Schwarz to explore what NIEHS and SIS might be able to accomplish together in the future. The Environmental Protection Agency (EPA) also has a new Administrator, Mr. Stephen L. Johnson, who has a distinguished record of service at EPA of over 30 years. SIS will also be engaging Mr. Johnson to find areas of mutual interest and discover new areas of collaboration with EPA.

Dr. Snyder announced that new designs have been implemented for the NLM (<http://www.nlm.nih.gov>) and SIS (<http://sis.nlm.nih.gov>) Web sites and encouraged panel members to explore the new interfaces, particularly those for the SIS environmental health

information products located at <http://sis.nlm.nih.gov/enviro.html>. New products include the Wireless Information Service for Emergency Responders (WISER).

Dr. Snyder mentioned several issues of potential significance for EnHIOP activities and encouraged members to follow these issues, which are outlined below:

- A “Sunset Commission” has been proposed by the Office of Management and Budget (OMB) in which agencies and programs would be reviewed according to a set schedule and could be terminated if certain kinds of results were not demonstrated. (More information: [http://www.whitehouse.gov/omb/legislative/grppi\\_act\\_trans\\_ltr.pdf](http://www.whitehouse.gov/omb/legislative/grppi_act_trans_ltr.pdf).)
- Asbestos continues to be on the minds of many in Washington, D.C., and asbestos reform negotiation is a major topic on the Hill.
- There is a proposal for federal judges to be required by law to review government-based consent decrees every four years to determine whether the decree should continue. It will be up to the person whose complaint led to the consent decree to prove it should continue. If the judge does not act to continue the consent decree within 90 days, the pact will end. This could have a significant impact on environmental issues, including carbon dioxide and global warming issues, national and international water contamination issues, genetically modified crops issues, and the siting of new energy facilities of all kinds. For more information, go to: <http://www.news-leader.com/apps/pbcs.dll/article?AID=/20050705/NEWS/507050365/1001/ARCHIVES>.

Dr. Snyder asked for additional issues of concern from the members. The issue of genetic differences in drug reactions was mentioned. Pharmacogenomics—which combines the disciplines of medicine, pharmacology, and genomics—addresses this issue. Dr. Snyder mentioned that there has been an increase in discussions in the medical community about pharmacogenomic information, and NLM has just begun a discussion with NIEHS and others to find out if there is a way to bring that kind of information together on a platform suitable for public searching. He asked the members to provide suggestions on how that information might be presented and what aspects of it would be particularly useful.

Dr. Lewis mentioned a symposium on pharmacogenetics that Dr. John Ruffin, Director, National Center for Minority Health and Health Disparities, hosted through the Institute of Medicine several years ago. A number of recommendations were made at the symposium, one of which had to do with funding research initiatives in pharmacogenetics. He added that the group might want to expand this discussion at the next meeting.

Dr. Lewis then asked the panel members to introduce themselves. Three of the members in attendance were new to the EnHIOP: Dr. Constance Hendricks, Dean of the School of Nursing, Hampton University; Dr. Deig Sandoval (alternate), an environmental chemist from Oglala Lakota College; and Dr. Leslie Schulz, Dean of the College of Health Sciences, University of Texas at El Paso.

#### **IV. CHRIS PILOT/PROGRAM OVERVIEW**

Rose Marie Womble from the Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, Tennessee, presented an overview of the Consumer Health Resource Information Service (CHRIS) pilot and program, developed and conducted by the Medical Education and Outreach group of ORISE and funded by the National Library of Medicine's Specialized Information Services Division.

The CHRIS program is a faith-based initiative designed to support the U.S. Department of Health and Human Services' Healthy People 2010 goals of increasing quality and years of life and eliminating health disparities. The program addresses these goals primarily by improving access to health information that addresses health issues that disproportionately affect minorities, such as HIV/AIDS, cardiovascular disease, diabetes, immunization, cancer, and infant mortality. The core components of the program are health education, health screenings, and health services.

The CHRIS pilot project was an 18-month demonstration pilot, which was conducted in six African American churches, each with an active membership of at least 100, in the inner city of Knoxville, Tennessee. Each church was equipped with a computer workstation, and parish nurses affiliated with each church were trained to access medical information on the Internet.

Ms. Womble stressed the importance of the formative evaluation system used throughout the process and the capacity-building activities for this endeavor, which involved working with five community-based organizations to accomplish the goal of addressing minority health disparities. Collaborating with ORISE during the pilot phase were the Knox County Health Department, the Tennessee Office of Minority Health-Knoxville Minority Health Coalition, the Baptist Health System Parish Nursing Program, and the Knoxville Chapter of the Chi Eta Phi Nursing Sorority.

The nurses were provided with parish nurse training and specialized training by ORISE in accessing NLM's online databases; this included training on Internet searching skills for those who needed it. This prepared them for providing health education presentations on six identified health disparities in the participating churches, providing screening services, and organizing a health fair held at one of the participating churches. The health fair served as a prelude to the Tennessee Office of Minority Health Annual Health Summit.

Surveys were conducted following the conclusion of the pilot, and 95 percent of the 170 church members who completed a survey indicated that the overall health information they received from their parish nurses resulted in positive changes in their health habits or lifestyles. The success of the pilot resulted in an increased awareness of minority health issues, enhanced health and wellness ministries within the participating churches, and increased access and use of NLM's health information resources. The CHRIS pilot was also the largest federally funded, faith-based initiative in the East Tennessee region and the first faith-based health communication initiative to address six of the identified health disparities in a single project.

The program is now in its second phase with four additional African American churches in the inner city of Knoxville and a Catholic, Hispanic-serving parish in nearby Lenoir City, Tennessee participating.

Replication plans are also in development in collaboration with the Tennessee Office of Minority Health. A replication manual titled *Developing a Consumer Health Resource Information Service Program: A Guide for Faith-based Organizations and Communities* is also being developed by ORISE.

Similar positive outcomes to the pilot project are anticipated for the continuation of the CHRIS program. Sustainability is a key component of the success of the CHRIS program during replication. This is being achieved through cost efficiency—minimal financial expenditures are required with maximum benefit—and the program’s eligibility for grant funding from various sources.

Two research approaches are recommended as the CHRIS Program is replicated on the state and national levels; these are translational research and community-based participatory research. Translational research involves clinical investigation in which knowledge obtained from basic research is translated into diagnostic or therapeutic interventions that can be applied to the treatment or prevention of disease or frailty. Community-based participatory research is a collaborative process that involves investing community members in the processes and products of the research by engaging them with the researchers and employing an understanding of local health problems and designing of interventions.

## **V. NIAMS COMMUNITY HEALTH CENTER PROJECT**

Dr. Gregory Dennis, Director of Clinical Care and Training, National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), NIH, spoke to the members regarding the NIAMS Health Partnership Program (HPP), a diversity outreach initiative, which NIAMS has been conducting for the past several years and in which he has played a lead role. He described the steps toward implementation of the program, specifically the NIAMS Community Health Center in the Washington, D.C. community, the evaluation of the HPP, and plans for the future.

Dr. Dennis explained that the prevalence of arthritis and musculoskeletal problems in the Washington, D.C. community led them to select that focus for the proposed community health center. Arthritis and related disorders have been reported as a leading cause of work disability, and higher rates of mobility impairment have been reported in both African Americans and Mexican Americans (according to the Third National Health and Nutrition Examination Survey). In addition, significant racial and gender differences have been found in the use of joint replacement and other interventions documented to improve the outcome for osteoarthritis. Statistics show that the socioeconomic impact of both osteoarthritis and rheumatoid arthritis are significant: osteoarthritis alone accounts for greater than seven million physician visits annually, and by the year 2020 arthritis will affect approximately 20 percent of the U.S. population and account for greater than 95 billion dollars in health care costs.

The objectives of the Health Partnership Program are to establish relationships with community organizations, implement an urban-based clinic in Washington, D.C., and increase awareness of disease and NIH studies to individuals in the community. Dr. Dennis emphasized that this was the first time an institute at the National Institutes of Health had initiated an outreach center

within Washington, D.C. The program began with a long process of partnership building, resulting in a long list of partners including foundations such as the Metropolitan Washington Chapter of the Arthritis Foundation, universities such as Howard University, and local health care clinics such as Unity Health Clinic. A key element was engaging both the African American and Hispanic/Latino communities within Washington, D.C.

The scope of the community involvement was vital to the initial success in the implementation of the program. Collaboration enabled the ideal location of the clinic in the northwest part of Washington, D.C. in the Upper Cardozo Community Health Center, which is next to a metro stop. This location is convenient, not only for the patients and partners, but the providers as well.

The objectives of implementing an urban-based NIAMS Community Health Center (CHC) were to:

- establish a community-based cohort for research purposes, to improve access to subspecialty care—especially for rheumatology,
- increase access to research studies,
- increase rapport with the referring providers in the Washington, D.C. metro area, and
- enhance clinical training—especially to increase trainees’ understanding of rheumatic disease in the community with conditions that individuals have on a day-to-day basis.

NIAMS CHC goals are to provide access to expert consultations at least three days per week in a year, provide access to state-of-the-art treatment over three years to 90 percent of early arthritis patients, and make 80 percent of community physicians aware of modalities that will improve quality of life.

Dr. Dennis then described the clinical capabilities of the NIAMS CHC. The center staff accepted referrals for evaluation of rheumatological disorders. Each referral accepted was then enrolled on the NIH-approved clinical research protocol, a natural history protocol that allows for evaluation of individuals with regard to disease over a period of time. Center physicians would then perform clinical evaluations, make assessments, and make recommendations for further evaluation and management. Patients who did not require the ongoing expertise of a rheumatologist were referred back to their primary care physicians with specific recommendations. Communication with referring physicians for all patients was facilitated by patient records being linked by computer to the NIH Clinical Center with a research “shadow file” at the Cardozo Clinic. Letters to referring physicians could be dictated at the Cardozo Clinic and then automatically sent by the NIH Clinical Center administrative personnel. After initial evaluations and assessments, they could obtain laboratory studies, imaging studies, X-rays, etc. at the NIH Clinical Center to support the initial diagnostic impressions and get expert consultations by other physicians at the NIH Clinical Center to help with the assessments.

The evaluation process involved surveying the project partners as well as patients of the NIAMS CHC. A telephone survey that was conducted among the partners in 2004 revealed the following:

- Seventy-nine percent agreed with the statement “Participating in the HPP makes me feel more trusting of the medical research at NIH.”
- Eighty-three percent agreed with the statement “I am more likely to recommend patients to the CHC because of my involvement with the HPP.”
- Fifty-four percent agreed with the statement “My involvement with the HPP helps my organization reach its goals.”
- Nine-two percent of the partners reported that they think the HPP has benefited the Washington, D.C. area community.

Bilingual telephone surveys are conducted among patients at four-month intervals to assess their level of satisfaction with the Patient Liaison Program (PLP). The PLP was implemented to address communication challenges. Patients who cannot speak English are encouraged to take the shuttle that comes twice weekly and they are met by personnel who can speak with them, help them navigate the Center during their initial visit, and facilitate communication between them and the providers. Results have been very positive. All 31 patients who agreed to participate in the survey between January 2004 and January 2005 were satisfied with their patient liaison’s service during the visit.

An important benefit of the Center is the increase of patient exposure for the clinical fellows. Prior to implementation of the NIAMS Community Health Center, fellows were able to see patients only at NIH and rotating through other centers in the Washington, D.C. area. This made clinical evaluation very difficult, since Dr. Dennis had no direct knowledge of a large amount of their clinical exposure. After implementation of the Center, there has been a dramatic increase in the number of new and follow-up patients the fellows have been seeing, which has given Dr. Dennis the opportunity to evaluate their ability to assess patients on an ongoing basis.

Dr. Dennis noted that the demographic makeup of the NIAMS CHC patients has changed since it began. From 2001 to 2003, approximately 30 percent of the patient population was black, 60 percent was Hispanic, and 10 percent was of “other origin,” with approximately 300 individuals enrolled that were being seen on a regular basis. From 2003 to 2004, with more than 900 individuals enrolled, there was a marked increase in the percentage of African American research subjects (42.5 percent), while the percentage of Hispanic/Latino subjects decreased to 39 percent. Dr. Dennis felt that this shift demonstrated that it took a longer amount of time to build confidence in the Center within the black population. At present, increasing numbers of other ethnic populations are now being seen. As stated earlier, the utilization of bilingual staff for effective communication, utilization of interpreters to facilitate communication between patients and providers, provision of a shuttle service twice weekly, as well as the implementation of the Patient Liaison Program have all alleviated the communication challenges presented by the demographic scope of the patient population.

An important focus of the NIAMS Community Health Center has been to have an impact on health disparities, which are assessed from a disease-focused perspective. They tested their ability to do this in a group of 45 patients with systemic lupus erythematosus (SLE), assessing for evidence of clinical improvement over time, changes in patients' medication profiles to drugs that are less detrimental, and whether the patients were receiving the necessary follow-up care. With regard to the medication protocol, after three months of follow-up care at the center, the average dose of prednisone (a steroid medication with many adverse effects) being administered had decreased from 15 milligrams to five milligrams and the percentage of patients on a steroid-sparing medication such as Hydroxychloroquine or Azathioprine had increased dramatically.

One conclusion from this study was that: "The long term use of prednisone to control disease activity in lupus is more likely to result in greater morbidity than if corticosteroid medications are implemented to reduce the cumulative exposure, and that programs should be developed to educate providers of patients with lupus the appropriate use of the corticosteroid medications tailored to their specific clinical problems."

As a part of the education component of the Health Partnership Program, more than 200 presentations have been given in the community over the past four years to individuals, community health centers, and providers. In addition, the clinicians communicate with the primary care providers as to the appropriate management formulations for their referred patients.

From the beginning of the program, the NIAMS Community Health Center has placed an emphasis on reaching out to the community. In 2004 alone, the center participated in 69 outreach activities in the Washington, D.C. metropolitan area. In addition to the NIAMS Natural History Study of Rheumatic Diseases in Minorities, other clinical studies in which the center has participated have included the following:

- Health Beliefs and Health Behavior Practices, including CAM Use, Among Minorities with Rheumatic Disease (NIH Department of Nursing)
- Community Research Study (Clinical Center Department of Clinical Bioethics)
- Standard of Care (National Cancer Institute)

In closing, Dr. Dennis said that they are continually trying to come up with new and innovative ways to evaluate this program, and they feel that continued collaboration with all of the NIH institutes is very important. Their vision is to have a clinical center in Washington, D.C. that would be able to engage the community on a day-to-day basis with all of the specialties and subspecialties within the NIH. A future goal is to continue to interact with federal and local agencies to find ways to take this type of program to a national level.

## **VI. EXPLORING HEALTH LITERACY**

Dr. Robert A Logan, Lister Hill National Center for Biomedical Communications, NLM, described health literacy initiatives from the perspectives of individuals, providers, and the

public. He cited the Institute of Medicine's report, *Health Literacy: A Prescription to End Confusion* (April 2004) as having prompted greater interest in this subject; the report indicated that 90 million Americans (nearly half of all American adults) cannot understand basic medical instructions, which is an alarming statistic. The U.S. Surgeon General has stated that no higher priority exists in public health right now. There is also controversy in that there are major differences in the motivations of interested groups and major perceptual differences about socio-cultural impact.

On a basic level, health literacy initiatives aspire to improve written health materials so they are more culturally and clinically appropriate, improve provider/patient dialogue so that patients can better understand and follow their health care provider's instructions, help patients better understand prescription information, all with the goal of reducing errors and improving health outcomes, disease prevention, and early medical intervention.

From a broader perspective, health literacy initiatives could boost information seeking among the public, improve the public's basic knowledge of health and medicine, promote critical thinking about medical advice and information, and help people better navigate the health care delivery system. It could also nurture more patient trust in the health care delivery system and help providers to better respond to their patients' needs. Some say that what health literacy should aspire to do is "empower" patients, although this means different things to different people, from boosting a patient's motivation to seek health care information to boosting an individual's ability to manage their own care or building a person's confidence to intervene on his or her own behalf.

There are a number of therapeutic results of health literacy initiatives on individuals, as well as on society and culture. For individuals, health literacy initiatives could better match the reading level and readability of health care materials and improve the understandability of prescription information, instructions, signs, and directions. Many suggest that improved health literacy will result in better informed patients who will make better decisions. For society and culture, it is believed that improving health literacy will not only improve the quality of health care and health care outcomes, but could reduce health care costs.

There are also many critics of health literacy initiatives, Dr. Logan explained, who argue that it will raise the shame and stigma associated with limited literacy skills without fundamentally dealing with the causes of the problem, which blames the individual for a much deeper socio-economic problem. Many suggest that a better informed patient is not necessarily the most cooperative one. Others say that writing health materials at a 6<sup>th</sup> or 7<sup>th</sup> grade level, which is the recommendation for many health literacy initiatives, will dilute the quality of health information for consumers.

On an even deeper level, some argue that raising the topic of health literacy raises the issue of inadequacy of K-12 health education/reading programs without providing solutions to improve them. Others say that it is an attempt to resolve a cultural problem without recognizing that its fundamental underlying causes are cultural and that it gives the appearance of being culturally paternalistic because it is not a "grass roots" initiative. Some even say that health literacy efforts will fail because they are perceived as serving the needs of the health care delivery system rather

than the broader public interest. Another perspective is heard from some physicians who say that translating medical terms into lay language is the wrong priority—the fundamental need is to first help people of all ages understand how the human body functions.

Dr. Logan ended his presentation by asking, “Is health literacy over-burdened with expectations and criticisms?” He gave the analogy of a Christmas tree so laden with ornaments (expectations and criticisms) that it collapses under its own weight. He is conducting a survey to assess the differences in attitudes that people have about health literacy and asked the members of the EnHIOP if they would participate. Results of the survey will be reported to the participants.

In response to questions, Dr. Logan also made the following points:

- Using health literacy initiatives to address disease prevention is a worthy goal. However, the solution involves more than the availability of appropriate materials—the information usually needs to be reinforced by friends, family, or a trusted medical provider.
- In addressing the challenge of conflicting information that causes confusion, what is most helpful is training people how to better assess information. To address this issue there is a Web site being planned, sponsored by all the major refereed medical journals in the country, that will help patients think through problems. He also pointed out that the issue of conflicting information is one reason critics say that health literacy initiatives are misfocused. Because science is uncertain, it would be better to teach people how their body functions and avoid details about specific conditions.
- Regarding the overlap between basic literacy and health literacy, Dr. Logan pointed out that anyone, regardless of educational background, who does not have a health care background, can have difficulty understanding basic medical instructions. Even the physicians on the IOM committee acknowledged that there were times when they did not understand medical instructions from their own providers because the conditions were new to them.
- When asked about the best definition of health literacy to use, Dr. Logan suggested the IOM’s definition<sup>1</sup> because it best represents state of the art.
- The key to assessing health literacy is to measure readability and suitability. How much do people really understand the information, and is it suitable for them in how they view their role as a patient or caregiver? The most common way that health literacy has been measured is by how much people learn.

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<sup>1</sup> “Health literacy is defined as the degree to which individuals have the capacity to obtain, process, and understand basic information and services needed to make appropriate decisions regarding their health.” Health Literacy: A Prescription to End Confusion. Institute of Medicine Report. April 8, 2004.

## VII. HEALTH LITERACY—A REALITY FOR ALL HEALTH PROFESSIONALS

Dr. Sharon Allison-Ottoy, a health literacy researcher and expert, presented information on the scope and impact of the health literacy problem and finding a solution. Dr. Allison-Ottoy is Chief Executive Officer of COSHAR Medical, Inc. Among her many honors is a feature in the national exhibit, *Changing the Face of Medicine—Celebrating America's Women Physicians*, which continues to be on display at the National Library of Medicine and on the Internet.

Dr. Allison-Ottoy expressed her passion for health literacy and her belief that it is most helpful to talk about health literacy in simplistic terms. Therefore, the definition she uses is very simply expressed as “the ability to read, understand, and act on health information.” This is a major problem for millions of Americans, regardless of age, race, education, or income. Populations at greater risk for low health literacy include ethnic minority groups, older patients, recent immigrants, people with chronic diseases, and those with low socioeconomic status. However, the majority of people with low health literacy are U.S.-born Caucasian Americans. It is important to find solutions that encompass all Americans.

To highlight the scope of the problem, Dr. Allison-Ottoy shared a personal experience and results from health literacy research. She stressed that patients with low or marginal health literacy skills may not be the ones you would expect or recognize. The patient from her personal experience had a Ph.D. in mathematics and could read quite well. However, she still had a problem taking her medication as prescribed because she did not understand the context of the directions she was given. The largest study conducted to date on health literacy found that:

- 33 percent were unable to read basic health care materials,
- 42 percent could not comprehend directions for taking medication on an empty stomach,
- 26 percent were unable to understand information on an appointment slip,
- 43 percent did not understand the rights and responsibilities section of a Medicaid application, and
- 60 percent did not understand a standard informed consent document.

Dr. Allison-Ottoy described the impacts of low health literacy and the importance of addressing the problem from a holistic perspective—on all levels and across all disciplines (e.g., whether a doctor is an oncologist or a veterinarian). Research has shown that adults with low health literacy:

- are often less likely to comply with prescribed treatment and self-care regimens,
- make more medication or treatment errors,
- fail to seek preventive care,
- are at a higher risk for hospitalization,
- remain in hospital nearly two days longer, and
- lack the skills needed to negotiate the health care system.

The issues are compounded for those with low health literacy and chronic disease, such as diabetes. They have even greater problems with control and consequently have worse health outcomes.

Other impacts include under-utilization of preventive services, needless patient suffering, higher patient dissatisfaction, and higher provider frustration. It is very important for health professionals to understand the reasons for patient non-compliance—is it that they don't know what to do or could it be that they are afraid of something?

In the search for a solution, health care leaders agree that focusing on the patient/provider relationship would provide the most immediate and effective solution to low health literacy. Clear communication is key. Dr. Allison-Otley offered this six-step approach to improving patient understanding:

- Limit the amount of information provided at each visit.
- Slow down—give information in “nuggets” instead of an entire book.
- Decrease the use of medical jargon. For example, instead of using the word “benign” say “harmless,” instead of “edema” say “swelling,” and instead of “intake” say “what you eat or drink.”
- Use pictures or models to explain important concepts.
- Assure understanding with the “show-me” technique. “Show me how to give yourself insulin.”
- Encourage patients to ask questions – this opens the door for dialogue and increased patient understanding.

Many people believe that the U.S. health care system is set up for failure with the many facets that have to be dealt with: appointments, telephone menus/prompts, directions, insurance/carrier information, pharmacy restrictions, etc. Accessing the health care system can be a nightmare. The practical solution, Dr. Allison-Otley believes, is that doctors/health professionals and patients all speak the same language. She gave concrete examples of simplifying the appointment card, the telephone recording, and the signs and maps; and she enumerated the many benefits that result when patients actually understand the health care information that they are being given. When they understand, patients are more likely to be more compliant with instructions/medication and call back/visit less often, as well as have fewer hospitalizations, better health outcomes, and increased satisfaction. Recent studies have proven overwhelmingly that this is so.

Dr. Allison-Otley recommended a very helpful tool that she uses as a model called “Ask Me 3.” It was developed by many individuals, companies, and institutes that are interested in health literacy. This concept promotes three simple but essential questions: 1) “What is my main problem?” (diagnosis); 2) “What do I need to do?” (treatment); and 3) “Why is it important for me to do this?” (context). This process creates shared responsibility for clearer health communication. “Ask Me 3” materials are available in English and Spanish. More information is also available on the Web site, [www.askme3.org](http://www.askme3.org). Also available on the Web site is a cultural

competence primer for health care professionals written by Dr. Allison-Ottey and Dr. Randall Maxey (<http://www.askme3.org/pdfs/NMAPrimer.pdf>).

During the exchange following the presentation, several good questions were raised, and Dr. Allison-Ottey's responses included the following:

- In dealing with the confusion of conflicting medical information, whether from the media, the Internet, or other sources, it is important to encourage people to use one trusted source, such as MedlinePlus, and to drive them back to their primary health care provider.
- In giving instructions for taking medication, context should be a part of every exchange. In addition to saying, "Take this medication," also say, "Take this medication because . . ." and tell them why it is important. Often, more educated people tend to have problems following prescription instructions; if you tell them why, it helps.

### **VIII. UPDATES ON NLM SMALL AWARDS TO EnHIOP SCHOOLS**

In 2004, awards of \$5,000 were made to fifteen EnHIOP schools that submitted proposals to NLM to carry out information-related projects. These projects are now underway, and presentations about these projects were made by seven of the EnHIOP schools. A final report will be submitted by each school at the end of its project. For complete descriptions of each project, see Attachment C.

#### **Haskell Indian Nations University, Haskell Environmental Research Studies Center— Lawrence, Kansas: *The Good Medicine Information Outreach Program***

Mr. Daniel Wildcat, director of the Haskell Environmental Research Services Center in Lawrence, Kansas, and professor at Haskell Indian Nations University, presented this report. The purpose of the "Good Medicine" project is to extend useful health information to the urban American Indian population of the metropolitan Kansas City area. This project targets youth, young parents/expectant women, and elders as a way of introducing the tribal community to NLM's digital resources. The university is collaborating for this project with the Haskell Environmental Research Studies (HERS) Center. The distance education/IT staff at Haskell has been working with the Heart of America Indian Center (HAIC)—one of the longest continuously-operating urban Indian centers in the United States—to accomplish this. Six to eight online computers are being used in the project and introductory training on the NLM databases was provided by ORISE. The target audience was chosen based on most services currently provided by the HAIC, which deals with those groups. Mr. Wildcat emphasized the importance of listening to elders as important for health literacy. He recalled Satchel Page's quote, "It's not what you don't know that gets you in trouble—it's the things you know that just ain't so that cause all the problems," that can be very appropriate for health literacy, he stated.

**Charles R. Drew University of Medicine and Science, Dept. of Oral and Maxillofacial Surgery—Los Angeles, California:** *Environmental Health Curriculum for Primary Health Care Providers*

The goals of this project are to develop a training course at Drew for health care providers, develop a method to familiarize target audience with content and instructions for searching NLM Web sites, and identify means to fully implement and sustain the training program.

Dr. Joseph McQuirter, Chief of Oral and Maxillofacial Surgery at Drew, explained that his interest in environmental health grew out of treating wounds caused by shotgun blasts to the face and ingested pellets as a complication to that, causing lead poisoning. Their project focuses on training health care providers to become well-informed about health information resources and aid them in fulfilling their role as patient educators in order to narrow the gap between patients and providers.

Charles R. Drew University of Medicine and Science and its corresponding King Drew Medical Center serve a low-income area of southwest Los Angeles with a population of about 1.3 million. They frequently see over-utilization of emergency room services in a very small emergency room with more than 70-120 visits per year. Many of these are patients without access to primary care services or without an understanding of the need for preventive services.

NLM databases included in the training are an introduction to TOXNET, ChemIDplus, HSDB, IRIS, TOXLINE/DART, and TRI/TOXMAP, as well as MEDLINE/PubMed and MedlinePlus. The target audience consists of emergency room physicians, and there are plans to expand the program to 14 residency training programs, primary care curriculum for medical students, and in the College of Health and Science. Departmental meetings and learning labs will be used to reach people.

**Diné College, Division of Math Science and Technology—Shiprock, New Mexico:** *Health Effects from Oil Field Operations on the Navajo Nation*

David Hurley, head librarian at Diné College, presented the update on their project. Diné is partnering with the University of New Mexico, the Navajo Nation EPA, the Indian Health Services, and Whitehouse High School. Diné College has about 1,500 full time employees spread across the eight locations of the Navajo nation, with a new and growing Public/Environmental Health program offered at four locations. The project is being conducted to look at the long term health effects of low level exposure to volatile organic carbons and other emissions from the oil and gas industries, which have experienced a five-fold increase in the number of wells over the past 50 years. The wells and pipelines are located close to residences, and area residents have expressed health concerns about the emissions for many years.

The purpose of the study is to address the community's capacity to address their own health concerns over the long term through training of students and their subsequent training of others in the community. Approximately 200 residents will be surveyed about health symptoms and concerns, air monitoring data will be collected from stationary equipment in identified trouble areas and badges worn by participants. Existing data on well and pipeline locations and wind

patterns will be used to identify potential problem areas for the study. At this time, about 10 percent of the surveys have been completed. Separate grants were used to purchase the monitoring equipment. Additional funding is needed to analyze the data—that will come in the future.

**Morehouse School of Medicine—Atlanta, Georgia:** *The Atlanta Project*

Perry Riggins, Director of Media Technology Services at Morehouse School of Medicine, described the focus of the Atlanta Project as health disparities and equal access to health information systems. The project has three different goals: to make students aware of health problems that are prevalent in their communities, to make them aware of the health information systems provided by NLM, and to engage the parents by discussing how they can learn from their children. Response to a request for volunteers resulted in 16 volunteers from the Ben Carson Science Academy and the Vivian Thomas High School Research Program. Other grants provided items for the project, including laptop computers, digital cameras, mobile carts, and wireless access points from the Beaumont Foundation. Students have been trained on the technology and on the NLM databases, particularly MedlinePlus. They were also trained how to do PowerPoint presentations and how to deliver poster presentations by having the digital images printed on a poster. The project is in its third week, with one week to go. Poster presentations will be judged and the five best posters will be in a national Web presentation. It is hoped that this project will give the students a drive to excel and share their knowledge with family and friends—to not be afraid of technology and to provide resources to enable them to find medical information when they need it.

**Meharry Medical College—Nashville, Tennessee:** *Approach for Building New Community-based Library Partnerships with Local Community Churches*

Dr. Patricia Matthews-Juarez, Associate Dean of Faculty Affairs and Development at Meharry Medical College, updated the members on Meharry's project, which grew out of Dr. Matthews-Juarez's first attendance to an EnHIOP meeting. The project has two goals: 1) To look at the context of isolation of parishioners and patients and the low health literacy with regards to interfacing with their providers, and 2) adherence to management and treatment, and 3) the issue of empowerment. They are working with the librarian at Meharry and in the context of Meharry's motto: "Worship of God through service to mankind." The church is located between two housing projects with an average age of about 50 with young children and 100 percent below the poverty level. Chronic illnesses include hypertension, diabetes, and HIV/AIDS. The first activity was to give them something to do on a regular basis after church on Wednesday night by having access to a computer. Many individuals in that community still do not have a computer. The project has been very well received. There are about 75 parishioners who come regularly on Saturdays, Sundays, and Wednesday nights, largely using MedlinePlus. They have a medical student and a child health specialist who have been working with them. One woman who did not know that there is a cure for syphilis—and many church parishioners did not know—found out on MedlinePlus. Another woman came in because her doctor did not have time to explain the side effects of her hypertension medication, so she has researched it on MedlinePlus. These are

examples of the tremendous amount of empowerment this project has leveraged in the community.

**University of Puerto Rico, Department of Pharmacology and Toxicology, School of Medicine—San Juan, Puerto Rico:** *UPR-Medical Sciences Campus: Outreach Project in Environmental Health Information*

Dr. Diogenes Herreño-Sáenz, professor of pharmacology and toxicology at the University of Puerto, School of Medicine, explained that the main goal of his project is to help reduce environmental health disparities through access to information. To accomplish this goal, the department is developing and will conduct training activities for middle and high school teachers, students, and librarians in the effective use of NLM resources.

UPR has joined with the ASPIRA Association, Inc. of Puerto Rico, a non-profit, community-based organization dedicated to the development of students, parents, and communities. One of ASPIRA's projects is to provide Internet access, as well as other services, at their community technology centers in Carolina, Ponce, and Mayagüez. These centers serve as the sites for the project training for the teachers, students, and school librarians.

Two types of training are being conducted. An introductory/basic training is being conducted for the middle and high school teachers and the public school librarians. A more advanced training is being held at the UPR Medical Sciences Campus, which will serve as an update for faculty in the UPR School of Medicine.

The NLM databases and resources covered are PubMed, MedlinePlus (Spanish version), Haz-Map, TOXMAP, Tox Town, Household Products Database, and the TOXNET databases. A total of 75 participants have been trained at the four sites. Evaluations have indicated 90 percent as excellent for all areas with very positive comments, indicating a strong desire for training to continue.

**Benedict College, Environmental Health Science Program—Columbia, South Carolina:** *Facilitating the Use of NLM's Databases Through Efforts of Benedict College*

Dr. Milton Morris, Director, Department of Environmental Health Sciences, Benedict College, reported that their project had been completed and described some of their findings. The major goal of their project was to increase awareness of the NLM databases on the campus and within the community. Project directors collaborated with Benedict's head librarian and library staff, and the health nurse and medical staff of the school. Faculty from the Department of Biology, Chemistry and Environmental Health Sciences were also actively involved.

To maximize the effectiveness of the project, activities were merged with those of another related small grant project involving the top junior and senior students in the school who conducted neighborhood health surveys. These surveys were conducted in accordance with procedures outlined in the Protocol for Assessing Community Excellence in Environmental Health (PACE).

These same students were invited to participate in the National Library of Medicine database training conducted in October 2004 by staff from the Oak Ridge Institute for Science and Education. Also attending that training were the project directors and representatives from the college's medical staff, library staff, and science department faculty. All who participated agreed to use the NLM databases in their work, and faculty members agreed to incorporate the databases into their course curricula.

As a part of the project, a survey of 23 close-ended questions was developed to assess the students' familiarity with the NLM databases. Results of this survey indicated that the majority of the college's junior and senior students had limited knowledge of the National Library of Medicine and its databases. The future goal is to at least double the number of students with increased knowledge of the databases.

## **IX. WISER**

Ms. Martha Szczur, Deputy Associate Director of the Division of Specialized Information Services (SIS) at NLM, gave the members an update on the Wireless Information System for Emergency Responders (WISER). WISER was developed by SIS to provide critical information for first responders to chemical incidents. The data is derived from the NLM's Hazardous Substances Data Bank (HSDB). There has been a very positive response from the fire chiefs who have been involved in evaluating and helping to field test the system during its development. Ms. Szczur announced that the basic development of the system is complete, and they are now looking for ways to continuously improve it. Ms. Szczur demonstrated both the desktop and PDA versions of WISER. One development concept is to make it look more like a game, and integrating with a patient reporting system so that the information could go directly to the emergency room.

For more information on WISER, visit <http://wiser.nlm.nih.gov/index.html>. The Web site includes a tutorial.

Dr. Snyder asked that the members download WISER to their own computers, test it, and report any problems they encounter to SIS. He also asked that everyone contact the police and/or fire officials—or any first responder community with which they might have or wish to establish a relationship—in their communities and ask them to access WISER to experiment with it.

Future additions to WISER include the twenty-five most important radio chemicals as well as biologicals. Dr. Snyder asked the members to let SIS know of chemicals, drugs, or biologicals that are of particular importance in their communities so they can be added.

## X. GROUP DISCUSSION

The final activity of the day was a group discussion led by Dr. Lewis addressing issues of concern to the members. Conclusions reached during this discussion included the following:

- There is a need for greater participation among the EnHIOP institutions in NIH research opportunities. Insight into some of these programs would be valuable. Representatives from other NIH institutes could present information at future EnHIOP meetings.
- Opportunities for faculty members in occupational health to do professional development activities in some of the NIH laboratories would be helpful. Meharry has been doing this, and it has been very effective.
- Member institutions need assistance in applying for RO1 grants. Although members have received training on RO1 applications, there is a greater need for information and training on the peer review criteria and process. It would be helpful if members of the EnHIOP could actually be a part of a grant review process.
- It would be very helpful for the members to be involved in formulating the focus of the institutes' research agendas. There is a current focus on health disparities, and the EnHIOP members come predominantly from those communities in which there are disparities in health.
- There is a great need in tribal communities for young native people to become doctors, scientists, biochemists, analytical chemists, etc. However, there is a perception among them that if they take this path they will be asked to leave their nativeness and tribal identities at the door, and they are unwilling to do that. This is a major challenge, and the tribal colleges will play a crucial role in overcoming the Native Americans' long held distrust in government initiatives.
- The EnHIOP institutions are all in different places of development. For example, the tribal colleges do not have the infrastructure for participation in higher-level research projects. It would be helpful for the institutions to partner with other EnHIOP institutions for this objective. Linking an HBCU with a tribal college for a research initiative would be beneficial. At the same time, each institution needs to move forward from wherever they are on the continuum. There is a fit for each institution in an NIH initiative—it is just a matter of finding it.
- A few institutes that would be a natural fit for EnHIOP are the National Institute of Environmental Health Sciences, Agency for Toxic Substances and Disease Registry, the Centers for Disease Control and Prevention, the Environmental Protection Agency, and the National Institute for Occupational Safety and Health. It would be good to see what the training and/or research opportunities are at those institutes and make them aware of some of the challenges that the EnHIOP schools are facing.

- Most institutes co-fund and there may be some partnership arrangements that can be made. Even in tight budget times, there may be opportunities for EnHIOP institutions to partner.
- The Health Resources and Services Administration has a loan repayment program that can be a valuable option. However, this can be difficult for minority institutions because there is a requirement for the institution to match the funds.
- Dr. Webster, Tuskegee University, asked that this group assist him in identifying health disparity areas for veterinary medicine.
- Dr. Copeland announced that for this school year's new student orientation at Howard University, he had made arrangements to bring the entire class of 125 students and faculty to NLM so that NLM can provide an introduction to its resources. This is the first time this has been done and was applauded by the NLM staff.

Dr. Snyder mentioned some specific ways that the EnHIOP members can provide assistance to NLM:

- Alert their professional communities to what NLM/SIS is and what it does. Encourage their professional communities to use the resources and provide feedback in anecdotes or case examples of how a resource was useful and made a difference, then relay that feedback to NLM/SIS in any form that works best—e-mail, picture, brochure, etc.
- Submit digital or “digitizable” pictures of anything to do with public health, environmental health, toxicology, pharmacology, etc., including environmental health episodes—HazMat incidents, etc. to SIS. Acknowledgements with photos would also be helpful. SIS is in the process of enhancing their textual/bibliographic materials with digital photographs.
- Continue to share with SIS any information the members feel is important.

Discussion on the small grants projects included:

- The current \$5,000 amount of the grant is a good amount. Current projects have demonstrated that a lot can be done with a little money. More would be wonderful if that is possible, but there is a preference for continuing to encourage the collaborative process with the amount of \$5,000 rather than making it more competitive for larger amounts. The collaborative process itself is a very special aspect of this group.
- Two or three institutions could pool their grants.
- The final reports of the institutions' grant projects should be packaged at the conclusion.

- Dr. Snyder suggested the use of “plain language” in the writing of the reports, based on the current effort at NIH to use plain language in all health information and communication efforts within NIH. Ms. Dutcher stated that the guidelines could be posted to the EnHIOP Web site.

### **Planning for Next Meeting**

Possible topics suggested for the next meeting were:

- Pharmacogenetics
- Electronic medical records and their impact on EnHIOP institutions. HHS is pushing to standardize and develop criteria for medical records. Dr. Lindberg is the representative to the interoperability group. If he is available, he could speak on this.

There was a consensus that the next meeting should be held in January rather than December to avoid the end of school terms and the holiday season.

Possible locations for the next meeting that were discussed were Jackson State University in Jackson, Mississippi; Meharry Medical College in Nashville, Tennessee; Morehouse School of Medicine in Atlanta, Georgia; University of Puerto Rico in San Juan, Puerto Rico; Southern University and A&M College in Baton Rouge, Louisiana; and Tuskegee University in Tuskegee, Alabama.

The meeting adjourned at 3:45 p.m. Although there were no formal closing comments, many topics were brought up throughout the meeting that the members expressed an interest in pursuing. In addition to the specific topics for the next meeting mentioned above, the following items were discussed as important strategic directions for the group that suggest possible topics and/or speakers for future meetings:

- Make known to other NIH institutes the varying challenges faced by the EnHIOP institutions.
- Gain insight into research and training opportunities at other NIH institutes, including opportunities for faculty professional development activities in occupational health.
- Meet with and/or hear from representatives from NIH institutes who are integral to the grant review process.
- Involve representatives from EnHIOP institutions in a grant review process.
- Enhance collaboration among the EnHIOP institutions to combine the varying strengths of different institutions in their research capabilities.
- Learn more about programs such as the Health Resources and Services Administration’s Loan Repayment Program.

- Learn more about the NIH's "plain language" initiative.
- Build on the historic collaboration between Historically Black Colleges and Universities and Tribal Colleges and Universities.
- Explore the implications of "open access" publications on the Internet.

The members suggested that NIH institutes with a good fit with EnHIOP include the Agency for Toxic Substances and Disease Registry, Centers for Disease Control and Prevention, Environmental Protection Agency, National Institute of Environmental Health Sciences, and National Institute for Occupational Safety and Health.

## ATTACHMENT A

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### ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM

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**ATTACHMENT A**  
**Environmental Health Information Outreach Program 2005-2006**

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**ATTACHMENT A**  
**Environmental Health Information Outreach Program 2005-2006**

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ATTACHMENT B

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ENVIRONMENTAL HEALTH INFORMATION OUTREACH PROGRAM  
2005-2006

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**2004 EnHIOP PROJECTS**

**Benedict College, Environmental Health Science Program—Columbia, South Carolina:**  
*Facilitating the Use of NLM's Databases Through Efforts of Benedict College*

The objectives of this project are to: 1) increase the on-campus awareness of environmental health information available using NLM's databases; 2) increase the on-campus utilization of NLM databases; and 3) provide NLM-based information outreach to communities currently being assisted by the Benedict College Environmental Health Science Program. Using on-campus electronic mail and campus library resources, faculty and staff will be surveyed to ascertain their knowledge of NLM databases. After determining the extent of on-campus knowledge of the databases, on-campus literature will be provided to increase the knowledge by at least fifty percent. Survey questions will be incorporated to determine the extent of on-campus use of the databases and information brochures will be provided about NLM databases to at least fifty percent of the Williston and Newcastle communities through active community organizations.

**California State University-Northridge, Dept. of Environmental and Occupational Health—Northridge, California:** *Presentation of NLM Databases Across Curriculum at a University*

The health information outreach project, targeting students attending California State University, will review the university catalog to find courses that could potentially use NLM online resources. This concept of incorporating a lecture discussing how to use NLM resources and services with an applied approach will be publicized throughout the university. Interested faculty who agree to incorporate some form of the training in their coursework will be awarded a stipend of \$250. This will provide incentive to the faculty in their participation. Funding will also be used to support printing, inks, small equipment purchases, or other incidental expenses that will support the project.

**Charles R. Drew University of Medicine and Science, Dept. of Oral and Maxillofacial Surgery—Los Angeles, California:** *Environmental Health Curriculum for Primary Health Care Providers*

The purpose of this project is to enhance the knowledge, skills, and ability of pre- and post-doctoral students to recognize how local environmental conditions can affect health and disease and integrate such knowledge into the differential diagnosis of commonly treated diseases. The goals include: 1) Develop a training course in environmental health for pre- and post-doctoral students at the Charles R. Drew University of Medicine and Science (CRDUMS); 2) Develop methods to familiarize the students and their patients with the content and instructions on how to search the medical, toxicological and environmental health information available from the NLM website and other Internet resources; and 3) Identify means to implement and sustain the training

**ATTACHMENT C**  
**2004 EnHIOP Projects**

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course. The primary target groups are physician post graduates and medical students completing their clinical clerkships at CRDUMS. The physician post graduates are primary and specialty physicians and dentists whose training takes place in an underserved area of South Central Los Angeles County. This course will be integrated as a part of the primary care training programs' curricula for primary care training.

**Diné College, Division of Math Science and Technology—Shiprock, New Mexico:** *Health Effects from Oil Field Operations on the Navajo Nation*

The project plans to build the community's capacity to address their health concerns over the long term through training of students and the students' subsequent training of others in the community. The project involves creating environmental health curriculum, both at high school and college levels. The project objectives include: 1) to collect air data on CO, VOCs, H2S and SO2; 2) survey community members to determine self-reported health effects; 3) evaluate the data with respect to location from emission sources and air-shed plum migration; 4) train students in the use of geospatial analysis; 5) communicate the results of the assessment to community members and the tribal leadership; and 6) use the results to prioritize resources and develop programs to address the health needs of impacted communities.

**Haskell Indian Nations University, Haskell Environmental Research Studies Center—Lawrence, Kansas:** *The Good Medicine Information Outreach Program*

The purpose of the "Good Medicine" project is to extend useful health information to the urban American Indian population of the metro Kansas City area. The objectives of the project are three-fold: 1) to train generations, from American Indian youth to Elders, to use the digital resources of the NLM; 2) to encourage the promotion of this information and establish links on the Haskell Indian Nations University and Heart of America Indian Center home pages; and 3) to encourage the formation of the "Good Medicine" American Indian Health Network which will be catalyst for a number of associated promotional activities throughout the Kansas City metro area.

**Meharry Medical College—Nashville, Tennessee:** *Approach for Building New Community-based Library Partnerships with Local Community Churches*

The goal of this project is to encourage and support the diffusion of principles of access to health information technology by increasing awareness in one faith-based organization in Nashville/Davidson County. The project will document a conceptual model for implementation and effectiveness of approaches that involves a collaboration of public libraries and faith-based organizations in the diffusion of health information technology. The project plans to increase the awareness of 75 members of the Claiborne Street Missionary Baptist Church around access to health information technology by providing 10 sessions on use of a computer for accessing health information.

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**2004 EnHIOP Projects**

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**Morehouse School of Medicine—Atlanta, Georgia:** *The Atlanta Project*

The “Atlanta Project” plans to facilitate learning and training on NLM databases and other types of information that will support the Atlanta Project objectives by purchasing a learning management system. Partnering with existing health disparities programs and involved leaders such as Dr. David Satcher, the learning management system will become a compendium for training and expansion of the program. Kiosks will be used by trained community leaders who will rotate in participating clinics. The kiosk will be linked to the Internet and include NLM databases and information on local interests, including directions to other clinics, hospitals, pharmacies, shelters, and government-assisted programs.

**Morgan State University, Department of Biology—Baltimore, Maryland:** *Environmental Health Information Outreach*

The purpose of the “Environmental Health Information Outreach” project is to improve upon the teaching and seminar presentations that take place at Morgan State University within the campus and meetings and presentations at other sites. Funding will be used to purchase equipment in order to facilitate the health information outreach presentations on campus and in the community.

**Oglala Lakota College, Department of Nursing—Kyle, South Dakota:** *Taking Charge—Living Wisely*

The goal of the project is to enable the Oglala Lakota people to identify healthy life styles and reasons to pursue the change in lifestyles through exercise, balance diet, and understanding toxicants and environmental toxicants. The project will use food models and the “Visible Man” presentation on CD-ROM to illustrate healthy and unhealthy outcomes. The presentation may be used by the Environmental Science Department and the Department of Education as well as the Department of Nursing. The presentation will be communicated to the faculty and the student senate and eventually to the student body and community groups. Nursing students and the Lakota Studies Department will have input in developing the actual format for the models and presentation.

**Southern University A&M College, School of Nursing, Office of Research—Baton Rouge, Louisiana:** *Reach for Rural Health Online*

This project is an extension of REACH for Rural Health Online—a Southern University community campus partnership designed to assist community leaders in accessing and using scientifically sound environmental health information. The purpose of this project is to identify, recruit, and train ten health reporters from local newspapers, ten environmental toxicology students, ten law center and nursing students, ten county extension agents, and ten Baton Rouge community members to use MedlinePlus, TOXNET, and Tox Town. Promotional activities for the program will be developed by a recruitment, planning, and workshop team. Key leaders from

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**2004 EnHIOP Projects**

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each of the potential user groups will collaborate to promote the conference by utilizing their organizations' Web sites and newsletters. A media breakfast and press release will be considered in the planning stages to launch REACH for Rural Health Online.

**Sigma Theta Tau International Honor Society of Nursing, Delta Iota Chapter—Hampton, Virginia:** *Sixhousehold Products Outreach Training (SPOT)*

The purpose of this project is to educate Hampton Roads residents regarding the hazardous nature of certain household products, proper use of the products, and the proper methods of management and disposal of residual product and containers for the protection of public health, safety, and preserving the environment. NLM's Tox Town and Household Products databases will be used to educate the residents in a train-the-trainer environment. The goal is to have parents and grandparents to educate each other and members of their families. At the end of the training, participants will be able to: 1) identify common household hazardous materials, their effects on people and the environment, safe alternatives to these products, and their proper use, storage, and disposal; 2) access Tox Town and the Household Products Databases; 3) describe what to do in the event of accidental poisoning from household hazardous materials, including the role of a poison control center; and 4) know the procedure in Hampton Roads for hazardous waste disposal, the results of incorrect disposal, and suggestions for improving local hazardous waste disposal programs and policies.

**Texas Southern University, College of Pharmacy and Health Sciences—Houston, Texas:** *Environmental Health Community Resource Information (EHCRI) Project*

The overall purpose of the EHCRI project is to enhance the ability of selected underserved minority and economically disadvantaged communities to understand and make informed health and prevention decisions on issues related to the role of environmental factors in human health and disease. In addition to providing education programs, the EHCRI project will establish links between members of the community whose health is directly affected by adverse environmental conditions, and Texas Southern University Environmental Health faculty, health care providers and university/public library personnel. Some of the environmental health issues to be addressed in this project include asthma, elevated blood lead levels, occupational exposures, and severe urban smog.

**University of Puerto Rico, Department of Pharmacology and Toxicology, School of Medicine—San Juan, Puerto Rico:** *UPR-Medical Sciences Campus: Outreach Project in Environmental Health Information*

The project plans to develop and schedule a set of training activities, workshops, and conferences directed to middle and high school teachers and students, and school librarians in effective use of NLM resources. The project also will support the librarians of the Medical Sciences Campus Library to serve as trainers for middle and high school librarians. The training sessions will be performed at the Community Technology Centers of ASPIRA, Inc. of Puerto Rico (a nonprofit

**ATTACHMENT C**  
**2004 EnHIOP Projects**

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organization devoted to the educational and leadership development of Puerto Rican youth) and the recruitments and promotional activities will be developed using the ASPIRA network with school directors and district superintendents. In addition, community newspapers will be used to promote the activities of the project.

**University of Texas-El Paso, College of Health Sciences—El Paso, Texas:** *Enhancing Campus/Community Access to Health Disparity Information*

The goal of the project is to provide publicly available information on Hispanic health disparities. The project plans to: 1) identify relevant links, databases, and other publicly-available health information resources relevant to Hispanic health disparities; 2) organize these electronic resources (e.g., by illness/disease) and provide documentation regarding each; 3) configure the dedicated publicly-available computer to make these resources easy to access; and 4) publicize these organized resources locally using public service announcement, and make them electronically available via UTEP's Hispanic Health Disparities Research Center Web site.

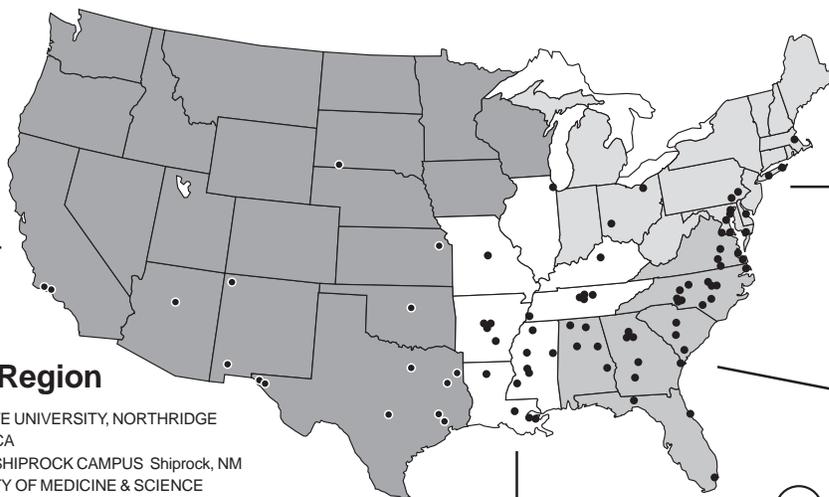
**Xavier University of Louisiana, College of Pharmacy—New Orleans, Louisiana:** *Diabetes Community Outreach Program*

The purpose of this project is to enhance patient education activities by providing access to the e-health information available through the NLM. It is further anticipated that these resources will assist in efforts to improve glycemic control, increase patient understanding of diabetes, and improve the quality of life in targeted minority communities suffering from diabetes. Kiosks will be set up in spaces provided by the Diabetes Pharmaceutical Care Clinic, which the university is wiring for Internet access. Students and clinical pharmacists will be available to assist patients in accessing tutorials. Patients will also be encouraged to obtain printed copies of the information available in the tutorials for subsequent review and reference. As part of student training, it is expected to engage the fourth year pharmacy students and undergraduate pharmacy students enrolled in research courses in small projects and pilot studies designed to assess the effectiveness of the intervention strategies to enhance knowledge, increase compliance, and foster appropriate health behaviors.



# HBCUs, HSIs, and Tribal Colleges Environmental Information Outreach

## Participating Colleges and Universities



### Northeastern Region

BOWIE STATE UNIVERSITY Bowie, MD  
 COPPIN STATE COLLEGE Baltimore, MD  
 CENTRAL STATE UNIVERSITY Wilberforce, OH  
 CHEYNEY UNIVERSITY Cheyney, PA  
 DELAWARE STATE UNIVERSITY Dover, DE  
 HOWARD UNIVERSITY Washington, DC  
 LINCOLN UNIVERSITY Lincoln University, PA  
 MEDGAR EVERS COLLEGE-CUNY Brooklyn, NY  
 MORGAN STATE UNIVERSITY Baltimore, MD  
 NOTRE DAME COLLEGE Cleveland, OH  
 ROXBURY COMMUNITY COLLEGE Roxbury, MA  
 UNIVERSITY OF MARYLAND, EASTERN SHORE  
 Princess Anne, MD  
 UNIVERSITY OF THE DISTRICT OF COLUMBIA  
 Washington, DC

### Southeastern Region

ALABAMA A&M UNIVERSITY Normal, AL  
 ALBANY STATE COLLEGE Albany, GA  
 ALLEN UNIVERSITY Columbia, SC  
 BARBER-SCOTIA COLLEGE Concord, NC  
 BENEDICT COLLEGE Columbia, SC  
 BENNETT COLLEGE Greensboro, NC  
 BETHUNE-COOKMAN COLLEGE Daytona Beach, FL  
 CLAFLIN UNIVERSITY Orangeburg, SC  
 CLARK ATLANTA UNIVERSITY Atlanta, GA  
 ELIZABETH CITY STATE UNIVERSITY Elizabeth City, NC  
 FLORIDA A&M UNIVERSITY Tallahassee, FL  
 FLORIDA MEMORIAL COLLEGE Miami, FL  
 FORT VALLEY STATE COLLEGE Fort Valley, GA  
 GADSDEN STATE COMMUNITY COLLEGE Gadsden, AL  
 HAMPTON UNIVERSITY Hampton, VA  
 INTERDENOMINATIONAL THEOLOGICAL CENTER  
 Atlanta, GA  
 JOHNSON C. SMITH UNIVERSITY Charlotte, NC  
 LAWSON STATE COMMUNITY COLLEGE Birmingham, AL  
 LIVINGSTONE COLLEGE Salisbury, NC  
 MILES COLLEGE Birmingham, AL  
 MOREHOUSE SCHOOL OF MEDICINE Atlanta, GA  
 MORRIS BROWN COLLEGE Atlanta, GA  
 NORFOLK STATE UNIVERSITY Norfolk, VA  
 NORTH CAROLINA A&T STATE UNIVERSITY Greensboro, NC  
 NORTH CAROLINA CENTRAL UNIVERSITY Durham, NC  
 OAKWOOD COLLEGE Huntsville, AL  
 PAINE COLLEGE Augusta, GA  
 PEMBROKE STATE UNIVERSITY Pembroke, NC  
 SAINT AUGUSTINE'S COLLEGE Raleigh, NC  
 SAINT PAUL'S COLLEGE Lawrenceville, VA  
 SAVANNAH STATE COLLEGE Savannah, GA  
 SHAW UNIVERSITY Raleigh, NC  
 SOUTH CAROLINA STATE UNIVERSITY Orangeburg, SC  
 SPELLMAN COLLEGE Atlanta, GA  
 TALLADEGA COLLEGE Talladega, AL  
 TUSKEGEE UNIVERSITY Tuskegee, AL  
 VIRGINIA STATE UNIVERSITY Petersburg, VA  
 VIRGINIA UNION UNIVERSITY Richmond, VA  
 WINSTON-SALEM STATE UNIVERSITY Winston-Salem, NC

### Western Region

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE  
 Northridge, CA  
 DINÉ COLLEGE, SHIPROCK CAMPUS Shiprock, NM  
 DREW UNIVERSITY OF MEDICINE & SCIENCE  
 Los Angeles, CA  
 HASKELL INDIAN NATIONS UNIVERSITY Lawrence, KS  
 HUSTON-TILLOTSON COLLEGE Austin, TX  
 JARVIS CHRISTIAN COLLEGE Hawkins, TX  
 LANGSTON UNIVERSITY Langston, OK  
 NEW MEXICO STATE UNIVERSITY Las Cruces, NM  
 NORTHERN ARIZONA UNIVERSITY Flagstaff, AZ  
 OGLALA LAKOTA COLLEGE Pine Ridge, SD  
 PAUL QUINN COLLEGE Dallas, TX  
 PRAIRIE VIEW A&M UNIVERSITY Prairie View, TX  
 TEXAS SOUTHERN UNIVERSITY Houston, TX  
 TEXAS WOMAN'S COLLEGE Denton, TX  
 UNIVERSITY OF TEXAS AT EL PASO El Paso, TX  
 WILEY COLLEGE Marshall, TX

### Lower Mississippi Delta Region

ALCORN STATE UNIVERSITY Lorman, MS  
 ARKANSAS BAPTIST COLLEGE Little Rock, AR  
 BLUEFIELD STATE COLLEGE Bluefield, WV  
 CHICAGO STATE UNIVERSITY Chicago, IL  
 DILLARD UNIVERSITY New Orleans, LA  
 FISK UNIVERSITY Nashville, TN  
 GRAMBLING STATE UNIVERSITY Grambling, LA  
 JACKSON STATE UNIVERSITY Jackson, MS  
 KENTUCKY STATE UNIVERSITY Frankfort, KY  
 LANE COLLEGE Jackson, TN  
 LEMOYNE-OWEN COLLEGE Memphis, TN  
 LINCOLN UNIVERSITY Jefferson City, MO  
 MARY HOLMES COLLEGE West Point, MS  
 MEHARRY MEDICAL COLLEGE Nashville, TN  
 MISSISSIPPI VALLEY STATE UNIVERSITY Itta Bena, MS  
 PHILANDER SMITH COLLEGE Little Rock, AR  
 RUST COLLEGE Holly Springs, MS  
 SHORTER COLLEGE North Little Rock, AR  
 SOUTHERN UNIVERSITY SYSTEM Baton Rouge, LA  
 TENNESSEE STATE UNIVERSITY Nashville, TN  
 TOUGALOO COLLEGE Tougaloo, MS  
 UNIVERSITY OF ARKANSAS AT PINE BLUFF Pine Bluff, AR  
 XAVIER UNIVERSITY New Orleans, LA

### Caribbean Region

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 PONCE SCHOOL OF MEDICINE Ponce, PR  
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## TRAINING • FREE INTERNET ACCESS • USER SUPPORT

As part of its outreach efforts, the Specialized Information Services Division of the National Library of Medicine (NLM), in partnership with the Oak Ridge Institute for Science and Education (ORISE), developed and designed a training program to strengthen the capacity of Historically Black Colleges and Universities (HBCUs), Hispanic-serving institutions, and tribal colleges and universities to train medical and other health professionals in the use of toxicological, environmental, occupational, and hazardous waste information resources developed at NLM. This training also benefits the economically disadvantaged and underserved communities surrounding these institutions.

Health professionals at colleges and universities throughout the country are taught how to navigate the Internet maze to find quality critical health information quickly. Many of those trained have facilitated similar training at their respective schools for students, faculty/staff, community leaders, and other health professionals. Participants are trained to access and utilize the NLM's Toxicology and Environmental Health Information Program (TEHIP) databases on the Internet to address problems and concerns about the impact of environmental hazards. Training includes accessing these databases through the TOXNET Web Interface (<http://toxnet.nlm.nih.gov>) and searching other relevant Internet resources.

For additional information about this outreach program, contact one of the individuals listed below:

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