1991 Toxicology Outreach Panel Report

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Toxicology Information Outreach Panel

1st Annual Meeting of the Toxicology Information Outreach Panel
August 15-16, 1991
National Library of Medicine

Agenda

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Panel Deliberations
Reception Friends of the National Library of MEDicine

Toxicology Information Outreach Panel

Dr. Bailus Walker, Jr., University of Oklahoma, Chair
Dr. Walter Sullivan, Morehouse School of Medicine
Dr. Johnnie Early, Florida A & M University
Dr. Ann Barbre, Xavier University of Louisiana
Dr. James Webster, Tuskegee University
Dr. Maurice Knuckles, Meharry Medical College
Dr. Isaac Reese, King Drew Medical Center
Dr. Wilbert Wilson, Howard University
Dr. Edward J. Fontenette, University of Arkansas
Dr. Henry Lewis III, Texas Southern University
Dr. Charles Proctor, Consultant
Dr. Saundra Y. McGuire, Cornell University
Dr. Max Lunn, Agency for Toxic Substances and Disease Registry, Chairman
Dr. Delbert L. Flowers, U.S. Department of Labor
Meeting Highlights

1. Present to the Association of Minority Health Profession Schools (AMHPS) the NLM program of support to their institutions of computer hardware and software to facilitate the initial online capabilities at each university. Request of the CEO's their support of this initiative through incorporation of databases in classes, intern/resident training, drug/poison information centers, and community outreach. Present the composition of the Outreach Panel and the deliberations of this group relative to a larger programmatic effort, that will allow expansion of this effort and significant outreach efforts to the community that the university serves.

2. Recommend that the NLM develop its database which will correlate toxic hazards with body organ systems and which are programmed to provide user utility at the high school, middle school, and upper elementary school level. (Proctor)

3. NLM should assist HBCUs, especially those with health related programs; with conducting continuing education programs for physicians, pharmacist, nurses, and allied health personnel by offering continuing medical education credits, continuing education credits for R.Ph.'s, and R.N.'s, etc. NLM's assistance should be in the form of providing speakers, training equipment at the site of instruction, handouts, and other materials that will facilitate training and community outreach by these health personnel.

4. Toxicology Outreach Panel should reassess who should be trained at the HBCU's. NLM/ATSDR should provide support for the training of additional personnel from these universities. This will assure greater community transfer of the toxicological information.

5. NLM should develop computer-assisted instruction (CAI), and or tutorials to be used in pharmacy literature and drug information courses to teach students to use the bibliographic systems and data banks available through the NLM. This could serve as a component of current courses, i.e. toxicology, as well as provide a basis for the development of coursework (1 semester hour) in drug information and literature retrieval. Training of individuals on the various biohazards committees could also be facilitated.

6. HBCU librarians must play a leadership role in protecting the environment and helping university personnel, students, professionals, and citizens to exercise their right to know. It is necessary for the HBCU librarians to work closely with NLM in order to effectively disseminate key information resources. It is recommended that NLM sponsor an annual seminar for HBCU librarians. This yearly seminar should focus on greater involvement of HBCU librarians, greater access to databases, facilitate librarian involvement in environmental protection and emergencies; and present the various grant programs offered by NLM.

7. Toxicology Outreach Panel develop an evaluation instrument that will facilitate progress toward accomplishing initial programmatic direction and aims of this NLM initiative. Each institution receiving equipment should submit a six month evaluation of the system that would include usage by faculty, staff, and students; ongoing research efforts, as well as plans for future expansion.

8. HBCU Librarians need immediate access to NLM materials because of the importance of providing researchers and practicing professionals immediate data to resolve problems and treatments as quickly as possible. The traditional networking is remote and too slow to be useful to emergency and medical personnel in environmental and toxic crises.

9. It is recommended that NLM can improve the capacities of HBCU's through conducting faculty training
sessions on the manipulation of various databases. The training sessions should also include input from ATSDR, OSHA, and other related agencies with respect to providing information concerning application and interpretation of databases content. From this point, the trained faculty should integrate the databases initially in courses in the professional and undergraduate curriculums.

10. It is recommended that NLM could provide the following resources to HBCU's to assist in the delivery and usage of databases:
   - hardware
   - software
   - reprogramming of software at a level that would maintain interest and enthusiasm of pre-college and undergraduate students
   - reprogramming of citations to include information for lay interpretation. This addition should be included at the end of the current citation.

11. It is recommended that NLM with other agencies should implement a funding program for proposals submitted by trained faculty of HBCU's. The faculty would submit grants based on local objectives and needed for continuing the efforts of the funding programs. The proposal mechanism would allow for flexibility at the local level. One criterion should be that the faculty should have received training through these agencies.

   The guidelines of the proposals should allow the employment of personnel to assist the P.1. in delivery of information and encourage participation of the lay person.

   The submitted proposals should include an evaluation process. The trained faculty member will design milestone and check points for evaluation, as the process is implemented. NLM and other agencies should assemble a group of reviewers to assist in the review of awarding and reviewing of progress reports.

   The process however, should not be so rigid as to cause reluctance among faculty members. The need to educate the public concerning toxicological information should start with HBCU's and other minority institutions. It is recommended that a presentation to College presidents should occur with emphasis placed on the cutting edge of societal needs, and the role that minority must play in the process. It should be emphasized that the NLM program would allow a faculty member to satisfy all aspects of his/her professional development.

12. NLM in conjunction with ATSDR support the development of an Toxicological Electronic Bulletin Board that will network HBCU libraries and information centers with NLM. This enhanced electronic communications network will serve to facilitate inter-library, inter-institutional, cross governmental and medical research assistance to these institutions. NLM/ATSDR should provide the necessary hardware, software, and databases to facilitate this electronic network.

13. Toxicology Outreach Panel in conjunction with the National Science Teachers Association, NLM and ATSDR should explore the feasibility of a national marketing public relations campaign that shall serve to educate the minority community on the impact of chemic and toxic substances, encourage more educational efforts at the elementary and secondary school level, and motivate more minority youth to consider careers in the biomedical sciences.
Introduction
Within the past several decades, toxicological information systems have developed at a rapid pace in response to a broadening interest in the risk of chemically-induced disease, dysfunction and premature death.

The most expansive databases are those developed by the National Library of Medicine (NLM); a development that began over 20 years ago. This effort has evolved into an assembly of approximately a dozen on-line files dedicated to different aspects of toxicology and used by a variety of individual and institutional on-line users.

As part of its effort to improve access by Historically and Predominantly Black Colleges and Universities (HBCUs) to its products and services, NLM established the Toxicology Information Outreach Panel.

The Panel
The panel of twelve represented the Association of Minority Health Professions Schools (7 institutional members), the National Association of Equal Opportunity in higher education (117 HBCUs), and the Oak Ridge Associated Universities (56 colleges and universities including 6 HBCUs).

The breadth of views represented by the panel membership (deans, a vice-president, teachers of the environmental health and biomedical sciences and a librarian) led to an examination of a large number of perspectives on the potential for the HBCU-NLM relationship.

The Charge to the Panel
The panel was charged to develop strategies to strengthen the capacity of HBCUs to use the toxicological, environmental and occupational resources developed by NLM.

Panel's Approach to its Charge
In response to its charge, the panel developed an organizing construct to guide and facilitate its discussions at the initial and subsequent meetings.

First, to derive an accurate representation of the products, programs, and services - present and planned for the future - the panel received reports from Library staff. These explanations and demonstrations focused on microcomputer-based tutorials; GRATEFUL MED, the Toxicology Information Program, NLM's computer resources and training activities sponsored by the Library. NLM's outreach initiatives were also described. These presentations provided a framework within which the panel approached its charge.

The panel recognized another dimension of the framework. The broad array of forces - demographic, scientific, social, economic - that have come together to produce a window of opportunity to increase minority participation in the sciences.

A major new federal initiative led by the National Science Foundation coupled with increased efforts by the private sector - business and industry professional organizations - and more resources allocated from programs already in place, all point to a new climate for the recruitment and retention of minorities in science careers. A number of other federal agencies - departments of Education, Energy Agriculture, and Defense - have programs designed to increase minority participation in sciences.

Since 1972, the National Institutes of Health have been involved in efforts to address the shortage of minorities in health sciences. The Minority Biomedical Research Support Program (MBRS) and the Minority Access to Research Careers (MARC) are among the most prominent NIH minority-focused educational assistance programs. The Agency for Toxic Substances and Disease Registry (ATSDR) also has several initiatives to assist
in increasing the pool of minority occupational and environmental health scientists.

The NLM outreach effort complements these and similar programs in government and in the private sector to increase participation in science of the historically under-represented groups.

Moreover, many of the HCBUs have begun to develop information infrastructures by fusing computing and communications technologies and by training faculty, staff and students in the diversity of computer applications in teaching, learning, and research.

The panel believes that HBCUs should become firmly linked with NLM to prepare students and assist faculty members in meeting the challenges and to take full advantage of opportunities in the environmental and occupational health sciences, teaching, research, and practice/community service. To enhance these efforts, beginning in October 1991, NLM will loan HBCUs computer hardware, software and accessories, as well as provide necessary technical assistance including training. During this loan period and consistent with the organizing construct the panel shall:

- identify specific avenues of approach to strengthening the capacity of HBCUs to use the vast resources of NLM;
- identify immediate (2-3 months) steps that can be taken to ensure HBCUs begin to establish elements for a stronger partnership between the institutions and NLM - a partnership that will enhance HBCU’s role as a channel for the flow of NLM information to the larger minority communities (i.e. health practitioners, schools and work places);
- delineate resources needed by HBCUs to take full advantage of NLM’s data bases;
- describe practical approaches to evaluate the effectiveness of NLM’s effort to meet the new information needs of individual HBCUs
- describe a practical approach to evaluate HBCU’s utilization of products and services provided by NLM;
- outline processes/mechanisms by which HBCUs can be assured of a long-term, mutually beneficial relationship with NLM;
- identify ways in which HBCUs can effectively inform NLM of gaps or weaknesses/flaws in its (NLM) information system; and
- list constraints/barriers (real or potential) which may impede progress in HCBU's efforts to make maximum use of NLM's resources.

These activities will require effective coordination and leadership among HBCUs and open communication and responsiveness by the NLM.

## Recommendations

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To achieve the long-term goal of strengthening the capacity of HBCUs and to take maximum advantage of Elm’s products and services, the panel believes that attention must be paid to a number of practical and relatively inexpensive strategies that looks beyond the equipment (hardware and software) loan period.

Thus, the panel makes seven recommendations:

**Recommendation 1**
The panel recommends the presidents of HBCUs - specifically those with health profession schools - be advised of NLM’s outreach initiative with emphasis on the products and services which the Library is providing each institution. In this orientation, NLM should suggest ways the schools could make maximum use of computer hardware, software and related resources being loaned to HBCUs.

The focal point for this presentation is the annual meeting of the Association of Minority Health Profession Schools. The active participation and support of the chief executives of HBCUs can have many broad range benefits to both NLM and HBCUs.

**Recommendation 2**
The panel recommends, that NLM assist HBCUs in the design and implementation of continuing education programs that would reach a large number of minority health professionals. Such programs would provide an avenue for educating this group about NLM’s data system and ways to access it. Other governmental units such as the Agency for Toxic Substances and Disease Registry could complement NLM’s effort in this information transfer process.

**Recommendation 3**
The panel recommends that NLM develop Computer Assisted Instruction (CAI) and/or tutorials to enhance the teaching of students to use bibliographic systems and databases in the NLM. These instructional aids could be incorporated into current curricula in HCBUs as well as in continuing education programs.

**Recommendation 4**
The panel recommends that NLM sponsor annual seminars for HBCU librarians to ensure that this group is kept up-to-date on NLM resources which can strengthen HBCU library facilities. These annual sessions would also provide a mechanism for feedback to NLM on problems and issues (i.e. data gaps, etc.) in assessing The NLM databases.

**Recommendation 5**
The panel recommends that the NLM Toxicology Information Outreach Panel develop an instrument for evaluation of utilization and related parameters of the data-access equipment (hardware and software) which NLM will loan to HBCUs. The instrument should provide NLM with information on level of use by faculty members, students, staff, and by program (i.e. teaching, research, community service).

**Recommendation 6**
The panel recommends that during the equipment loan period, the receiving institutions develop plans for expansion of data access and usage capabilities. The plan should include specific objectives, timetables and resources needed to achieve the objectives. The panel recommends that each institution give high priority to integrating NLM databases into health sciences courses as well as to the training of faculty members and non-faculty in the use of the NLM data system.

**Recommendation 7**
The panel recommends that HBCUs serve as a primary channel through which NLM transfers toxicological and environmental information to high school faculty members and students and to other minority community
members. The vitality of this enterprise will depend not only on NLM’s activities but on the cooperation of all parties interested in increasing the number of minorities who pursue careers in the health sciences and in preventing disease, dysfunction and premature death among minority populations. This cooperation is also necessary to improve the nation's capacity to respond to health crises and capitalize on new opportunities in research, teaching and community service.

HBCU RESPONSIBILITIES (the chairman's views)

The discussions with individual panel members during and after the initial meeting leads the chairman to conclude that HBCU faculty members and administrators will want to take action that would improve the success of NLM's outreach activities beyond their own commitment to specific projects in their respective institutions.

HBCU faculty members and administrators want to assume a more active role in championing the overall needs in data on toxicology, environmental and occupational health problems. Clearly the development of data systems in the health sciences is a long term investment. The key to viable systems is the active participation of scientists and other health professionals in all aspects of the information-development enterprise, including priority setting and resource allocation policy.

HBCU administrators and faculty members wish to ensure that Congress and the Executive Branch are aware of their views so that both branches of the federal government can set priorities for national information sources. HBCU faculty members and administrators are committed to improving the public's understanding of science and all of the ramifications in the prevention of disease dysfunction and premature death.

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