

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

53rd Meeting of the

BOARD OF REGENTS

9:00 a.m., March 11-12, 1976

Board Room
National Library of Medicine

MEETING OPEN: All day on March 11 and from 9:00 to 9:30 a.m. on March 12.
MEETING CLOSED: From 9:30 a.m. to adjournment on March 12 for review of grant applications and contract proposals.

CALL TO ORDER AND INTRODUCTORY REMARKS

Dr. W. N. Hubbard, Jr.

CONSIDERATION OF MINUTES OF LAST MEETING

TAB I
(Orange Book)

I. DATES OF FUTURE MEETINGS
1976 and 1977 Calendars

TAB II

Next Meeting: June 10-11, 1976 (Th-F)

Subsequent Meeting: September 23-24, 1976 (Th-F)

Selection of Dates for Winter 1977 Meeting:

Jan. 27-28 (Th-F) or Feb. 3-4 (Th-F)

REMARKS BY THE DIRECTOR, NIH

Dr. Donald S. Fredrickson

REMARKS OF THE DIRECTOR, NLM

TAB III

Dr. Martin M. Cummings

COFFEE BREAK

2/13/76

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| REPORT OF STUDY GROUP ON COMPUTER AND COMMUNICATIONS SYSTEMS | <u>TAB IV</u> | General Ernest J. Clark |
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| B. Scope of On-Line Services | | |
| I. REPORT OF STUDY GROUP ON BIOMEDICAL COMMUNICATIONS POLICY ISSUES (LHC and NMAC) | <u>TAB V</u> | Dr. Joseph F. Volker |
| A. Broadband Communications | | |
| B. Transfer of Research Results | | |
| C. Educational Programs--Continuing Medical Education and Public Education | | |
| LUNCHEON CATERED IN CONFERENCE ROOM "B" | | |
| Photograph of Board of Regents | | |
| .II. REPORT OF STUDY GROUP ON NLM INVOLVEMENT IN INTERAGENCY PROJECTS | <u>TAB VI</u> | Dr. W. N. Hubbard, Jr. |
| 6. REPORT OF STUDY GROUP ON LIBRARY POLICY ISSUES | <u>TAB VII</u> | Dr. Faye G. Abdellah |
| A. Preservation of the Collection | | |
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| REPORT OF STUDY GROUP ON ORAL HISTORY PROGRAMS | <u>TAB VIII</u> | Captain J. William Cox |
| I. REPORT OF STUDY GROUP ON EXTRAMURAL POLICY | <u>TAB IX</u> | Dr. Ethel Weinberg |
| II. OTHER BUSINESS | | Dr. W. N. Hubbard, Jr. |
| R E C E S S | | |

DINNER Bethesda Naval Officers' Club
 Cocktails (Cash Bar): 6:30 p.m. 8901 Wisconsin Avenue
 Dinner (Dutch Treat): 7:30 p.m. Bethesda, Maryland

SPEAKER: Dr. Martin M. Cummings
 Director
 National Library of Medicine

TOPIC: "Lucky Country, Lazy Countrymen"

 R E C O N V E N E : 9:00 a.m., March 12, 1976

- II. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS Dr. Ernest M. Allen
- A. DRG Administrative Report TAB X
 - B. Audiovisual Application Guidelines TAB XI Mrs. Doris J. Doran

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS
 AND CONTRACT PROPOSALS

- V. REGIONAL MEDICAL LIBRARY CONTRACTS--Result of Review of Responses to RFP Mr. Arthur J. Broering
 Dr. Joseph F. Volker
 and Mrs. Bernice M. Hetzner, Discussants

COFFEE BREAK

SPECIAL APPLICATIONS

- A. Research (Gray Book) TAB I Dr. Roger W. Dahlen
- B. Training TAB II
- C. Publication TAB III Dr. Jeanne L. Brand

/I. SUMMARY STATEMENTS

- A. Research TAB IV Dr. Roger W. Dahlen
- B. Resource TAB V
- C. Training TAB VI
- D. Publication TAB VII Dr. Jeanne L. Brand

- /II. ADJOURNMENT Dr. W. N. Hubbard, Jr.

DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS

MINUTES OF 53RD MEETING

MARCH 11-12, 1976

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/

March 11-12, 1976

The Board of Regents of the National Library of Medicine was convened for its fifty-third meeting at 9:00 a.m. on Thursday, March 11, 1976, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. W. N. Hubbard, Jr., President, The Upjohn Company, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on January 28, 1976, the meeting was open to the public from 9:00 a.m. to 5:00 p.m. on March 11, 1976, and from 9:00 a.m. to 9:30 a.m. on March 12, and closed from 9:30 a.m. to 11:15 on March 12 for the review, discussion, and evaluation of grant applications and contract proposals. A Board roster is included in Attachment "A."

Board members present were:

Dr. Eloise E. Clark (Attended March 11)
Vice Admiral Donald L. Custis (Attended March 11)
Dr. W. N. Hubbard, Jr.
Dr. Joseph F. Volker
Dr. Ethel Weinberg

Alternates to Board members present were:

Dr. Faye G. Abdellah, representing Dr. S. Paul Ehrlich, Jr.
Col. Mims C. Aultman, representing Lt. Gen. Richard R. Taylor
Brig. Gen. Ernest J. Clark, representing Lt. Gen. George E. Schafer
Capt. J. William Cox, representing Vice Adm. Donald L. Custis on March 12
Dr. Richard R. Drisko, representing Dr. John D. Chase (Attended March 11)

Inable to attend:

Dr. Daniel J. Boorstin, Librarian of Congress

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/ The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford A. Bachrach, Head, Medical Subject Headings Section, LO
Mr. Harry D. Bennett, Deputy Associate Director for Computer and Communications Systems
Mr. Albert M. Berkowitz, Chief, Reference Services Division, LO
Dr. Robert M. Bird, Director, Lister Hill National Center for Biomedical Communications
Dr. John B. Blake, Chief, History of Medicine Division, LO
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Charles F. Bridgman, Assistant Director for Educational Resources Development
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. William H. Caldwell, Chief, Bibliographic Services Division, LO
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mr. Benjamin Erdman, Deputy Director, Lister Hill National Center for Biomedical Communications
Mr. Joseph F. Gantner, Chief, Technical Services Division, LO
Mr. B. Earl Henderson, Chief, Communications Engineering Branch, LHCNBC
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mrs. Erika Love, Deputy Associate Director for Library Operations
Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Dr. Peter D. Olch, Deputy Chief, History of Medicine Division, LO
Mr. Kent A. Smith, Assistant Director for Administration
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Dr. Harold A. Wooster, Special Assistant for Program Development, LHCNBC

Others present included:

Dr. Donald S. Fredrickson, Director, NIH
Dr. William G. Anlyan, Vice President for Health Affairs, Duke University School of Medicine -- Consultant, NLM
Dr. Fred C. Cole, President, Council on Library Resources, Inc.
Mrs. Bernice M. Hetzner, Professor of Library Science, University of Nebraska Medical Center -- Consultant, NLM
Mrs. Jeanne Holmes, Deputy Director for Research Development, National Agricultural Library
Dr. Saul Jarcho, Editor in Chief, New York Academy of Medicine -- Consultant, NLM
Dr. Doris H. Merritt, Dean for Sponsored Programs, Indiana-Purdue University at Indianapolis -- Consultant, NLM
Dr. Max Michael, Jr., Executive Director, Jacksonville Hospitals Educational Programs, Inc. -- Consultant, NLM
Dr. G. Burroughs Mider -- Consultant, NLM
Mrs. Ileen E. Stewart, Executive Secretary, Biomedical Communications Study Section, DRG
Dr. Stewart G. Wolf, Jr., Director, Marine Biomedical Institute -- Consultant, NLM

Members of the public present:

Dr. Charles Watson, Research Assistant, Washington Representative Services, Falls Church, Virginia

I. OPENING REMARKS

Dr. W. N. Hubbard, Jr., Chairman, welcomed the Regents, consultants, and guests to the 53rd meeting of the Board of Regents of the National Library of Medicine.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board recommended approval of the minutes of the meeting of November 25-26, 1975.

III. DATES FOR FUTURE MEETINGS

The Board approved the dates of June 10-11, 1976, for the next meeting, and confirmed September 23-24, 1976, for the subsequent meeting. January 27-28, 1977, were approved tentatively for the following meeting.

IV. REMARKS BY THE DIRECTOR, NIH

Dr. Donald S. Fredrickson discussed with the Board his concern about making the peer review process more open. The Director believes that the confidentiality of peer review must be maintained to protect the scientist's equity in his idea and to assure honest and candid expression by the reviewers. The latter reason, especially, is extremely important if quality research is to be selected for NIH support. Senator Metcalf's subcommittee is considering legislation that would eliminate using exemption 5 of the Freedom of Information Act to close study section meetings and that would also require the chartering of all ad hoc advisory groups and the recording and transcribing of every meeting. These requirements, Dr. Fredrickson said, would "bring NIH to its knees overnight." Discussing the preliminary results of large-scale clinical trials at open meetings might well cause the abortion of many of these expensive and long-term experiments. Senator Metcalf's staff, although not especially concerned with protecting the scientist's equity in his idea, was sympathetic to the other arguments in favor of maintaining confidentiality. As a result of a meeting of Senator Metcalf's subcommittee yesterday, it appears that the Senate will support closing certain peer review meetings under exemption 5.

In a related area, Dr. Fredrickson said he does not support closing the meetings of the cancer review panel when that body reviews the budget for cancer research. He will ask the National Cancer Institute to open these meetings. Dr. Fredrickson said it is important to get citizens more involved in questions that affect both science and the public; he described a recent successful open meeting on the subject of recombinant DNA ("genetic engineering") that has provided him with a wide variety of opinion to assist his decision making.

Dr. Volker asked whether other agencies like the Energy Research and Development Administration and the Veterans Administration are participating in the discussions to preserve the confidentiality of peer review. Dr. Fredrickson replied that these agencies are watching with interest, but that science is a small part of the Congressional effort to open up meetings. The NIH peer review process is caught in a cross fire that is not really aimed at it.

V. REPORT OF THE DIRECTOR, NLM

Dr. Cummings reviewed the recent action on the HEW appropriation bill for FY 1976, culminating in an override by Congress of the President's veto. The appropriation contains \$29,065,000 and 472 budgeted positions for NLM and \$26 million for construction of the Lister Hill Center Building. The FY 1977 budget calls for a \$5.9 million increase over 1976; the Director reported to the Board on how this increase would be distributed throughout NLM's programs. A large share of the increase would go to the Lister Hill Center to support programs for disseminating research results. The Director expressed his concern over the large increase for "program direction." This increase is necessitated by rising assessments from NIH for "management fund," "general expense," and "program evaluation," and is not attributable to an increased cost in managing the Library's programs. Dr. Cummings suggested that NLM may be paying more than its fair share for the first two of these assessments.

The Director next discussed the steps necessary for completion of the Lister Hill Center Building. There are several reviews necessary before a construction contract can be awarded later this year. If all proceeds smoothly, the building could be completed by October 1979.

The Medical Library Assistance Act is being considered for renewal for a three-year period this year. Dr. Cummings characterized the hearings on the renewal as "friendly," and he sees no major problem to its extension.

As to new appointments to the Board of Regents, the Director reports that, despite recent encouraging communications from the White House and the Senate, no imminent action is expected.

Mr. Melvin S. Day, NLM Deputy Director, summarized recent developments on copyright legislation now before Congress. Section 108g(2) of the bill deals with photocopying and would prohibit libraries from engaging in their present practice of photocopying for interlibrary loans. The Senate passed (97 to 0) its copyright legislation (S.22) on February 19, 1976.

There have been numerous attempts over the past two years to bring the publishing and library communities together to work out a compromise solution on copyright and photocopying. These attempts have all failed. NLM had initiated a number of meetings with the Williams & Wilkins Company to see if a common position could be reached that might serve as a model of compromise for the legislation. Very similar (but not identical) positions were reached and letters outlining these positions were sent to Barbara Ringer, the Register of Copyrights. Because both positions were so close, Miss Ringer convened a meeting at NLM on January 26 that included representatives from the major library and publishers associations. From that meeting a group was formed to draft a discussion paper for the final meeting of the group to be held in February. Dr. Schoolman, who represented NLM on the group, drafted a basic paper which Barbara Ringer transmitted to the staff of the House Subcommittee. A final meeting of representatives from both sides was held at NLM in February where a complete redraft of section 108g(2), proposed by the House Subcommittee staff, was discussed. The redraft was presented by the House Subcommittee staff and was based largely on Dr. Schoolman's paper. The House Subcommittee staff advised that Congressman Kastenmeier,

Chairman of the House Subcommittee, would consider introducing the revised language if it were supported by the communities concerned. Any revision of language in a House version of the bill would still have to undergo a reconciliation with the already passed Senate bill.

Subsequently, six library associations (ALA, SLA, MLA, AALL, and the Music Library Association) and the Association of American Publishers each rejected the proposed revision. Both sides are now preparing for transmittal to the House Subcommittee a recommended revision of just section 108g, which brings us back to square one again where all this started.

Dr. Cummings summarized by saying that although we won the copyright issue in the judicial process, we appear to have lost it in the legislative because of the inability of the libraries and publishers to find a common ground. It is not a loss for libraries, he added, but rather a loss to those who rely on library services.

Dr. Hubbard thanked Mr. Day and Dr. Schoolman for their valiant efforts in seeking an accommodation--he said, it was a "near miss."

VI. REPORT OF STUDY GROUP ON COMPUTER AND COMMUNICATIONS SYSTEMS

Brig. General Ernest J. Clark, chairman of the study group, described his group's charge to (1) review the proposed on-line services policy statement, and (2) consider the future direction of the Library in providing services for non-NLM data bases. Also on the study group were Mr. Zipf, Col. Aultman, Mr. McCarn, and Mr. Erdman.

The study group unanimously recommended the adoption of the proposed on-line policy statement, with certain modifications. The new statement emphasizes the importance of coordinating the Library's on-line services with the Regional Medical Library Program. It lists several desirable characteristics of the growing network, including timeliness, cost effectiveness, local and regional coordination, and common standards among the on-line services. The proposed statement also describes the kinds of institutions qualified to join the network, their specific responsibilities as users, and the rationale for NLM recovering certain costs by charging for on-line services.

General Clark reported that the study group has reached no firm recommendations concerning the expansion of data bases on NLM's network. The group did, however, define a number of issues to be considered in formulating a policy in this area. Among these are the scope and quality of proposed new data bases and how they are related to NLM programs, demand by the user community for extended services, benefits to users and the Library, and the resources required of the Library. General Clark presented three possible options: NLM acting as a centralized information resource for health; a distributive system with NLM as a collecting and referral center; a combination of the first two with selected centralized information services and certain indexing and referral services.

Dr. Hubbard suggested that the feasibility of an expanded NLM role be tested by applying the discussions of his study group (to review NLM's involvement in

interagency information projects) to the several options presented by General Clark's group. The results, to be presented at the June meeting, will be estimates of the resources required for each option. Dr. Schoolman clarified the task by stating that staff will estimate, for each option, not only the amount of NLM resource required, but also the resources and commitment of the health community as a whole. Dr. Hubbard cautioned against creating an over-elaborate, overtechnical examination--what is needed at this stage is an approximate estimation of resources required in terms of manpower, dollars, and space.

VII. REPORT OF THE STUDY GROUP ON BIOMEDICAL COMMUNICATIONS POLICY ISSUES (LHNCBC AND NMAC)

Dr. Joseph F. Volker, chairman of the study group, presented that group's report to the Board. The report recommends three policy statements concerning the involvement of NLM's components in broadband communications, the Lister Hill National Center for Biomedical Communications' and the National Medical Audio-visual Center's roles in improving the translation of research results to professional practice, and the Library's responsibilities to the professional health community and to the agencies of the Public Health Service.

In the area of broadband communications, the report recommends that the Library focus on networking, with emphasis on continuing education and dissemination of research results. The second statement calls for the LHNCBC and NMAC to explore ways to improve the analysis, synthesis, and translation of research results to the benefit of health practice. The last statement defines NLM's primary constituency as the health professional community; the Library should give technological support to all agencies of the PHS for specific projects within the scope of the NLM mission.

Dr. Stewart G. Wolf, Jr., member of the study group, emphasized two points: (1) the issue of the centrality of NLM in health communications, and (2) the value of reorganizing and integrating the Lister Hill Center and NMAC. Dr. Cummings reinforced the importance of Dr. Wolf's comments concerning reorganization. There is at this time an internal study being conducted on integrating the functions of the Lister Hill Center and NMAC, the Director reported. Further, there is current consideration of higher level reorganization, including NLM's place in NIH. Dr. Cummings believes NLM should face up to the possibility that we may need to reorganize ourselves, before we are reorganized.

Dr. Hubbard emphasized the importance of reconsidering the organizational structure of the Library in light of the views of the two study groups that just reported. A firm policy statement is needed from the Board on just what the Library's goals should be.

Following a discussion of whether "National Library of Medicine" is an appropriate name for an institution with responsibilities in communication and health (defined broadly), Dr. Cummings suggested that the Library be viewed as one element of several within a broader framework for health communications. The present name of the Library certainly need not be eliminated.

The Board accepted, in principle, the three policy statements recommended by the study group. Additional consideration may be given them before the Board's next meeting, when final actions will be taken on the broad range of issues identified at this meeting. The second policy statement especially occasioned much discussion. The Chairman summarized the sense of discussion by saying that the Board concurs that it is the set of functions described in the policy statement number two that represents the "binding force" for the LHNCBC and NMAC, but that several expressed concerns about the functioning of this relationship will require elucidation of the statement.

VIII. REPORT OF THE STUDY GROUP ON INTERAGENCY PROJECTS

Dr. Hubbard, chairman of the study group, noted that the report in the agenda book has since been amended as a result of the group's meeting in late February. Many of the problems of a decade earlier have been solved as technology has progressed--broadband satellite communications, on-line networks, etc. Organizational planning and interagency collaboration, however, have not similarly progressed. The study group proposes that the Library reassert its intention to create a Centralized Information Resource for Health (CIRH)--a "one-stop shopping center" for the health information seeker.

The study group identified two alternative ways to proceed: (1) to develop a complete model for such a center, including the necessary resources that would be submitted by the Board to HEW and Congress; (2) to proceed step by step with present NLM authorization and resources--first consolidating its own bibliographic services, then studying user needs, and improving linkages to other information services. Dr. Hubbard discussed the pros and cons of the two methods, noting that the second approach would be more politically feasible and meet less resistance from other agencies. The study group strongly recommends that NLM be increasingly responsive to the information needs of other agencies within the limits of the Library's resources. This latter approach in an evolutionary manner would also contribute to the development of a centralized information resource. Although the study group did not recommend one alternative over the other, it was clear from the ensuing discussion that the Regents preferred the second. On this basis, Dr. Hubbard said that his study group will formulate a more precise document on the subject, working closely with General Clark's study group on computer and communications systems.

IX. REPORT OF THE STUDY GROUP ON LIBRARY POLICY ISSUES

Dr. Abdellah, who chaired the group, said their charge was to review (1) scope and coverage, (2) preservation of the collection, and (3) user charges.

Scope and coverage. Dr. Abdellah said the following issues are to be addressed in the scope and coverage policy: the policy must be responsive to NLM's mandate--precisely what is to be collected and what is to be "announced" bibliographically; distinguish the unique functions of NLM; define terms such as "health-related" and "health professionals," etc.; define audiences to be served; distinguish between our responsibility for collecting primary publications and repackaging certain literature; relate NLM's functions under scope and

coverage with those of the Regional Medical Libraries--bibliographic control, archival responsibilities, fiscal and personnel resources, and management or monitoring functions. A draft of such a policy statement will be prepared for the June meeting of the Board.

Dr. Abdellah then described some of the characteristics of a revised scope and coverage manual: It should be looseleaf to allow for convenient modification; its introduction should clearly reflect the new policy statement; it should clearly specify levels of coverage; contain definitions and a glossary; and should include audiovisuals and instructions for handling microforms, technical reports, and government publications. Because a revised manual entails a considerable amount of staff work, Dr. Abdellah estimated it would probably not be completed before March 1977.

Preservation. Mrs. Hetzner, the study group member responsible for reviewing preservation of the collection, identified several key areas involved in the question of preservation: (1) NLM's statutory responsibility for sharing--should responsibility be shared with others, such as the Library of Congress; (2) should preservation be all-inclusive or selective (the scope and coverage policy being developed should help resolve this question); (3) criteria for selecting and preserving the book as an artifact vs preserving its content; (4) availability of commercially prepared microfilm of journals; and (5) alternative methods of preservation. A draft statement of the policy on preservation will be presented at the June Board meeting.

User charges. Dr. Michael, whose subgroup investigated policies for user charges, said that his group used previously approved statements by the Board as a point of departure. There was general agreement, he reported, that user charges should not be used only for management control but also to recover marginal costs for providing a specialized service. Training costs should be borne by NLM for the first trainee from each on-line center--advanced or additional training might be charged for. User charges were favored for interlibrary loans but not for NMAC training. The group did not reach agreement on whether there should be a charge for complex reference services. There was also agreement that the quota system for interlibrary loans in the RML's was cumbersome--a flat fee or "membership" system should be considered. A draft of a user charge policy will be presented at the June meeting.

Dr. Cummings, in the following discussion, said he was concerned about the difficulty in determining what is worthy of preservation. What we today consider trivial might be of great importance to historians of the future. NLM should seek better methods of preserving what has been inherited from the past and what is now being collected. Existing and new technology for compacting knowledge--whether printed or audiovisual--should allow us to preserve what we collect.

Dr. Hubbard summarized the discussion on preservation by stating that NLM's preservation program should be as comprehensive as feasible and that although secondary condensed storage (i.e., microform) is important, optimum preservation

of the original document should receive highest priority.

The issue of scope and coverage received considerable discussion, especially in the area of the social aspects of health (ethics, health care delivery, etc.) Dr. Abdellah said this issue would be considered by the study group and included in the final draft policy statement for scope and coverage. Dr. Cummings emphasized the importance of developing our scope and coverage statement, keeping in mind the corresponding policies of the National Agricultural Library and the Library of Congress.

X. REPORT OF THE STUDY GROUP ON ORAL HISTORY PROGRAMS

Captain Cox, chairman of the study group, reviewed his group's charge: to review the oral history program and its relationship to the manuscript collection; to consider the role of the personal profile type videotape; and to consider the broad question of preserving Federal records at NLM, with a specific recommendation regarding the Federal nursing records.

Captain Cox briefly summarized his study group's conclusions: Oral history interviews are expensive (because of the high-salaried manpower involved) and lengthy, and should be used as a supplement to manuscript collection--to fill gaps and clarify points in the manuscript record. The study group recommended that NLM have a systematic approach to collecting manuscripts, supplementing them with audio interviews when necessary, and only in special instances arranging for a videotape summary. As to personal profile interviews on videotape, the study group views this as a valuable undertaking by NMAC and recommends that it be continued (but not as part of the Oral History Program).

Captain Cox said the group recommended that the Library not serve as a routine depository for the health-related records of other Federal services and suggested alternative methods for preserving the Federal nursing records. Dr. Abdellah responded to the suggested alternatives and said she was pessimistic as to the role of the National Archives in preserving historically important records from the Federal nursing services. She believes that these nursing materials stand on their own and should not be considered a subcategory under the history of medicine. As such they should have a home in NLM. Dr. Cummings said that carefully selected "landmark" documents in nursing would be within the Library's scope for preservation, especially if the alternative is destruction. Perhaps, the nursing profession should review this material and make a formal proposal to NLM for housing it, he suggested. Dr. Hubbard summed up by saying that portions of the study group's report dealing with oral history and personal profile videotapes are accepted without dissent by the Board, but that there needs to be further discussion on the third proposal concerning Federal records. He asked that the study group reconsider this last topic.

XI. REPORT OF STUDY GROUP ON EXTRAMURAL PROGRAMS POLICY

Dr. Weinberg, chairman of the study group, presented a progress report on the meetings of the study group which have taken place since the November Board meeting. The group identified two major EP activities: (1) Regional Medical Libraries (RML), and (2) Grants.

Under "RML Activities," the group looked at the structure and organization of the Regional Medical Libraries and their effectiveness, efficiency, and ability to change in the present hierarchical RML network. The group recommended that a further study be made of the RML structure as it now exists and that suggestions be proposed for possible alternatives, keeping in mind the changes that are imminent because of the expected new copyright legislation. Dr. Weinberg commented on a second problem associated with the RML's: NLM is not effectively serving the health practitioner community--physicians, nurses, dentists. The Extramural Programs will undertake a planning program to consider alternative approaches for providing this type of information service and will report to the Board in June.

Under "Grant Activities," the problems identified related to the lack of EP objectives, funding priorities, and intra-NLM program coordination. The specific suggestion made, to be considered at the June meeting, was to find a mechanism for targeting grant activities.

Dr. Merritt commented at the conclusion of Dr. Weinberg's report that there is very little EP can do, because it is circumscribed by the vehicle of the support. What the study group can do will be dependent on what the objectives of the Library programs are. Dr. Hubbard pointed out that the evolving programs of the Lister Hill Center will become an important part of this consideration of the Extramural Programs. Dr. Allen emphasized that among the EP programs there are certain priorities that could be established which would directly relate to the interests of the other programs of the Library. Dr. Hubbard concluded the discussion by pointing out that the real problem is to know how to harmoniously utilize the resources internally and externally to accomplish subordinate goals. In general, policies and directions of the Library should be reflected both in extramural and intramural efforts.

XII. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. Ernest M. Allen, NLM Associate Director for Extramural Programs, pointed out that it is the present rule of NIH that comments in outside opinions, site-visit reports, and notes of study section members be incorporated in the summary statements, and discarded when no longer needed. A list of all individuals who are not study section members and who furnished opinions will be maintained in the record.

Dr. Allen continued by reviewing the 1976 and 1977 fiscal year budgets for the Extramural Programs which would make available \$6,433,000 and \$8,000,000, respectively. He pointed out that the FY 1976 budget leaves only \$290,000 for new business, but that the expected FY 1977 budget would have a balance of over \$2,000,000 for new proposals. The Board concurred with Dr. Allen's recommendations on a priority pay plan for FY 1976.

Mrs. Doris J. Doran, EP Program Officer, presented draft Audiovisual Guidelines and Checklist to the Board for its information. The guidelines were developed for the use of applicants in preparing Resource Project grant applications for audiovisuals, while the checklist is for the use of the reviewers of these applications.

XIII. OTHER BUSINESS

1. The Regents congratulated Dr. Cummings on receiving the 1976 Distinguished Achievement Award from "Modern Medicine."

2. Colonel Aultman presented to the Library, on behalf of the Army Medical Department, a copy of the Bicentennial Plate honoring the 200th anniversary of the founding of that Department.

3. Dr. Hubbard appointed a Nominating Committee for the election in June of the next Board of Regents' Chairman. The Committee is chaired by Dr. Abdellah and includes Captain Cox and Colonel Aultman as members.

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS AND CONTRACT PROPOSALS FROM 9:30 A.M. TO 11:15 A.M.

XIV. RESEARCH, RESOURCE, TRAINING, AND PUBLICATION GRANT APPLICATIONS, AND CONTRACT PROPOSALS

Before proceeding with the consideration of pending applications and proposals, Dr. Roger W. Dahlen informed Board members and consultants of confidentiality and conflict-of-interest procedures and reminded all appointed Regents and consultants to sign, at the conclusion of the grant and contract review, the statement certifying that they had not participated in the discussion of any applications or proposals where conflicts of interest might occur.

Three competitive proposals for regional services in the four-state area of New York, Pennsylvania, New Jersey, and Delaware were reviewed by the Board. A final report on negotiations and awards will be made by Mr. Broering at the June Board meeting.

The Board concurred with recommendations of the Extramural Programs Subcommittee with the exception of a deferral of one Resource grant application and a change in priority of one Publication grant application. A total of 53 applications was reviewed, of which 26 were recommended for approval, 24 for disapproval, and three for deferral. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment "B"). Interim actions taken by EP staff since the last Board meeting in November 1975 were noted.

XV. ADJOURNMENT

The meeting was adjourned at 11:15 a.m. on Friday, March 12, 1976.

* * * * *

Wednesday, March 10, 1976, 2:00 to 5:00 p.m. (EP Subcommittee--List of Attendees under Attachment "C")

Thursday, March 11, 1976, 9:00 a.m. to 5:00 p.m.

Friday, March 12, 1976, 9:00 to 11:15 a.m.

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. Dr. Hubbard appointed a Nominating Committee, consisting of Dr. Abdellah, Chairman, Captain Cox, and Colonel Aultman.
2. The Board concurred with recommendations of the Extramural Programs Subcommittee. Grant applications recommended for approval are listed in the summary actions (Attachment "B").

* * * * *

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

Martin M. Cummings 4/12/76
Martin M. Cummings, M.D. (Date)
Executive Secretary

W. N. Hubbard, Jr. 4/15/76
W. N. Hubbard, Jr., M.D. (Date)
Chairman

Robert B. Mehnert
Chief
Office of Inquiries and
Publications Management

BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINECHAIRMAN

HUBBARD, W. N., Jr., M.D. (76)
 President
 The Upjohn Company
 Kalamazoo, Michigan 49001
616-382-4000 (Ext. 3195)

OLKER, Joseph F., D.D.S., Ph.D. (77)
 resident
 University of Alabama in Birmingham
 University Station 205-934-4342
 Birmingham, Alabama 35294 or 934-4784

WEINBERG, Ethel, M.D. (76)
 Director, Allied Health Professions
 Evaluation Program, and Associate
 Director, Department of Undergraduate
 Medical Evaluation
 National Board of Medical Examiners
 3930 Chestnut Street 215-349-6400
 Philadelphia, Pennsylvania 19104

EX OFFICIO MEMBERS

HASE, John D., M.D.
 Chief Medical Director
 The Veterans Administration
 Washington, D.C. 20420 202-389-2596
Alt.: Dr. Bill M. Domm 202-389-5093

BOORSTIN, Daniel J., Litt.D.
 Librarian of Congress
 10 First Street, S.E.
 Washington, D.C. 20540 202-426-5205

ARK, Eloise E., Ph.D.
 Division Director for Biological
 and Medical Sciences
 National Science Foundation
 300 G Street, N.W.
 Washington, D.C. 20550 202-632-4338

SCHAFER, George E., Lt. Gen., USAF, MC
 Surgeon General
 Department of the Air Force
 Forrestal Building
 Washington, D.C. 20314 202-693-5800
Alt.: Brig. Gen. Ernest J. Clark 202-693-6231

JSTIS, Donald L., Vice Adm., MC, USN
 Surgeon General
 Department of the Navy
 Washington, D.C. 20372 202-254-4153
Alt.: Capt. J. William Cox 202-295-0203

TAYLOR, Richard R., Lt. Gen., MC, USA
 The Surgeon General
 Department of the Army
 Washington, D.C. 20310 202-697-1295
Alt.: Col. Mims C. Aultman 202-693-1652

IRLICH, S. Paul, Jr., M.D.
 Acting Surgeon General
 U.S. Public Health Service
 Rockville, Maryland 20852 301-443-1774
Alt.: Dr. Faye G. Abdellah 301-443-6497

EXECUTIVE SECRETARY

CUMMINGS, Martin M., M.D.
 Director
 National Library of Medicine
 Bethesda, Maryland 20014
301-496-6221

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: March 1976

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
1 G08 LM 02600-01A1	REGIONAL INFORMATION AND RESOURCE SYSTEM	01A1	39,457
		02	28,074
		03	26,291
1 G08 LM 02733-01	CONSORTIUM OF MEDICAL LIBRARIES	01	8,420
		02	4,470
		03	4,650
1 G08 LM 02767-01		01	21,011
	CREATION OF LEARNING CENTER INTEGRATED WITH LIBRARY		
1 G08 LM 02772-01	REGION XI COOPERATIVE SERIALS ACQUISITIONS PROGRAM	01	17,463
		02	7,626
1 G08 LM 02774-01		01	50,000
	A/R TO EXPAND THE MEDICAL LIBRARY		
1 G08 LM 02776-01		01	22,023
	A/R OF A NEW AREA FOR EXPANSION OF THE LIBRARY		
1 G08 LM 02780-01	LIBRARY MOBILIZATION FOR CONTINUING EDUCATION	01	49,732
		02	69,845
		03	79,592
1 G08 LM 02782-01		01	32,506
	A/R PROJECT TO REMODEL THE PUBLIC SERVICES SECTION		

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
(Arranged numerically by program)

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: March 1976

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 02784-01	PRINTED BOOK CATALOG FOR HEALTH PROFESSIONALS IN ALASKA	10,766
1 G08 LM 02786-01	BIOMEDICAL INFORMATION SERVICES FOR HOSPITALS	22,324
1 G08 LM 02795-01	UNION LIST OF HEALTH SCIENCE MONOGRAPHS OF THE SHSLC	3,910

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
(Arranged numerically by program)

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: March 1976

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 T15 LM 07014-01	GRADUATE PROGRAM IN BIOMEDICAL INFORMATION SCIENCE	01 114,495 02 114,620 03 117,826

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: March 1976

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
2 R13 LM 00824-07		07	3,300
		08	3,550
	INTERNATIONAL MAMMALIAN HISTOLOGICAL NOMENCLATURE	09	11,800
2 R01 LM 01804-04		04	5,200
	CONCEPTUAL BACKGROUND OF EIGHTEENTH CENTURY MEDICINE		
2 R01 LM 01941-04		04	12,250
	DEVELOPMENT OF ANATOMICAL SCIENCES/GALEN TO VESALIUS	05	14,840
2 R01 LM 02517-02		02	5,600
	COLONIAL MEDICINE IN THE NORTHERN GOLD COAST		
1 R01 LM 02603-01A1		01A1	41,830
	RETRIEVAL OF ANSWER-PASSAGES FROM BIOMEDICAL PAPERS	02	48,530
1 R01 LM 02700-01		01	1,855
	THE BLACK DEATH IN THE MIDDLE EAST		
1 R01 LM 02701-01		01	14,910
	WOMEN IN THE AMERICAN MEDICAL PROFESSION, 1830-1930	02	14,910
1 R01 LM 02765-01		01	18,340
	THE RECENT LAND MAMMALS OF EGYPT		

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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: March 1976

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
1 R01 LM 02787-01	DEVELOPMENT OF MOSQUITO TAXONOMIC GLOSSARY	01	19,380
		02	20,199
1 R01 LM 02794-01	LA PEYRONIE (1678-1747) AND THE RISE OF SURGERY	01	15,479
1 R01 LM 02810-01	COUNSELING IN NUTRITION BY COMPUTER	01	58,251
		02	82,026
		03	69,526
1 R01 LM 02811-01	PREPARATION OF BOOK ON THE DOCTOR'S JOB	01	5,835
1 R01 LM 02813-01	LOEB CLASSICAL LIBRARY, HIPPOCRATES, VOLUME FIVE	01	800
		02	600
		03	16,600
1 R01 LM 02826-01	HISTORY OF MEDICAL CARE IN AMERICA, 1790-1914	01	9,192
		02	26,744

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

B O A R D O F R E G E N T S

Extramural Programs Subcommittee Meeting

March 10, 1976

A T T E N D E E S

Subcommittee Members Present:

Dr. Faye G. Abdellah
Dr. Joseph F. Volker
Dr. Ethel Weinberg

Consultants Present:

Mrs. Bernice M. Hetzner
Dr. Doris H. Merritt

NLM Staff Present:

Dr. Martin M. Cummings, Director
Dr. Harold M. Schoolman, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mrs. Helen S. Bennison, Grants Management Specialist, EP
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mr. Peter A. Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant
Mrs. Frances H. Howard, Special Assistant to the Associate Director, EP
Mrs. Frances E. Johnson, Program Officer, EP
Miss Maureen J. Malone, Program Analyst, EP
Mrs. Kathleen Nichols, Grants Management Assistant, EP
Dr. Dorothy A. Stroup, Program Officer, EP
Mr. Kenneth C. Styers, Chief, Office of Contracts Management
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Mr. Randall Worthington, Program Officer, EP
Dr. Galina Zarechnak, Program Officer, EP

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

54th Meeting of the

BOARD OF REGENTS

June 10-11, 1976

Board Room
National Library of Medicine

MEETING OPEN: From 9:00 a.m. to 5:00 p.m. on June 10 and from 9:30 a.m.
to adjournment on June 11.

CALL TO ORDER AND INTRODUCTORY REMARKS

Dr. W. N. Hubbard, Jr.

CONSIDERATION OF MINUTES OF LAST MEETING TAB I

I. DATES OF FUTURE MEETINGS

1976 and 1977 Calendars TAB II

Next Meeting: September 23-24, 1976 (Th-F)

Subsequent Meeting: January 27-28, 1977 (Th-F)

Selection of Dates for Spring 1977 Meeting:

May 19-20 (Th-F) or May 26-27 (Th-F)

REPORT OF THE DIRECTOR, NLM TAB III

Dr. Martin M. Cummings

COFFEE BREAK

5/10/76

- V. DRAFT POLICY STATEMENT AND LONG-RANGE PLANS TAB IV Dr. W. N. Hubbard, Jr.
- VI. CONVENING OF STUDY GROUPS IN INDIVIDUAL MEETINGS TO DISCUSS DRAFT POLICY STATEMENT AND LONG-RANGE PLANS
- LUNCHEON CATERED IN CONFERENCE ROOM "B"
- VII. DISCUSSION OF POLICIES AND LONG-RANGE PLANS BY STUDY GROUPS:
- A. Biomedical Communications Policy Issues (NMAC and LHNCBC) TAB V Dr. Joseph F. Volker
- B. NLM Involvement in Interagency Projects TAB VI Dr. W. N. Hubbard, Jr.
- C. Computer and Communications Systems: TAB VII General Ernest J. Clark
1. On-line services policy
2. Scope of on-line services
- COFFEE BREAK
- D. Library Policy Issues TAB VIII Mrs. Bernice M. Hetzner
1. Preservation of the collection
2. Scope and coverage
3. User charges
- E. Extramural Programs Policy TAB IX Dr. Ethel Weinberg
- III. PRESENTATION OF AWARDS:
- A. Seventh Regents' Award for Scholarship or Technical Achievement Dr. W. N. Hubbard, Jr.
- B. Director's Award Dr. Martin M. Cummings

E C E S S

DINNER	Bethesda Naval Officers' Club
Cocktails (Cash Bar)6:30 p.m.	"Patio Room"
Dinner (Dutch Treat)7:30 p.m.	

SPEAKER: Dr. Peter D. Olch
 Deputy Chief
 History of Medicine Division
 National Library of Medicine

TOPIC: "Medicine and Surgery on the Early Western Frontier"

PRESENTATION OF CERTIFICATES TO REGENTS COMPLETING TERMS OF OFFICE	Dr. Martin M. Cummings
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R E C O N V E N E : 9:30 a.m., Friday, June 11, 1976

X. SYNTHESIS OF DISCUSSION OF POLICIES AND LONG-RANGE PLANS	Dr. W. N. Hubbard, Jr.
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COFFEE BREAK

. MANUSCRIPTS PROGRAM--Accession of Federal Records by NLM	<u>TAB X</u>	Dr. Mabel E. Deutrich
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[. FINAL RESULTS OF RML CONTRACT AWARDS	Mr. Arthur J. Broering
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[I. OTHER BUSINESS	Dr. W. N. Hubbard, Jr.
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[II. ADJOURNMENT	Dr. W. N. Hubbard, Jr.
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DEPARTMENT OF HEALTH, EDUCATION,

AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS

MINUTES OF 54TH MEETING

JUNE 10-11, 1976

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/

June 10-11, 1976

The Board of Regents of the National Library of Medicine was convened for its fifty-fourth meeting at 9:00 a.m. on Thursday, June 10, 1976, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. W. N. Hubbard, Jr., President, The Upjohn Company, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on April 28, 1976, the meeting was open to the public from 9:00 a.m. to 5:00 p.m. on June 10, 1976, and from 9:30 a.m. to 11:50 a.m. on June 11. A Board roster is included in Attachment "A."

Board members present were:

Dr. Eloise E. Clark
Vice Admiral Donald L. Custis (Attended June 10)
Dr. W. N. Hubbard, Jr.
Dr. Joseph F. Volker
Dr. Ethel Weinberg

Alternates to Board members present were:

Col. Mims C. Aultman, representing Lt. Gen. Richard R. Taylor
Brig. Gen. Ernest J. Clark, representing Lt. Gen. George E. Schafer
Rear Adm. J. William Cox, representing Vice Adm. Donald L. Custis on June 11
Dr. Richard R. Drisko, representing Dr. John D. Chase
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin on June 10

Unable to attend:

Dr. Faye G. Abdellah

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/ The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Assistant Deputy Director
Dr. Myron J. Adams, Jr., Acting Chief, Materials Development Branch, NMAC
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford A. Bachrach, Head, Medical Subject Headings Section, LO
Mr. Harry D. Bennett, Deputy Associate Director for Computer and Communications Systems
Mr. Albert M. Berkowitz, Chief, Reference Services Division, LO
Dr. Robert M. Bird, Director, Lister Hill National Center for Biomedical Communications
Dr. John B. Blake, Chief, History of Medicine Division, LO
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Miss Mary E. Corning, Assistant Director for International Programs
Mr. Benjamin Erdman, Deputy Director, Lister Hill National Center for Biomedical Communications
Mr. Joseph F. Gantner, Chief, Technical Services Division, LO
Mr. B. Earl Henderson, Chief, Communications Engineering Branch, LHCNBC
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Dr. George E. Mitchell, Director, National Medical Audiovisual Center
Dr. Peter D. Olch, Deputy Chief, History of Medicine Division, LO
Mr. Kent A. Smith, Assistant Director for Administration
Dr. James M. Stengle, Deputy Director for Medical Affairs, LHCNBC
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP
Dr. Harold A. Wooster, Special Assistant for Program Development, LHCNBC

Others present included:

Dr. William G. Anlyan, Vice President for Health Affairs, Duke University School of Medicine -- Consultant, NLM
Dr. Fred C. Cole, President, Council on Library Resources, Inc.
Dr. Mabel E. Deutrich, Assistant Archivist for the National Archives of the National Archives and Records Service
Dr. Richard A. Farley, Director, National Agricultural Library
Mr. Colin Freeman, Principal Librarian, National Library of Australia
Mrs. Bernice M. Hetzner, Professor of Library Science, University of Nebraska Medical Center -- Consultant, NLM
Dr. Saul Jarcho, Editor in Chief, New York Academy of Medicine -- Consultant, NLM
Dr. John P. McGovern, Professor and Chairman, Department of the History of Medicine, University of Texas, -- Consultant, NLM
Dr. Doris H. Merritt, Dean for Sponsored Programs, Indiana-Purdue University at Indianapolis -- Consultant, NLM
Dr. Max Michael, Jr., Executive Director, Jacksonvill Hospitals Educational Programs, Inc. - - Consultant, NLM
Dr. G. Burroughs Mider -- Consultant, NLM
Dr. Stewart G. Wolf, Jr., Director, Marine Biomedical Institute -- Consultant, NLM

Members of the public present:

Mr. Jeff Christy, Reporter, "The Blue Sheet"

I. OPENING REMARKS

Dr. W. N. Hubbard, Jr., Chairman, welcomed the Regents, consultants, and guests to the 54th meeting of the Board of Regents of the National Library of Medicine. He noted the presence of Mr. William J. Welsh, Deputy Librarian of Congress, and Mr. Colin Freeman, Principal Librarian of the National Library of Australia.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board approved the minutes of the meeting of March 11-12, 1976.

III. DATES FOR FUTURE MEETINGS

The Board approved the dates of September 23-24, 1976, for the next meeting, and confirmed January 27-28, 1977, for the subsequent meeting. May 19-20, 1977, were approved tentatively for the following meeting.

IV. REPORT OF THE DIRECTOR, NLM

Dr. Cummings discussed several important influences on the programs and budget of NLM: (1) the influence of election-year politics on Regents' appointments; (2) the noncompetitive salary structure may lead to losses of key NLM staff; (3) NLM, as a service organization, must compete for budget resources with the research institutes; and (4) rising levels of service outstrip the manpower available to perform them effectively.

Dr. Cummings concentrated on the last two items concerning budgets and workloads. NLM has done extremely well in the competition for funds--the FY 77 budget has \$35.2 million for NLM, an increase over the 1976 appropriation of \$29.2 million. Large increases will go to the Extramural Programs, the Lister Hill Center, and Library Operations. The Senate has yet to act on the 1977 appropriation bill.

Dr. Cummings expressed his concern about the rising demand for services and the declining numbers of staff to provide them. In 1968 the NLM had a staff of 491; we presently have an authorized ceiling of 472. The 1977 budget, unfortunately, calls for a decrease in staff, despite dollar increases in budget. The Director presented a series of charts showing rising demands for services in the areas of on-line searching, interlibrary loans, reader services, reference services, binding, indexing, and cataloging. This growth in services has been satisfied, to a large extent, by supplementing the NLM staff with contract support.

There was considerable discussion by the Regents about the rise in workloads and the potential effect on NLM services of the new Uniformed Services University of the Health Sciences. NLM is encouraging the new school to develop a strong library of its own, but the plans to do so are unsure at this time. In response to a question from Dr. Weinberg about on-site use of NLM, Dr. Cummings said he would have the staff prepare figures on current and projected usage to present to the Board for their consideration. Perhaps the Board might then recommend changes in the policy for reader use. Vice Admiral Custis commented that the Board of Regents of the new school understands Dr. Cummings' concern that the school develop an adequate medical library; NLM's "worst fears" will not be realized, he said. Dr. Leiter commented that NLM can help in sharing one costly burden for the new school--the processing and cataloging of new materials for its collection.

The Director also noted that the Environmental Impact Statement for the Lister Hill Center building was published in the Federal Register on April 30. There has been no adverse reaction--although the period for comment still has 45 more days to run. The Library hopes to begin construction this November. The integration of functions of the Lister Hill Center and the National Medical Audiovisual Center was the subject of a recently completed staff study. The recommendations call for a gradual phasing of integration with the ultimate merging of functions taking place in about three years.

The Medical Library Assistance Act extension has been passed by the House. The House Report on the Act was puzzling in several respects, however. The Report calls for NLM (1) to accept and preserve all Federal nursing records (see item VII -- Manuscripts Program), and (2) to place more emphasis on collecting and indexing the literature of health care delivery. Dr. Cummings has appointed a working group to study this latter charge and to convene a group of experts to review the MeSH vocabulary and to reexamine NLM's holdings in health care delivery.

Dr. Cummings reported that although there have been at least 28 names submitted by HEW to the White House of potential nominations for membership on the Board of Regents, there has been no word of action from the White House. On the second day of the Board meeting, following the election of Dr. Joseph Volker as Chairman of the Regents, Dr. Hubbard proposed and the Regents unanimously approved a resolution to HEW Secretary Mathews on the subject of new appointments to the Board (Attachment "B").

Dr. Cummings discussed the impact of the Privacy Act on NLM's manuscript collection. Manuscripts and personal papers donated to NLM sometimes have restrictions placed by the donor on their use; e.g., the papers might not be available to the public for a specified number of years. Similar restrictions are sometimes placed on oral history interviews. Recent guidelines issued by the Office of Management and Budget would seem to make these restrictions invalid under the Privacy Act and thus the entire program may be jeopardized. OMB is reexamining the matter at the request of NLM. Mr. Welsh of the Library of Congress and Dr. Farley of the National Agricultural Library related the experience of their institutions in this area. Dr. Farley will send to Dr. Cummings a copy of the opinion of NAL's legal counsel. Dr. Anlyan suggested that material subject to such conditions be placed in non-Federal collections for the period of the condition; or that, like oil paintings, the material be loaned out to other institutions. Dr. Cummings said NLM will look into these suggestions.

NLM Deputy Director Melvin Day briefed the Regents on the most recent development on copyright. The language in section 108G2 of the Senate copyright bill, which would essentially prohibit NLM's current photocopy practice, may be amended by the House to allow a library to photocopy from a journal for which there is only an occasional demand (up to 10 requests in a year). If the House makes this change, there will be a conference between House and Senate to work out an agreement on this and other changes in the copyright bill.

Mr. Day also reported on the two legal suits brought against NLM by the System Development Corporation. SDC charged that (1) NLM was acting outside its statutory authority and in violation of a licensing agreement with SDC by providing MEDLINE services to pharmaceutical companies, and that (2) NLM was in violation of the Freedom of Information Act (FOIA) by refusing to provide SDC with copies of MEDLARS tapes at the cost of reproducing them. The first suit was dismissed by the Court of Claims. In the second suit the Federal District Court, Los Angeles, found that the FOIA is not applicable to MEDLARS tapes because neither the tapes nor the information they contain are "records" within the meaning of the Act. This finding for NLM is being appealed by SDC in the U.S. Court of Appeals, Los Angeles.

V. REGENTS' CONSIDERATION OF POLICIES AND PLANS

Dr. Hubbard listed four documents that will result from the Board's deliberations at this meeting:

1. "National Library of Medicine: Issues and Challenges for the Future." This is a programmatic narrative, prepared by senior NLM staff, from which the long-range plan will be derived.
2. A set of operating plans for each NLM program; to be derived from "Issues and Challenges" (No. 1, above).
3. The Board of Regents Study Group Reports. Reports from the several Study Groups established at last November's meeting will be discussed and acted on by the Regents later in this meeting.
4. Policies established by the Board of Regents. A compendium of the various policies the Board has reviewed and approved..

From these four documents will be developed an "NLM Policy Manual" and the "NLM Scope and Coverage Manual." These six documents, Dr. Hubbard said, will codify NLM's program plans and administrative procedures.

The Board discussed, in considerable detail, the "Issues and Challenges," the Study Group Reports, which were included in the Agenda Book, and the compendium of policies established by the Board. The following documents, with changes, were acted on by the Regents:

1. The Regents voted unanimously to adopt the "Policies Established by the Board of Regents" (Attachment C).
2. The Regents agreed to receive the document "Issues and Challenges" (Attachment D).

During the discussions that led to these actions, several critical issues were considered. These issues are described below:

The Library's involvement in public health education

Following the presentation by Dr. Volker, Chairman of the Study Group on Biomedical Communications Policy Issues, there was a discussion of what should be the Library's role in health education for the public. Since there is a new Bureau of Health Education at CDC, Dr. Cummings expressed his doubt that NLM should assume any primary responsibilities in this area. His position was strongly supported by Rear Admiral Cox. Dr. Hubbard warned against the Library arbitrarily refusing involvement in all public health education programs. Dr. Mider added that, as the world's largest repository of published medical information, NLM cannot avoid being involved--if only passively--in public health education efforts. As a result of these discussions, the language of the policy statement proposed by the Study Group on Biomedical Communications Policy was amended (Attachment C).

Bibliographic control and announcement

Mrs. Hetzner, who chaired the Study Group on Library Policy Issues, reported that the group recommends a special study group be established to examine the issues concerning bibliographic control, indexing, cataloging, and the Library's responsibility for announcing scholarly primary publications. The Study Group concluded that the policies relating to these practices were of such great importance that they warrant separate and careful attention. The Regents accepted this recommendation and such a group will be established.

Application of user charges

During the discussion of user charges, led by Mrs. Hetzner, it became apparent that, although there was agreement about the philosophy of "marginal" or "limited" cost charges for NLM services to provide for flexibility of operation and orderly growth, this agreement did not extend to which services should be charged for. The report of the Study Group on Library Policy Issues listed the possible use of service charges for interlibrary loans, training conducted at NLM for on-line services, complex reference services, and NMAC consultation services. Subsequent discussion revealed considerable reluctance by Board members to endorse charges in these areas. Dr. Mider pointed out that the recommendation that NLM use money received in fees to improve the "quality and performance of its various services" implies the establishment of a revolving fund -- an action requiring legislative action and fraught with many perils. Dr. Cummings suggested that mixing a discussion of fees for such disparate programs as training and traditional reference services under one common policy was not the best way to examine these issues. In the end, the Regents voted to approve the statement of policy on user charges (Attachment C) as presented by the Study Group, but to defer any action on approving new categories of charges.

VI. RML CONTRACT AWARDS

Mr. Arthur J. Broering, NLM Deputy Associate Director for Extramural Programs, reported to the Regents on the five proposals received for Regional Medical Libraries in Regions II and III. Three were deemed competitive: The New York Academy of Medicine (the present RML for Region II), the Medical Library Center of New York, and the College of Physicians of Philadelphia (the present RML for Region III).

The Subcommittee of the Board that considered the proposals found no reason to change contractors for the New York Region and recommended that The New York Academy of Medicine be continued as the RML. There were several weaknesses identified by the Regents in all three proposals, primarily concerning the composition and role of the RMLs' governance bodies and the decentralization programs each outlined. The proposers were receptive to criticisms in these areas and they made alterations in their proposals accordingly. Contracts were signed in late April with The New York Academy of Medicine and the College of Physicians of Philadelphia. There is a change in geographic areas covered: New Jersey, which had been split between Regions II and III, is now included entirely in the New York Region. However, libraries in the southern counties of New Jersey are still free to go to Philadelphia for document delivery services, if they wish.

VII. MANUSCRIPTS PROGRAM--ACCESSION OF FEDERAL RECORDS BY NLM

Dr. Mabel E. Deutrich, Assistant Archivist for the National Archives of the National Archives and Records Service, briefed the Regents on the responsibilities of the National Archives to collect and preserve Federal records of permanent value. She noted that she was aware of suggestions that NLM preserve selected portions of various Federal health-related records. "If these records are of permanent value," she said, "that would be clearly illegal."

Dr. Deutrich read several relevant portions of the U.S. Code that clearly spelled out the responsibility of the General Services Administration (the parent agency of the National Archives) to preserve Federal records of historical interest and importance. Records come to the Archives either by direct transfer from Federal agencies or from the Federal Records Center where the agencies deposit noncurrent records for storage. Only five percent of the records created by the Federal Government are considered to be of permanent value and worthy of retention by the National Archives. Dr. Deutrich emphasized that the National Archives cannot destroy any records from another Federal agency without the written consent of the head of that agency.

Dr. Hubbard asked specifically how NLM should respond to a statement in the report of the House of Representatives accompanying that body's passage of an extension of the Medical Library Assistance Act that the Library should accept and preserve Federal nursing records. Dr. Deutrich said that what the Report enjoins is clearly illegal. Dr. Hubbard summarized the Board's opinion that NLM "should not get into the business of collecting Federal archives." He added that the Library should continue to be alert to preserving health-related documents that do not fall within the purview of the National Archives, but that would be of interest to scholars. In the case of the Federal nursing records, specifically, Dr. Hubbard said that it is clear that their proper place is in the National Archives.

VIII. AWARDS

1. Myron J. Adams, Jr., M.D., of the National Medical Audiovisual Center, was honored with the 1976 NLM Regents Award for Scientific or Technical Achievement. In presenting the award, Dr. Hubbard cited Dr. Adams for "the successful application of educational methodology and learning theory to the design and use of audiovisual technology." To illustrate his achievements, the Regents were shown part of Dr. Adams' highly acclaimed series of self-instructional units concerning congenital heart defects.

2. Albert M. Berkowitz, Chief of the Reference Services Division, was presented the NLM Director's Award. In making the award, Dr. Cummings cited Mr. Berkowitz for "superb utilization of expert librarianship and unique personal sensitivity in serving the diverse needs of the community of users of the National Library of Medicine."

IX. ADJOURNMENT

The meeting was adjourned at 11:50 a.m. on Friday, June 11, 1976.

Thursday, June 10, 1976, 9:00 a.m. to 5:00 p.m.

Friday, June 11, 1976, 9:30 a.m. to 11:50 a.m.

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board elected Joseph F. Volker, D.D.S., Ph.D, Chairman for 1976/77.
2. The Board voted to approve the policies in Attachment C.
3. The Board voted to receive the document "National Library of Medicine: Issues and Challenges for the Future" (Attachment D).
4. The Board voted unanimously to approve a resolution urging HEW Secretary Mathews to expedite the appointment of nine new members to the Board (Attachment B).
5. The Board presented the 1976 NLM Regents Award for Scientific or Technical Achievement to Myron J. Adams, M.D.

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

Martin M. Cummings

7/14/76

Martin M. Cummings, M.D.
Executive Secretary

W. N. Hubbard, Jr.

W. N. Hubbard, Jr., M.D.
Chairman

Robert B. Mehnert
Chief
Office of Inquiries and
Publications Management

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20014

NATIONAL LIBRARY OF MEDICINE

June 11, 1976

The Honorable David Mathews
Secretary of Health, Education and Welfare
Washington, D. C. 20201

Dear Mr. Secretary:

As incoming Chairman of the Board of Regents of the National Library of Medicine, I am writing to you in an effort to resolve a most vexing problem facing the NLM. For the past few years the appointed members of the Regents have been decreasing in numbers to the point where soon I will be the only member out of the required ten Presidential appointees. In order for NLM to continue its excellent record of serving the varied needs of the biomedical community, the Board of Regents is submitting to you a resolution asking for your help in reestablishing an effective policy advisory mechanism.

The current untenable position facing the NLM must be resolved and we ask your assistance in contacting the necessary individuals in the White House and the U. S. Senate to alleviate this dilemma.

We are cognizant of your interest and support of the Library's activities and know you will make every effort possible to assist us.

Sincerely yours,

JS/

Joseph F. Volker, D.D.S., Ph.D.
Chairman, Board of Regents
National Library of Medicine

Enclosure

WHEREAS: The Board of Regents of the National Library of Medicine is charged by law to "advise, consult with, and make recommendations to the (Secretary) on important matters of policy in regard to the Library....." and

WHEREAS: to adequately perform this function and the grant and contract review functions given to the Board under the Medical Library Assistance Act of 1965 and

WHEREAS: the appointed members of the Board of Regents will number only one out of the required ten as of August 1976.

THEREFORE: In order that the Regents be able to perform its mandatory directives, be it resolved that the Board of Regents urgently requests the Secretary to do all in his power to expedite appointments of nine new members of the Board as required by law.

National Library of Medicine
June 11, 1976

NATIONAL LIBRARY OF MEDICINE
POLICIES OF THE BOARD OF REGENTS

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1. Program

Library Operations

2. Issue and Background: Preservation of the Collection

The National Library of Medicine Act calls for the Library to "acquire and preserve...library materials pertinent to medicine." In addition to binding, the Library's preservation program has consisted of microfilming deteriorating or rare portions of the collection through in-house filming of brittle or rare volumes and through outside contract filming of material which has deteriorated to a lesser degree. The Library has not investigated the practical and economic feasibility of mounting a deacidification program to arrest embrittlement and deterioration. Our inability to keep pace with the deterioration of the collection has been the result of (1) lack of a well-defined policy leading to a long-range preservation program, and (2) lack of money and personnel resources.

3. Date(s) of Board of Regents Discussion

June 1976

4. Summary of Board Discussion

Although NLM's preservation program should be as comprehensive as feasible and although secondary condensed storage (microform) is important, optimum preservation of the original document should receive highest priority. NLM's role in cooperating with other libraries in research and development in preservation was discussed.

5. Policy Statement

In accordance with the terms of the NLM Act and the clearly expressed intent of Congress, the fundamental responsibility of the National Library of Medicine is to preserve permanently its collection of books, periodicals, and other library materials pertinent to medicine, without respect to the practices of other institutions.

Means of preservation may include:

- A. Preservation of the original.
- B. The purchase of available microforms of library materials provided an examination of adequate samples affords satisfactory evidence that the film meets NLM standards for archival quality.

- C. Conventional microphotography of material that is already deteriorating.
- D. Microfilm preservation through the utilization of high speed handling equipment or other techniques for material in good physical condition.
- E. Such other means as the Director may determine, including new methods made practicable by advancing technology.

The Director will establish criteria to determine priority of selection for preservation. Items in the collection will be retained in the original form as long as they remain useful.

The Library shall continue to monitor the development of technologies which offer alternatives to microphotography for the preservation of information and should participate in such research, development, testing, and evaluation.

1. Program

Library Operations

2. Issue and Background: Scope and Coverage

Scope and coverage involves the processes involved in deciding what literature is to be included in the NLM collection, in Index Medicus, and in certain data bases. The authority for NLM to determine what is to be collected and cited is implicit in the National Library of Medicine Act mandate to "acquire and preserve...library materials pertinent to medicine." In 1972, the Director approved the most recent version of the National Library of Medicine's Scope and Coverage Manual, which was developed by a committee of senior NLM staff, including the Deputy Director. This manual defines what is to be regarded as "pertinent to medicine" for the purpose of selection for acquisition. It is now necessary to review the National Library of Medicine Scope and Coverage Manual to ascertain whether it provides an adequate mechanism for selection and acquisition of materials for the NLM collections. It is also necessary to determine whether the manual needs to be expanded to cover changing emphases in the Health Sciences and in areas where the Library's Scope and Coverage Policies are not now implemented.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board discussed the scope and coverage of the Library's collection in social issues, health care delivery, etc. The Study Group on Library Policy Issues described the characteristics of a revised scope and coverage manual.

5. Policy Statement

This Scope and Coverage Policy is established for the National Library of Medicine (NLM) pursuant to the authority contained in the National Library of Medicine Act of 1956 (P.L. 84-941).

Every area of human activity may affect or be affected by the health of the human community, but NLM cannot presume to collect all literature that has some relevance, however remote, to health. The collection practices of NLM shall concentrate on the biomedical literature without being limited by present perceptions of pre-occupations.

Coverage of the scholarly biomedical literature will be comprehensive; coverage of other biomedical literature may be more selective. In determining coverage, NLM will take into consideration its role as the national resource for the provision of biomedical literature not otherwise readily available, and as the national bibliographic center for biomedical literature, for the health professions.

NLM is aware of the acquisitions policies and collection emphases of the Library of Congress and the National Agricultural Library. While a certain amount of duplication of collections among the three national libraries is inevitable, and indeed often necessary, NLM recognizes the ultimate interdependence of these libraries, and its collecting policies will reflect this.

It is impractical for NLM to give consideration to estimates of quality in acquiring printed literature for the collection. The Director may require that quality evaluation procedures be established to assist in determining what non-print materials shall be collected by NLM.

Nothing in this policy statement shall be construed to require the disposal of any literature previously acquired by NLM that would not be eligible for acquisition under this policy or under any present or future Scope and Coverage Manual, nor shall this policy statement be construed to limit the acquisition by NLM of literature that may be needed by NLM staff in the fulfillment of their duties, or that may reasonably be provided for the reference convenience of NLM reading room users.

The healing arts can only be understood in their cultural context; therefore, scope and coverage decisions will have to be interpreted with flexibility in acquiring literature relating to the history of medicine.

The Scope and Coverage of acquisitions for the NLM collections shall be detailed for operational purposes in a manual to be developed and amended from time to time in a manner to be determined by the Director. A group of senior NLM staff shall be designated by the Director for the purpose of meeting regularly to consider the need for changes in the manual and to recommend appropriate changes to the Director.

Definitions:

- A. "Literature" shall be construed to include information not only in the form of the written or printed work, microforms and graphic materials, etc., but also such non-print information formats as audiotapes, videotapes, films (both still and motion picture), slides, computer tapes, etc.

- B. "Health Professions" shall include persons 'engaged in the administration of health activities, the provision of health services, or in research, teaching, or education concerned with the advancement of medicine or other sciences related to health or improvement of the public health.' (36 Federal Register 3895)
- C. "Biomedical" shall mean pertaining to health care, to the practice of the science and art of medicine broadly conceived, or to those branches of life sciences which are fundamental to that science and art.
- D. "Scope" shall mean the bounds of the subject areas within which NLM collects.
- E. "Coverage" shall mean the extent of completeness of the collection in the subject areas that are in scope.
- F. "Collect" shall mean to acquire for inclusion in the literature holdings of NLM.

1. Program

Library Operations

2. Issue and Background: User Charges

The National Library of Medicine offers a wide range of services which are being provided either in fulfillment of a specific Congressional mandate or in response to certain principles endorsed by the Board of Regents. While NLM's services are in harmony with these directives, NLM's practices in regard to user charges have been such that services of a similar nature have been treated in dissimilar fashion. These inconsistencies have stemmed from the fact that certain directives to Federal agencies identify types of services for which charges should be levied, whereas traditionally, NLM has followed a long-standing practice of providing free service. Thus, the imposition of charges has not developed in orderly fashion.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

User charges should be used for management control and to recover marginal costs of providing specialized services.

5. Policy Statement

The NLM should be permitted to apply the principles of "marginal" or "limited" cost charges to its products and services. Such principles which would allow a cost-sharing policy between the Library and its patrons are in line with the NLM's policy mandate to increase and improve the dissemination of scientific information and to achieve flexibility in internal operations sufficient to enable continuation of innovative research and service activities.

1. Program

Lister Hill National Center for Biomedical Communications

2. Issue and Background: Manpower for Computer Applications in Medicine

These recommendations were made by the Priority Review Committee to review the AAMC Report (Educational Technology for Medicine) at a meeting on September 8-9, 1971. The recommendations were accepted by the Board at the meeting on November 22, 1971.

3. Date(s) of Board of Regents Discussion

November 1971; Reaffirmed in November 1975.

4. Summary of Board Discussion

The Board discussed two programs suggested for NLM-BHME support - a joint M.D.-Ph.D. program (with the Ph.D. in computer science and communications technology) and a one-two year postdoctoral computer/communication fellowship for academic health scientists.

5. Policy Statement

NLM should assume a leadership role in the development of manpower for computer applications in medicine.

1. Program

Lister Hill National Center for Biomedical Communications

2. Issue and Background: Health Education

Respective advisors have urged that the Library become more active in the arena of educational programs on health topics for the general public. The reaction of NLM to such advice has been that the audience concerned is a far larger one than the constituency presently served by the Library, and that the responsibility for this activity has been assigned legislatively to another Federal agency.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board discussed what role, if any, the Library has in public health education and what role the Library has in cooperating with other PHS agencies such as CDC's Bureau of Health Education.

5. Policy Statement

It is appropriate for components of the National Library of Medicine to explore new ways, to develop system modes, to foster analysis, synthesis and translation and to improve the organization and dissemination of such biomedical information, emphasizing new knowledge which has applicability to the problems faced by the practicing health professional.

While the interface between public and health professional education is not clearly delineated, the prime responsibility of the NLM is for health professional education, and the statutory responsibility for health education for the public resides in other Federal agencies.

1. Program

Lister Hill National Center for Biomedical Communications

2. Issue and Background: Synthesis and Translation

Undergraduate medical (medical student) education traditionally has been and should continue to be primarily concerned with principle and process. In contrast, graduate (residency) education and continuing education for the practitioner is additionally concerned with procedure and application. Indeed, this additional concern is probably the primary concern. There is a continuum in this educational spectrum which relates to critical observation and analytical interpretation, but the immediate objectives of educational programs prior to and following the award of the graduate degree are quite different conceptually and operationally.

In this framework, the benefits of the results of biomedical research become reflected in the accepted norms of health professional practice through the process of efficient and effective biomedical communications. In the practice arena, the information which is disseminated must be validated for its accuracy and relevance to clinical problems (analysis), must be condensed from the total biomedical information pool (synthesis), and must be presented in a language and format which is understood by the practitioner (translation). The functions of analysis, synthesis and translation for clinical application are seldom approached systematically and have not received adequate status rewards.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board concurred that the set of functions described in this policy statement represents the "binding force" for the LHNCBC and NMAC, but expressed some concern about the functioning of this relationship.

5. Policy Statement

It is appropriate for components of the National Library of Medicine to explore new ways, and to develop system models, to improve the organization and dissemination of analyzed, synthesized and translated biomedical information, emphasizing new knowledge which has applicability to the problems faced by the practicing health professional.

1. Program

Lister Hill National Center for Biomedical Communications

2. Issue and Background: Broadband Communications

The Lister Hill Center has been involved in broadband communications in two spheres of activity, namely, in the focal point/coordination role and in the programmatic research and development role. Illustrative of the focal point role was the designation of the Lister Hill Center as the lead organization, under control of a PHS Task Force, to develop an initial plan for the organization and technical services required to consolidate PHS data communications. In addition, the Center has been assigned a coordinating and technical support role in the development for the DHEW Health Agencies of a mechanism for the planning of health programs involving the use of telecommunications, and for evolving a national broadband biomedical communications utility.

The following project areas are illustrative of the programmatic research and development role of the Lister Hill Center in broadband communications: New Hampshire/Vermont Medical Interactive Television Network and ATS-1 and ATS-6 Satellite Advanced Health Care and Education Experiments.

At the present, the Communications Engineering Branch of the Lister Hill Center is deeply involved in planning health experiments which will utilize the Canadian-American Communications Technology Satellite to be launched at the end of this year. These activities combine the focal point role with the programmatic role.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The LHCBC should operate as an agent for ongoing R&D and evaluation, not as an operator of ongoing systems.

5. Policy Statement

The programmatic priorities of the National Library of Medicine should dictate the scope of the involvement of the components of the Library in broadband communications. Research and development should be directed mainly to improving network aspects and to serving the priority areas of biomedical science and education, especially the dissemination of biomedical research results and the incorporation of the products of research in continuing education of practicing health professionals.

1. Program

National Medical Audiovisual Center

2. Issue and Background: Multimedia Free-Standing Information Modules

These recommendations were made by the Priority Review Committee to review the AAMC Report (Educational Technology for Medicine) at a meeting on September 8-9, 1971. The recommendations were accepted by the Board at the meeting on November 22, 1971.

3. Date(s) of Board of Regents Discussion

November 1971; Reaffirmed in November 1975

4. Summary of Board Discussion

This was presented to the Board as a recommendation of the Priority Review Committee in November 1971. The Board discussed the modular concept for teaching both well-defined areas of singular knowledge and complex, multifaceted clinical problems.

5. Policy Statement

NLM should promote the development of multimedia free-standing information modules designed to permit manipulation by individual faculty members in their presentation of a floor curriculum for the health sciences.

1. Program

National Medical Audiovisual Center

2. Issue and Background: Processing of Non-Print Instructional Material

These recommendations were made by the Priority Review Committee to review the AAMC Report (Educational Technology for Medicine) at a meeting on September 8-9, 1971. The recommendations were accepted by the Board at the meeting on November 22, 1971.

3. Date(s) of Board of Regents Discussion

November 1971; Reaffirmed in November 1975.

4. Summary of Board Discussion

Identification and screening of existing and new material, and definition of output requirements, were recommended as requiring action. The criteria for initial and subsequent selection of material to be cited should assure currency, technical and subject excellence, and availability at reasonable cost.

5. Policy Statement

The National Library of Medicine should accept the national responsibility for indexing and cataloging appropriate health science learning resource information material not published in journals and monographs. This indexing and cataloging should be limited to selected materials such as audiovisuals, multimedia presentations, and computer-aided instructions which meet published criteria.

1. Program

Computer and Communications Systems

2. Issue and Background: On-Line Services

In November 1972, the Board of Regents adopted a policy statement for NLM's on-line services. Since that time, NLM's on-line services have grown from one bibliographic data base (MEDLINE) to twenty bibliographic data bases and will soon include an information base, the Toxicology Data Bank. The old policy also included material on the responsibilities for various aspects of on-line services which are now out of date.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board's discussion concentrated on NLM's user charge policy for on-line services.

5. Policy Statement

See Attachment 1.

NATIONAL LIBRARY OF MEDICINE ON-LINE SERVICES PROGRAM POLICY STATEMENT

INTRODUCTION

The National Library of Medicine is committed to the development of a Biomedical Communications Network (BCN) to serve health services delivery, education and research.

The Regional Medical Library Program (RMLP) is one part of the development of the library component of the BCN. Another part now assuming an increasingly important role in the development of the BCN is a variety of on-line services. These services have greatly increased the accessibility of the biomedical literature and specialized information and will allow economies and improvements in medical libraries and information centers throughout the nation.

Since these new services facilitate access to the literature, the development of this aspect of the BCN must be coordinated with the RMLP to insure appropriate document delivery services and to improve the efficiency of the delivery service to meet the growing demand on-line services will place on this service.

The implementation of this program is to be achieved through existing institutions willing and able to assume these additional service responsibilities. It is neither desirable nor necessary to build separate institutions for this purpose.

I. PROGRAM OBJECTIVES

To support the development and operation of a range of on-line information services for the nations's health professionals. This network should include, but not be limited to, the following characteristics:

- A. Rapid and efficient delivery of bibliographic and specialized information.
- B. Optimal cost effectiveness of the on-line services and the related document delivery services.
- C. National coordination with local and regional management planning.
- D. Access to on-line services on a balanced basis to serve the fundamental purpose of the network, i.e., health services, delivery, education and research.
- E. The various on-line services of NLM should, to the maximum extent practicable, adopt common policies and standards and user groups should be encouraged to develop intergroup service arrangements.

II. SERVICE POLICIES

A. General

The system design is generally not hierarchical except in its management aspects. The NLM exercises overall management and provides supporting services, e.g., training and trouble resolution, but each unit obtains service on an equal and self-sufficient basis. The RMLs provide planning and support functions for their regions.

B. Qualified Institutional Users

Terminals having access to the on-line services of NLM are usually in institutions having document holdings to provide the delivery of identified literature. Qualified institutional users include:

1. Regional Medical Libraries and Participating Libraries.
2. Hospitals.
3. Large institutions with meaningful health science education and training programs.
4. Other health-related schools, research organizations, commercial organizations involved in health and information activities, library schools, or governmental agencies.
5. In some cases, individuals in the health professions with a need for direct access to the services.

There may be a limit to the on-line services of the NLM, and they will be available to only a limited number of requesting institutions: however, the NLM will provide increasing capabilities to meet the legitimate needs of the biomedical community. Access to the service will be provided to institutions to achieve the immediate objectives above (I.).

C. Specific Responsibilities of Institutional Users

1. Institutions undertaking to provide on-line services should function in a manner consistent with the rapidity inherent in such services. In general, requests should be handled as quickly as practicable, generally within one working day.
2. When feasible, users should be encouraged to use the services themselves or at least be present when their requests are run. As a general rule, requests should not be returned or forwarded to another center. If the request is from outside the area of responsibility, unless inappropriate to the services, it should be fulfilled and the requestor informed where he should obtain the service in the future.

3. Using institutions and individuals must agree to pay the rates levied by NLM for the services. Further, since this is a government service, they must agree to adhere to NLM established maximum charges to their users or to identify in any charges levied on their users the actual cost of the services they have used from the NLM.

III. PRICES

The NLM should price its on-line services so as to recover those costs beyond the walls of NLM associated with the provision of the service, e.g., communications, back-up computer services, and use fees for data bases from other organizations. The Director, NLM, to insure effective and efficient management of the system, is authorized to set prices above this level. To the extent practicable, such prices will be independent of geographic location.

1. Program

Extramural Programs

2. Issue and Background: Regional Medical Library Program

This policy was endorsed in principle by the Board of Regents at its meeting of June 14-15, 1971. It was reaffirmed by the Board as part of its review of existing NLM policies in November 1975.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board discussed new roles for the Regional Medical Libraries, including the need for a more clear-cut understanding of local needs and acting as a resource for local libraries' grant applications.

5. Policy Statement

Regional Medical Libraries, except for the National Library of Medicine which shall act as regional library for the mid-Atlantic states, shall: (1) be backup facilities for the resources libraries in the region; (2) be responsible for the planning of a coordinated system within the region for provision of library services; (3) indicate how resource and project grants which have regional implications fit into the regional plan (this indication shall not include a quality judgment of the proposal which is the prerogative of the Biomedical Library Review Committee and the Board of Regents); (4) be backup for the education activities, supplying coordination and expertise in support of resource libraries education efforts within the geographic area of their responsibility.

Extramural Program policies of a more operational nature may be found in the NLM Program Policy Addendum to Public Health Service Grants Policy Statement. This includes policies approved by the Board of Regents relating to medical library resource improvement, medical library resource projects, special scientific projects, and publications.

1. Program

International Programs

2. Issue and Background: Conduct of International Programs

The Board of Regents in its adoption of the NLM 1966 program plan endorsed the conduct of international programs by the National Library of Medicine. These international activities are a natural extension of domestic responsibilities. The specific eight areas of activity outlined for the Library were: translations, abstracting and indexing services, literature reviews, sale or exchange of MEDLARS tapes, interlibrary loans, resource building (consultative services), and training of personnel.

In the course of the last nine years there has been a change in program emphasis to reflect both U.S. health needs and available foreign capabilities. This modification of program activity is a result of not only Board deliberation but active Board participation in site visits.

3. Date(s) of Board of Regents Discussion

November 1975

4. Summary of Board Discussion

After a presentation on the history and current status of NLM's International Programs, the Board unanimously approved this policy.

5. Policy Statement

The conduct of NLM international programs is an extension of domestic responsibilities, recognizing that:

- A. They are based primarily on a sharing of time, talent and resources; and
- B. They may vary in scope and mechanism but they meet the criterion of being of demonstrated value to the United States.

1. ProgramInternational Programs2. Issue and Background: Quid-Pro-Quo for International MEDLARS Agreements

The Board accepted in November 1973 and March 1974 the basic elements for international bilateral MEDLARS agreements. The principles are:

- A. The agreements are based on continuing scientific substantive exchange.
- B. The basic elements are identical for all countries.
- C. There may be a variation in the selection of the package but all arrangements are equivalent.
- D. NLM is not doing this on a for-profit basis.
- E. An annual dollar value will be placed on the alternatives of MEDLARS II tapes; MEDLARS II tapes, plus software package; on-line access to the NLM computer; or a combination. This dollar value will be translated into indexing input to the MEDLARS data base or other services to NLM from the cooperating country.

3. Date(s) of Board of Regents Discussion

November 1973, March 1974, and November 1975

4. Summary of Board Discussion

This was unanimously approved by the Board.

5. Policy Statement

The concept of quid-pro-quo for international MEDLARS agreements between NLM and scientific organizations abroad should be based on a continuing scientific substantive exchange.

1. Program

International Programs

2. Issues and Background: Copyright Protection for NLM Publications Abroad

In 1973, the Library became acutely aware that the USSR was engaging in unauthorized reproduction and sale of Index Medicus (IM) not only within the USSR but to the COMECON countries. Soviet subscriptions to IM had decreased from eight to one.

In May 1973, the USSR joined the Universal Copyright Convention (UCC). The Soviets began approaching U.S. governmental, private (non for profit and profit) publishers to negotiate royalty payments for Soviet reproduction of U.S. scientific and technical journals. In most cases, the proposed payment was low and would not cover the loss of revenue to the originating organization. NLM received a form letter requesting authorization for the Soviets to continue this reproduction of IM pending negotiation of a royalty payment to NLM by a Soviet copyright agency which was being established.

NLM raised this issue with Professor Lisitsyn, Director of the All-Union Research Institute for Medical and Medical-Technical Information, Ministry of Health, USSR, who spent three weeks at NLM in 1973 at the request of Minister of Health Petrovsky. NLM made several proposals (exclusive of royalty payments) but received no official response.

3. Date(s) of Board of Regents Discussion

November 1975

4. Summary of Board Discussion

The Board unanimously recommended approval of this policy.

5. Policy Statement

That the NLM place on its publications beginning January 1976 the copyright symbol and the statement "all or portions of this publication are protected against copying or other reproduction outside of the United States in accordance with the provisions of Article II of the Universal Copyright Convention."

1. Program

Interagency Projects

2. Issue and Background: Collaborative Projects

The Library has cooperated with other agencies in the development of information services (e.g., Toxicology Information Subcommittee, CANCERLINE). The major issue is the degree of control NLM should exercise in such projects.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board discussed two modes under which NLM might operate in collaborative projects: (1) NLM provides service directly to the user; (2) NLM develops services to the point of operation and then the actual provision of services becomes either a shared responsibility or the sole responsibility of the operating agency. Collaborating agencies should share the costs of any cooperative project.

5. Policy Statement

NLM shall continue to increase its leadership role in biomedical information and communication by responding to requests for assistance from other agencies, or by offering its capabilities for collaborative projects.

- A. Where direct NLM services result from such collaborative projects, NLM will have the decision-making responsibility for the control of these services.
- B. Where collaborative projects do not result in direct NLM services, shared control or divestiture of control will be considered.

1. Program

Interagency Projects

2. Issue and Background: Centralized Information Resource for Health (CIRH)

As the importance of the Scientific and Technical Information (STINFO) component of government R&D becomes apparent, the relative inefficiencies of the present system are coming under increased scrutiny. Symptomatic of these inefficiencies are lack of Federal-wide coordination and monitoring of STINFO activities; replicative and uncoordinated agency-based STINFO activities; slow and incomplete transfer of government R&D results to practitioners, etc. Existing health information transfer systems have been criticized in particular for these failures because "health" is an emotion-laden issue and because the costs of health research and the provision of health care are increasing rapidly. Continuing requirements from high levels of the government for new information systems or activities in areas of immediate public concern impact the ability of existing information organizations to provide services to their traditional user communities.

NLM has established a leading role in the transfer of health-related information derived from the published literature. Demands on NLM for information support to special subject areas (e.g., toxicology, cancer) may erode NLM's ability to support its traditional constituency. Refusal of NLM to accede to these demands would increase the growth of duplicative, splintered information services at greater costs to the government and with less efficiency to the user community.

Computer and communication technology are growing at an increasing rate. Information, storage, transfer and processing capabilities, unthinkable only a few years ago, are now possible and promise to become continuously less expensive. Large, coordinated information systems for a general area such as health, therefore, will become technically and economically feasible. It is apparent that if our organizational/political planning does not become more imaginative and venturesome, we will fail to improve the information transfer process in the health area even though the technology to do this is readily available.

3. Date(s) of Board of Regents Discussion

November 1975, March 1976, and June 1976

4. Summary of Board Discussion

The Board discussed two alternative ways to proceed in developing a CIRH: (1) to develop a complete model for such a center, including the necessary resources that would be submitted by the Board to HEW and Congress; (2) to proceed step by step within present NLM authorization and resources - first consolidating its own bibliographic services, then studying user needs, and improving linkages to other information services. It was clear that the Regents preferred the second alternative.

5. Policy Statement

After defining scope, coverage, the user community, and suitable services, the National Library of Medicine shall implement a Centralized Information Resource for Health in a stepwise fashion through consolidation of existing NLM services, acquisition of other data bases, and constructing improved service capabilities and linkages to non-NLM services.

D R A F T
NATIONAL LIBRARY OF MEDICINE
ISSUES AND CHALLENGES FOR THE FUTURE

June 1976

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PREFACE

In November 1965, the Board of Regents of the National Library of Medicine exercising its duty to "advise, consult with and make recommendations to the Surgeon General on important policy matters of the library" submitted to the Surgeon General an advisory report covering current policy. Using this report as a guideline, the National Library of Medicine developed in the following year a program plan to implement the report.

Ten years have now elapsed and the Board of Regents has considered it timely to reassess the policies and programs of the National Library of Medicine.

To this end the Regents have joined with staff and consultants to form five task groups. These groups have worked throughout the year and their preliminary reports have been reviewed by the Board of Regents. The work of some of these groups will continue for another year.

The results of these efforts will include:

- a. A consolidated statement of current policies of the National Library of Medicine.
- b. A Revised Scope and Coverage Manual for the National Library of Medicine.
- c. A detailed operational forward plan to meet the issues and challenges of the next decade.

This plan is to be based on the description and discussion of the issues by the task forces and elaborated through Board of Regents discussions. Those reports and discussions form the basis of the following report.

The Regents wish to stress that the purpose of this document is to identify issues and challenges which should be pursued by the National Library of Medicine in the coming years. Not all of the areas identified will turn out to be worth pursuing and some which have not yet been identified will command our attention. To most effectively use our opportunities will require the talents of the Library staff and the continued advice and guidance of the Regents.

The realization of the new Lister Hill National Center for Biomedical Communications building will permit the development of a totally integrated program in biomedical communications. All organizational components of the National Library of Medicine will be located in one physical complex. The National Medical Audiovisual Center will move from Atlanta and its functions can be better integrated into a total information dissemination system. The Extramural Programs will be able to coordinate more effectively its activities with overall Library objectives. Thus the new building permits for the first time geographic unification.

The availability of new laboratory space will permit the development of an active intramural research program addressing the communication needs of the health professions. To date research efforts have been fragmented according to the unique potentials offered by individual media. A new integrated and multidisciplinary research program is possible in which a critical mass of communication scientists, media experts and health professionals can work together in an appropriate laboratory environment. In addition, the learning carrells and training laboratories which are being built in the new complex will give the Library the capability to simulate and test within its own walls a full range of communication systems and modes for sharing information. This expanded research capability will place all components of the Library in a better position to respond to the information needs of the total health community and will allow the research personnel of the Library to participate as peers with scientists in other communications centers.

The past decade has seen many changes and much growth of the National Library of Medicine. The annual appropriation budget has tripled and four major program areas have been added. The Extramural Programs, Toxicology Information Program, programs of the National Medical Audiovisual Center and the Lister Hill Center, all constitute major areas of growth and development for the Library. The Regents are proud of these accomplishments and look forward confidently to the even greater challenges and opportunities of the future.

W. N. Hubbard, Jr., M.D.
Chairman, Board of Regents
National Library of Medicine

I. INTRODUCTION

Few institutions have witnessed two-thirds of our nation's history. Founded in 1836 as the library in the office of the Surgeon General of the Army, only sixty years after the birth of our country, the National Library of Medicine has been, is now, and will continue to be a major collector and distributor of health-related information. From its inception the National Library of Medicine has initiated programs in response to the perceived needs of the medical community. This concept of the Library's role was clearly established under its first full-time director, Dr. John Shaw Billings. The Billings legacy of service to those serving the nation's health constitutes the basis of this proposed long-range plan.

In the past ten years, the National Library of Medicine has initiated a series of integrated programs designed to create a national biomedical communications network to meet the information needs of health professionals by coordinating the nation's health science information resources into an effective operating system. Major activities added to the Library's programs in the past ten years include: the National Medical Audiovisual Center; the Toxicology Information Program; the Lister Hill National Center for Biomedical Communications; and the medical library assistance programs. Advances in computer and communications technology (spearheaded

by the advent of MEDLARS in 1964) were marked by the initiation of MEDLINE in 1971, followed by a series of new NLM on-line retrieval services, and the experiments in biomedical communications of the Lister Hill Center. A major redirection toward developing self-instructional learning materials was initiated at the National Medical Audiovisual Center in collaboration with the Bureau of Health Manpower.

During the next five-year period the National Library of Medicine will enter an era of even more rapid progress in computer and communications technology and greater demands from the biomedical community for effective dissemination of biomedical information. NLM can meet these challenges only by careful planning.

A. The NLM Statutory and Administrative Authority

In recognition of the Library's long-standing service to the entire health community, the Congress formalized the clear need for a continuation of a central national health information resource to be placed under the responsibility of the Public Health Service in Public Law 84-941 dated August 3, 1956, which established the National Library of Medicine as a component of the Department of Health, Education, and Welfare. The Act calls for the National Library of Medicine to promote and participate in the dissemination and exchange of health and scientific information important to the progress of medicine and the public health. It established the Presidentially-appointed Board of Regents of the Library whose members are leaders in the scientific, health, and

library communities and in public affairs, and whose role is to provide advice and direction on important matters of policy affecting the Library.

In 1965 a special subcommittee of the House of Representatives, chaired by Congressman Paul Rogers, investigated the Department of Health, Education, and Welfare and reported that NLM serves as the dominant source of biomedical information in the United States, and as the essential element in the growth of biomedical communications in the United States. (Committee on Interstate and Foreign Commerce, U.S. House of Representatives, Serial No. 89-42)

In fulfillment of the National Library of Medicine Act the Library continues to expand a broad array of bibliographic and reference services comprehensively covering the world's health literature.

In 1967 the need for incorporating the audiovisual modality into a health science information network on a national scale and in an organized effective manner became clear. This led on July 1, 1967, to the renaming of the Medical Audiovisual Branch of the Communicable Disease Center in Atlanta, as the National Medical Audiovisual Center and its organizational transfer to the National Library of Medicine as a major operating component of the Library. The mission of the National Medical Audiovisual Center is to develop a national program to improve the quality and use of biomedical audiovisuals for primary and continuing health professional education.

Likewise, the continuing expansion of NLM's services and capabilities led on August 3, 1968, to Public Law 90-456 and the establishment of the Lister Hill National Center for Biomedical Communications as an organizational entity within the National Library of Medicine. The Lister Hill Center received its formal "Statement of Organization and Functions and Delegations of Authority" in November 1968:

"(1) To design and develop a national Biomedical Communications Network; (2) to assist the biomedical community in identifying and developing products and services for dissemination through the Network; (3) to develop networks and information systems to improve health education, medical research and the delivery of health services; (4) to apply technology to the improvement of biomedical communications; (5) to represent DHEW in Federal activities related to biomedical communications activities; and (6) to serve as the focal point in the Department for development and coordination of biomedical communications, systems and network projects."

A recognition of the need to improve the information transfer mechanisms to serve the health community led to passage of the Medical Library Assistance Act of 1965 (Public Law 89-291). The MLA Act as amended authorizes the Library to support the development and expansion of medical library resources and technology, the conduct of research and development in health related library science, the training of medical librarians and other information specialists in the health sciences, and biomedical scientific publications.

The Toxicology Information Program became a part of NLM in 1967 as a result of a report issued by the President's Science Advisory Committee which called for the development of a coordinated and generally available computer-based toxicology information system.

B. Purpose of the Plan

Clearly the public-intended role for NLM, backed by legislative authority and Board of Regents advice, is to provide improved access to biomedical information in support of the nation's health.

This involves four basic functions: acquisition of information, processing, dissemination, and utilization of information. The NLM Long-Range Plan examines the current status of NLM activities in these four functional areas and discusses relevant projects which are responsive to the public's health information needs. It provides an overall framework within which to develop the Library's operational programs over the next several years.

C. The Constituencies of NLM and Its Programs

NLM services embrace the principal information needs of its core constituency--the health professional community. For non-health related information or for highly specialized information, component parts of the health community may also require access to other information services.

A continually increasing number of health workers have recognized and are now using the expanded services provided by the library. Growing interest in social, ethical, and legal aspects of medicine has created a new need which now requires expanded services from NLM. The establishment of the Toxicology Information Program in the National Library of Medicine has brought a different group of users to the Library such as pharmacologists, toxicologists, chemists, and others in related fields. Additionally, as a logical extension of the biomedical library network concept, increasing emphasis has been placed upon the need to reach the clinician as well as the biomedical researcher, educator, and student. NLM must continue to identify more precisely the information needs of the varied users and to determine its own ability to serve them.

D. Goals of the National Library of Medicine

Based on legislative intent the Board of Regents has directed the NLM to:

1. Operate as the principal national medical information resource by acquiring, organizing and distributing all forms of health related literature;
2. Improve information and communications resources in support of health research, education and health care delivery;
3. Develop a biomedical communications network to link health care facilities, medical education centers, and research institutions for the purpose of sharing health science information;

4. Strengthen the nation's medical libraries and information services through resource, research and publication support;

5. Support the health practitioner's efforts to maintain currency with the latest development for clinical application.

E. Working Principles

The operating goals have been translated into the following principles to provide a specific framework within which to develop the long-range plan:

1. The ultimate purpose served by NLM in all its undertakings is more effective access to health information for the American people. Such information support must be approached through improved health information services to scientists, educators, health professionals, students, and decision makers in agencies affecting the nation's health.

2. The increasing information needs of the total health community can be satisfied through an expanded network of health information and library systems. Such an expansion should be coordinated as the foundation on which to build new information transfer capabilities.

3. The National Library of Medicine should take initiative in the adaptation and application of newer technologies to improve biomedical information systems and networks. It should work closely with all elements of the health community to identify the priority of their information needs and to match them with that technology which can

present the needed information in the most useful form. Such a concept requires carefully designed and evaluated experimental projects.

Emphasis should be placed on developing the most economical use of scarce human resources by eliminating unnecessary duplication.

4. A biomedical information system is not self-contained. The subject coverage of biomedicine interfaces with many other disciplines. As NLM pursues further development of the Biomedical Communication Network (BCN) it should make provision for interconnecting the BCN with other scientific and technical information resources in related sciences.

5. A biomedical information system should be a dynamic, responsive system adapting continually to the needs of the health community. NLM planning should emphasize the changing information needs of health workers. Consequently, NLM's planning function should be reviewed at least annually.

6. To meet the unique needs of the practitioner the NLM should provide assistance and leadership in exploring new ways to organize, access, and distribute biomedical information so that the health practitioner can get needed information in a more timely fashion and in a form which permits its efficient utilization in dealing with the practitioner's immediate problems.

7. NLM activities which promote improved information transfer and learning systems should be predicated on the principle of cooperation with private organizations, academia, and government agencies.

8. The increasing recognition of the need for health professionals to remain abreast with current medical development through graduate and continuing education is having a significant effect on the functions and operations of health science libraries. NLM should encourage medical libraries and especially hospital libraries: (a) to function as active teaching and learning resources; (b) to place increasing emphasis on the use of learning systems in the continuing education of health professionals; and (c) to develop the capabilities for providing the modern educational technology for the use of the health professionals.

9. Further network development should provide effective and efficient access to and exchange of health information for all health professionals. Funding priorities should reflect not only the delivery of information service to the health community but also research, development, and evaluation activities. An appropriate balance between investing resources in service and R&D requires continual evaluation.

II. DISCUSSION

The mandate of the National Library of Medicine is to contribute to the improvement of the nation's health by providing health science information services and channels for the health community in support of patient care, preventive medicine, education, and research. The goal of the Library may be said to have been reached when any member of the health community may obtain in a timely manner the biomedical information he requires in a form which he can effectively use.

The discussion which follows is intended to be illustrative of the general state of the art, to assess the degree to which this goal has been achieved, and to point out some of the areas that need particular attention. To shorten and simplify this presentation, it is convenient to classify most NLM activities into four general categories. This classification is admittedly arbitrary and somewhat artificial. Therefore, the four categories--input, processing, output, and utilization--are each described in the context of this discussion where, as is frequently the case, the activity encompasses more than one of these categories, it has been largely dealt with under a single heading.

A. INPUT (Acquisition and Access)

This term describes all those activities whose purpose is to create reservoirs of information from which will be drawn the specifics required to meet the requests of individuals in the health community. Input includes both NLM holdings and NLM access to information holdings of other resources.

The monographic and serial holdings of NLM comprise the largest collection of medical literature in the world. Acquisition, or input, into this collection is governed by a Scope and Coverage Policy last revised in 1972. Scope, that is, the bounds of the subject areas within which NLM collects, needs careful reexamination. While there is little evidence that scope needs fundamental reorientation, some areas which have achieved prominence in the health care field, such as "health care delivery systems," receive no mention in the present policy manual. The policy also needs to be augmented in the area of coverage, that is, the extent of completeness of the collection in subject areas that are in scope. Certain types of publications such as, Government documents, report literature, theses, etc., need more explicit treatment. In addition, specific policies need to be written to cover the important nonprint literature.

The nonprint literature demands a definition of what constitutes acceptable material. It is not the Library's responsibility to determine what is valid, but it is the Library's responsibility in the allocation of service resources to deal as much as possible with "valid" information. For the serial and monographic literature, NLM has accepted the editorial review attendant to publication as an adequate screen for "validity." In general, the nonprint literature has no mechanism analogous to editorial review to identify the "acceptable." For audiovisual literature, NLM has followed the principle that it should not be the Library's responsibility to determine what is acceptable. NLM, therefore, urged

the academic community to undertake this responsibility and has supported the efforts of the Association of American Medical Colleges and the American Association of Dental Schools in this regard. A comparable mechanism for computer-mediated material and simulation materials is under study but not yet operative.

One of the basic purposes of good bibliographic control is frustrated if the document identified cannot be obtained. In dealing with nonprint material the National Library of Medicine is accepting responsibility, for the first time, for bibliographic control over audiovisual material for which NLM does not have distribution rights even on a loan basis. The situation with computer-mediated materials is still more complicated because the conditions under which the material can be accessed are even less well defined and much more limited than those for audiovisual materials.

It would seem appropriate that the NLM consider availability as an additional requirement for inclusion in a bibliographic data base. AVLINE has used as one of its criteria for admission a statement of the guaranteed conditions of availability. Thus, no matter how good audiovisual material is, it is not included in AVLINE if it cannot be obtained by meeting a pre stated set of conditions. While this would appear to be a reasonable approach, no mechanism exists for assuring that the stated conditions are met. Nor has NLM explicitly adopted the policy that it has any responsibility to see that the conditions are met or to take any

corrective action if they are not met. The current state of the art of transferability of computer-mediated and simulation material makes access to them even less certain than audiovisuals. It is likely that a policy statement of NLM responsibilities regarding distribution of audiovisuals could not be implemented if extended to computer-mediated and simulation materials.

We have been considering input of documents or information about documents in various media. Recently, however, the National Library of Medicine has embarked upon a whole new dimension of input, namely, input of data. This concept of data as input may be the most important and most difficult development of the immediate future. The idea is to provide the requester not with a citation to a document that may contain the answer to his question, but rather with the answer itself. This form of data input and storage has remarkable flexibility. It not only permits manipulation and computation of the elements but allows for multiple and flexible formats. However, the problems of "validity" or what constitutes acceptable data are even more complex than those referred to earlier. This is true not only because of the nature of the information but also because such a data bank will undoubtedly come to be viewed as an "authority file." NLM's earliest experiences with this kind of input have been instructive but have not resolved the issues.

The Laboratory Animal Data Bank is being designed by the Toxicology Information Program to include baseline values for selected strains of laboratory animals. These values are to be available through on-line

interactive retrieval, and also may be used for statistical manipulation as well as possible publication of handbooks. The LADB uses as input primarily the observations of experimenters. The ground rules for what constitutes acceptable data are still a matter of considerable discussion. However, the discussion is largely about the experimenter and his colony of animals and less about his observations. The LADB introduces a number of new concepts or activities into accepted or traditional data input practices:

- a. It includes the use of unpublished laboratory data. This means that an input system to the data bank from the laboratory has to be devised.
- b. In order to accomplish this, the data bank itself will have to establish standards, or at least nomenclature, which are consistently defined and adhered to by all participants.
- c. With this kind of information, the data bank will become a source for primary publication, for it will be the sole place where much of this data resides.
- d. The nomenclature-coding, etc., methods developed for the data bank, may become journal publication standards and may direct a unified reporting system for this data.
- e. There is the potentiality, and indeed the necessity, for the continuing summation of observational data, e.g., pathology on an individual animal strain or for an animal colony.

The Toxicology Data Bank has attempted to rely initially on data published in handbooks and textbooks, and has identified the secondary source from which the data are taken. Regardless of the suitability of this device, it is of limited use, and it has been necessary for the Library to establish an expert panel review mechanism to determine content validity. This time-consuming and expensive process will become even more complicated as the nature of the data requires greater interpretation. Moreover this task of validation of data is not a library function and must be assumed by the health science community.

Some early insight into the interpretative complexities with which we will be confronted can be gained by even a superficial examination of a proposed new Chemical Hazard Alert Reporting System. The objective of this program is to provide information regarding potential hazards from chemicals. The reports would be based on analysis and interpretation of data from the published literature as well as chemical intelligence data which would correlate chemical structure and toxicity to humans through exposure by various routes. Chemical structure searches would be used and an attempt made to establish a probabilistic assessment of the likelihood that any proposed chemical structure will produce toxicity in humans or animals based on toxicities of compounds of related structures.

This project will require the coordination of chemical production, usage, distribution, and human exposure with biologic data. It would mean using both published and unpublished data and an application of assessment methodologies to provide informed estimates or probability statements of the likelihood of encountering potential hazards. The

activity also has a problem of screening and the kind of error structure that needs to be incorporated. Obviously, if one insists upon calling attention to every possible potential hazard one will include a large number of "false" alerts. Large amounts of noise could be deleterious to the usefulness of the system; on the other hand the failure to include an important alert could call the whole system's usefulness into question. A rational, published screening mechanism with known error structure needs to be developed. Thus, a major issue which must be addressed in data input is the specification of rules which determine the "acceptability" of the input.

Finally, as one looks down the road to the machine storage and nonprint publication of experimental data, the problem assumes staggering dimensions. Primary data input will require an increasingly organized collaboration among various creators and utilizers of data bases. The current ad hoc utilization of cooperative or network approaches for input of data needs to be transformed to an organized, systematically planned activity. Nonprint publication constitutes a data handling, data editing, and data management problem of such dimensions that it can be met only by effective and appropriate utilization of existing and future technology, and will require significant research and development investments. Some development needs to be initiated in this area during the period of this plan not because the development of a nonprint publication is expected during this period, but rather because such developments will begin and their future course may be affected by early

and appropriate actions. A future without printed publication which depended on many machine stored files at different sources would fragment the coherent literature of science and greatly complicate the provision of access and the viability of INDEX MEDICUS. Alternatives to such fragmentation which are acceptable to scientists, publishers, and librarians must be found.

SUMMARY OF ASSESSMENT AND RECOMMENDATIONS ON INPUT

1. NLM policies covering the scope and coverage of its document holdings, while adequate for certain published materials, do not adequately deal with other types of printed literature, such as, reports, technical bulletins, legislative documents, theses, and so-called "throw-away" literature. This same deficiency also applies to nonprint materials. The staff of Library Operations with consultant help is in the process of developing a revised Scope and Coverage Manual. The content of such a revision should extend across all NLM programs, and should make provisions for the different, continually changing information needs of the health community.

2. The NLM Scope and Coverage Policies need to be expanded to deal explicitly with nonprint literature, including computer-mediated instructional and simulation materials.

3. Certain of NLM's own computerized data bases overlap to some degree among themselves. In addition, they contain information which is duplicated in part in other data bases provided to NLM by other Health agencies for operation on the NLM computer and communications network.

As more data bases are added, the possibility of overlap will increase. A review should be undertaken to assess the extent of current duplication in content and retrieval; to propose alternative approaches with supporting data on the cost-benefit and cost-effectiveness aspects; and to determine the best approach for NLM to prepare the necessary planning and policy documentation.

4. NLM is an early leader in the building of factual (non-bibliographic) data banks. Currently the specifications for selecting data for input are ad hoc. In view of the critical importance of data selection, it is mandatory that a staff study be commissioned to explore in detail the complex ramifications of data selection and to develop comprehensive selection criteria for operational use.

5. The current technology for data processing and data management as related to data banking operations are still in a primitive state of development. At this early stage, the systems design for these data banks should be kept flexible and in modular forms so that they can adapt easily to the major improvements in data management techniques that are sure to develop.

6. The definitions of NLM historical and archival responsibilities for print materials are well established. Such clearly defined responsibilities do not now exist for the nonprint formats. The latter are becoming a major source of input into the NLM holdings. Maintenance and protection of holdings require an ever-increasing level of resources. At an early date, NLM should define policies and procedures relating to the NLM historical and archival responsibility for nonprint materials.

B. PROCESSING

"Processing" means all those manipulations necessary for the identification, organization, storage, and retrieval of information. The intellectual and mechanical components of processing are quite different.

The intellectual component for processing the traditional literature is well developed. However, the full logic structure of the system is rarely necessary to meet the needs of most users. Whether it would be more efficient to have a simpler, two-level system is a question worthy of exploration. If a simpler system would not only satisfy most users needs but also be more easily used, then perhaps this should be pursued. It is likely however that the addition of free language search to our current system will prove the most efficient approach not only for the usual request but also for the rare occasion that requires the total search capability of the system.

Greater efforts should be undertaken to develop less expensive means of accomplishing input processing. Since it is now a very labor-intensive effort, the development of a machine translation from free text to MeSH terms has great promise for reducing the costs of processing. Now that the NLM has a significant file of articles with abstracts, it is practicable to begin development of a system to assign MeSH terms based on text. While such a system would need careful review prior to actual use to assist in the production of INDEX MEDICUS, it would allow

adding MeSH terms to other data bases such as, TOXLINE and CANCERLINE and thus contribute to standardization of data base access. Moreover, if applied at the search input side of the retrieval system, it could greatly simplify searching for infrequent uses.

The intellectual component of processing other printed literature, e.g., legislative histories, etc., is not as well developed and varies considerably according to the type of materials. The premises underlying the development of AVLINE constitute a radical departure from traditional practices. It is assumed that audiovisuals do not constitute a form of primary publication. There is, therefore, no need for concern about completeness of retrieval. Rather, the emphasis has been placed on the attempt to provide that information most relevant to the user in deciding if the materials meet his needs. The intellectual component of processing audiovisual materials is still at a primitive stage. While it is clear that certain logical assumptions may be made about such things as content validity, intended audience, media, and education design, for self-instructional or lecture support material, it is not evident that any of these characteristics is truly decisive in the user's choice. Very little data exists upon which to base any conclusions regarding what prompts the user's choice. It is certainly possible that given a reasonably screened pool from which to choose, the behavior of those selecting is likely to be largely idiosyncratic.

In the early development of AVLINE, we have drawn upon our expertise to translate directly from traditional library practices and have created an exceptionally elaborate and expensive documentation which includes not only subject matter indexing, but media and education characteristics and full written abstracts. Early experiments with visual abstracts and visual excerpts suggest that they may be more useful to selectors than many of the other descriptors. Much more work needs to be done and better data acquired. Considerable simplification of our present procedures without loss of usefulness should be the aim of such efforts.

Although the actual indexing and cataloging of other nonprint literature such as computer-mediated instructional material have not yet begun, it is timely to be concerned with the intellectual component of such endeavors. The problems of computer-mediated instructional material and simulation have some similarities to audiovisuals. However, it is not immediately apparent how one creates the counterpart of editorial review or makes accessible the analog of a visual abstract or excerpt. Distribution presents a large set of unique problems.

The intellectual component of the processing of data is a challenging problem which will require much effort. Some progress has already been made in the computerized storage and retrieval of two-dimensional chemical structures based on matrix representation. Such a system has been developed by Chemical Abstracts Service (CAS) and is used for structure comparison.

Technological developments will make it feasible in the foreseeable future to generate structure displays on terminals from stored matrices in response to on-line queries. Thus, the important capability of on-line substructure search and full structure display will become possible and should be developed as an addition to NLM's CHEMLINE service. CAS, through its National Chemical Registry System, has also developed extensive computerized files and supporting software that provide identification data and associated information for over three million compounds. In prior years, NLM, working with CAS, laid the foundations to use these files and systems for the construction and maintenance of its CHEMLINE service and for chemical file support services to other agencies. NLM should continue to improve its own technology in this field as well as to exploit developments effected by CAS in order to bring improved chemical identification and structure-based retrieval capabilities to its own files and services (e.g., MEDLINE, TOXLINE, CANCERLINE, etc.).

This interrelationship with CAS is illustrative of an ever expanding need to develop planned links with other data bases. This approach should be vigorously pursued by NLM not only for input and processing but also for output or dissemination.

Greater effectiveness in the mechanical processing of the traditional literature should be possible through the expanded use of appropriate existing technology. This effort has begun in Technical Services with the development of a master serials control mechanism. There needs to

be developed a decentralized machine input processing system for indexing and cataloging as well as serials control. The problems of processing which emerge from the attempt at coordinating the use of multiple data bases at NLM, or of non-NLM data bases, create the necessity for, at the very minimum, convertibility to allow use in a common retrieval system. The options are either that all coordinated data bases adopt standardized procedures or that existing technology be used to create convertibility from one data base to another.

Other applications of technology to existing processing should be beneficial. These include the increased use of optical scanning input for abstracts and, hopefully, for additional bibliographic control. NLM and publishers should explore the development of either a standard type font for abstracts and title pages or, at least, one of several type fonts that can be read by optical scanners. This would allow the entire abstract input and a certain amount of the serial control and bibliographic data input to be entirely machine-mediated.

Also, as more journals are produced through computer-mediated photocomposition it may be possible to obtain descriptive bibliographic data and abstracts in machine-readable form from the publishers. Either the effective development of optical character reader input and/or machine-readable input in combination with computer-assisted MeSH term development might provide major economies in processing. In addition, such a system might even make the abstracts available prior to hard copy publication. The application of standard product code information to

the journal and monographic literature would simplify check-in operations and circulation control at all libraries. The problems attendant to developing an effective, totally centralized process for the sharing of bibliographic information on the traditional literature have persisted for too long. Many of these problems could be avoided with the nonprint literature by an early start in creating a national sharing mechanism for catalog information on audiovisual and computer-mediated materials.

Throughout this discussion as well as that on input, new machine requirements are being described, to house larger information pools, to link with other information pools, or to facilitate processing. Long-range planning for the acquisition and optimal use of computing facilities is mandatory. This planning must also take into consideration the output distribution needs. The concepts of centralized vs. decentralized computer capacities, mini vs. maxi, computer networking and sharing of computer resources all need examination. This planning must be integrated step by step with all the elements already discussed. Over the next five years computer technology can be expected to drop dramatically in cost; communications costs will drop but more slowly. This change in the balance of costs will require periodic reexamination of the network architecture of computer-based information and instruction services. Very frequently performed functions requiring modest processing may be decentralized to intelligent terminals and minicomputer systems. On the other hand, maintenance and retrieval from large files will probably not

be decentralized but will be centralized to take advantage of economies of scale which can still be expected to apply. Development of a repository of computer assisted instruction (CAI) materials will need to be centralized; actual execution of computer assisted instruction should be decentralized with the terminal systems having access to the repository for acquisition of requested materials. Some part of the input process should be decentralized to distributed mini-computer systems but major file maintenance will remain on large centralized systems.

As a result of the mixed architecture of future systems, and the nature of the present investments in processing systems, it will be necessary to develop improved capabilities on both the large systems and on minicomputers and intelligent terminals. Examples of projects suitable for each are as follows:

Minicomputers

1. Testing new user interfaces to retrieval systems
2. Formatting and editing of input
3. Small Data Base Management Systems
4. Execution of CAI programs
5. Coordination of library support to remote users
6. Text editing

Large Computer Systems

1. Retrieval services from large files
2. Implementation of improved search services
3. Maintenance of large files
4. Maintenance, production, and distribution of CAI materials
5. Implementation of "user cordial" interfaces for retrieval systems
6. Application of text processing techniques to
 - a. Improve input
 - b. Merge files
 - c. Improve the user interfaces for retrieval systems
7. Develop cooperative cataloging systems

Closely related to the impact of extension of the network are computer-related costs (primarily communications) and the number of personnel at NLM needed to manage the system. The current policy of user charges based on recovery of all costs external to the National Library of Medicine appears to be effective in permitting growth to be independent of NLM budget with regard to communications costs. Projections of growth of on-line services can be made using several assumptions and modeling from previous experience. With these projections, the baseline requirements of the next five years can be estimated.

The requirement for computer-related funding and personnel assumes that NLM adopts a policy of not charging more in one year than the average cost for on-line services in the prior year. This policy results in growth which is closely similar no matter what option is selected with regard to the addition of data bases. Such a policy results in growth and prices as follows for existing NLM data bases:

Fiscal Year	Price/ Hour	Total Hours	Percent Growth From Prior Year
1976	\$ 15	83,000	
1977	15	102,000	23
1978	14	125,000	23
1979	11	162,000	30
1980	9	198,000	22
1981	7	238,000	20

The total computer-related cost to the Government is covered by collections from users starting in FY 1977. In fact, in every year the Government will receive \$200,000-\$400,000 more in revenue than the service costs because of the policy of basing the coming year's costs on the prior year's experience. The addition of other data bases does not alter this overall pattern but does increase prices to users slightly.

The baseline requirement for computer and communications resources provides for growth in accordance with this policy and provides funds and personnel for the conversion to the new computer system in late FY 1978, and for the new facilities in the Lister Hill Center building in FY 1980.

These latter costs are not attributed to users.

COMPUTER AND COMMUNICATION

Baseline	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981
Funding In Thousands	\$4,494	\$5,494*	\$4,000	\$4,500**	\$4,000
Positions	52	58	59	60	61
LO/SIS***	(1)	(1)	(1)	(2)	(2)

*Includes \$1,000,000 for conversion to new computer systems and parallel operation for 3 months of both the old and new systems.

**Includes \$500,000 for installation of new system in the new building and parallel operation for one month.

***These are positions that will be required in Library Operations and Specialized Information Services.

Even if NLM adopts a cautious growth rate for the number of services it provides by adding one or two data bases per year, additional personnel will be required. Linking to other data services would also require new resources. The following table summarizes resource requirements for several courses of action:

RESOURCE REQUIREMENTS FOR VARIOUS COMPUTER OPTIONS

Resources Required	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	Growth Rate
<u>Unified NLM Data Base</u>						
Positions	2	4	7	9	12	1 Data Base/Yr.
Positions	3	6	9	13	16	2 Data Base/Yr.
<u>Separate NLM Data Bases</u>						
Positions	3	5	8	12	15	1 Data Base/Yr.
Positions	4	8	13	17	22	2 Data Base/Yr.

Some comments on preservation of the collection are indicated. Clearly NLM has an unalterable responsibility for the preservation of its collection. When total preservation is not feasible, representative preservation must be assured. Clear policies and specific operating principles need to be defined. Newer technology, such as high density digital storage, should be explored and utilized where possible. Acquisition and preservation policies must be coordinated and reconciled. A specific organized preservation program must be instituted and maintained as soon as possible and must consider both print and nonprint materials.

SUMMARY OF ASSESSMENT AND RECOMMENDATIONS ON PROCESSING

1. NLM should promote a Centralized Information Resources for Health (CIRH) that would: (1) be linked to information resources in related fields; (2) obviate the creation of new Federal health-related information resources; (3) become a one stop "shopping center" for health-related information systems in other agencies. The initial tasks that should be undertaken by NLM would be: (1) delineating the dimensions of the proposed system; and (2) establishing policies and ground rules for NLM's providing support to other agencies.

2. The intellectual processing of the print materials (published literature) is well developed and provides powerful sophisticated bibliographic tools for the NLM user communities. To date there has been insufficient use and feedback on the system by end users to develop a systematic evaluation and assessment of "use" patterns. Controlled experiments should be undertaken to determine how to make the system more useful before more resources are invested in "upgrading" the system with additional searching capabilities such as stored searches.

3. The conversion of the intellectual input for computer processing is still heavily dependent on manual effort. This "front-end" processing should be computer-assisted where possible. It appears that a balanced distributed processing utilizing minicomputers would be effective. A detailed plan and schedule for such conversion should be prepared.

4. More cost-effective techniques and procedures are required for development of machine-readable input. The use of optical scanning should be tested and assessed. NLM should explore with publishers development of either a standard type font for use with abstracts and title pages, or at least, several type faces that can be read by optical scanners or the provision of machine-readable information so that entire citations and abstracts could be automatically machine-read and processed.

5. Some major documentation activities in the U.S. are making use of machine-aided indexing techniques to attempt to improve processing and reduce costs. A study should be made to assess the effectiveness of its application to NLM processing.

6. The intellectual processing of other printed materials is not well developed and varies considerably with the type of material. Present NLM processing practices should be examined and reconstituted into a consistent approach.

7. As additional non-NLM data bases are added by NLM, the problems of content quality, standards and convertibility become significant. NLM should develop policies and guidelines for acquisition of these additional data bases.

8. NLM's current central computer capacity is limited. In preparation for expanded workloads, alternative network configuration and plans for future machine-processing requirements should be developed.

9. NLM has an unalterable responsibility for preservation of its collection. Present practices are only partially effective. New technology such as automatic feed filming devices should be examined as ways to increase the volume of material microphotographed and to reduce costs. At the same time, NLM should examine those technologies which offer alternatives to archival microphotography.

C. OUTPUT (Distribution)

This category includes all the mechanisms employed to deliver information to requesters. Three major areas can be identified: publications, library services, and library networks.

NLM publishes INDEX MEDICUS, Current Catalog, Bibliography of the History of Medicine, Abridged INDEX MEDICUS and 28 recurring bibliographies to announce the literature. Plans are underway to publish catalog information on audiovisuals as part of Current Catalog and as a separate annual accumulation. The current publication process is effective and efficient. Most major problems result from the distribution of NLM publications by the Government Printing Office. Long delays, especially for overseas subscribers, and many failures to fill orders, are constantly reported. Repeated efforts to resolve these problems with the Government Printing Office have elicited many promises but no significant reduction in either customer complaints or the number of unfilled orders NLM must fill from its stock.

The rapid proliferation of categorical disease programs at the NIH following the cancer model will probably produce a large demand for recurring bibliographies and special literature searches. Most of these can be generated from NLM data bases at relatively little cost; NLM should discourage the creation of special services unless additional resources are supplied by the categorical institutes involved.

In many instances there is demand for dissemination of information that is not suitable for journal publication because of size or complexity of format. In some cases this demand can be met inexpensively through distribution in microfiche format. Segments of the health community can thus be provided with access to specialized information files that they now do not have through the scientific journal system. The Toxicology Document and Data Depository (TD3) is pioneering this concept for the field of toxicology. A variety of industrial, agency, and Congressional files and documents, not normally considered suitable for journal publication, are being identified and disseminated. Supplementary materials such as graphs, tables and additional experimental details to articles appearing in toxicology journals are also being distributed in this manner. In the course of implementing TD3, it became apparent that dissemination of color photomicrographs (e.g., pictures of stained slides) on color microfiche was technologically and economically feasible and represented an important service for this user community. The use of color microfiche for many areas of biomedicine as an output device for various nonprint materials deserves more consideration.

Direct reader and reference services provided by the National Library of Medicine have risen significantly in recent years. Additional manpower must be provided to maintain these valuable services.

Interlibrary Loan activity has increased by 120 percent in the past five years (insert data here). Demands for monographic materials have increased disproportionately to serials probably in part because rising costs with relatively stable budgets have forced libraries to curtail the purchase of some books in order to maintain their subscriptions to serials. The exact reasons for the overall increase are not clear. Part is surely due to the ease of identification which NLM's on-line retrieval services have created. However, some part must also be due to the success of the outreach programs of the Regional Medical Library Programs responding to an increased demand created by Professional Standards Review Organizations, relicensure and recertification. The demand has probably not reached its peak. Nevertheless, the funding of this endeavor from a national point of view requires clarification and decisions on such issues as appropriate user charges and subsidies. This planning should have as its objective the establishment of a stable funding mechanism in which the support of growth would be independent of the vagaries of the NLM budget. The charges should contribute to maintaining the quality and equality of service, as well as being a deterrent to frivolous requests.

The basic dissemination mechanism of the NLM is a network of libraries arranged in a hierarchical fashion for document delivery and in a more centralized mode for on-line data bases. A high-priority issue is the continued development of the Regional Medical Library Network. Success in some regions in achieving greater outreach is apparent from the promotion of hospital library consortia. This type of support appears to be an effective mechanism for extension of the network at the basic unit or community hospital level. Allied to this effort is the attempt to use Area Health Education Centers as the organizational vehicle for extension at the community hospital level. These efforts should be fostered; the Extramural Grant Program is being modified to promote this end. While these library extensions of the dissemination network should be pursued with vigor, some consideration should now be given to non-library extensions of the network.

There are approximately 7,000 hospitals in this country. Only 3,000 of these have recognized hospital libraries staffed with minimal competence in accessing the resources made available by NLM. Many of the remaining 4,000 are small hospitals located in predominantly rural areas. Many have fewer than 50 beds and medical staffs of fewer than 15. Some are widely dispersed, do not lend themselves to consortia development, and cannot support information specialists. Clearly, some method of access to and distribution of NLM information resources other than a library network must be developed. One illustration of a possible alternative approach is to draw on the experienced County Agriculture

Agents as information specialists with direct access to doctors' offices. The County Agent has for many years served as the information specialist for rural America. In Alabama a program has been started to use the County Agent as an information specialist for health matters. This County Agent has had by long tradition an accepted role in the community. Good County Agents are accustomed to using reference and referral services. Such a network link might also be effective in serving National Health Service Corps physicians.

Additional non-library network expansion may be possible through the use of newer communications and computer technology. The feasibility of broadband communications, for example, has been demonstrated. Some of its additional potentialities are being explored in the current experiments of the Library. However, program priorities and cost-effective applications in enhancing delivery of information should dictate the scope of future involvement of the Library in broadband communications. The ever present need is for more effective means to share resources throughout the health community. The application of communications and computer technology to that end must remain a high priority research and development arena.

One technological development which may soon significantly alter the whole approach to document distribution is cost-effective, high-speed facsimile transmission for both printed and audiovisual materials. These considerations need to be incorporated into planning for network expansion and development.

Finally, the role of NLM in the international organization and delivery of health science information requires periodic examination. The program details of NLM's international activities should reflect the program and policies of the Library and be consistent with our domestic policies. In general, the primary objective of NLM's international programs should be the improvement of U.S. research, education, and services in health and health-related sciences utilizing the mechanism of international cooperation and collaboration in biomedical communications. The conduct of international programs is in the interests of the National Library of Medicine where these programs are a natural extension of domestic responsibilities, represent a sharing of time, talent, and resources, and are of demonstrated value to the U.S. Quid pro quo bilateral agreements have served the Library well and should continue to be based on scientific, substantive exchange.

SUMMARY OF ASSESSMENT AND RECOMMENDATIONS ON OUTPUT (Distribution)

1. The distribution of NLM publications by the Government Printing Office (Supt. of Documents) has been very poor (especially outside the U.S.). Alternative distribution mechanisms should be explored, such as air freight shipments to the Foreign MEDLARS Centers or NTIS offices around the world using them for distribution centers within their respective geographic regions. Additional cost to the subscriber will be incurred but much more rapid and reliable distribution should result. A detailed study should be made.

2. Continued development of categorical disease programs will produce a continuing demand for special purpose bibliographies. In further fulfillment of its responsibilities as a Centralized Information Resource for Health, NLM should better inform the NIH categorical institutes how they can share in the use of centralized resources in direct support of their own research programs.

3. NLM interlibrary loan activity, which increased 120 percent in the past five years, will continue to increase. A stable national funding mechanism needs to be rapidly developed. This will require user charges which will assure continued quality of service and make the continued growth largely independent of the NLM budget.

4. Local readership service requirements should be met and their quality maintained by the allocation of necessary resources. In order to make more reasonable the demands on the NLM Reading Room, steps should be taken to assure that local medical, nursing, and dental schools provide the basic library services required by their own students.

5. Hospital library consortia development will continue to expand and should be encouraged.

6. Improved access to and distribution of NLM information in support of health care delivery should be initiated with a small number of alternative trial projects.

7. The NLM International programs should continue to effectively use quid pro quo arrangements to support those international collaborations which are in the interests of NLM and which constitute a natural extension of domestic responsibilities. The results of these endeavors should continue to be of demonstrated value to the United States through a sharing of time, talent and resources.

D. UTILIZATION

In spite of the considerable services and rapid growth of the NLM Health Science Information Network, there remains a significant portion of the health science community which does not use it. If our stated goal is to be reached, it is likely that an examination of this population may be the highest priority step to be taken in achieving a new growth phase of the information network.

Several studies have shown that a significant segment of the health science community is unaware of the existence of their National Library of Medicine let alone its many programs. The pattern of this lack of awareness is not immediately clear for it may occur as often with sophisticated specialists practicing in highly urban areas as with solo general practitioners in rural communities. If the lack of awareness can be characterized at all it is probably best described as being related to the operational distance from an academic health center, and to the degree of participation in teaching and research. The one most likely to know about the National Library of Medicine is the academician working in a medical school whose primary activities are teaching or

research; the one least likely to know is a solo practitioner not operating within the aegis of an organized educational structure such as an Area Health Education Center. There are no data available regarding other members of the health community; but it is a safe assumption that there are significant numbers of nurses, pharmacists, dentists, chemists, technicians, and technologists who are unaware of the National Library of Medicine.

Clearly, effort needs to be directed toward publicizing the services of NLM. Articles appearing in JAMA or state medical society journals and exhibits at meetings need to be supplemented with deliberate efforts designed to achieve the goal. One important by-product of the PAID Prescription Program, alluded to earlier, may simply be increasing the awareness of practicing physicians. Another interesting experiment is the planning exercise of the Midwest Regional Medical Library group. This involves inviting health professionals to participate in planning conferences throughout the region. Six planning conferences per state are planned; about half have already been accomplished. Invitees come at their own expense. There is certainly an unknown but significant multiplier effect because the participants carry back to their communities an awareness and understanding that is strongly reinforced from participating in the planning process. In addition, they are provided feedback from similar planning groups through the region and thus learn the thinking and problems of others. Quite independent of the product planning, the process may prove to be an invaluable tool in achieving greater dispersion of the information network.

A second area of concern which has in part already been addressed is the recognition that there is also a group who are aware that NLM exists and provides services but are unaware of how to avail themselves of these services. Is the current hierarchical library network an adequate access mechanism? Allusion has already been made to non-library expansion of access to the network. There remains, however, a large untapped library resource, namely, state library systems and public libraries in general. Interface with this resource is being explored in certain sections of the country by Regional Medical Libraries, e.g., New York State Library System. Even though the National Commission on Libraries and Information Services has addressed this problem, little has been done to take a careful and deliberate look at every community in the nation not now adequately served to determine what its potential access resources are. Doing this and then supporting the development of these resources to serve the entire community could constitute a major programmatic effort. The library chosen may be a community hospital library, a private library, a VA hospital or a resource of some other agency including private libraries. Each of these situations presents certain difficulties, but in the future, NLM should move to try to resolve the problems that impede such sharing.

But there is good reason to believe that the problems of non-utilization would not be solved even if delivery of the information were assured. There remains a significant resistance in many quarters to the use of information. One form of this resistance is manifest with regard

to teaching modules, audiovisuals, computer-mediated material, and simulations. This resistance is sometimes described as the "not invented here" syndrome, but that description is probably an over-simplification. In any event, faculty resistance, although relatively slight in nursing schools and schools of allied health, can be very strong in medical schools. Three approaches to this problem have been advocated and probably all should be pursued to a varying extent: student pressure, faculty training, and faculty involvement.

The student pressure hypothesis is that if availability of materials to students is facilitated, they will use them and increasingly exert pressure on faculty for greater availability, especially of self-instructional educational modules.

The faculty training hypothesis assumes that the faculty resistance is due to lack of knowledge and exposure to these materials, particularly to their potentiality as faculty time savers. Specific faculty training workshops and courses are designed to correct this deficiency.

The faculty involvement hypothesis simply accepts the "not invented here" syndrome as the basis of resistance and attempts to overcome it by getting more faculty involved in inventing so that in fact the materials of concern will in large part be "invented here."

Others who may concede there is some validity to all three approaches contend that the basic issues are really appropriate role models and reward systems. Because the existing role model in most medical schools is the researcher-clinician-teacher, whose advancement is largely based

on his research accomplishments, faculty resistance will continue until the development of such materials is considered of importance comparable to research. For these reasons, the use of national recognition through NIH scholarships or similar devices is considered of prime importance to long range solutions of the problems of faculty resistance.

The health practitioner's traditional struggle to maintain current competence is being formalized through public recognition and expectation. Professional Standards Review Organizations, relicensure, recertification, and various self-assessment opportunities continue to publicize this difficult task. In its service to the health community, NLM must assume an aggressive role in providing the information base required to maintain competence, for in this sense competence is determined by the currentness of the health practitioner's data base. This task requires the effective and efficient presentation of relevant information for the health practitioner. The determination of effectiveness must be made in terms of the user. Information systems must be specifically designed for this purpose and must stress the current relevance of the information, it must be presented in a manner which can be readily used, and it must be perceived by the user as an answer to his needs in maintaining the currentness of his information in his constant efforts to assure his continued competence. Information systems designed for such a purpose will necessarily utilize not only bibliographic citations to relevant articles but also data. It will require special efforts to create information in a format to meet the relevant current needs of the user.

The National Library of Medicine must recognize these developments. It is necessary and proper that NLM promote research to explore ways to improve the functional processing of information to the end that the benefits of biomedical research can be inrated more efficiently and effectively in health professional practices to the benefit of the nation's health.

But NLM's operational responsibility still remains information handling. The synthesis and analysis, indeed the reformatting or elaboration to achieve greater efficiency, is the operational responsibility of others. Nevertheless, NLM must pursue an assessment of the effectiveness of the products and services it provides if it is ever to achieve the last part of our stated goal--to make information available in a form which can be effectively used.

SUMMARY OF ASSESSMENT AND RECOMMENDATIONS ON UTILIZATION

1. NLM should carefully examine the characteristics and information needs of the non-users of its services and programs.
2. Specific and deliberate attempts should be undertaken to: (a) increase awareness of NLM services and programs; (b) overcome resistance to the use of newer information learning resources and services; (c) facillitate access for those removed from the aegis of an academic environment; and (d) utilize the best available resource in every community to establish a link to the Biomedical Communications Network.

3. NLM should promote the development of systematic analysis, synthesis, and elaboration of relevant current information designed to support the health practitioner's efforts at maintaining current competence.

4. Although NLM should promote the development of the information formats described in 3. above, its operational responsibility should remain limited to the collection, processing, and dissemination of such information.

5. NLM should more actively attempt to assess the effectiveness of its services and products.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

55th Meeting of the

BOARD OF REGENTS

9:00 a.m., September 23-24, 1976

Board Room
National Library of Medicine

MEETING OPEN: All day September 23 and from 9:00 to 9:30 a.m. on September 24.

MEETING CLOSED: From 9:30 a.m. to adjournment on September 24 for the review of grant applications.

- . CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Joseph F. Volker
- I. CONSIDERATION OF MINUTES OF LAST MEETING TAB I
(Orange Book)
- II. DATES OF FUTURE MEETINGS TAB II
1977 Calendar
- Next Meeting: January 27-28, 1977 (Th-F)
- Spring 1977 Meeting: May 19-20, 1977 (Th-F)
- Selection of Dates for Fall 1977 Meeting:
Sept. 29-30 (Th-F) or Oct. 6-7 (Th-F)
- V. REPORT OF THE DIRECTOR, NLM TAB III Dr. Martin M. Cummings

- I. INTEGRATION OF NMAC/LHNCBC AND OTHER
NLM FUNCTIONS: TAB IV
- A. Report of In-House Study Group Tab A Dr. Harold M. Schoolman
- B. AVLINE Now Tab B Dr. George E. Mitchell
- C. AVLINE Future Tab C Dr. Joseph Leiter
- D. Program Areas for Coordinated
Planning:
 - 1. NMAC Tab D Dr. George E. Mitchell
 - 2. LHNCBC Tab E Dr. Robert M. Bird
- E. General Discussion

LUNCHEON CATERED IN CONFERENCE ROOM "B"

- I. REPORT ON TOXICOLOGY COORDINATING
COMMITTEE TAB V Dr. Henry M. Kissman
- II. INTERNATIONAL AFFAIRS TAB VI Miss Mary E. Corning
- III. DISCUSSION OF ADVISORY GROUP MEETING ON
INFORMATION NEEDS IN HEALTH CARE DELIVERY TAB VII Dr. Robert M. Bird
- COFFEE BREAK
- X. PLANNING FOR THE NEW COMPUTER TAB VIII Mr. Davis B. McCann
Mr. Alfred R. Zipf,
Discussant
- . DEMONSTRATION OF LEARNING RESOURCE
LABORATORY ACTIVITIES TAB IX Dr. Robert M. Bird
Mr. Charles M. Goldstein

DINNER		Walter Reed Army Medical
Cocktails (Cash Bar)	6:30 p.m.	Center Officers' Club
Dinner (Dutch Treat)	7:30 p.m.	"Ball Room"

RECONVENE: 9:00 a.m., Friday, September 24, 1976

- I. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS TAB X Dr. Ernest M. Allen
- II. BIOMEDICAL LIBRARY REVIEW COMMITTEE ACTIVITIES TAB XI Dr. Roger W. Dahlen

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS

- III. SPECIAL APPLICATIONS
A. Research (Gray Book) TAB I Dr. Roger W. Dahlen
B. Resource TAB II
C. Training TAB III
D. Publication TAB IV Dr. Jeanne L. Brand
- IV. SUMMARY STATEMENTS
A. Research TAB V Dr. Roger W. Dahlen
B. Resource TAB VI
C. Training TAB VII
D. Publication TAB VIII Dr. Jeanne L. Brand
- V. ADJOURNMENT Dr. Joseph F. Volker

DEPARTMENT OF HEALTH, EDUCATION,

AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS

MINUTES OF 55TH MEETING

SEPTEMBER 23-24, 1976

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/

September 23-24, 1976

The Board of Regents of the National Library of Medicine was convened for its fifty-fifth meeting at 9:00 a.m. on Thursday, September 23, 1976, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. Joseph F. Volker, Chancellor, University of Alabama System, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on August 10, 1976, the meeting was open to the public from 9:00 a.m. to 5:00 p.m. on September 23, and from 9:00 to 10:00 a.m. on September 24, and closed from 10:00 to 11:00 a.m. on September 24 for the review, discussion, and evaluation of grant applications. A Board roster is included under Attachment "A."

Board members present were:

Dr. Joseph F. Volker

Alternates to Board members present were:

Dr. Faye G. Abdellah, representing Dr. S. Paul Ehrlich, Jr.
Rear Adm. J. William Cox, representing Vice Adm. Willard P. Arentzen
Dr. William D. Mayer, representing Dr. John D. Chase
Col. John C. Richards, representing Lt. Gen. Richard R. Taylor
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin

Unable to attend:

Dr. Eloise E. Clark
Brig. Gen. Ernest J. Clark

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/ The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.

National Library of Medicine staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford A. Bachrach, Head, Medical Subject Headings Section, LO
Mr. Albert M. Berkowitz, Chief, Reference Services Division, LO
Dr. Robert M. Bird, Director, Lister Hill National Center for Biomedical Communications
Dr. Charles F. Bridgman, Assistant Director for Educational Resources Development
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. William H. Caldwell, Chief, Bibliographic Services Division
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mr. Benjamin Erdman, Deputy Director, Lister Hill National Center for Biomedical Communications
Mr. Joseph F. Gantner, Chief, Technical Services Division, LO
Mr. Charles M. Goldstein, Chief, Computer Technology Branch, LHCBC
Mr. B. Earl Henderson, Chief, Communications Engineering Branch, LHCBC
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mrs. Erika Love, Deputy Associate Director, LO
Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Dr. George E. Mitchell, Director, National Medical Audiovisual Center
Mr. Kent A. Smith, Assistant Director for Administration
Dr. Harold A. Wooster, Special Assistant for Program Development, LHCBC

Others present included:

Dr. Fred C. Cole, President, Council on Library Resources, Inc.
Mrs. Bernice M. Hetzner, Professor of Library Science, University of Nebraska Medical Center - Consultant, NLM
Dr. Saul Jarcho, Editor in Chief, New York Academy of Medicine - Consultant, NLM
Dr. John P. McGovern, Professor and Chairman, Department of the History of Medicine, University of Texas - Consultant, NLM
Dr. Doris H. Merritt, Dean, Office of Research and Sponsored Programs, Indiana-Purdue University at Indianapolis - Consultant, NLM
Dr. Max Michael, Jr., Executive Director, Jacksonville Hospitals Educational Programs, Inc. - Consultant, NLM
Dr. G. Burroughs Mider - Consultant, NLM
Mr. Samuel T. Waters, Associate Director, National Agricultural Library
Dr. Stewart G. Wolf, Jr., Director, Marine Biomedical Institute - Consultant, NLM

Members of the public present:

Mr. Jeff Christy, Reporter, "The Blue Sheet"

I. OPENING REMARKS

Dr. Joseph F. Volker, Chairman, welcomed the Regents, consultants, and guests to the 55th meeting of the Board of Regents of the National Library of Medicine. He noted the presence of new alternate members Dr. William D. Mayer (Veterans Administration) and Col. John C. Richards (Department of the Army).

The question was raised as to whether consultants were permitted to vote on Board actions. The Chairman responded that although the consultants were encouraged to join in all discussions of the Board, only the appointed and ex officio members were permitted to vote on motions and resolutions.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board approved the minutes of the meeting of June 10-11, 1976.

III. DATES FOR FUTURE MEETINGS

The Board approved the dates of January 27-28, 1977, for the next meeting, and confirmed May 19-20 for the subsequent meeting. October 6-7, 1977, were approved tentatively for the following meeting.

IV. REPORT OF THE DIRECTOR, NLM

Dr. Cummings said that because this is the 20th anniversary of the creation of the National Library of Medicine by Congressional statute, and his impending retirement after 13 years as Director of the Library, he wished to review some of the important events of this period. He noted that NLM had a budget of \$4 million and a staff of 268 when he joined the Library in 1963; today the budget is \$30 million and the staff has been enlarged to 468.

Dr. Cummings gave credit to Dr. Rogers, his predecessor, for skillfully managing this institution's changeover from the Armed Forces Medical Library to the National Library of Medicine in 1956, and for the design and building of the present facility. Dr. Rogers had also set in motion all of the plans for MEDLARS which Dr. Cummings implemented in 1964. The next year, 1965, was notable for the passage of the Medical Library Assistance Act. Since its enactment almost \$100 million have been awarded in grants to support library construction, resource building, the creation of a national medical library network, training, biomedical communications, research, and the publication of scholarly works.

In the following years the Toxicology Information Program was assigned to NLM (1967), the PHS Audiovisual Facility was transferred (1967) to NLM and became the National Medical Audiovisual Center, and the Lister Hill National Center for Biomedical Communications was created at NLM (1968). Also in 1968, the Library was transferred from the PHS Surgeon General's Office to the National Institutes of Health. This transfer occasioned much debate, because the legislation creating NLM indicated that it should be a national resource and not the instrument of any single agency. This is a matter, Dr. Cummings said, that may require Board review in the near future. The service functions of the Library are not receiving as high a priority as the NIH intramural research activities, particularly with respect to staffing positions. The latest milestone noted by the Director was the action by Congress to provide \$26 million for the construction of the Lister Hill Center building and the integration of NMAC and LHC functions that this will permit.

Dr. Cummings ended his review of developments over the last two decades by praising the creative and productive staff of NLM. He thanked also the members of the Boards of Regents and the consultants who have served NLM faithfully over the years. He said that a review of the minutes of the 35 Board meetings held since 1956 would be illuminating and inspiring and that, were he ever given the opportunity to contribute to the history of NLM, he would choose to write about the contributions of those dedicated men and women.

Dr. Cummings then reported on several contemporary issues:

1. The most pressing current issue is that of appointments to the Board of Regents. It is depressing, he said, to see such a lack of action on appointments that really have no political significance. He suggested that a change in NLM's legislation might be desirable to remove the appointing authority from the Office of the President to a lower echelon.

2. The Labor HEW Appropriation Bill for 1977 has passed Congress, but faces a possible veto by the President. The bill contains a significant increase for NLM.

3. The Department's budget submission to the Office of Management and Budget for FY 1978 is not favorable to NLM in terms of staffing positions. It would hold the Library to this year's level. Only mandatory increases would be allowed for the 1978 budget.

4. HEW has determined that collections of papers from prominent men, placed in the Library for safekeeping and for the use of future scholars, are not subject to public inspection under the Privacy Act. This means NLM may accept such papers and honor certain restrictions of confidentiality that the donor may insist on. This problem was discussed in some detail at the last meeting of the Board.

5. The Board of Regents will not be subject to the general provisions of the recently passed "Sunshine Act" that would open up certain closed portions of its meetings now held confidential. However, as it affects the Federal Advisory Committee Act and the exemptions that may be used for closing certain portions of meetings, the Board of Regents will be subject to the Act.

6. Mr. Melvin S. Day, NLM Deputy Director, reported to the Board on recent progress of copyright legislation through the Congress. The Senate passed its bill earlier this year; the House passed its version on September 22. There is a significant difference between the bills as they would affect NLM's photocopying operation. We are hopeful that the House language, which would be more favorable to us, will be accepted in conference.

7. Mr. Kent A. Smith, NLM Assistant Director for Administration, reported to the Board on the schedule for construction of the Lister Hill Center building. A waiver on the Montgomery County sewer moratorium, a final review of the drawings by the National Capital Planning Commission, and the filing and review of the Environmental Impact Statement, have all been accomplished. The schedule calls for advertising for bids November 1, 1976; awarding of contract February 1, 1977; completion of construction by November 1979. Total money for the project is \$26,765,000. \$21,573,000 has been released to the General Services Administration for planning, construction management, and actual construction. The remaining \$5.1 million is for a communications relay facility in Poolesville, Md., offices, landscaping, renovation of the existing building, and a contingency fund.

8. Dr. Cummings presented to the Board an analysis of Reading Room users. This study was requested by the Regents at the June 1976 meeting when there was considerable discussion of the impact on NLM by the new Uniformed Services University of the Health Sciences. The study shows that 25% of the users are health professionals, 66% students, and 9% others. The use has been increasing in recent years--from 16,000 in 1973 to 28,000 this year. Each visitor generates four to five requests for services on the average. If this trend continues, NLM will be hard pressed to maintain its high level of service (currently 92% fulfillment rate for requests for material).

Several Board members expressed concern about the impact of the new medical school (USUHS) on the Library. Dr. Cummings reassured the Board that the school plans to develop a substantial library and will not rely on NLM as its primary resource. The new library will have some 30,000 square feet and will concentrate on modern materials to satisfy the school's teaching mission. Admiral Cox confirmed Dr. Cummings' statements and said it is clear that NLM will not be called on to provide day to day services for USUHS. In reply to a question from Dr. Volker, Dr. Leiter, NLM Associate Director for Library Operations, characterized the students who use NLM as largely medical and nursing students; they use the collection in the Reading Room quite heavily. Dr. Mayer suggested that, as services continue to grow, it will be important to have more detailed information and statistics concerning users on which to base future policy decisions. Dr. Cummings said he believes there should be more on-site use of NLM by practicing physicians. This represents a challenge to the Library.

V. INTEGRATION OF NMAC, LHNCBC, AND OTHER NLM FUNCTIONS

A. Report of Study Group

Dr. Harold M. Schoolman, NLM Assistant Deputy Director, reported to the Regents about the activities of an in-house study group that was formed by the Director. The group addressed three major considerations: how to alleviate anxiety about the upcoming move of NMAC to Bethesda; how to handle the transition and consolidation of certain functions before the LHC building is constructed; how to reorganize, in final form, the functions of NMAC and LHC after the move.

A list of functions of NMAC and LHC was drawn up, together with the resources and personnel allocated to each function. This list was then reviewed to identify overlap and similarities in functions, not only between NMAC and LHC, but also with other areas of the Library. Dr. Schoolman discussed briefly the ten recommendations made by the study group. These fell in the areas of (1) transfer of certain NMAC service activities to Library Operations, (2) synthesis of NMAC and LHC activities, (3) organizational alternatives, (4) administrative management, and (5) implementation. Dr. Schoolman reported that Kent Smith and the Personnel Officer, Brian Makoff, have been to NMAC recently to discuss the upcoming reorganization and move with employees there.

B. AVLINE Now

Dr. George E. Mitchell, Director of the National Medical Audiovisual Center, described the Center's responsibilities for developing AVLINE (Audiovisuals On-Line). These include liaison with the AAMC, administrative, logistical, and acquisitions support, providing facilities and specialists for review, maintaining the AVPROC (Audiovisuals in Process) data base, and precataloging approved materials for entry into AVLINE. Dr. Mitchell presented a statistical summary of results to date that showed that almost 5,700 titles have been reviewed and 3,400 approved for entry into AVLINE. Some 300 titles (with production dates of 1974 and 1975) remain to be processed before the end of 1976, at which time all responsibility for the AVLINE project will be transferred to Library Operations.

C. AVLINE Future

Beginning in January 1977, the bibliographic and operational control of AVLINE will become the responsibility of the Technical Services Division in Library Operations. The processes of acquisition, bibliographic control, cataloging, and file building, are essentially similar to those employed for printed literature. It thus makes sense to integrate them and to reduce by one-half the number of staff involved. The distribution system for

audiovisuals, because it differs significantly from the activities of Library Operations in Bethesda, will remain at NMAC in Atlanta. Only a small proportion of the current AVLINE data base represents materials produced since 1973; the next procurement effort, by Library Operations, will be devoted primarily to newer materials.

Dr. Leiter reported that the review system for AV materials will undergo some modification. Rather than convene formal AAMC review panels, a critical review process will be set up similar to that already in operation for printed material. On the basis of critical reviews by one or two referees we should be able to develop informative abstracts to be reviewed. He described how the processing file, AVPROC, will be modified to provide better bibliographic control; AVPROC will give rise to another file, under joint AAMC and NLM control, that will contain material necessary for the reviewers; a third "distributor" file will provide information on how the materials may be acquired or distributed after they are placed in AVLINE. Two major printed catalogs will result from the AVLINE activity: a catalog of all audiovisual materials in AVLINE, and a list of items in AVLINE that are available for distribution from NMAC. The former may be produced in microform (with a printed index) because of its expected size.

Dr. Schoolman said that the first phase of AVLINE was to examine the existing universe of audiovisuals; the second phase, which we are now beginning, is to emphasize the most recent audiovisuals and to maintain currency by identifying materials before they are made generally available ("prepublication") and by streamlining the review process. We are setting a goal of 100 days from acquisition to entry into AVLINE. Admiral Cox expressed his concern about parochialism and interprofessional competition affecting the review of audiovisual materials by the professional societies. Interdisciplinary panels are less likely to be so influenced. Dr. Schoolman acknowledged this concern but said that the heavy demands on the present system mandate a change in procedure; if experience shows the proposed mechanism to be flawed, we will have to make adjustments.

D. Program Areas for Coordinated Planning--NMAC and LHCBC

Dr. Mitchell reviewed for the Regents the present organizational structure of NMAC. He noted that two of NMAC's branches have functions that are related to the Lister Hill Center: the Educational Research and Evaluation Branch and the Educational Training and Consultation Branch. Dr. Mitchell described the Center's method of targeting projects to serve the purposes of five functional areas: clearinghouse, distribution, workshop and advisory services, applied research and evaluation, and media development. There are some 300 projects in various stages at any one time. This kind of project management system would lend itself to joint NMAC-LHC undertakings.

Dr. Robert M. Bird, Director of the Lister Hill National Center for Biomedical Communications, described the present organization of the Lister Hill Center and identified a number of the Center's activities which would be continued into the new combined NMAC-LHC organization. The primary function of the Center is to identify the programmatic needs of the user community and match them with available communications technology to see if the needs can be fulfilled. Dr. Bird described several model systems as examples: library resource sharing and information transfer, translation of research results into practice, and continuing education for practitioners. In response to a question, Dr. Bird cited several LHC projects in these areas, such as the Computer-Aided Instruction (CAI) network the Center has supported and the telecommunications studio being constructed for further satellite communications experiments. Dr. Cummings made the important distinction that although NLM can provide a communications modality, it is the professional society, school, or other cooperating organization that provides the substance of what is transmitted, i.e., the program.

VI. REPORT ON THE TOXICOLOGY COORDINATING COMMITTEE

Dr. Henry M. Kissman, NLM Associate Director for Specialized Information Services, briefed the Regents on the charter and makeup of the DHEW Committee to Coordinate Toxicology and Related Programs and its Toxicology Information Subcommittee. The Library's Toxicology Information Program serves as the functional arm of the Subcommittee and Dr. Kissman described several of the Subcommittee's current projects in which NLM has been heavily involved. These include: (1) the Toxicology Research Projects Directory, a quarterly publication sold by the National Technical Information Service (NTIS), based on data from the Smithsonian Science Information Exchange; (2) the Toxicology Document and Data Depository, also based at NTIS, a depository for toxicological data files and documents that are not normally published--the first product of the Depository is the current awareness publication, TOX-TIPS (Toxicology Testing in Progress); (3) Laboratory Animal Data Bank (LADB), an on-line data bank being developed containing baseline data for widely used strains of laboratory animals. Dr. Kissman described several of the future projects of the Toxicology Information Subcommittee. One of these is a planned Chemical Compound Information System--a series of computerized information files linked into one on-line, interactive retrieval system. Dr. Kissman closed by emphasizing that as industrial nations place more and more emphasis on toxicology related programs, it is incumbent on us to develop information services that can be used by those working in this area. If we do not, we may find our programs redundant as other institutions develop the needed services.

VII. INTERNATIONAL AFFAIRS

Mary Corning, NLM Assistant Director for International Programs, reviewed current activities, with primary emphasis on (1) international MEDLARS cooperation, (2) a visit to the U.S.S.R. by a U.S. (NLM) Delegation on Biomedical Communications, and (3) recent international developments which may impinge on NLM.

Three countries--Mexico, South Africa, and Iran--have met the technical requirements to enter into quid pro quo MEDLARS arrangements with NLM. The history and background of each of these were presented. The Iran arrangement is part of a broader NLM cooperative effort with the Minister of Science and Higher Education and the Imperial Medical Center of Iran, which has established a national resource--Pahlavi Library of Medicine, Biomedical Communications Center. NLM has been serving in an advisory capacity; and the rapid accomplishments in Iran during the last 1-1/2 years are noteworthy.

Under these new MEDLARS arrangements, Mexico, Iran, and South Africa will have on-line access to the NLM computer. Training is under way to prepare specialists in each of these countries to be responsible for MEDLARS/MEDLINE services. The new partners join Sweden, the United Kingdom, Germany, France, Canada, Japan, Australia, and the World Health Organization. WHO is undergoing budget difficulties and organizational changes. In reconsidering its role in providing information services, WHO may discontinue MEDLARS service within the next year. NLM has informed WHO that it will not influence WHO's decision in any way. NLM has advised the Pan American Health Organization and its Regional Library of Medicine in Sao Paulo, Brazil, that it must now consider, as completed, the experimental phase of operating portions of the MEDLARS data base, and determine whether it wishes to enter into a full quid pro quo MEDLARS arrangement.

Biomedical communications has been identified since 1972 as a potential area for cooperation under the U.S.-U.S.S.R. Agreement for Cooperation in Health. NLM had reported in 1975 to the U.S.-U.S.S.R. Joint Committee on the unilateral nature of activities to date. As a result Deputy Minister of Health Venediktov proposed a U.S. visit. A U.S. Delegation consisting of Dr. Cummings, Chairman; Dr. Hubbard, former Regents' Chairman and President of The Upjohn Company; Dr. Slamecka of the Georgia Institute of Technology; and Miss Corning spent two weeks in the U.S.S.R. to determine whether there are areas for equitable cooperation in biomedical communications between the two countries.

Miss Corning described the status of U.S.S.R. medical information activities and library network development. The Soviets are interested in U.S. computer technology. The Delegation did not observe any sophisticated computer or information technology adequate to mount and operate the MEDLARS tapes. The U.S.S.R. can receive MEDLARS in the same manner as other countries--by lease or quid pro quo arrangements. The Delegation and NLM do not recommend provision of our software. The Soviets expressed an interest in a terminal access via telecommunications linkage to the

NLM computer to gain experience in on-line services. They would then develop and operate a Soviet system which would be extended to the COMECON countries. Any proposed terminal access via telecommunication linkages to the NLM computer would have to be reviewed and approved by the Export Office of the Department of Commerce. Dr. Venediktov favors using WHO as the organ for cooperation in the coordination of biomedical research, establishment of international priorities, forecasting trends and analysis and vocabulary development. NLM believes the latter, vocabulary development in public health and social medicine, could be done on a bilateral (U.S.-U.S.S.R.) basis.

A draft Memorandum of Understanding was drawn up and an English-language version agreed to in Moscow. The subsequent Russian translation was inaccurate. It omitted some items, added others, and retained language and concepts that both sides had agreed earlier to omit. We are still awaiting a new Russian translation of the English text, which will then be verified against the English text orally endorsed by both sides. The memorandum characterized cooperation in three ways:

1. Several finite areas which could be considered for possible collaboration in the near future:
 - a. Exchange of biomedical literature
 - b. Interlibrary Loan (photocopy of research articles) using the Telex linkage between the Soviet Ministry of Health and DHEW for requests. This is to be done on a page for page basis.
 - c. Exchange of personnel. These people should be in the nomenclature or indexing specialties--not in computer technology.
2. Development of Pilot Projects
 - a. Nomenclature in public health
 - b. Exchange of bibliographic information in toxicology and pharmacology
3. Deferral
 - a. Computer technology
 - b. Software technology

In summary, any cooperation should be in specific well-defined areas, within a time frame and on a quid pro quo basis. These recommendations are being submitted to the U.S.-U.S.S.R. Joint Committee which will meet October 25.

Miss Corning reported on the Council of the European Community and its development of a network for scientific and technical information among its nine member nations (Belgium, Denmark, France, Germany, Ireland, Luxemburg, Italy, Netherlands, United Kingdom). Medicine has been identified as the subject area for most on-line usage in the future. The provisional network will involve host computers with specified data bases in the United Kingdom, France, Germany, and Italy. Each of our foreign MEDLARS partners (U.K., France, and Germany) has offered to be a host computer for MEDLARS. These developments toward a European network will be watched with care and interest because they may bear upon our bilateral agreements.

There have been some recent foreign policy commitments concerning developing countries which relate to NLM. The U.S. has agreed, within the UN setting, to the establishment of an International Center for the Exchange of Technical Information. In a speech by Secretary of State Kissinger in Africa, a commitment was made for the U.S. to perform an inventory of its national resources, to make available the services of consultants to developing countries, and to provide increased access to information facilities; and NLM was named as one of these facilities. NLM had no prior consultation or knowledge of this. The Library may be increasingly faced with being identified to serve internationally without the necessary resources to do so. Miss Corning was alerting the Board to this and she will keep them advised.

Dr. Cummings, who chaired the U.S. Delegation to the U.S.S.R., emphasized the necessity of insisting on a reasonable quid pro quo for any collaborative efforts with the Soviets. He warned against providing sophisticated software programs that would provide insights into U.S. hardware technology. Dr. Cummings said we would not collaborate with the Soviets to influence WHO or developments through WHO. He also has misgivings about NLM becoming an instrument of U.S. foreign policy---the State Department should certainly consult with NLM before making commitments on its behalf.

VIII. INFORMATION NEEDS IN HEALTH CARE SERVICES AND HEALTH CARE DELIVERY

Dr. Bird reported on the meeting of an Ad Hoc Advisory Group at NLM on July 16 to discuss problems associated with responding to the information needs of health professionals working in the area of health care services and delivery. Present at the meeting were some 15 invited consultants and NLM staff. The conference was prompted by a House of Representatives report that stated that "the Library has not done as well in serving the needs of health services organization and delivery as it has those of biomedical research and medicine." The group identified many problems; the most important is that health services do not enjoy the same formal "scholarly literature" apparatus as medical research. Information about health services is widely scattered throughout a "fugitive literature." The consensual advice formulated by the participants which permits translation into an action plan by the Library was summarized by Dr. Bird as follows:

1. The basic proposal sees NLM assuming responsibility for the published "scholarly" literature; the Health Resources Administration dealing with the nonpublished and "fugitive" literature. The group recommended beginning a close collaborative effort between the two organizations to (a) examine and

define the user community; (b) examine the nature of the "scholarly" literature versus the "fugitive" literature and establish the responsibilities of the agencies for managing each; (c) examine the compatibility between data bases and distribution systems; and (d) initiate a workshop involving key representatives from the Library and the Health Resources Administration.

2. There was clear recognition by the group of the importance of an expanded vocabulary and its relationship to the entire bibliographic control process (indexing, cataloging, retrieval). It was agreed that the vocabulary and indexing currently being generated by various health service groups are fragmented, uneven, and inadequate to meet the needs of the community. The group suggested an incremental approach to this problem.

3. The group suggested that, in addition to expanding the vocabulary for health services, there was a need for an expanded number of journals in this field indexed for MEDLARS and an expanded number of both serials and monographs acquired for the collection. The group agreed, however, that the Library should not seek material outside of that which it considers the "scholarly record."

4. Responding to the concern with gaps in the existing published literature, the group proposed that one approach might be to encourage the production of new literature to synthesize the experiences gained from major health service programs such as the Regional Medical Programs, Community Health Planning Programs, and Health Maintenance Organizations.

A specific Action Plan containing six recommendations was a final result of the group's efforts. The Plan establishes responsibilities for each recommendation as well as a general time frame for initiation.

IX. REPORT AND DEMONSTRATION OF LEARNING RESOURCE LABORATORY ACTIVITIES

Dr. Bird introduced Mr. Charles M. Goldstein, Chief of the Lister Hill Center's Computer Technology Branch. Mr. Goldstein described for the Regents the function of the Center's new Learning Resource Laboratory, located on A-level. The Laboratory was developed to provide an environment in which to develop and demonstrate modern computer technology applicable to the educational and library needs of the biomedical community. There are three areas of emphasis: research and development in information processing; development of specific library applications; development of technology related to Computer-Based Educational Materials (CBEM). The new Laboratory contains a variety of modern equipment: minicomputers, microprocessors, "intelligent" terminals, and special graphics capabilities.

Several areas of innovative application to Library Operations were noted. These include a distributed input processing system (already implemented), an automatic system for reformatting the Library of Congress or the Ohio College Library Center (OCLC) catalog cards in MEDLARS format, and an on-line public catalog for patrons that is "user-ecordial." Mr. Goldstein then described several of the CBEM programs that can be accessed in the new Laboratory, showing slides of the equipment used. The Regents adjourned from the Board Room and were escorted on a tour of the Learning Resource Laboratory.

X. PLANNING FOR THE NEW COMPUTER

Mr. Davis B. McCarn, NLM Acting Associate Director for Computer and Communications Systems, reported on the progress in replacing the Library's computer system. NLM has only interim approval for its present IBM 370/158-MP system. A completed Request for Proposal will go to the Government Services Administration within a few weeks; proposals should be received by next April; a contract should be awarded in October 1977, with installation of the new computer a year later. The new equipment is to be in use through 1983. Mr. McCarn explained the various requirements that NLM will insist on for the new system. He briefly addressed several important issues pertaining to the replacement of NLM's computers: the projected rate of growth of the system, whether a backup system is necessary, the effect of a new machine on our foreign partners, whether the new system should be leased or purchased, and how to phase in the new machines into the new Lister Hill building.

Dr. Cummings commented that Mr. Alfred Zipf, consultant to the Library for the procurement, does not feel that this is a good time to change systems. Our present machines and software are highly sophisticated and it would be desirable to continue to use them another two or three years before replacing. Dr. Cummings emphasized what Mr. McCarn had pointed out earlier, that GSA is compelling NLM to make this change. Mr. McCarn added that Mr. Zipf estimated the conversion to a new system would cost the government \$2.5 million. The Board expressed its continuing concern over the potential impact of a disruptive change on the U.S. health community and the lack of coordination between the construction of the new Lister Hill Center and the new procurement.

XI. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. Ernest M. Allen, NLM Associate Director for Extramural Programs, reported briefly on the EP budget picture for the FY 1976, including the transition quarter, and FY 1977. He pointed out that funds of \$8.0 million will be available for FY 1977 if the President's expected veto of the Labor-HEW Appropriations Bill is overridden. Of the \$8.0 million, commitments as of August 1976 amounted to \$5.2 million; approved unfunded awards with 250 or better priority ratings as of June 30 to \$953,000; and pending before the Board for action at this meeting with similar priority ratings are another \$1.1 million, leaving an anticipated balance for the rest of FY 1977 of approximately \$788,000. Included in these figures are 41% which were set aside for Regional Medical Library contracts, with the remaining funds allocated to the grant programs, including the newly expanded Medical Library Resource Improvement Grant Program. Since this amount is insufficient for even one of the two remaining rounds of meetings, it will be necessary to adjust plans by paying only through some higher priority, perhaps 225.

Dr. Allen then called on Dr. Roger W. Dahlen, Executive Secretary of the Biomedical Library Review Committee, to report on the recent activities of the Committee.

Dr. Dahlen brought the Board up to date on the developments regarding the expanded Improvement Grant Program. At a recent meeting in Bethesda with representatives from each Regional Medical Library, the new program was discussed, comments were noted and incorporated into the final instructions that will be distributed to potential applicants as soon as they have been printed. The Office of Management and Budget has approved and released the special application forms. Dr. Dahlen briefly mentioned the meeting of the Directors of eight NLM-sponsored training programs in health sciences and computer technology which was held in May at the NIH campus. The conference was viewed a success by the participants in that it afforded an opportunity to meet each other, examine common problems, and explore future directions for this NLM grant program. Finally, Dr. Dahlen informed the Board of the four new members of the Biomedical Library Review Committee who officially joined the Committee on July 1: Mr. Elmer Friman of the Indiana University School of Medicine, Dr. Donald A. B. Lindberg of the University of Missouri-Columbia, Mr. Warren A. Sawyer of the Medical University of South Carolina, and Dr. John F. Sherman of the Association of American Medical Colleges. He also announced that Dr. Richardson K. Noback was chosen to become the Chairman of the Committee for the years 1977 and 1978.

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS FROM 10:00 A.M.
TO 11:00 A.M.

XII. RESEARCH, RESOURCE, TRAINING, AND PUBLICATION GRANT APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Dahlen informed Board members and consultants of confidentiality and conflict-of-interest procedures and reminded all appointed Regents and consultants to sign, at the conclusion of the grant review, the statement certifying that they had not participated in the discussion of any applications where conflicts of interest might occur.

The Board concurred with recommendations of the Extramural Programs Subcommittee. A total of 67 applications was reviewed, of which 22 were recommended for approval, 36 for disapproval, and nine for deferral. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment "B"). Interim actions taken by EP staff since the last Board meeting in March 1976 were noted.

Dr. Jeanne I. Brand, Chief, International Programs Division, EP, briefed the Board on the actions taken by the Extramural Programs Subcommittee on the previous day, relating to NLM's Special Foreign Currency Program: 1. The Subcommittee reviewed two applications submitted under NLM's collaborative program with the Israel Journal of Medical Sciences (now funded under an award from the U.S./Israel Binational Science Foundation), sustained the approval of one and recommended the disapproval of the second. 2. The Subcommittee also endorsed the submission of an overall application from Poland, to be negotiated

through the Office of International Health, for a three-year extension of NLM's "Health Research Communications Program" with the Ministry of Health and Social Welfare in Poland, in a total amount of \$325,652 (equivalent in Polish zlotys). This proposal must subsequently be acted upon by the advisory group to the U.S./Polish Joint Committee of Cooperation in the Health Field. If approved, funding would be from both U.S. and Polish sources through the Marie Sklodowska-Curie Joint Fund, the successor in Poland to the P.L. 480 Program. The Board concurred with the Subcommittee's recommendation of the three-year extension of the Polish Bloc Agreement.

XIII. ADJOURNMENT


The meeting was adjourned at 11:00 a.m. on Friday, September 24, 1976.

Wednesday, September 22, 1976, 2:00 to 4:30 p.m.
(EP Subcommittee--List of Attendees under Attachment "C")
Thursday, September 23, 1976, 9:00 a.m. to 5:00 p.m.
Friday, September 24, 1976, 9:00 to 11:00 a.m.

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board concurred with recommendations of the Extramural Programs Subcommittee. Grant applications recommended for approval are listed in the summary actions (Attachment "B").

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.


Martin M. Cummings, M.D.
Executive Secretary


Joseph F. Volker, D.D.S., Ph.D.
Chairman

Robert B. Mehnert
Chief
Office of Inquiries and
Publications Management

BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINECHAIRMAN

VOLKER, Joseph F., D.D.S., Ph.D. (8/3/77)
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8/31/76

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

COUNCIL DATE: SEPTEMBER 1976

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
2 R01 LM01803-04	SCIENCE, MEDICINE AND DEVELOPMENT IN EAST AFRICA	04 6,450
2 R01 LM 02306-08	HISTORY OF MENTAL HOSPITALS IN THE U.S. SINCE 1875	08 12,510 09 12,500 10 13,100 11 13,800 12 14,500
1 R01 LM 02574-01A1	PROSTITUTION, VENEREAL DISEASE, AND CONTAGIOUS DISEASES	01A1 14,342 02 6,266
1 R01 LM 02800-01	DEVELOPMENT/EVALUATION OF HEALTH INFORMATION SHARING	01 65,943 02 61,373
1 R01 LM 02833-01	WALDEMAR M. HAFKINE: PUBLIC HEALTH PIONEER	01 12,500
1 R01 LM 02852-01	A STUDY OF MJELLER AND FALLOPPIO ON TUMORS	01 9,200 02 9,840 03 10,531

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

COUNCIL DATE: SEPTEMBER 1976

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 R01 LM 02857-01	INDIVIDUALIZED LIBRARY SERVICES FOR OFFICE PRACTICE	01 73,521 02 78,634 03 83,535
1 R01 LM 02888-01	CRITICAL EDITION OF THE HERBAL BY EUCHARIUS ROSSLIN	01 12,892 02 11,775 03 11,586
1 R01 LM 02891-01	LIVING NEW WORLD MONKEYS (PLATYRRHINI)	01 30,175
1 R01 LM 02903-01	A SHARED PATIENT-CARE INFORMATION SYSTEM	01 59,142 02 61,338
1 R01 LM 02904-01	ATTITUDES TOWARD OLD AGE IN NINETEENTH CENTURY AMERICA	01 7,279
1 R01 LM 02905-01	SMITHSONIAN PHARMACEUTICAL ANTIQUES CATALOGUE	01 9,578 02 10,831 03 12,216
1 R01 LM 02907-01	PREPARATION OF A MYCOTOXIN COMPENDIUM	01 11,801 02 8,422
1 R01 LM 02914-01	THE LIFE AND TIMES OF RICHARD BRIGHT	01 5,000

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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
 (Arranged numerically by program)

COUNCIL DATE: SEPTEMBER 1976

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
2 G08 LM 02291-02		02 41,438
		03 15,119
	RECATALOG HISTORIC LIBRARY-IMPROVE ACCESS TO ARCHIVES	
1 G08 LM 02859-01		01 21,899
		02 15,723
	MUHLENBERG HOSPITAL/AREA NURSING HOMES AV CONSORTIUM	
1 G08 LM 02874-01		01 35,098
	MICHIGAN-U.P. HOSPITAL AV CONSORTIUM	
1 G08 LM 02880-01		01 43,675
		02 38,000
	IDA-HEAL-NET IDAHO HEALTH LIBRARIES NETWORK	03 31,500
1 G08 LM 02885-01		01 17,910
		02 20,197
	ORGANIZATION OF THE ADOLF MEYER PAPERS	
1 G08 LM 02908-01		01 40,000
	A HEALTH SCIENCES LIBRARY NETWORK FOR MAINE	02 40,000

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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL
(Arranged numerically by program)

COUNCIL DATE: SEPTEMBER 1976

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 T15 LM 07015-01	COMPUTER APPLICATIONS FOR HEALTH PROFESSIONALS	01 136,800 02 144,180 03 146,845 04 150,658 05 141,445

1/ Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.

B O A R D O F R E G E N T S

Extramural Programs Subcommittee Meeting

September 22, 1976

A T T E N D E E S

Subcommittee Members Present:

Dr. Faye G. Abdellah
Mrs. Bernice M. Hetzner
Dr. John P. McGovern
Dr. Doris H. Merritt

NLM Staff Present:

Dr. Ernest M. Allen, Associate Director for Extramural Programs
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mrs. Helen S. Bennison, Grants Management Specialist, EP
Mrs. Karin K. Colton, Committee Management Assistant
Mrs. Doris J. Doran, Program Officer, EP
Mrs. Frances E. Johnson, Program Officer, EP
Mrs. Kathleen M. Nichols, Grants Management Assistant, EP
Mrs. Marguerite Pusey, Grants Management Specialist, EP
Dr. Dorothy A. Stroup, Program Officer, EP
Mr. Randall Worthington, Program Officer, EP
Dr. Galina Zarechnak, Program Officer, EP