Tuesday, November 8 (Continued)

| | | |
|---|---|---|
| 2:00 pm - 4:00 pm | AAMC SPECIAL GENERAL SESSION | Ballroom East |
| | Forum on the AAMC General Professional Education of the Physician Project | |
| 4:00 pm - 5:30 pm | AAMC Group on Public Affairs General Session | Lincoln Room |
| | Issues Surrounding the Use of Animals in Medical Research | |
| | *Frederick A. King, Ph.D.*<br>*Director, Yerkes Primate Research Center* | |
| | *William Samuels*<br>*Executive Director*<br>*National Society for Medical Research* | |
| | *David Sundwall, M.D.*<br>*Professional Staff Member*<br>*Senate Committee on Labor and Human Resources* | |

Wednesday, November 9

10:30 am - 5:45 pm AAMC RESEARCH IN MEDICAL EDUCATION CONFERENCE

At each AAMC Annual Meeting, the Group on Medical Education sponsors a Conference on Research in Medical Education (RIME). The purpose of the conference is to provide a forum for the presentation and discussion of studies concerning the process of medical education. The conference has two types of sessions: paper presentations for discussion of current research and symposia to explore issues of pending interest. More detailed information regarding the topics for the papers which will be presented and the panelists for the symposia may be obtained by calling Stephanie Kerby at 202-828-0560. Copies of the RIME conference proceedings, including the research papers which will be presented and the panelists for the symposia, may also be obtained at a cost of $15.00 by contacting Ms. Kerby. The proceedings will also be available during the meeting at the RIME information booth on the Concourse level of the Washington Hilton.

## OTHER AAMC SESSIONS

This supplement to the CAS meeting announcement has been prepared to provide information about other Annual Meeting activities of particular interest to faculty. Please note that it does not list all sessions; a more complete listing of activities including individual society meetings may be found in the AAMC preliminary program.

### Monday, November 7

**9:00 am - Noon** — AAMC PLENARY SESSION — BALLROOM

Transformation of Medicine Since 1945

*Julius R. Krevans, M.D.*
*Chancellor, UC, San Francisco*

Medical and Scientific Advances: Social Cost or Social Benefit?

*Uwe E. Reinhardt, Ph.D.*
*Professor of Economics and Public Affairs*
*Woodrow Wilson School of Public & International Affairs*

Preserving the Scientific Enterprise

*James B. Wyngaarden, M.D.*
*Director, National Institutes of Health*

Managing the Revolution in Medical Care

*Robert G. Petersdorf, M.D.*
*Vice Chancellor, Health Sciences and Dean*
*UC, San Diego School of Medicine*

### Tuesday, November 8

**8:15 am - 9:15 am** — AAMC ASSEMBLY — BALLROOM WEST

**9:30 am - 11:30 am** — AAMC PLENARY SESSION — BALLROOM

Presentation of AAMC Award for Distinguished Research and Flexner Award

Medical Progress: A Challenge to Education

*J. Michael Bishop, M.D.*
*Professor of Microbiology*
*UC, San Francisco School of Medicine*

Medical Progress: How Much Money Will It Take?

*Eli Ginzberg, Ph.D.*
*Director, Conservation of Human Resources*
*Columbia University*

What's Right About American Medicine

*Steven C. Beering, M.D.*
*President, Purdue University*
*AAMC Chairman*

*(over)*

## MEETING SCHEDULE

| | | |
|---|---|---|
| **SUNDAY, NOVEMBER 6** | | |
| 1:30 - 5:00 p.m. | CAS Plenary Session<br>*RESEARCH SUPPORT: A CONSENSUS IS NEEDED* | Thoroughbred Room |
| 6:00 - 8:00 p.m. | CAS Cocktail Reception | Lincoln West Room |
| **MONDAY, NOVEMBER 7** | | |
| 1:30 - 5:30 p.m. | CAS Business Meeting | Jefferson West Room |

## HOTEL RESERVATIONS

The 1983 AAMC Annual Meeting preliminary program was mailed to all CAS officers and representatives in August. Those who wish to attend the November 6-7 CAS meetings should register for the AAMC meeting and make hotel reservations using the forms included in the preliminary program. Please keep in mind that accommodations at the headquarters hotel (the Washington Hilton) are limited and assigned on a first-come, first-served basis. If you wish to stay at the Hilton, you should return the registration and reservation forms immediately. Additional preliminary programs may be obtained by calling 202-828-0480.

## CAS REGISTRATION INFORMATION

If you plan to attend the November 6-7 CAS meetings, please complete and return the registration form below. To cover the cost of the reception, a registration fee of $15 will be charged. If you wish to attend the reception, please enclose a check made payable to the AAMC with your registration form. Return to:

Lucy Theilheimer
Staff Associate
Department of Academic Affairs
AAMC
One Dupont Circle, N.W. #200
Washington, D.C. 20036

If you have questions, please call Lynn Morrison or Ms. Theilheimer at 202-828-0480.

PLEASE RETURN THIS FORM BY OCTOBER 7, 1983!

cut along this line

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NAME _____ ADDRESS _____

SOCIETY _____ _____

I will____attend the reception on Sunday, November 6 and have enclosed a check for $15.00

I will not____attend the reception.

association of american medical colleges

COUNCIL OF ACADEMIC SOCIETIES
1983 ANNUAL MEETING
NOVEMBER 6-7, 1983
WASHINGTON HILTON HOTEL
WASHINGTON, D.C.

## RESEARCH SUPPORT: A CONSENSUS IS NEEDED

*"...those who have responsibilities for administering NIH are far better qualified than those of us on the House floor, operating in a political environment like this, to make the determination as to where... dollars go."*
*(Representative James Broyhill, R-NC)*

*"I do not believe that it is the role of Congress to decide which disease or diseases deserve funding. Rather, a thorough evaluation of all research proposals by scientific and medical leaders in each field should more appropriately determine dollars allocated."*
*(Representative Richard Shelby, D-AL)*

Although there is bipartisan support for biomedical research and the National Institutes of Health, there is significant disagreement over how to best achieve the goals of the NIH. Many members of Congress have seen fit to support overly directive legisation regarding both the administration and research priorities of the NIH. This has been due in large part to concerted efforts by disease-specific groups advocating special attention to their particular area of interest. Organizations representing the research community--including some CAS member societies--have also played a role in these well-intentioned but misdirected efforts. This disjointed advocacy for research support, coupled with existing fiscal constraints, may seriously destablilize the research enterprise as a whole. Therefore, it is critical that the research community achieve a consensus on important policy issues and become united in its efforts to convey these positions to Federal decision makers.

This topic will be the focus of the November 6, 1983 fall meeting of the Council of Academic Societies. (A business meeting will be held on November 7.) The program for the November 6 meeting follows:

- Research Funding Priorities of the National Institutes of Health
  *William F. Raub, Ph.D., Associate Director for Extramural Research, NIH*
- Statement of Basic Principles of the Nation's Medical Research Program
  *John F. Sherman, Ph.D., Vice President, Association of American Medical Colleges*
- Congressional "Micromanagement" of the NIH
  *John Walsh, Science Reporter for News and Comment, SCIENCE Magazine*
- The Science of Politics and the Politics of Science
  *Leonard Heller, Ph.D., Vice Chancellor for Academic Affairs, University of Kentucky Medical Center, former Robert Wood Johnson Foundation Health Policy Fellow*
- Can Biomedical Research Survive Attacks of Confused Lucidity?
  *Sherman M. Mellinkoff, M.D., Dean, School of Medicine, University of California, Los Angeles*

The schedule for the November 6-7 CAS meetings and registration information appear on the following page. Background materials for the CAS plenary session and the agenda for the November 7 business meeting will be mailed to all CAS officers and representatives in mid-October. Information regarding other AAMC sessions of particular interest to faculty is also attached.

PLEASE MARK YOUR CALENDARS NOW!

association of american medical colleges

# AGENDA

## FOR THE

# COUNCIL OF ACADEMIC SOCIETIES

NOVEMBER 6-7, 1983

Washington Hilton Hotel
Washington, D.C.

*ASSOCIATION OF AMERICAN MEDICAL COLLEGES*
*One Dupont Circle*
*Washington, D.C. 20036*

COUNCIL OF ACADEMIC SOCIETIES
ANNUAL MEETING

November 6-7, 1983
Washington Hilton Hotel
Washington, D.C.

*Also refer to special AAMC Annual Meeting handout: "Emerging Perspectives on the General Professional Education of the Physician"

# MEETING SCHEDULE

SUNDAY, NOVEMBER 6

1:30 pm — CAS PLENARY SESSION — Thoroughbred Room

*RESEARCH SUPPORT: A CONSENSUS IS NEEDED*

Research Funding Priorities of the National Institutes of Health

*William F. Raub, Ph.D.*
*Associate Director for Extramural Research and Training*
*National Institutes of Health*

AAMC Statement of Principles for the Support of Biomedical Research

*John F. Sherman, Ph.D.*
*Vice President, AAMC*

Congressional "Micromanagement" of the NIH

*John Walsh*
*Science Reporter for News and Comment*
*SCIENCE Magazine*

The Science of Politics and the Politics of Science

*Leonard Heller, Ph.D.*
*Vice Chancellor for Academic Affairs*
*University of Kentucky Medical Center*
*(1982-1983 Robert Wood Johnson Health Policy Fellow)*

Can Biomedical Research Survive Attacks of Confused Lucidity?

*Sherman M. Mellinkoff, M.D.*
*Dean, School of Medicine*
*University of California, Los Angeles*

5:00 pm — ADJOURNMENT

6:00 pm — CAS RECEPTION — Lincoln West Room

MONDAY, NOVEMBER 7

1:30 pm — CAS BUSINESS MEETING — Jefferson West Room

5:30 pm — ADJOURNMENT

MINUTES

JOINT COUNCIL OF ACADEMIC SOCIETIES/ORGANIZATION OF STUDENT REPRESENTATIVES MEETING

NOVEMBER 7, 1982
WASHINGTON HILTON HOTEL
WASHINGTON, D.C.

## THE AAMC GENERAL PROFESSIONAL EDUCATION OF THE PHYSICIAN PROJECT: A STUDENT FACULTY COLLOQUY

Stanley Reiser, Professor of Humanities and Technology in Medicine at the University of Texas, Houston, opened the session with a talk entitled "The Enigmatic Future and Tumultuous Past of Medical Education." Reiser emphasized that the rapid expansion of biomedical knowledge and the application of technological advances to diagnosis and treatment are placing an increasing burden on physicians' abilities to make effective rational decisions. This burden is compounded by ethical dilemmas that were not previously apparent. The education of future physicians will require concentration on their learning how to make decisions based on complex data sets with the goal of providing medical care which meets the personal needs of each individual patient.

Following Dr. Reiser's presentation, Dr. Swanson reported on the status of the project. He pointed out that the advisory panel had met three times during the first year of the three year project and had enunciated four major concerns which are published in a pamphlet distributed to registrants for the Annual Meeting. These concerns are:

1. The rapid growth of knowledge applicable to the care of patients and the treatment of disease.

2. The ascendency of complex technology and procedures in the diagnosis and treatment of patients with overt or potential disease.

3. The coalescence of physicians, other health professionals, and hospitals into complex systems which is paralleled by a concentration of the financial support for medical care in governmental and private agencies.

4. The mounting evidence that physicians are having difficulty coping with rapid progress in medical care and in adapting to demands placed upon them by their patients and by the profession.

To facilitate the project, three working groups have been established--one on Essential Knowledge, a second on Fundamental Skills, and a third on Personal Qualities, Values, and Attitudes that should comprise the general professional education of the physician. Each of these fifteen member working groups have held one meeting and the chairmen of each who are also members of the overall panel reported on the direction they believe the deliberations of each group will turn.



Suite 200/One Dupont Circle, N.W./Washington, D.C. 20036/(202) 828-0400

Dr. John Gronvall, Chairman of the Working Group on Essential Knowledge, stated that the working group had identified four major issues.

1. That medical school curricula had become extremely intense, rigid and over scheduled. Mechanisms must be identified to assist faculty to restrain the level of detail being taught and decrease the number of scheduled hours, particularly in the preclinical phase.

2. There must be increased motivation for faculties to become involved in improving medical student teaching and the rewards for being involved in medical student teaching must be adequate.

3. The changes in the nature of teaching hospitals are creating special problems for the education of medical students in the clinical settings. Those changes that are intefering with students' acquisition of essential knowledge must be identified and adaptations of student programs must be instituted.

4. External examinations, particularly the National Board examinations, are widely used. Their influence on the definition of essential knowledge must be carefully assessed.

Dr. Gronvall emphasized that the working group did not believe that the fabric of American medical education was about to unravel, but that the group perceived significant changes were necessary if the education of future physicians was to keep pace with the rapid changes in biomedical knowledge and technology.

Dr. Victor Neufeld, Chairman of the Working Group on Fundamental Skills, reported that the group had divided skills into three categories. The first are clinical skills, which include both skills in interacting with patients and technical skills; second, learning skills, which involved skill in the personal management of information and the skill to evaluate critically the evidence presented in scientific papers; and third, communications skills with both colleagues and other health professionals. This skill includes the ability to work within the health care team. The working group has established several subgroups who are particularly concentrating on the level of skill development that should be expected of students during their general professional education as opposed to their specialized graduate medical education.

Dr. Robert Kellogg, Chairman of the Working Group on Personal Qualities, Values, and Attitudes, emphasized that the working groups had achieved consensus that medical students are still maturing and are critically susceptible to the development of positive and desirable values and attitudes. This susceptibility places a particular responsibility upon faculties to mold students' values and attitudes during their general professional education.

# CAS BUSINESS MEETING - NOVEMBER 8, 1982

## I. CALL TO ORDER

The meeting was called to order at 1:30 p.m. Dr. David M. Brown, chairman, presided. Sixty-three individuals representing 50 of the 73 member societies were present.

## II. APPROVAL OF MINUTES

The minutes of the November 1-2, 1981 CAS Business Meeting were approved as submitted.

## III. ACTION ITEMS

### A. New Members

In accordance with the established procedures, election to membership in AAMC of academic society members is upon recommendation by the CAS to the Executive Council and by majority vote in the Assembly. It was the recommendation of the CAS Administrative Board that the applications of the following organizations for membership be approved by the full Council:

American College of Neuropsychopharmacology

American Institute of Ultrasound in Medicine

ACTION: The above applications for membership were unanimously approved.
Note: On November 9, 1982 by action of the AAMC Assembly, these societies were elected to AAMC membership, increasing to 75 the number of societies in the CAS.

### B. Election of Members to the 1982-83 CAS Administrative Board

ACTION: The Council elected the following individuals to serve on the CAS Administrative Board to take office at the conclusion of the Business Meeting:

Chairman-Elect

Robert L. Hill, Ph.D. - Representative, Association of Medical School Departments of Biochemistry
Chairman, Department of Biochemistry, Duke University

Clinical Science Positions

Joseph E. Johnson, III, M.D. - Representative, Assoc. of Profs. of Medicine
Chairman, Department of Medicine, Bowman Gray

Frank G. Moody, M.D. - Representative, Society of Surgical Chairmen
Chairman, Dept. of Surgery, UT-Houston

Virginia V. Weldon, M.D. - Representative, Society for Pediatric Research and Endocrine Society
Assoc. Vice Chancellor for Med. Affairs and Professor of Pediatrics, Washington University

Basic Science Position

Lowell M. Greenbaum, Ph.D. - Representative, Association for Medical School Pharmacology
Chairman, Department of Pharmacology, Medical College of Georgia
(to serve for one year, completing the current term of Dr. Robert Hill)

## IV. DISCUSSION ITEMS

### A. Follow-Up on November 7 CAS/OSR Discussion Sessions

The Council discussed several themes which had pervaded the previous day's discussions: 1) that students feel that medical education is no longer "fun and exciting" because of information overload and decreasing personal contact with faculty, and 2) that they find that the medical school curriculum does not foster the development of communication skills, the ability to work as part of a team, or the ability to manage large quantities of information. It was noted that for the most part, the students seemed negative and cynical regarding their medical school experience. Many had complained of the impersonal nature of the "parade of stars" approach to medical education.

CAS Representatives agreed that the sessions had been worthwhile and that joint meetings with the OSR should be considered again in the future. With regard to the GPEP project, Dr. Brown encouraged Representatives to urge their societies' involvement in the project and expressed the hope that faculty would participate in the four regional hearings of the project panel.

### B. CAS Interim Meeting Plans

Given the success of the 1982 Interim Meeting, the CAS Administrative Board had agreed that the 1983 meeting should be organized similarly as a public affairs symposium. Ms. Lynn Morrison of the AAMC staff reported on the program and plans for the February 14-15 meeting. Again, key Congressional staff and Executive Branch agency officials would be invited for a plenary session and informal small group discussions. CAS Representatives would be notified in advance of the meeting of the names and addresses of Congressional staff for their respective state's delegations who had been invited to attend. Ms. Morrison encouraged CAS Representatives to arrange to meet with these individuals (perhaps for dinner following the February 14 reception) to discuss the concerns of their institutions and their academic societies.

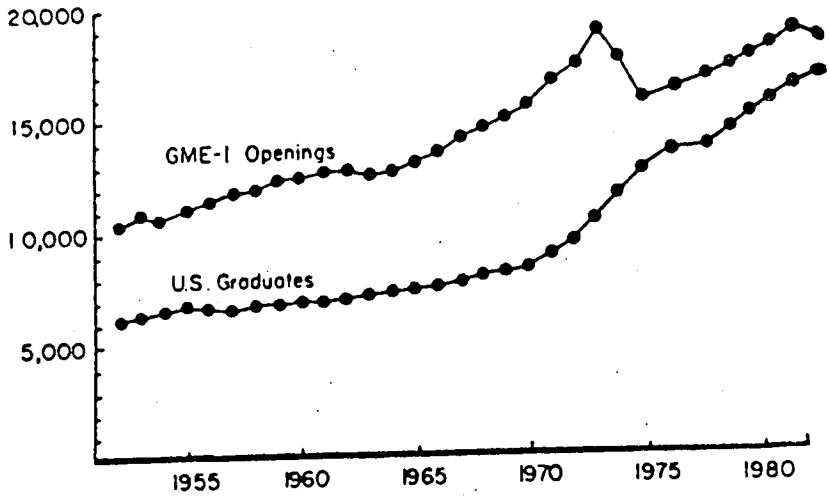
### C. Clinical Evaluation Project

Dr. Xenia Tonesk, principal investigator for the two-year AAMC study of the evaluation of students in clinical clerkships, summarized the project's findings. As might be expected, studies indicated that faculty had no difficulty in identifying and appropriately evaluating above average students. However, such was not the case regarding below average or failing students. She stated that the study also found that there is excessive emphasis on the methodology of evaluation (clerkship forms, examinations, etc.). The report recommended that in addition to psychometrics, faculty should examine the "who, where, when and why" of the evaluation of clinical clerkship performance.

D. Trends in the Numbers of Applicants for Medical School and Residency Training

Dr. August G. Swanson of the AAMC staff stated that the number of applicants to medical school has been on a downward trend since 1976. In 1982, there were 6669 (16%) fewer applicants than in 1975. Although the number of matriculants had increased by 11%, the applicant/matriculant ratio had decreased from 2.84 to 2.15. Dr. Swanson noted that the rate of decrease in applicants is expected to accelerate due to: 1) a decline in the number of college graduates, 2) the increased financial burden and scarcity of loan funds for medical students, and 3) the wide public discussion of a future physician surplus.

With regard to residency training, the 1982 National Resident Matching Program data indicated a narrowing of the ratio between the number of graduate medical education positions available and the number of graduates from U.S. medical schools (see below).




The ratio is even narrower considering the fact that 23% of the programs in the Match did not attract a single U.S. graduate applicant. Subtracting these positions results in a ratio of .99.

Dr. Swanson stated that the continuation of this trend has serious implications. By 1984, there will be 16,800 U.S. graduates. To maintain the 1982 ratio of 1:1.12, 18,000 positions will be required. To regain a ratio of 1:1.2, 20,000 positions would be needed. There is question whether hospitals will be able to fund additional residency positions and some may even reduce the number supported. In addition, Dr. Swanson noted that the removal of unmatched positions (which occurred for the first time in 1982) will increase the difficulty of finding places for unmatched students.

E. Federal Activities

1. Legislative Update: On November 29, the Congress was scheduled to return from the election recess for a lame duck session. Ms. Lynn Morrison of the AAMC staff reported on several pending issues including:

   - FY1983 Budget - With regard to the NIH, indications were that both the House and Senate intended to provide a significant increase over FY 1982.

   - Animal Research Legislation - Bills had been introduced in both the House and Senate to require that most Federally-funded research facilities be accredited by an outside agency (presumably the American Association for the Accreditation of Laboratory Animal Care) within ten years. The bills would also mandate the establishment of institutional animal studies committees to conduct periodic inspections of animal care facilities. The NIH and other research agencies would be required to place special emphasis on the development of research methods which use "fewer or no animals." Ms. Morrison indicated that it was unlikely that the bills could be passed and conferenced before the adjournment of the lame duck session but that the legislation was expected to pass in some form during the next Congress.

   - Separate Arthritis Institute - Senator Barry Goldwater and more than 40 co-sponsors had introduced legislation to establish a separate institute within NIH for the study of arthritis. On the House side, Congressman Waxman's NIH reauthorization bill also included such a provision. Again, however, Ms. Morrison noted that time constraints might forestall enactment of the legislation by both Houses until the next session.

2. HCFA Regulations: Dr. James Bentley, associate director of the AAMC department of teaching hospitals, briefed the Council regarding Medicare reform regulations recently proposed by the Health Care Financing Administration. He discussed the potential negative impact of these proposals on the administration of teaching hospitals. He also provided a detailed report on those proposals which would be particularly disruptive to academic departments by: 1) sharply reducing reimbursement to practice plans for professional services provided by teaching physicians, and 2) reducing fees for many services provided in hospital outpatient departments. Information regarding these proposals was distributed to the Council and Dr. Bentley urged that concerns be communicated to the HCFA Administrator and Members of Congress.

F. AAMC Response to Small Business Innovation Development Act

In response to numerous inquiries, AAMC staff had explored the implications of faculty participation in the development of for-profit entities eligible for funding under the NIH Small Business Innovation Research program, to be established pursuant to Congressional passage of the small business set-aside legislation. Ms. Anne Scanley of the AAMC staff reviewed a discussion paper approved by the AAMC Executive Council in September for distribution to constituents. The paper outlined the pros and cons of faculty participation in the SBIR program. The document pointed out that extra-institutional research could 1) provide greater opportunity for scientists to commercially

apply basic science discoveries, 2) foster greater university/industry cooperation, and 3) provide supplemental income for faculty. The paper also identified some potential adverse effects including the realignment of faculty loyalty and orientation toward the institution and conflicts of interest which might serve to distort traditional academic values. The paper highlighted the political implications of faculty participation in the SBIR program, emphasizing that the establishment of profit-making research ventures by academic scientists might compromise the academic community on Capitol Hill, particularly with those Congressmen who had so vigorously opposed the legislation. The paper also pointed out that academic participation might provide the illusion of success for the SBIR program and thereby enhance the possibility of its renewal in 1988.

## V. PRESIDENT'S REPORT

AAMC President John A. D. Cooper commented on the current political atmosphere in Washington as it relates to issues of concern to medical school faculty and administrators. He noted that current Federal budgetary policy emphasizes short-term goals and immediate payoffs--clearly a fiscal approach inconsistent with the nature of fundamental science. In addition, Dr. Cooper expressed concern regarding the increasing numbers (and influence) of political action committees (PACs). (In 1974, approximately 32 PACs were in existence as compared with the 3200 recently reported.) He stated that the constituents and staff of the AAMC remain opposed to adopting this approach to advocating the needs of the academic community and that it is therefore more important than ever that faculty involve themselves in the political arena. He also stressed the importance of unity within the academic community and cautioned against allowing changing Federal policies to strain relationships between basic and clinical scientists, administrators and faculty, and medical schools and universities.

On a more positive note, Dr. Cooper highlighted recent favorable Congressional actions regarding NIH and ADAMHA appropriations as a sign that the Congress is aware of the important contributions of the nation's medical schools and teaching hospitals. He urged the continued efforts of academic societies and their individual members towards assuring that the needs of the research community are recognized by Federal policymakers.

## VI. INTRODUCTION OF NEW CHAIRMAN

Dr. Frank C. Wilson was installed as Chairman of the CAS. Dr. Wilson expressed the Council's appreciation to Dr. Brown for his contribution as Chairman over the last year.

## VII. ADJOURNMENT

The meeting adjourned at 5:00 p.m.

## ELECTION OF ACADEMIC SOCIETY MEMBERS

The following academic societies are submitted for consideration for election to membership status within the AAMC:

American Association of Directors of Psychiatric Residency Training

American Psychiatric Association

American Society for Cell Biology

These societies have been recommended for membership by the CAS Administrative Board and have been forwarded to the CAS and the Assembly for approval. Their applications appear on the following pages.

MEMBERSHIP APPLICATION
COUNCIL OF ACADEMIC SOCIETIES
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*MAIL TO:* AAMC, Suite 200, One Dupont Circle, N.W., Washington, D.C. 20036
Attn: Ms. Lynn Morrison

*NAME OF SOCIETY:* American Association of Directors of Psychiatric Residency Training, I

*MAILING ADDRESS:* Executive Office: Institute of Living
200 Retreat Avenue
Hartford, CT 06106

*PURPOSE:* Please see attached Certificate of Incorporation and By-Laws.

1) To promote understanding and communication among representatives of psychiatric residency training programs; to assist in the attainment and maintenance of high professional and academic standards; to undertake studies relative to graduate psychiatric education, including social and economic aspects of residency training; and to disseminate and publish results of such studies for the benefit of and implementation by interested and concerned professional organizations.
2) To engage in any other lawful act or activity for which corporations may be formed under the Nonstock Corporation Act of Connecticut, etc.

*MEMBERSHIP CRITERIA:* There are three classes of membership (please see bylaws):

1) Institutional Members: Membership consists of psychiatric hospitals and departments of psychiatry and/or child psychiatry of other institutions which maintain accredited programs of psychiatric residency training; 2) Individual Members: Board eligible psychiatrists; 3) Honorary members.

*NUMBER OF MEMBERS:* 292

*NUMBER OF FACULTY MEMBERS:* 292

*DATE ORGANIZED:* 10/1/73

*SUPPORTING DOCUMENTS REQUIRED:* (Indicate in blank date of each document)

10/1/73 - original bylaws
5/2/83 - amended bylaws (enclosed) 1. Constitution & Bylaws

1/83 2. Program & Minutes of Annual Meeting

MEMBERSHIP APPLICATION
COUNCIL OF ACADEMIC SOCIETIES
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*MAIL TO:* AAMC, Suite 200, One Dupont Circle, N.W., Washington, D.C. 20036
Attn: Ms. Lynn Morrison

*NAME OF SOCIETY:* American Psychiatric Association

*MAILING ADDRESS:* 1400 K Street, N.W., Washington, DC 20005

*PURPOSE:* The American Psychiatric Association is a society of medical specialists brought together by a common interest in the continuing study of psychiatry, the search for more effective application of psychiatric knowledge to combat mental illness, and the promotion of mental health for all citizens. The objectives of the Association are stated succinctly in its Constitution: to improve the treatment, rehabilitation, and care of the mentally retarded and the emotionally disturbed; to promote research, professional education in psychiatry and allied fields, and the prevention of psychiatric disabilities; to advance the standards of all psychiatric services and facilities; to foster the cooperation of all who are concerned with the medical, psychological, social, and legal aspects of mental health and illness; to make psychiatric knowledge available to other practitioners of medicine, to scientists in other fields of knowledge and to the public; and to promote the best interests of patients and those actually or potentially making use of mental health services.
*MEMBERSHIP CRITERIA:* Please refer to the Constitution and Bylaws and brochure attached.

*NUMBER OF MEMBERS:* 27,604

*NUMBER OF* FACULTY *MEMBERS:* @ 12,000

*DATE ORGANIZED:* October 16, 1844

*SUPPORTING DOCUMENTS REQUIRED:* (Indicate in blank date of each document)

April, 1980 1. Constitution & Bylaws

May, 1982 2. Program & Minutes of Annual Meeting

MEMBERSHIP APPLICATION
COUNCIL OF ACADEMIC SOCIETIES
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

*MAIL TO:* AAMC, Suite 200, One Dupont Circle, N.W., Washington, D.C. 20036
Attn: Ms. Lynn Morrison

*NAME OF SOCIETY:* The American Society for Cell Biology

*MAILING ADDRESS:* 9650 Rockville Pike, Bethesda, MD 20814

*PURPOSE:* The purpose of the Society is to promote and develop the field of Cell Biology.

*MEMBERSHIP CRITERIA:* Membership is open to scientists who share the stated purpose of the Society and who have educational or research experience in Cell Biology.

*NUMBER OF MEMBERS:* 5,000

*NUMBER OF FACULTY MEMBERS:* 4,000

*DATE ORGANIZED:* 1961

*SUPPORTING DOCUMENTS REQUIRED:* (Indicate in blank date of each document)

1983 1. Constitution & Bylaws

1982 2. Program & Minutes of Annual Meeting

## ELECTION OF MEMBERS TO THE 1983-84 ADMINISTRATIVE BOARD

The 1983 CAS Nominating Committee met by conference call on May 9, 1983 to develop a slate of nominees for vacant positions on the Administrative Board. The slate of nominees which resulted from that meeting is as follows:

| | |
|---|---|
| CHAIRMAN-ELECT | Virginia V. Weldon, M.D.<br>Society for Pediatric Research and Endocrine Society<br>Washington University School of Medicine |
| CLINICAL SCIENCE POSITION | * Philip C. Anderson, M.D.<br>Association of Professors of Dermatology<br>University of Missouri - Columbia School of Medicine |
| BASIC SCIENCE POSITIONS | Joseph R. Bianchine, M.D., Ph.D.<br>Association for Medical School Pharmacology<br>Ohio State University College of Medicine |
| | William F. Ganong, M.D.<br>Association of Chairmen of Departments of Physiology<br>University of California, San Francisco School of Medicine |
| | Harold S. Ginsberg, M.D.<br>Association of Medical School Microbiology Chairmen<br>Columbia University College of Physicians and Surgeons |

Information about the nominees appears on the following pages.

* To serve on the Board for two years, completing the unexpired term of Dr. Virginia Weldon should she be elected Chairman-Elect.

NOMINEES FOR CAS ADMINISTRATIVE BOARD
CV FORM

Name: Virginia V. Weldon
Present Location (School) Washington University School of Medicine
CAS Society: Endocrine Society; American Pediatric Society; Society for Ped. Res.
Undergraduate School: Smith College
Degree: A. B. cum laude Date: 6/57
Medical School: State University of New York at Buffalo Year Graduated: 1962

Location and Nature of Major Graduate Training:

*Housestaff (e.g. Inst. & Res., Pediatrics, Northwestern 1957-59):-*

Intern & Resident in Pediatrics; The Johns Hopkins Hospital 1962-64

*Fellowship (e.g. Peds/Cardiology, Yale University, 1960-61):*

Pediatric Endocrinology; Johns Hopkins 1964-67

Board Certification:

Pediatrics - 1967 (Specialty/Date)
Pediatric Endocrinology - 1978 (Specialty/Date)

Academic Appointments (With Dates):

1967-68; Instructor in Pediatrics, The Johns Hopkins School of Medicine

1968-69; Instructor in Pediatrics, Washington University School of Medicine

1969-73; Assistant Professor of Pediatrics, Washington Univ. School of Med.

1973-79; Associate Professor of Pediatrics, Washington Univ. School of Med.

1979---;Professor of Pediatrics, Washington University School of Medicine

1983 - --; Deputy Vice Chancellor for Medical Affairs, Washington University School of Medicine

Societies/Affiliations:

Endocrine Society; American Pediatric Society; Society for Pediatric Research; Lawson Wilkins Pediatric Endocrine Society; Institute of Medicine; National Advisory Research Resources Council-NIH; Joint Committee on Health Policy; AAMC/CAS Administrative Board; Board of Directors, National Society for Medical Research

Honors/Awards:

Sigma Xi; Alpha Omega Alpha

NOMINEES FOR CAS ADMINISTRATIVE BOARD
CV FORM

Name: Philip C. Anderson, M.D.
Present Location (School) University of Missouri School of Medicine
CAS Society:
Undergraduate School: University of Michigan
Degree: A.B. Philosophy/Math Date: 1951
Medical School: University of Michigan Year Graduated: 1955

Location and Nature of Major Graduate Training:

*Housestaff (e.g. Inst. & Res., Pediatrics, Northwestern 1957-59):*

Internship, St. Luke's Hospital, Cleveland, Ohio 1955-56

Assistant Resident, Dermatology, Univ of Michigan, 1956-57

*Fellowship (e.g. Peds/Cardiology, Yale University, 1960-61):*

Resident, Dermatology, Univ of Michigan 1959-60

Chief Resident, Dermatology, Univ of Michigan 1960-61

Board Certification:

Dermatology 1962 (Specialty/Date) Allergy 1965 (Specialty/Date)

Academic Appointments (With Dates):

Clinical Instructor, Univ of Michigan 1961-62

Assistant Professor of Medicine, Univ of Missouri, 1963-67

Associate Professor of Medicine, Univ of Missouri, 1968-71

Professor of Medicine, Univ of Missouri, 1971-present
~~(Chairman of Dermatology)~~

Societies/Affiliations:

American Dermatologic Association
~~American Academy of Dermatology~~
Society of Investigative Dermatology
~~American Association of Medical Colleges~~
Association of Professors of Dermatology

Honors/Awards:

John Markle Scholar

Special Award Lecturer, American Dermatological Association
~~and Association of American Medical Colleges~~

Elected Faculty Honorary Member 1978 to Alpha Omega Alpha

NOMINEES FOR CAS ADMINISTRATIVE BOARD
CV FORM

Name: Joseph R. Bianchine
Present Location (School) Ohio State University College of Medicine
CAS Society: Association of Medical School Pharmacology
Undergraduate School: Sienna College, Loudonville, New York

Graduate School (with degrees and areas of specialization)(e.g. University of Wisconsin 1957-60, Ph.D. 1960, Biochemistry)

Albany Medical College 1959 - Ph.D.
State University of New York 1960 - M.D.

Academic Appointments (with dates)

Internship to Associate Professor of Medicine and Pharmacology
1960 - 1972 Johns Hopkins University, Baltimore, Maryland
Professor and Chairman, Pharmacology 1972-74 Texas Tech University,
Lubbock, Texas
Professor and Chairman, Pharmacology; Professor of Medicine 1974 -
present Ohio State University College of Medicine, Columbus, Ohio

Societies/Affiliations:

American Society for Pharmacology and Experimental Therapeutics
American Society for Clinical Pharmacology and Therapeutics
American College of Physicians
Amercian Pharmaceutical Association

Honors/Awards:
Vice President, American Society for Clinical Pharmacology and Therapeutics
Chairman, National Council on Clinical Pharmacology
Chairman, VSP Committee on Revision for Neurologic and Psychiatric Disease

NOMINEES FOR CAS ADMINISTRATIVE BOARD
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Name: William F. Ganong, M.D.
Present Location (School) Dept. of Physiology, University of California, San Francisco
CAS Society: Association of Chairmen of Departments of Physiology
Undergraduate School: Harvard College
Degree: A.B. Date: 1945
Medical School: Harvard Medical School Year Graduated: 1949

Location and Nature of Major Graduate Training:

*Housestaff (e.g. Inst. & Res., Pediatrics, Northwestern 1957-59):*
Intern and Resident, Peter Bent Brigham Hospital, Boston, 1949-51

*Fellowship (e.g. Peds/Cardiology, Yale University, 1960-61):*

Board Certification:

(Specialty/Date) (Specialty/Date)

Academic Appointments (With Dates):

University of California, San Francisco: Assistant Professor of Physiology, 1955-60; Associate Professor of Physiology, 1960-64; Professor of Physiology, 1965-82; Jack D. and Deloris Lange Professor of Physiology, 1982-date; Chairman, Dept. of Physiology, 1970-date

Societies/Affiliations: Amer. Assn. for the Advancement of Science(Fellow); Amer. Physiological Society(Pres.1977-78); Amer. Society for Pharmacology and Experimental Therapeutics; Assn. of Chairmen of Depts. of Physiology(Pres.1976-77); Council for High Blood Pressure Research, Amer. Heart Assn.(Fellow); Endocrine Society; International Brain Research Organization; International Society of Neuroendocrinology (VP1976-80); Society for Experimental Biology and Medicine; Society for Neuroscience

Honors/Awards:

Faculty Research Lecturer, UCSF, 1968; IFI Golden Hippocrates Award, 1970; ACDP Award for Outstanding Contributions to the Teaching of Physiology, 1978; Various named lectures.

NOMINEES FOR CAS ADMINISTRATIVE BOARD
CV FORM

Name: Harold S. Ginsberg, M.D.
Present Location (School) Columbia University, 701 W. 168th St., NY NY 10032
CAS Society: Chairman, Dept. of Microbiology
Undergraduate School: Duke University
Degree: A.B. Date: 1933-37
Medical School: Tulane Univ., School of Medicine Year Graduated: 1941

Location and Nature of Major Graduate Training:

*Housestaff (e.g. Inst. & Res., Pediatrics, Northwestern 1957-59):*
(1941-42)
Resident, 3rd Assistant, Mallory Inst. of Pathology, Boston City Hospital
Intern, Assistant Resident, 4th Med. Service (Harvard)Boston City Hospital (1942-43)

*Fellowship (e.g. Peds/Cardiology, Yale University, 1960-61):*

Rockefeller Istitute for Medical Research 1946-51 Chief Resident

Rockefeller Institute Hospital and Associate 1949-51

Board Certification:

NONE
(Specialty/Date)

(Specialty/Date)

Academic Appointments (With Dates):

Assoc. Prof.Preventive Medicine , Western Reserve Univ. School of Med. 1951-60

Prof. of Microbiology, Chairman of Department, Univ., School of Medicine 1960-73

Prof. of Microbiology, Chairman of Dept., Columbia University 1973-present

Societies/Affiliations:

Amer. Society for Clinical Investigation, Association of American Physicians, Amerian Society for Microbiology, American Society for Virology, American Association of Immunologists, Amer. Society for Biological Chemists.

Honors/Awards:

Alpha Omega Alpha, Legion of Merit, National Academy of Sciences, Institute of Medicine

## AAMC STATEMENT OF PRINCIPLES FOR THE SUPPORT OF BIOMEDICAL RESEARCH

During recent discussions, the Association's governing boards perceived the need to articulate the basic principles which should govern the funding and management of the National Institutes of Health. Such a statement was developed and adopted by the CAS Administrative Board and the AAMC Executive Council at meetings held in September (see page 21). The statement is being sent to the presidents and public affairs representatives of all CAS member societies along with the memorandum which appears on the following page.

# CAS

COUNCIL OF ACADEMIC SOCIETIES

ASSOCIATION OF AMERICAN MEDICAL COLLEGES
1 Dupont Circle, N.W.
Washington, D.C. 20036

TO: CAS Society Presidents and Public Affairs Representatives
FROM: Elizabeth M. Short, M.D.
Director
Biomedical Research/Faculty Development
SUBJECT: AAMC Position Paper

Enclosed is an AAMC Position Paper on the principles for Federal support of biomedical research entitled "Preserving America's Preeminence in Medical Research." It was adopted by the CAS Administrative Board and the Association's Executive Council on September 22, 1983. We ask you to review this document with your governing board and consider adopting it as the position of your society. It is important for all academic societies to reflect upon the general principles which should underlie the funding and management of our nation's biomedical research effort and it is hoped that this document will serve as the basis for extensive discussions of these issues. Endorsement by CAS member societies will enhance the impact of this enunciation of the principles important to preservation of the biomedical research enterpirse.

Should you need further copies of the position statement for your executive committee we will be happy to forward them immediately. At a later date we will have copies available for you to order for distribution to the entire membership of your society.

Thank you very much for your consideration and support of this Position Paper.

PRESERVING AMERICA'S PREEMINENCE
IN MEDICAL RESEARCH

## Principles for the Support of Biomedical Research

### The Problem

The evolution of the National Institutes of Health (NIH) into the world's most productive and prestigious biomedical research enterprise has been one of the important and remarkable developments in this country during the post-World War II period. Recent events suggest the favorable conditions that contributed to that phenomenon are changing. Most prominent among the forces influencing that change has been a significant modification in approaches to legislation under which the NIH has been funded and managed. Spurred in large part by dissatisfaction with funding levels for NIH programs in their areas of interest, both lay and professional leaders of many disease-oriented organizations have turned increasingly over the last decade to a responsive Congress. They have adopted a strategy of proposing new legislation as a means of satisfying their aspirations for greater visibility and support. This approach is epitomized by bills currently before the Congress that contain numerous specific directives to NIH which, if passed, would attain the relative permanence of statute. Conversely, the components of the NIH itself are moved toward relative impermanence because of the need for the periodic renewal of expiring legislative authorities, such as those for the Cancer and Heart Institutes. Given the almost infinite number of potential disease-oriented causes and the predictable competition among them for greater recognition, this circumstance creates a continuing opportunity for the expansion of set-asides, institutes, boards, task forces and programs. Over time, such legislation would create the antithesis of the broad, elegant authority

for biomedical research, unencumbered by detailed directives, as enacted in 1944. The consequence would be an inevitable erosion and ultimately the destruction of the delicate balance between the political and scientific forces that has been and remains so crucial to the success of NIH.

The Elements of a Successful Biomedical Research Program

With the record of repeated accomplishments and the strong promise of continued productivity, it is essential that the environment in which the research enterprise functions continues to assure that the solid record of the past will be emulated, if not exceeded, in the future. Because scientific inquiry in itself is a dynamic process, the management of the program and the instruments provided for its management must also be dynamic in character. The elimination of some diseases as major threats, the emergence of new forms of illness and the ever increasing and changing knowledge base all must be recognized as developments to which the content and direction of the program must be adapted. At the same time, certain considerations, regardless of the time or the state of change, will remain essential to the well-being of both the nation's biomedical research enterprise and its primary instrument, the National Institutes of Health. Accordingly, the following characteristics deserve recognition by those responsible for or interested in the continued vitality of the NIH and its programs. This community includes scientists themselves, as well as administrators, legislators and leaders in the commercial and public sectors.

- The greatest scientific productivity occurs when highly creative investigators are provided with appropriate resources and work in an environment free of excessive demands from external regulation and directives.

- The identification of the most promising research areas and the determination of their important dimensions are in large measure a scientific judgment requiring highly knowledgeable experts in related fields.

- The need for additional knowledge requires a major emphasis on basic research.

- Free communication among investigators is the lifeblood of science; adequate resources and means must be available to facilitate that communication.

- The continuing replenishment of the pool of intellectual talent and the maintenance of the infrastructure of research institutions are essential.

- Funding for biomedical research by the federal government is essential and must be the principal source for the scale of effort currently established.

- Funding of the research enterprise should be predicated on long-term perspectives and should minimize sudden or wide fluctuations.

- Evidence of scientific merit in proposed projects should be the key determinant in decisions relating to the award of funds for research support.

- The terms and conditions of fiscal support should be compatible with and not seriously distort the administrative processes of recipient institutions.

- o Investigators and organizations engaged in research must continually demonstrate an active sense of public and scientific accountability.

- o Public expectations as to the benefits of investment in scientific activity should be realistic in terms of the unpredictabilities of research, and the substantial time lag between fundamental discoveries and their widespread impact on health problems.

The evolution of this set of working principles over a thirty year period has given the nation a highly effective model for the pursuit of an important social objective. Modification should be undertaken only on firm justification and after thorough examination of the possible consequences, lest serious harm be done to the integrity of the enterprise.

Background and History

Widespread and persistent public interest in extending the human lifespan and in enhancing the state of physical and mental well-being has prompted the establishment and maintenance of a very substantial medical research enterprise in this country. This phenomenon was predicated on the premise that only with new knowledge derived from a vigorous, diverse and high quality research effort could progress be made in reducing the toll of suffering and economic loss from cancer, heart disease, arthritis, and a host of other maladies. It was further premised that only the federal government could acquire and sustain the sizable financial resources necessary for such a venture.

These conditions and their exploitation in a responsible, visionary and cooperative manner by a small number of individuals from government, academe and the public resulted in the NIH. Its success can be attributed in

large part to four unusual circumstances, all of which were essential. They were:

- o the establishment and maintenance of a crucial balance between the political and scientific forces that influence the medical research program,
- o the relationshp between the NIH and research-intensive academic institutions,
- o the provision and reaffirmation by the Congress of general authorities to the Public Health Service for the conduct and support of medical research, and
- o the continuing appropriation of funds by the Congress for the NIH operation.

The first two involved the forging of significant and enduring relationships. One was the matching of the political appeal of categorical diseases with identified scientific opportunities. This relationship is epitomized by the nature of the names given most of the major NIH organization components (e.g., National Cancer Institute) and by the widespread use of expert scientific advisors for planning and evaluating research programs and for selecting research projects for funding. The establishment and persistence of this modus vivendi is as contributory as any other single condition because of its unquestioned influence on the congressional appropriation process. Not inconsequentially, it has been probably the greatest determinant of the productivity and quality of the agency. Unfortunately, it is also probably the most fragile. Either of two far less desirable possibilities could have occurred. The scientific community could have insisted on organizing not only the research but its funding and administration along the traditional lines of scientific disciplines (e.g., a National Institute for Biochemistry). Alternatively, those fighting the causes for specific diseases could have insisted

that the enabling legislation require that the distribution of funds appropriated for research be made proportional to the comparative levels of disease-specific mortality or morbidity. That concept would tie the appropriations, at least in terms of visibility, much closer to their identified disease interests. The first approach obviously would have lessened the emotional impact generated by serious disease, meaning far lower appropriations for research. The second would have unquestionably wasted tax-derived dollars, because scientific opportunities and the incidence of disease frequently do not coincide. Instead a remarkably ingenious confluence of interests was evolved. It is most apparent in the two-tier advisory system that was established at NIH, in part by legislative mandate and in part by administrative action. The National Advisory Councils generally are composed of individuals having some identified association with a particular categorical disease and drawn from either the professions or the public, while the technical review panels, made up of individuals with established scientific reputations, are charged with the responsibility for assessing proposals for scientific merit.

The other essential relationship was a partnership between the NIH and the bio-scientific and academic communities, represented especially by the universities. While the purposes and activities of the partners are not identical, they have been highly compatible and a relationship has developed that has been generally characterized by a high degree of mutual dependence and trust. Through federal policy and funding, this arrangement has permitted the public interest to be served by the best source for the generation of new knowledge required for the fight against disease while at the same time indirectly but definitely strengthening many institutions of higher learning. The public interest has been thereby enhanced in two notable ways.

The second contributing factor of great significance was the provision in 1944 of enabling legislation in Section 301 of the Public Health Service Act that was almost unique in its combination of no temporal or dollar ceilings and few directives to the NIH. It was ideally suited to contend with the unpredictabilities of pace, direction, opportunity and outcome in a research activity. These characteristics, so inherent in scientific inquiry, require unusual flexibility in the management of a research effort. At the same time, it was eminently clear that the NIH was to be a health agency, using science to fulfill its mission. The enactment and preservation for almost three decades of this elegant legislation reflected a remarkable degree of foresight and self-restraint by the Congress. The legislature disregarded methods previously adopted for dealing with more applied activities such as defense or commerce and selected one for the biomedical research program that recognized both congressional responsibilities and limitations. It enabled:

- the Congress to discharge its responsibilities through the processes of oversight and appropriations,
- the NIH to develop a flexible management concept and operation, based on high quality science, that facilitated and strengthened the nation's biomedical research enterprise,
- the scientist to pursue promising avenues of research, and
- the public to express its aspirations through the appropriation process and participation in the Advisory Council apparatus.

The third factor was the insistence by the agency, its advisors and the Congress that scientific merit should be the primary determinant in the

allocation of research monies. This principle assured that the research supported had the highest probability of developing valuable new knowledge and offered the greatest likelihood for the most rapid and most effective improvements in the treatment of specific diseases. Fortunately, the insistence on merit as a keystone has been broadly based and unrelenting, because well-intentioned but scientifically deficient proposals for the solution of disease problems are often vigorously promoted.

The fourth major influence was the provision by the Congress of continuing financial support for the effort. Funds have been provided annually with strong bipartisan support after an extensive hearing process and with only general instructions as to their deployment.

Accomplishments of the NIH Program

As a result of these conditions, a vast increase has occurred in our understanding of the fundamentals of health and disease and the practice of medicine has been revolutionalized. Some afflictions, especially among the infectious diseases, have all but disappeared as major threats to our citizens and the knowledge base is well on its way to a level of development that will permit major assaults on more complex, chronic ailments. Scientific fields such as endocrinology, genetics, immunology, the neurosciences and virology abound with important discoveries that offer hope of earlier diagnosis or more effective measures for prevention or treatment of numerous diseases. At a time when the costs of health care are coming under increasing scrutiny, research leading to the prevention or cure of illness represents the most rewarding approach to control or reduce those costs.

In addition to the benefits which have accrued in terms of health per se, there have been two other highly desirable consequences. The first is the very significant return on the biomedical research investment that has occurred in non-medical areas. Such biomedical discoveries as freeze-drying and its application to food preservation, genetic manipulation and its uses in agriculture, laboratory instrument computers and contributions to the development of mini-computers, fiber optics and their growing use in telecommunications, and enzyme biochemistry in the development of new types of detergents have contributed significantly to the development of whole new industries. Second, the emergence of the large and high quality biomedical research endeavor in this country established the United States as the world's leader in this field. At a time when the Nation has lost some of its preeminence in other fields, our citizens can still point with pride to the maintenance of leadership in biomedical research.

Preserving the Enterprise

Despite all the accomplishments and accolades and the appearance of an undertaking of great permanence, the continued vitality of the NIH endeavor requires constant vigilance and protection. Preserving academic values under the aegis of public funding on the one hand, or adopting the special standards of public conduct in the very private research enterprise on the other, has not been easy in the United States or in any other free society. Yet the stakes for the public good are so high that every effort should be made to devise and institutionalize workable arrangements. Our current cultural emphasis on the short-term gain and the frequent failure to distinguish between science and technology contain a constant threat to the well-being of the NIH.

The sheer size of the effort with its heavy dependency on federal funding represents another point of great vulnerability. Even its own friends and benefactors when dissatisfied with their share of the resources or degree of visibility in its operations may inadvertently cause serious problems. It behooves all to whom these considerations are addressed not only to provide support for the continued integrity and vitality of NIH but also to exert restraint during periods of temporary frustration or dissatisfaction with day-to-day decisions or outcomes. Thus:

- o Biomedical scientists should keep constantly in mind their responsibilities to the public that provides the funding and determines the character of the national environment in which the scientific effort occurs. Part of this responsibility is participation in education of the public about biomedical science, its capabilities and limitations.

- o The public should recognize the limitations as well as the capabilities of scientific inquiry so as to assure a climate of tolerance for the uncertainties of scientific effort.

- o Individuals and organizations with disease-specific interests should consider possible negative impacts of their proposals for legislative mandates in specific categorical areas on the integrity and vitality of the NIH as a whole.

- o Legislators' personal agendas should have as a high priority the preservation of that fine and difficult line between their representative and advocacy responsibilities and their fiduciary responsibilities as trustees of the nation's research enterprise.

- Administrators should recognize that facilitating the scientific effort while assuring adequate scientific, financial and ethical accountability will always remain their paramount task.

- The NIH should extend and formalize their current procedures to receive, evaluate and appropriately publicize proposals by advocacy groups for modifications in program content, emphasis or priority.

Only if these considerations are recognized and accepted will the rewards of the investment for better health be fully realized.

# INSTITUTE OF MEDICINE STUDY OF THE NIH ORGANIZATIONAL STRUCTURE

The National Academy of Sciences, Institute of Medicine has begun a study of the organizational structure of the National Institutes of Health. Former HHS Secretary Richard Schweiker initiated the study in response to increasing public and political pressure to alter or expand the current NIH structure. The purpose of the study is: 1) to develop criteria to be used when assessing the need to make any substantial organizational changes, and 2) to consider possible alternatives to the current NIH structure. It is likely that the study's recommendations will have a major impact on the extent to which the public and the Congress will determine the program directions of the NIH.

An IOM committee (see page 34) has been appointed to conduct the study under the chairmanship of Dr. James D. Ebert, president of the Carnegie Institution of Washington. (In September, the administrative boards of the CAS and the Council of Deans had the opportunity to meet informally with Dr. Ebert and committee staff.) In addition to the committee, separate panels have been formed to consider historical issues relating to the organizational structure of NIH, the current structure, and possible alternative structures (see pages 35-37).

To aid the committee and panels, public hearings were held on September 26-27 to allow the opportunity for organizations and individuals to express their views. (Dr. Robert Berne, former chairman of the CAS and a member of the IOM, testified on behalf of the AAMC.) The committee was specifically interested in opinions regarding:

1) the effect of the organizational changes in the last fifteen years on the flow of funds into various fields, on the management and coordination of biomedical research, and on the comprehensiveness and quality of research in the affected fields;

2) the strengths and weaknesses of the current organizational structure of disease-based institutes, advisory councils, peer review groups, and so on, for managing and ensuring high quality and relevant biomedical research; and

3) the strengths and weaknesses of possible alternative organizational structures, particularly as exemplified by existing research organizations.

In addition to the hearings, organizations and individuals were invited to offer written comments by October 1. A CAS Alert was sent to the presidents of all CAS member societies encouraging them to submit the views of their organizations. The AAMC's written comments begin on page 38.

September 22, 1983

NATIONAL ACADEMY OF SCIENCES
INSTITUTE OF MEDICINE

Committee for the Study of the Organizational
Structure of the National Institutes of Health

Bills proposing changes or additions to the National Institutes of Health (NIH) have been introduced at every recent session of Congress. While some regard such organizational changes as a way to emphasize research in neglectd areas, others see them as administratively costly and scientifically ineffective. To develop the criteria for determining the need for change, the Congress and the NIH have called for a study of the NIH organizational structure.

In order to carry out this study the Institute of Medicine has named a committee, chaired by Dr. James D. Ebert, President of the Carnegie Institution of Washington. The other members are listed on the following page. This committee will analyze the organizational evolution of the NIH, analyze present approaches to major issues which cut across organizational lines, and recommend criteria for future organizational change.

In order to inform the committee's deliberations, separate panels have been formed to investigate 1) the effect of past organizational changes on the flow of funds into various disciplines, the scope of research in specific areas of study, and the management and coordination of biomedical research; 2) the current organizational structure of the NIH and related research agencies, and the way this structure handles management issues that cut across institute lines; and 3) alternative means for goal setting, decision making, priority setting, and budgeting that might suggest directions for organizational change. Chairmen and members of these panels, as well as a more detailed description of the charges, are listed on the following pages.

The study is funded by the National Institutes of Health. The committee held its first meeting in June 1983 and expects to release its report in late October 1984. Questions may be addressed to the Study Director, Michael A. Stoto, Ph.D., (202) 334-2268.

INSTITUTE OF MEDICINE

Committee for the Study of the Organizational
Structure of the National Institutes of Health

James D. Ebert, Ph.D., CHAIRMAN
President
Carnegie Institution of Washington
1530 P Street, N.W.
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Steven C. Beering, M.D.
President
Purdue University
Hovde Hall, Suite 206
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Baruj Benacerraf, M.D.
President
Sidney Farber Cancer Institute
44 Binney Street
Boston, Massachusetts 02115

William Bevan, Ph.D.
Vice President and Director
of Health Programs
The John D. and Catherine T.
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Stanley Cohen, Ph.D.
Professor of Biochemistry
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Maclyn McCarty, M.D.
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Thomas D. Morris
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George E. Pake, Ph.D.
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Professor, John F. Kennedy
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David S. Saxon, Ph.D.
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September 6, 1983

Panel 1 - Historical Issues

The first panel will examine the evolution of NIH's mission and organizational structure in order to shed light on the purpose of the current structure and its reaction to organizational change. This will involve gathering information on when, why, and how new institutes were started, the flow of funds to new and remainder institutes, the effect on science, and the effect on management. The panel will also examine organizational changes below the institute level, including program structure and mix of research mechanisms. It will also include a study of changes in the political climate, and the relationship between NIH, the Department of Health and Human Services, and the Congress.

Membership (Partial List)

Maclyn McCarty, M.D., CHAIRMAN
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Mildred Cohn, Ph.D.
Senior Member
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Arno G. Motulsky, M.D.
Professor of Medicine and Genetics
Director, Center for Inherited Diseases
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Richard S. Ross, M.D.
Vice President for Medicine
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The Johns Hopkins University School of Medicine
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Baltimore, Maryland 21205

Stephen P. Strickland, Ph.D.
Vice President
Aspen Institute for Humanistic Studies
1333 New Hampshire Avenue, N.W., Suite 1070
Washington, D.C. 20036

Panel 2 - Current Organization

The second panel will examine the current organizational structure of the NIH and related research agencies and explore a number of management issues that cut across organizational lines. This will include an analysis of the span of the Director's control, the program planning process in each institute and the Director's office, staffing profiles, the composition and role of study sections and advisory councils, and the role of staff and the role of advisors. It will also include studies of the organization and mission of agencies that have been proposed as additions to NIH so that the committee can develop criteria about whether or how they should be incorporated into NIH.

Membership (Partial List)

Samuel O. Thier, M.D., CHAIRMAN
Sterling Professor & Chairman
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Barbara C. Hansen, Ph.D.
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Leon E. Rosenberg, M.D.
C.N.H. Long Professor and Chairman
Department of Human Genetics
Yale University School of Medicine
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Stewart Wolf, M.D.
Director, Totts Gap Medical Research Laboratories
RD 1, Box 1120G
Bangor, Pennsylvania 18013

Panel 3 - Alternatives

The third panel will examine alternatives to the current organizational structure, especially in regard to goal setting, decision making, priority setting, and budgeting. This will include a discussion of 1) "scientific opportunity" and "burden of illness" as criteria for setting research priorities; 2) the balance between basic and targetted research; 3) the balance between intramural and extramural research; 4) the balance between funding mechanisms, such as grants and contracts; and 5) how to promote and stimulate priority or neglected research areas. The panel will explore these issues in part by an examination of other research institutions, such as the NSF, foreign medical research councils, and industrial labs. Although the panel will be cognizant of political realities, it will attempt to search for alternatives to the current structure for evaluation by the full committee.

Membership (Partial List)

Steven C. Beering, M.D., CHAIRMAN
President
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West Lafayette, Indiana 47907

Theodore Cooper, M.D., Ph.D.
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# The Organization of the National Institutes of Health
## Comments by the Association of American Medical Colleges

Pressures for the establishment of new national institutes at the National Institutes of Health (NIH) have increased significantly in recent years. Uncertainty as to what criteria should be met to justify a new organizational unit and dis-ease as to the consequences of a rapid proliferation of new institutes brought a request to the National Academy of Sciences (NAS) and its Institute of Medicine (IOM) for advice. The latter, in turn, has invited comments from interested organizations, including the Association of American Medical Colleges (AAMC).

## Historical Background

The United States Public Health Service (PHS) and its antecedents first embarked on mission-related research in 1887. Until the mid 1940's, the program emphasizing traditional public health concerns, principally communicable disease, and, to a limited extent, selected basic medical sciences; the organizational structure of both the Hygienic Laboratory (1887-1930) and the National Institute of Health (1930- 1948) reflected this scope of purpose. The activity was exclusively intramural until the PHS was authorized to award fellowships by the Randsdell Act in 1932; annual expenditures for fellowships stabilized at about $160,000 between 1938-1945. The establishment in 1937 of the NIH's first categorical institute, the National Cancer Institute (NCI), did not change the situation significantly; between 1938 and 1946, annual extramural expenditures of the NCI averaged only about $71,000 and supported an average of nine research grants.

In the immediate postwar period, the mission of the NIH was radically revised. The concept that research on the entire spectrum of human health problems was an important function of the Federal Government acheived wide public acceptability. To pursue this very broad mission, the NIH not only expanded and diversified its intramural effort, but also engaged a large community of non-government scientists, located for the most part in academic institutions throughout the Nation, to participate in a national research agenda. The prewar organizational structure was not appropriate for the new mission; accordingly between 1946 and 1950, a rapid organizational transformation was effected through the creation of seven new institutes; several more were added in subsequent years. But ever since the late forties and irrespective of its organizational structure, the NIH has assumed responsibility for the total set of problems encompassed by its new mission: to enhance human health through fostering, supporting and conducting laboratory and clinical research for the purpose of increasing the understanding of life processes and the etiology, treatment and prevention of disease.

The restructuring of the NIH could have been based on any of a number of organizational concepts. The one generally thought to have been selected was to organize by category of disease, e.g., cancer, allergy, infectious diseases, metabolic disease. On closer examination, however, other concepts are

evident in the structural evolution: disciplines of science (environmental health sciences and general medical sciences); organ and organ system diseases (heart, lung, blood, eye); biological processes (aging, human development); or some mix of these. Organizational evolution was probably more pragmatic than ideological, determined by the most viable consensus in the light of the prevailing scientific, managerial and political realities. The fact is that the scientific scope of the NIH cannot be uniquely or unambiguously encompassed in any set of discrete and nonoverlapping groupings. Most research problems are multifaceted, simultaneously embodying categorical, disciplinary, biological process and organ or organ system elements. As long as an organizational scheme permits the NIH to discharge comprehensively and effectively its entire range of responsibilities, it should be deemed satisfactory. The present structure appears to meet this specification.

## The Problem of Organizational Proliferation

One major characteristic of most organizational schemes, including that of the NIH, is that they are more or less open-ended and without an inherent logical basis for limiting the number of operating units. Widespread concern that excessive proliferation of organizational units was imminent precipitated the present IOM study. The AAMC feels that a further increase in the number of national institutes would create important problems.

- The span over which an executive can exercise control is finite. The current number of institutes and institute equivalents requires that eighteen operating units report directly to the Director, NIH; this number already stretches reasonable limits.

- Institutes tend to develop an entirely proper sense of territoriality, pursuing their assigned mission with singlemindedness. Thus, their effort tend to become walled off into fixed compartments, with resources carefully husbanded for projects within, and only within, those compartments. Proliferation of institutes fragments the effort into ever smaller compartments, sequesters resources into programs of ever narrower scope, and makes it managerially difficult to reallocate them when opportunity wanes or when overlap problems commend redistribution. Thus, program and fiscal flexibility are reduced.

- With new institutes come new national advisory councils. Overall, loss of program and fiscal flexibility is enhanced by the participaticipation of these non-government advisors who, selected for their specialized expertise, are likely to have a parochial outlook. Thus, the greater the number of national advisory councils, the greater the tension between the need of the NIH for flexibility to capitalize on research opportunity wherever it emerges and the preoccupation of external advisors with the problems of single disciplines, fields or specialties.

- The narrower its scope and the more intense its focus, the more likely an institute is to underemphasize biomedical problems that,

while peripheral to its central mission, are closer to its than to that of any other institute.

## Constraint on Proliferation

To resolve the dilemma of how to subdivide the mission of the NIH into manageable segments without risking crippling or destructive fragmentation, the AAMC suggests that:

> some more explicit limitation be established, de facto or de jure, on the number of operating units reporting to the Director, NIH.

However, for an arbitrary limitation such as this to solve more problems than it creates, its adoption should be coupled to the development of new mechanisms for short- and long-range adjustments to accommodate new realities brought about by scientific progress. Over long epochs, in a field as dynamic as biomedical science, the problem structure of any field is likely to be made obsolete as new knowledge is acquired. Most bioscientists are confident that, eventually, the cancer problem will be solved; when that day comes, an NCI will obviously not be needed.

To maintain concordance between organizational structure and progress in bioscience, the AAMC suggests that:

> the NIH periodically, perhaps decennially, reevaluate, reaffirm or revise its organizational structure through a process that involves the participation of a maximum number of interested government and nongoverment organizations.

This periodic reexamination would require justification of the organizational structure from a zero basis and in the light of the then prevailing realities. The range of possible actions could include: the establishment of new and the disestablishment of old institutes; the regrouping of established programs into new configurations; the addition or deletion of programs; and the addition, expansion, elimination or transfer of subunits. A definitive schedule for major review of the structure of the NIH would, it is hoped, stimulate widespread discussion within the community of interest; the predetermined constraint on proliferation would encourage collegial cooperation and negotiation among the parties of interest.

Over short periods, the annual cycles of budget development provide a reasonable basis for accommodating scientific progress. However, to improve the fidelity with which program content tracks scientific progress, the AAMC suggests that:

the NIH extend and formalize their current procedures to receive, evaluate and appropriately publicize proposals by advocacy groups for modifications in program content, emphasis or priority;

and

the strength of the Office of the Director (OD) for resolution of overlap issues be increased.

First, the forum. It is established policy at the NIH to be open to suggestions from all quarters. But interactions between special interest advocates and NIH officials have not been systematically documented, nor have the context and outcomes of the discussions been made generally available. Some special interest groups are well organized, funded and staffed; their areas of concern are concordant with major NIH program emphases; they share a large set of common interests as well as a very common information base with NIH officials; the magnitude and urgency of the problems to which they are committed, as well as the size of the NIH commitment to these problems, are matters of which the NIH, the scientific community and the public are widely aware. Clearly, these groups have no major problems, and require no special processes, to have their day in court. The proposal for some kind of a forum, however, would encourage less powerful groups to interact officially and publicly with the NIH. Thus, the NIH could reap the benefit of the information and insights of organizations focused intensely on problems of diseases that, while perhaps less frequently encountered, account for significant mortality and morbidity and profound human tragedy. Interaction with these groups would also provide the NIH the opportunity to examine and display the extent of its engagement with the problem under discussion, a mutually useful exercise. The records of such meetings, with the views of both parties on the state of research in the field, would be useful to others besides the participants: the scientific community at large should find the information valuable in assessing the validity of NIH program priorities; the higher levels in the Executive Branch should welcome the inclusion of material from these interactions in budget justifications; and the Congress should find enlightening the discussion between the NIH and the special interest advocates on the scientific issues at stake.

The absence of a formal and visible public forum for presenting claims on the NIH budget increases the credibilty of claims that access to a fair, impartial, objective hearing is not possible; and, thereby, it invites political intervention. The creation of a process of the type suggested would not only enhance the public trust in the integrity and fairness with which the national research enterprise is managed, but also increase the sensitivity with which the annual budget process adjusts program priorities.

The AAMC suggestion to strengthen the Office of the Director, NIH, relates to the fact that, in the interval between budget development cycles, as well as during the course of budget development, resolution of overlap problems depends on negotiated agreements between the involved organizational entities or on effective intervention by the Office of the Director. Several

devices might be employed to achieve the goal of strengthening the OD: a small portion---say 0.5%---of the budget of each institute's budget could be designated as reserved during the first three quarters of each fiscal year for the discretionary transfer by the Director to some other institute(s); or an equivalent---a specified fraction of National Advisory Council-approved grant applications---could be designated as transferable for award purposes from one institute to others. The value of overtly and explicitly strengthening the hand of the Director, NIH, by these or other devices may be largely symbolic since traditional mechanisms---formal reprogramming requests---would accomplish the same end. But the Association believes that the effectiveness of the Director, NIH, would be substantially strengthened if that individual were formally accorded modest discretionary authority that could be quickly and independently exercised.

## Preserving the NIH

Even though the charge to the IOM has been phrased as an organizational issue, the AAMC, as was made clear in the testimony presented on September 26 by Dr. Robert M. Berne, believes organization to be a derivative, not a primary, problem. The unchallenged preeminence of the U.S.A. in biomedical science and its wide margin of leadership in medicine is far and away more a tribute to how the NIH functioned than to how it was organized. What is most important and what must be preserved above all, is the policy framework that has characterized NIH operations for the last several decades and the statutory authority essential for it. The enclosed statement entitled "Preserving America's Preeminence in Medical Research," articulates the AAMC's convictions in this matter (see page 21).

## The Current Policy Framework

The criteria by which program objectives are selected and appropriated funds allocated have been crucial elements in the success of the NIH. By longstanding policy, the establishment of research programs depends on the identificaton of important scientific opportunities that are available for exploitation; that a health problem exists does not justify investments, absent opportunity. Equally longstanding is the policy that only high quality research proposals should be funded. In devising as well as in executing these policies, the NIH has relied heavily on nonfederal scientific experts for advice. National advisory councils, with both scientific experts and "consumer" representatives, have played the major role in shaping program emphasis; technical merit panels, notably the study sections, have been responsible for objective and impartial evaluation of the scientific quality of all research grant applications. The steadfast adherence to these policies over almost four decades has not only resulted in an undeniably productive research effort but earned the confidence of the scientific community, the Executive and Legislative Branches of government, and the general public in the responsibility and integrity with which public funds are expended. It is for these reasons that the AAMC strongly recommends that:

Program selection and project funding at the NIH continue to be based on scientific promise and quality.

Statutory Basis for NIH Policy

Not so widely recognized as the importance of the above policies is the fact that the statutory base which the Congress provided to the NIH has important characteristics that have enabled the NIH to function in the exemplary manner just described. Administrative flexibility not only to promulgate and implement these policies but also to develop appropriate mechanisms and to prescribe appropriate terms and conditions of support, has resulted in the emergence of a national system of research support that has been widely applauded and extensively emulated.

From 1944 until 1971, the NIH operated under broad and permanent statutory authority, without either time or dollar limits and, except in the instances of the NCI and the NHLBI, has continued to do so since 1971. Detailed legislative specification of the authorities of federal science adminstrators and of the modus operandi of federal science agencies---so difficult to get off the statute books, once enacted---limits necessary flexibility and discretion. In this context, the AAMC recommends that:

> a powerful case be made to convince the Congress to refrain from detailed statutory prescription re the NIH and to rely, instead, on general authorities coupled with oversight focused on "systems" problems.

The recently published NAS report entitled "Strengthening the Government-University Partnership in Science" deals with many of the currently troublesome aspects of the relationship between academe and the federal establishment. In one sense, it is a tribute to the wisdom with which the government has behaved for almost 40 years that the many misgivings about government support of scientific research, so widely held and vigorously articulated in the five year period preceding the activation of the National Science Foundation, did not surface in the course of this study.

But for more than a decade, the role of the Congress in the governance of federally funded scientific research has become far more interventionist. Ever since the new legislative authorities for NCI and NHLBI, enacted in 1971 and 1972 respectively, periodically brought Title IV of the Public Health Service Act before Congressional legislative committees, there has been a growing tendency for the latter to assume, to a major degree, responsibility for the detailed management of the NIH's scientific research program through statutory direction. Occasional intervention by legislative committees to mandate the establishment of new institutes (Eye, Aging) is not unprecedented and the Congressional interest in conferring institute status on arthritis and musculoskeletal disease could be viewed as just the latest episode in a long saga. To take this view would, in the opinion of the AAMC, be a mistake and would be to miss a rare opportunity to examine how the Congress might most effectively contribute to the acheivement of government research objectives.

A publicly supported biomedical research program must obviously be accountable, not only fiscally and scientifically, but also politically; i.e.,

to the public and its elected representatives. Given this inescapable reality, the paramount issue, in the opinion of the AAMC, is what approach to accountability takes advantage of what the Congress is most qualified, and avoids what it is least qualified, to do. Sound decisions with respect to the national research agenda--scope, long- and short-range objectives, relative priorities and intensities, etc. -- require balanced judgments, based on the understanding of complex and extensive scientific and technical information and considerations. The inescapable responsibility of a federal science agency is to construct and to use an appropriate apparatus for making these decisions. The national legislature is not the place and national legislators are not the people to perform the task. On the other hand, Congress is eminently qualified to examine this decision-making apparatus and to determine whether the "system" meets an acceptable standard of political accountability. Is it competent, objective, fair, sensitive to public need, responsive, responsible, innovative, imaginative, etc.? Do the processes for budget development enable careful and comprehensive analysis of scientific opportunity, explicit examination of these opportunities in light of the importance of health problems, and holistic assessment of priorities by field of science and mechanism of support? Such a Congressional oversight role is entirely appropriate and highly valuable. Its adoption would match talent to task--with the Congress and the scientific community assigned roles that each does best.

The AAMC hopes the IOM would recognize that the issue before it cannot be adequately assessed without a thorough exploration of the role of the Congress in the governance of science.

## MEDICARE PROSPECTIVE PAYMENT: IMPACT ON TEACHING AND RESEARCH

Beginning October 1, 1983, Medicare began implementing its new prospective payment system for inpatient hospital services. This system, which pays a predetermined price for each patient depending upon the patient's clinical condition, dramatically alters the environment for hospitals. Because teaching hospitals generally have higher costs per case than non-teaching hospitals, many observers expect teaching hospitals must undertake dramatic changes if they are to prosper in the years ahead. The anticipated changes have secondary consequences and implications for both the clinical and basic science faculties. To prepare for and plan their own futures, faculties must understand the likely implications of prospective payment for their patient care, educational and research roles.

Medicare Prospective Payment
Issues for the Faculties: Impact on Teaching and Research

CHANGE:

1. Medicare Payments for Inpatient Services

   a. Predetermined Payments

      - per case payment

      - outlier payments

      - indirect medical education adjustment

   b. Cost Reimbursement Payment

      - direct medical education costs

      - capital costs (through 1986)

      - distinct part psychiatric/rehabilitation units subject to per case limits

2. The Major Change

   a. predetermine payment for each patient

   b. payment based on diagnosis related groups (DRG)

3. The key implication: services consume revenue they do not generate revenue

4. Changes in payment system require changes in hospital

   a. adaptations will cause stress and conflict

   b. must understand incentives to manage

CONFLICTING OBJECTIVES:

1.

| Payer Objectives | Physician Objectives |
|---|---|
| Limit expenditures | Increase income |
| Share financial risk | Limit financial risk |
| Constrain capacity | Add services, programs |
| Low intensity care | High technology care |
| Compete on price | Compete on competence |
| Conform to average | Autonomy and discretion |
| Specialized hospitals | Full service hospitals |

2. Hospital:

   a. Caught in the middle of conflicting objectives

   b. Trying to strike a balance

CLINICAL STAFF IMPLICATIONS:

1. Increased visibility and accountability for practice patterns

   A. Hospitals will create patient specific data systems to match revenues with expenses

   B. Permit analysis of practice patterns by type of case, individual physician, or physician group

   C. Identification of "empirical" treatment profiles

2. Increased attention to the management of hospital

   A. Clarified mission statements: must provide a basis for making choice among activities

   B. Modify clinician roles

      1. Management of Patient Care

         a. Medical records documentation

         b. Efficient production of cases

            1) Create locally determined practice protocols

               a. length of stay

               b. intensity of care

               c. ancillary use

            2) Consistency with patient protocols

            3) Justification of atypical patterns

         c. Disciplining unnecessary utilization

            1) Identification of unnecessary services

            2) Persuasion of colleagues to conform

            3) Detailed delineation of privileges

         d. Development of referral patterns

            1) Obtain necessary volume for high technology services

            2) Recruit low intensity patients to compensate for absence of severity measure

      2. Management of Education

         a. Decision on types of programs and numbers of students

b. Teaching by example: the clinical culture

c. Careful supervision of what is ordered by trainees

3. Expansion of Clinical Research Topics

a. Development of normative treatment protocols

b. Development of improved case mix categories--severity, intensity, dependency

c. Studies to be internally funded

1) payer has conflicting interests

2) knowledge is competition

3. Hospital's need for a profit

A. Need healthy bottom line to attract capital or have government allocation

B. Net income available for

1. Subsidy for unprofitable services

2. Development of new programs, services: self-funding of new technology

3. Management of debt/equity balance

C. New technologies/services must provide operational revenue and capital recovery

D. Hospital's capital investments must include management capabilities and systems

E. Key issue: who decides "retained earnings"

4. Income from clinical services

A. Medicare will attempt to separate teaching and educational supervision from other hospital activities

1. Educational activities a "pass through"

2. Noneducational activities divided into fixed payment for A services and fee-for-service payments

B. Hospitals revenue for Part A services limited

1. Support for physicians must compete with all other expenses

2. How reward expanded physician roles and behavioral changes with restricted revenues? Change practices to make dollars available

C. Hospital may not be able to afford recruitment promises, clinical costs of research award, low volume technologies

D. Financial conflicts

1. Hospital paid per case, physician paid per service

2. Hospitals may loose money on cases with high fees

3. Hospitals need low intensity admissions, physicians competing with freestanding ambulatory centers

4. HCFA exploring per case payments for physicians

CONCLUSION:

1. The stress of change will be real

2. Leadership must

A. Communicate environmental awareness

B. Stimulate and reward cost conscious behavior

C. Demonstrate sustained diplomacy

D. Develop conflict management/resolution skills and processes

3. Leadership's choice: opportunities versus crisis

## INDIRECT COSTS: PROMOTING DIALOGUE BETWEEN FACULTY AND ADMINISTRATORS

The subject of the indirect costs of research, always a source of significant tension and misunderstanding between faculty and institutional officials, has recently assumed greater importance and visibility. In the context of a grossly inadequate NIH budget proposal for FY1983, the Administration submitted plans to reduce by ten percent the overall reimbursement to grantee institutions for incurred indirect costs. That threat stimulated an immediate and vigorous reaction from university presidents, who sought a complete restoration in pleas to both the Executive and Legislative Branches. Faculty-oriented organizations, already critical of previous and repeated arbitrary reductions in the direct costs of awards, responded by demanding the funding of at least 5,000 competing project grants at or near "full funding," even at the expense of reductions in overhead reimbursement. The increasingly hostile nature of the relationships among faculty, university administrators and NIH officials over this issue was partially and temporarily eased by subsequent Congressional and NIH actions.

A similar proposal in the FY1984 budget submission for the NIH reignited the deterioration in those relationships. The AAMC, seeing merit but also faults in the position of each of the three parties, sought resolution by two simultaneous approaches. Since shortfalls in funding have been the fundamental problem, the Association participated in the formation of a new, very broad-based coalition that worked successfully for higher NIH appropriations. In addition, prompt efforts were made to convene the representatives of the three parties for discussion as to how the problem could be mitigated. The continuation or worsening of the situtation could seriously harm the vitality of both the grantee institutions and the research enterprise.

Both efforts have been initially successful. The Congress is disposed to increase the FY1984 NIH budget significantly and some productive meetings have been held (see following page). However, these are but first steps in a necessary continuum of activities during the immediate future. With regard to overall funding, similar but even more broadly based efforts must be continued in the future to assure adequate funding for all NIH programs. In terms of the indirect cost issue, the points made in the letter beginning on the next page must be widely circulated and acted upon within individual institutions as well as by the pertinent national organizations.

The AAMC believes that both faculty members and institutional officials have a major opportunity and an important responsibility in this situation and should initiate local as well as national efforts accordingly.

September 6, 1983

Dear Colleagues:

Representatives of the university associations and the biomedical research community met in Washington on July 8 to discuss the future of NIH funding. The meeting was attended by a number of leaders of scientific societies as well as by university presidents and association staff.

The objective was to reach agreement on strategy and tactics for increasing future support for the biomedical research enterprise. We met for four hours of vigorous and productive discussion, at the end of which we agreed fully on the following points:

- o A healthy biomedical research venture supported by full funding is a vital national objective—parallel with our need for strength in the physical sciences. There has been slowed growth in support for biomedical research since 1968 with real shrinkage over the last five years. This course of events has resulted in a substantial accumulated liability. The immediate objective of the Coalition for Biomedical Research Funding, to add $414 million to the Administration's proposal for FY 1984, is a promising start on the task of reducing this shortfall and making it possible for NIH to fund at full direct and indirect costs a minimum of 5,000 competing research grants, as well as training programs, centers, the Biomedical Research Support Grant program,--in short, a balanced program. Full funding of a sound biomedical research program would require a substantially higher figure than the additional $414 million recommended by the Coalition. We commit ourselves, the associations, and the societies to the effort of gaining Congressional support for the Coalition proposals now and greater improvements in future years.

- o There is a need to resolve the problem of indirect costs, because they pose a singular threat of discord within the academic community and frequently lead to mixed messages to the public and to Congress. The NIH difficulty in reconciling an inadequate Administration budget with the real needs of research is understandable, but proposing cuts in either direct or indirect costs of research will damage the enterprise. We recognize, however, that the rise in indirect costs poses long range problems. At a meeting with PHS leadership on June 27, that some of those listed below attended, it was tentatively agreed that

the President's Science Adviser be asked to see that a study of the problem of indirect costs be undertaken. In particular, it should address the reasons for the increases in such costs over the past decade, and ways to control and, if possible, reduce them. We support that proposal. As a corollary, we urge that the Administration suspend its efforts to obtain budgetary relief either by cutting numbers of grants or by arbitrarily reducing direct or indirect costs—any of which will result in serious damage to the nation's biomedical research enterprise.

- o We agreed that an important source of tension between researchers and university administrators over the indirect cost issue is the complexity of the rules and the cost-accounting measures employed, and the general failure to date to gain faculty sympathy with them. Faculty members complain that their administrations are often confusing or opaque in their explanations; and conversely, administrators sometimes feel that their faculty constituents are refractory to explanation. However one might apportion the blame, we think, the continued discord simply cannot be accepted. The University presidents present, accordingly, agreed to urge their colleagues to renew efforts to present their faculties with clear explanations of what indirect costs are and how their institutions handle them. We also agreed on the desirability of involving faculty meaningfully in the development of institutional policies respecting indirect costs, and of exchanging among institutions particularly useful explanations, documents, or accounting or budgeting procedures. For their part, the society representatives agreed to encourage among their members a receptiveness toward this proposed dialogue.

- o Finally, we agreed that indirect costs as a category are particularly important targets for economy in our institutions. During the discussion, we shared some examples of institutional efforts to reduce such costs selectively. The associations will try to act as devices for communicating successful experiences, and will urge their member institutions to make such economies a matter of high priority.

We repeat that the discussion was, in our judgment, positive and highly significant. We believe it lays the foundation for strong cooperation in working for improvements in biomedical research funding, and addressing objectively our differences over the troubling matter of indirect costs. We hope you will communicate the results to your colleagues so that we can all move forward together on our main business—which is to strengthen the capacity of our faculties to do research that the Nation vitally needs, and to protect our own capacity to nurture and support that work.

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## REPORT OF THE NATIONAL RESEARCH COUNCIL COMMITTEE ON A STUDY OF NATIONAL NEEDS FOR BIOMEDICAL AND BEHAVIORAL RESEARCH PERSONNEL

In the National Research Service Award Act of 1974, the Congress requested that the National Academy of Sciences continually monitor the nation's needs for biomedical and behavioral research personnel. A committee formed for this purpose (see page 56) issues biennial reports which detail the specific subject areas in which such personnel are needed and the nature and extent of training which should be provided. The Committee focusses on the programs of the National Institutes of Health; the Alcohol, Drug Abuse, and Mental Health Administration; and the Division of Nursing of the Health Resources and Services Administration.

The Committee's 1983 report will be issued in late October. An advance copy of the report's executive summary appears on the following pages. (Please note that until the full report is released officially, the contents of the summary should not be cited or distributed further.) Dr. Robert Hill, chairman of the Committee, will discuss the panel's most recent findings and recommendations.

# PERSONNEL NEEDS AND TRAINING FOR BIOMEDICAL AND BEHAVIORAL RESEARCH

THE 1983 REPORT

of the

COMMITTEE ON NATIONAL NEEDS FOR
BIOMEDICAL AND BEHAVIORAL RESEARCH PERSONNEL

INSTITUTE OF MEDICINE

NATIONAL ACADEMY OF SCIENCES

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# 1. INTRODUCTION AND SUMMARY

We are concerned here about the quality of biomedical and behavioral research conducted in this country and the role that federally supported research training plays in developing and maintaining it. Evidence about the quality of research and the scientists who conduct it often becomes available only over a rather long period. Hence, we must be aware of the long-term effects of the training programs. We must also try to anticipate future research personnel needs in a quantitative sense. Thus a major part of this report is devoted to an assessment of the current and projected supply of and demand for scientists in the biomedical and behavioral fields.

Two fundamental principles underlie the work of this Committee over the past 8 years:

1. vigorous research activity is the key to continual progress in most scientific and technical fields and
2. an adequate flow of well trained new scientists is necessary to maintain the quality and vitality of research conducted in these fields.

With these principles in mind, the Committee has attempted to respond to the task presented to the National Academy of Sciences (NAS) by Congress in the National Research Service Award (NRSA) Act of 1974 (P.L. 93-348) and amendments. The NAS was asked to determine the nation's need for biomedical and behavioral research personnel and to assess the research training programs offered through the National Institutes of Health (NIH), the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), and the Division of Nursing of the Health Resources and Services Administration (HRSA).

In the previous six reports issued since 1975, the Committee has outlined its methodology, formulated conceptual models of how the market works in these fields, and developed analytical models that have proved useful in monitoring the system and making projections. In the process, we have compiled a substantial body of relevant data, most of which is presented in the Appendix.

The Committee has interpreted national needs primarily, but not exclusively, in terms of the number of positions expected to be available in both the academic and nonacademic sectors for doctorate-level biomedical and behavioral investigators. The number of positions available reflects the market demand for scientists and depends on an array of economic, political, and sociological factors, one of the most important of which is the availability of funds to support research. We have attempted to define the appropriate level of training to be supplied by the above-mentioned federal agencies on the basis of projections of supply and demand, considerations of how the system works to produce trained researchers and teachers, and by examination of employment patterns and practices.[1]

Although these short-term market projections have weighed heavily in our deliberations, we also have been influenced by a perception that training support contributes not only to the quantity of students entering a field, but also to the quality of the training environment and the competence of the program graduates. The immediate effect of training support for a field is to increase the number of students entering the field. In the longer term, the probable effect is to increase the quality of research.

We believe that much of the recent progress made in biomedical research in this country can be traced to the strong federal commitment to research and training that emanated from the National Cancer Act of 1937 and subsequent legislation. That commitment has been instrumental in establishing a powerful and effective biomedical research enterprise based on a cooperative arrangement between the federal government, acting principally through the NIH, and the universities. This enterprise is a national resource that has provided this country with a superb base for health related services and technological leadership in many biomedical and behavioral fields. Developments during the past 30 years have transformed our knowledge and understanding of biology. Achievements of research in many disciplines during this period have led to new technologies contributing to a flood of discoveries in molecular biology, biochemistry, physiology, and medicine.

Recombinant DNA technology, which makes possible the transfer of hereditary units from one species to another, represents a significant addition to the "new biology." It permits, for example, bacteria to become "factories" that produce substances of biological and medical importance. It has already led to the synthetic production of human insulin, somatostatin, and growth hormone. The effectiveness of these substances in treating insulin-dependent diabetes and certain types of dwarfism is now undergoing clinical trial. Techniques for combining genes can also yield large quantities of pure antigen which in the

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[1] For an extended discussion of the system by which biomedical and behavioral scientists are trained and absorbed into research positions, see Chapters 3 and 4 and also the 1981 Report of this Committee (NRC, 1975-81, pp. 10-15).

near future may be used to produce safer and more potent vaccines for immunization against specific infectious agents.

Substantial progress has been achieved in understanding of the immune system. Scientists have uncovered genetic mechanisms that control the immune response to such invaders as cancer cells, transplanted organs, and environmental agents that cause allergies. Involved here is the discovery of the major histocompability complex (MCH). A region of this "super gene" appears to be the major regulator of the immune response to foreign substances or antigens. Disorders such as multiple sclerosis, juvenile diabetes mellitus, systemic lupus erythematosus, and myasthenia gravis may be associated with certain recognition antigens on the surface of cells--antigens located under the directions of MHC. Further knowledge of MHC can result in more effective means for supplementing natural resistance to these diseases, as well as better techniques for organ and tissue transplantation.

Highly specific antibodies can now be produced in the laboratory through a procedure that consists of fusing in culture a myeloma cell with single lymphocytes from an immunized animal. The resulting hybridoma yields clones of lymphocytes that emit monoclonal antibodies which have the potential for development of specific vaccines, diagnostic tests, and treatments for many diseases. Recently, for example, investigators have used human lung cancer cells to immunize animals and then prepare monoclonal antibodies which can distinguish human tumor cells from normal cells. This technology makes possible the detection of cancer at a very early stage. Eventually, clinicians may be able to attach radioactive or chemotherapeutic agents to the antibodies and thereby kill cancer cells without harming surrounding healthy tissue.

The detection and isolation of oncogenes has provided a new paradigm for cancer research. Oncogenes are dominant genetic elements whose expression within a normal cell leads to malignant transformation. Some major questions remain to be answered. At what point in the processes leading to malignancy do oncogenes act? What are the functions of these oncogenes and by what mechanisms do they effect cell transformation? Knowledge of the metabolic pathways in which genes and their products interact could ultimately lead to the development of rational strategies for the treatment and prevention of malignant cells.

The developments described above may be viewed as dividends on past federal investment in biomedical research and training. But it is critically important to recognize that the federal commitment to support biomedical research and training means that federal budget decisions have great impact on these activities, although other sources of funds are available to some extent.

The rationale for government support of biomedical and behavioral research "derives from its responsibility for the general welfare to do that which is necessary whenever other mechanisms do not suffice" (NRC, 1975-81, 1979 Report, p. 19). Research training is a necessary and vital adjunct to the research program. The Committee's recommendations for research training have been formulated to promote

stability in the market for biomedical and behavioral research personnel, while preserving the quality of the training program and ensuring that adequate numbers of well-trained scientists are available to meet the nation's needs.

## PRIORITY FIELDS

One of the most difficult components of the Committee's task has been that of determining the appropriate allocation of training grant and fellowship funds among fields. For purposes of this study, the biomedical and behavioral fields have been divided into five major categories as shown in the following table along with the distribution of National Research Service Awards made in the last 6 years and the Committee's recommended distribution through 1987:

Distribution of National Research Service Awards

| Categories | Actual 1977-82 | Recommended 1982-87[a] |
|---|---|---|
| 1) Biomedical Sciences | 56% | 57% |
| 2) Behavioral Sciences | 10% | 9% |
| 3) Clinical Sciences | 32% | 30% |
| 4) Health Services Research | 1% | 2% |
| 5) Nursing Research | 1% | 2% |
| | 100% | 100% |

[a]Awards in the short-term (3-month) training program for health profession students have been calculated at 1/4 of a full-time equivalent award. An average of 1,600 such awards per year from 1982-87 (400/yr. on an FTE basis) have been included in the clinical sciences in this table.

Although the boundaries between these categories are not always clearly drawn in practice,[2] conceptually they define fairly distinct sets of problems. Each major category has been analyzed separately, and our recommendations have generally been directed to the allocation of training awards among these major categories.

It has proven to be an especially difficult task to identify priority fields within each major category. The Committee has in the past identified certain fields such as biostatistics, biomathematics, epidemiology, toxicology, environmental health, and the clinical sciences as meriting high priority for training support. However, we

[2]See Appendix Table D5 for the taxonomy used to define the categories.

have refrained from being more specific because basic research is such a fluid and unpredictable activity. We have found no way of accurately predicting precisely where and when the important scientific developments will occur and we have no recent data to indicate that some or all of the earlier conclusions are still valid. The Committee's position is that the peer review system continues to provide the best available method for distributing training funds within the general guidelines we recommend. Those guidelines are based on the informed judgment of the panelists and Committee members, who have considerable experience relevant to the task and who have reviewed extensive analyses of the current and projected market for scientists in each area and other relevant information.

## SUMMARY OF CURRENT OUTLOOK

In previous reports the Committee has called attention to the sustained growth in the number of biomedical Ph.D.s occupying postdoctoral positions. Although a period of postdoctoral training has long been a traditional and accepted phase in a bioscientist's career, the build-up of the postdoctoral pool was viewed as an indication that the supply of biomedical scientists was growing faster than the number of positions requiring their skills. Indeed, more than 40 percent of the biomedical postdoctoral trainees who received their doctorate degree between 1971 and 1975 reported that they remained in postdoctoral status longer than they might otherwise have done because they could not secure a more permanent position (NRC, 1975-81, 1977 Report, Vol 2, p. 31).

There now are some indications that the postdoctoral pool of bioscientists may soon level off. Most important, the number of bioscience graduate students has begun to drop, and this is likely to result in fewer Ph.D.s produced and fewer of them entering the postdoctoral pool. There has been very little growth in biomedical Ph.D. production since 1972.

The Committee has expressed concern about the lack of interest in research careers on the part of young physicians. The sustained expansion of clinical faculties in medical schools since the early 1960s has contributed to the demand for clinical investigators, and the growing number of unfilled positions is evidence of need. In 1981, the Association of American Medical Colleges (AAMC) reported to the Committee that only about 21 percent of individuals newly hired to fill vacancies on clinical faculties at medical schools were physicians with some postdoctoral research training (NRC, 1975-81, 1981 Report, p. 2). There is an increasing tendency to rely on practice income generated by medical school faculty members to bolster medical school and departmental budgets. This growing dependence tends to detract from faculty members' commitments to clinical investigation. To the extent that faculty members must help support their salaries and expenses through clinical practice, the resarch effort is weakened.

Problems in our health care system are increasing while funds for health services research and training are being sharply reduced. There is likely to be additional pressure on federal agencies to stress mission-oriented research and cost containment over other issues of long range importance in the system.

The number of nurses with doctoral degrees in biomedical and behavioral fields is increasing but only about 7 percent of these individuals reported research as a major activity in 1980. There is as yet no solid core of qualified investigators in the area of nursing research.

In the behavioral sciences, the clinical fields are flourishing as opportunities for careers as counselors and therapists have become more attractive. Coverage of these services by health insurance plans has spread in recent years. But most behavioral science research is performed by nonclinical behavioral scientists, and enrollments as well as Ph.D. production in the nonclinical fields are declining.

Only a few years ago most observers were projecting that Ph.D. production would continue to increase until the early 1980s (Cartter, 1976; NSF, 1975). The flattening out of the Ph.D. production curves since the the early 1970's is a rather surprising event, one that promises to produce more short-term balance in the market for Ph.D.s than was earlier thought possible.

However, the demographic patterns that are emerging present another set of problems. Perhaps the most serious is that biomedical, clinical, and behavioral science faculties at colleges and universities are not likely to expand at all for the rest of this decade. This means fewer opportunities for research careers for young scientists in these fields. Persons born during the baby boom that occurred roughly between 1946 and 1965 are now largely past the prime college age years, so enrollments in higher education are expected to decline steadily for the next 10 or 12 years. Faculty size is determined partly by enrollments and partly by the availability of R and D funds. In the biomedical fields, we expect the latter to grow at modest real rates of about 2 percent annually for the next few years. But this probably will not be enough to offset the drop in revenues resulting from declining enrollments. Hence, faculties will not grow and academic vacancies will occur mainly by attrition. Consequently, young researchers will find it difficult in these circumstances to begin their careers as independent investigators. Without adequate numbers of young investigators, who typically are highly innovative and creative, where will the new ideas for advances in basic research come from? Should progress in research be tied so closely to demographic cycles? What policies can be invoked now that would tend to mitigate the imbalances between supply and demand caused by the cyclical demographic and social changes? How can this country's competitive advantage in technological areas such as the new biotechnology be maintained?

In our view, these problems are most likely to be solved by greater expenditure of funds to support research. However, this Committee has been asked to determine the nation's need for biomedical and behavioral research personnel, and we have interpreted that task as one of estimating the number of positions that are likely to be available under realistic conditions. A market-based approach such as

this is only one of several possible approaches that could be taken to estimate national personnel needs. One alternative approach would base personnel needs on a projected level of research expenditures somehow tied to total health care costs. But this approach also has problems, e.g., what will health care costs be in 5 years and what is an appropriate ratio of research expenditures to health care costs? No matter what criterion is used, there is always a danger that some unforeseen development will negate the assumptions on which projections are made and will lead to market imbalances--either shortages or surpluses--and a misallocation of resources. There is no known protection against that event. The training recommendations described below have been formulated on the basis of our best judgment as to what the demand for these scientists is most likely to be, given the demographic trends, the most likely future levels of research funds, and the financial conditions of our colleges and universities.

## RECOMMENDATIONS

We direct the following recommendations concerning the level and distribution of National Research Service Awards to fiscal years 1985-87. The analyses, background, and discussion leading to these recommendations may be found in succeeding chapters of this report.

### Clinical Sciences

1. The number of postdoctoral research training positions in the clinical sciences should be about 2,600 per year from 1985 through 1987, and the number of physicians receiving research training should be increased from the current level of less than 2,000 to about 2,200, or 85 percent of these postdoctoral positions.

2. The training grant is the most appropriate mechanism for postdoctoral training of physicians, most of whom have no prior research experience. At least 85 percent of the clinical science training positions should be on training grants, the remainder on fellowships.

3. One of the most effective mechanisms for training physician-scientists is the Medical Scientist Training Program (MSTP) administered by the National Institute of General Medical Sciences (NIGMS). The costs of MSTP as a share of total NIGMS funds for predoctoral training have been increasing steadily. To ensure an appropriate balance, we therefore recommend that MSTP's share over the near future not exceed 25 percent of NIGMS predoctoral training funds with a target goal of approximately 725 trainees. We believe this can be accomplished without loss in quality by introducing administrative changes, such as the recently adopted limitation on length of MSTP support for an individual trainee (6 years). Other modifications now under consideration by the agency have a potential for increasing output per MSTP dollar.

4. We endorse the program of institutional grants that provides up to 3 months research training for health professions students without incurring the payback provision, and recommend that it be continued. If possible, the stipends should be raised to a level which is competitive with other opportunities of these students for summer earnings.

Basic Biomedical Sciences

1. Predoctoral training in these fields should be supported at a level of about 4,250 trainees per year.

2. Postdoctoral training in the basic biomedical sciences should continue to support about 3,200 fellows per year.

Behavioral Sciences

1. In view of the rapidly developing movement away from the research fields and into the more clinical fields of the behavioral sciences, the Committee recommends that research training support not be further eroded. The number of predoctoral awards in the behavioral sciences should be maintained at the 1981 level--about 650 per year.

2. The development of postdoctoral training programs should be encouraged by gradually increasing the number of postdoctoral research training awards from the 1981 level of about 350 to 540 by 1987.

3. About 80 percent of the behavioral science awards should be traineeships and 20 percent should be fellowships.

Health Services Research

1. We recommend that 330 trainees and fellows be supported annually in the catgory of health services research.

2. Earlier efforts by the Committee and others to develop adequate data on health services research personnel and training should be supplemented by further investigations. The Institute of Medicine should convene a meeting of interested parties to review the status of university-related centers for health services research and to outline a plan for collecting additional data on potential demand for investigators in this field.

Nursing Research

1. The number of training awards in nursing research should be about 300 per year.

2. A maximum of 15 percent of these awards should be at the post-doctoral level.

## TRAINING DATA

To give perspective to the resources devoted to training by the NIH, ADAMHA, and HRSA, we present below the training budgets as a percentage of research expenditures by these agencies over the past 10 years. Training expenditures declined from almost 18 percent of research expenditures in 1971 to 7 percent in 1981. This results from a steady 4 percent per year increase in research expenditures and a 5 percent per year decrease in training expenditures over this period after adjusting for inflation.

Training Expenditures as a Percent of Research Expenditures

| | |
|---|---|
| 1971 | 17.7% |
| 1972 | 15.1% |
| 1973 | 10.4% |
| 1974 | 12.9% |
| 1975 | 10.5% |
| 1976 | 7.7% |
| 1977 | 7.4% |
| 1978 | 7.4% |
| 1979 | 6.4% |
| 1980 | 7.3% |
| 1981 | 7.0% |

SOURCE: See Appendix Table D4.

Nevertheless, the current number of trainees is in fact quite close to that recommended by this Committee. The point is that large adjustments in training programs have been occurring right along--correctly, we think--in view of the ample number of biomedical and behavioral Ph.D.s being produced annually and serving in postdoctoral positions. A transition has been made from a period of high training levels to one of modest levels. What is needed now is not a huge infusion of funds for training but rather a reasonably stable program geared to preserving the long-term quality of research.

By definition, there will always be a shortage of the best people, and it is in the sense of ensuring the availability of some minimum number of very good people for careers in biomedical and behavioral research that NRSA programs are most useful.

## NATIONAL RESEARCH SERVICE AWARDS FOR 1981 AND 1982

In 1981 NIH/ADAMHA/HRSA made 13,325 awards under the NRSA program--a slight increase over the 13,191 made in 1980. In 1982 the number of

awards dropped to 12,907. The awards were distributed among the fields as follows:

| | 1981 | 1982 |
|---|---|---|
| Biomedical Sciences: | 52.4% | 55.6% |
| Behavioral Sciences: | 8.0% | 7.5% |
| Clinical Sciences:[a] | 38.5% | 35.8% |
| Nursing Research: | 1.1% | 1.1% |
| | 100.0% | 100.0% |

[a] Awards in the short-term training program for health professions students were counted as 1/4 of a full-time equivalent award.

These distributions reflect an increased emphasis on the clinical fields and away from the biomedical sciences and health services research, compared to recent years. This shift occurred in part because ADAMHA revised its classification of research training awards in 1981. This change resulted in 114 additional awards in the clinical sciences, up from none in 1980, and the elimination of any awards in health services research.

Another reason for the increase in clinical sciences is that awards in the short-term (3 months) training program for health professions students increased from 911 in 1980 to 1,275 in 1981 and 1,339 in 1982.

Despite the apparent increase in training awards in the clinical sciences category, the number of physicians and other health professionals participating in the research training program was less than 2,000 out of the nearly 2,800 clinical science postdoctoral awards made by the NIH in 1981.[3] The remaining awards went to Ph.D.s.

The following tables show the 1981 and 1982 research training awards made by the NIH, ADAMHA, and HRSA under the NRSA program, and the Committee's recommendations for 1985-87. Cost estimates for the recommended programs are also provided.

Training grant awards are defined as the number of predoctoral or postdoctoral training positions to be made available on the grant. The number of awards is generally quite close, but not exactly equal to the number of individuals trained, since some training grant awards may provide support to more than one trainee during the year.

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[3] Special tabulation prepared by the Statistics and Analysis Branch, Division of Research Grants, NIH. October 7, 1982.

TABLE 1.1 Aggregated Numbers of NIH/ADAMHA/HRSA Traineeship and Fellowship Awards for FY 1981 and FY 1982[a]

| | | TOTAL ALL FIELDS | Biomedical Sciences | Behavioral Sciences | Clinical Sciences | Nursing Research |
|---|---|---|---|---|---|---|
| FY 1981 | TOTAL | 13,325 | 6,482 | 988 | 5,723 | 132 |
| | Predoctoral | 7,264 | 3,708 | 639 | 2,791 | 126 |
| | Postdoctoral | 6,061 | 2,774 | 349 | 2,932 | 6 |
| | Trainees | 11,430 | 5,047 | 861 | 5,506 | 16 |
| | Predoctoral | 7,043 | 3,656 | 588 | 2,787 | 12 |
| | Postdoctoral | 4,387 | 1,391 | 273 | 2,719 | 4 |
| | Fellows | 1,895 | 1,435 | 127 | 217 | 116 |
| | Predoctoral | 221 | 52 | 51 | 4 | 114 |
| | Postdoctoral | 1,674 | 1,383 | 76 | 213 | 2 |
| FY 1982 | TOTAL | 12,907 | 6,608 | 896 | 5,270 | 133 |
| | Predoctoral | 6,989 | 3,673 | 516 | 2,669 | 131 |
| | Postdoctoral | 5,918 | 2,935 | 380 | 2,601 | 2 |
| | Trainees | 11,097 | 5,202 | 781 | 5,101 | 13 |
| | Predoctoral | 6,784 | 3,620 | 484 | 2,667 | 13 |
| | Postdoctoral | 4,313 | 1,582 | 297 | 2,434 | 0 |
| | Fellows | 1,810 | 1,406 | 115 | 169 | 120 |
| | Predoctoral | 205 | 53 | 32 | 2 | 118 |
| | Postdoctoral | 1,605 | 1,353 | 83 | 167 | 2 |

[a]These are total numbers of awards for traineeships and fellowships. Data on the number of new starts for FY 1981 and FY 1982 are not available. See Tables 1.2 and 1.3.

SOURCES: Office of the Administrator, ADAMHA (5/25/82 and 6/6/83); Division of Nursing, HRSA (4/9/81 and 10/1/82); Division of Research Grants, NIH (9/22/82 and 7/12/83).

**TABLE I.2 NIH Traineeship and Fellowship Awards for FY 1981 and FY 1982[a]**

| | | | Biomedical Sciences | | | | | | Clinical Sciences | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOTAL ALL FIELDS | Total Biomedical Sciences | Basic Biomedical Sciences | Math, Physics, Engineering, Other | Community and Environmental Health | Epidemiology and Biostatistics | Behavioral Sciences | Total Clinical Sciences | Medical Scientist Program | Other Clinical Sciences | Short-Term Trainees | Nursing Research[b] |
| FY 1981 | TOTAL | 11,902 | 5,963 | 5,574 | 104 | 51 | 234 | 198 | 5,619 | 705 | 3,629 | 1,275 | 132 |
| | Predoctoral | 6,456 | 3,473 | 3,268 | 17 | 27 | 161 | 115 | 2,742 | 705 | 861 | 1,176 | 126 |
| | Postdoctoral | 5,446 | 2,490 | 2,306 | 87 | 24 | 73 | 83 | 2,867 | 0 | 2,768 | 99 | 6 |
| | Trainees | 10,212 | 4,624 | 4,320 | 28 | 51 | 225 | 164 | 5,408 | 705 | 3,428 | 1,275 | 16 |
| | Predoctoral | 6,322 | 3,453 | 3,249 | 16 | 27 | 161 | 115 | 2,742 | 705 | 861 | 1,176 | 12 |
| | Postdoctoral | 3,890 | 1,171 | 1,071 | 12 | 24 | 64 | 49 | 2,666 | 0 | 2,567 | 99 | 4 |
| | Fellows | 1,690 | 1,339 | 1,254 | 76 | 0 | 9 | 34 | 201 | 0 | 201 | 0 | 116 |
| | Predoctoral | 134 | 20 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 |
| | Postdoctoral | 1,556 | 1,319 | 1,235 | 75 | 0 | 9 | 34 | 201 | 0 | 201 | 0 | 2 |
| FY 1982 | TOTAL | 11,661 | 6,122 | 5,785 | 89 | 32 | 216 | 248 | 5,158 | 676 | 3,143 | 1,339 | 133 |
| | Predoctoral | 6,337 | 3,461 | 3,285 | 21 | 17 | 138 | 128 | 2,617 | 676 | 678 | 1,263 | 131 |
| | Postdoctoral | 5,324 | 2,661 | 2,500 | 68 | 15 | 78 | 120 | 2,541 | 0 | 2,465 | 76 | 2 |
| | Trainees | 10,002 | 4,793 | 4,525 | 25 | 31 | 212 | 197 | 4,999 | 676 | 2,984 | 1,339 | 13 |
| | Predoctoral | 6,195 | 3,437 | 3,265 | 18 | 16 | 138 | 128 | 2,617 | 676 | 678 | 1,263 | 13 |
| | Postdoctoral | 3,807 | 1,356 | 1,260 | 7 | 15 | 74 | 69 | 2,382 | 0 | 2,306 | 76 | 0 |
| | Fellows | 1,659 | 1,329 | 1,260 | 64 | 1 | 4 | 51 | 159 | 0 | 159 | 0 | 120 |
| | Predoctoral | 142 | 24 | 20 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 118 |
| | Postdoctoral | 1,517 | 1,305 | 1,240 | 61 | 0 | 4 | 51 | 159 | 0 | 159 | 0 | 2 |

[a]These are total numbers of awards for traineeships and fellowships. Data on the number of new starts for FY 1981 and FY 1982 are not available.
[b]Most of the awards in Nursing Research are from the Division of Nursing, HRSA. Figures for FY 1981 also include 8 predoctoral trainee awards and 1 predoctoral fellowship award from the NIH. Figures for FY 1982 includes 13 predoctoral trainee awards from the NIH.

SOURCE: Division of Nursing, HRSA (4/9/81 and 10/1/82); Division of Research Grants, NIH (9/22/82 and 7/12/83).

TABLE 1.3 ADAMHA Traineeship and Fellowship Awards for FY 1981 and FY 1982[a]

| | | | Biomedical Sciences | | | | |
|---|---|---|---|---|---|---|---|
| | | TOTAL ALL FIELDS | Total Biomedical Sciences | Biological Sciences | Epidemiology and Biostatistics | Behavioral Sciences | Clinical Sciences[b] |
| FY 1981 | TOTAL | 1,423 | 519 | 398 | 121 | 790 | 114 |
| | Predoctoral | 808 | 235 | 158 | 77 | 524 | 49 |
| | Postdoctoral | 615 | 284 | 240 | 44 | 266 | 65 |
| | Trainees | 1,218 | 423 | 308 | 115 | 697 | 98 |
| | Predoctoral | 721 | 203 | 127 | 76 | 473 | 45 |
| | Postdoctoral | 497 | 220 | 181 | 39 | 224 | 53 |
| | Fellows | 205 | 96 | 90 | 6 | 93 | 16 |
| | Predoctoral | 87 | 32 | 31 | 1 | 51 | 4 |
| | Postdoctoral | 118 | 64 | 59 | 5 | 42 | 12 |
| FY 1982 | TOTAL | 1,246 | 486 | 365 | 121 | 648 | 112 |
| | Predoctoral | 652 | 212 | 139 | 73 | 388 | 52 |
| | Postdoctoral | 594 | 274 | 226 | 48 | 260 | 60 |
| | Trainees | 1,095 | 409 | 292 | 117 | 584 | 102 |
| | Predoctoral | 589 | 183 | 110 | 73 | 356 | 50 |
| | Postdoctoral | 506 | 226 | 182 | 44 | 228 | 52 |
| | Fellows | 151 | 77 | 73 | 4 | 64 | 10 |
| | Predoctoral | 63 | 29 | 29 | 0 | 32 | 2 |
| | Postdoctoral | 88 | 48 | 44 | 4 | 32 | 8 |

[a]These are total numbers of awards for traineeships and fellowships. Data on the number of new starts for FY 1981 and FY 1982 are not available.
[b]Effective FY 1981, ADAMHA has been using a different system for classifying their trainees and fellows. In prior years, ADAMHA reported training in Health Services Research but none in Clinical Sciences.

SOURCE: Office of the Administrator, ADAMHA (5/25/82 and 6/6/83).

TABLE 1.4 Committee Recommendations for NIH/ADAMHA/HRSA Predoctoral and Postdoctoral Traineeship and Fellowship Awards for FY 1985-87[a]

| Fiscal Year | Type of Program | | TOTAL ALL FIELDS | Basic Biomedical Sciences[b] | Behavioral Sciences[c] | Clinical Sciences | | Health Services Research | Nursing Research |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Medical Scientist Program | Other Clinical Science Programs | | |
| 1985 | TOTAL | Total | 12,495 | 7,450 | 1,090 | 725 | 2,600 | 330 | 300 |
| | | Predoc. | 6,070 | 4,250 | 650 | 725 | [d] | 190 | 255 |
| | | Postdoc. | 6,425 | 3,200 | 440 | 0 | 2,600 | 140 | 45 |
| | Trainees | Total | 8,475 | 4,250 | 895 | 725 | 2,230 | 250 | 125 |
| | | Predoc. | 5,755 | 4,250 | 535 | 725 | [d] | 140 | 105 |
| | | Postdoc. | 2,720 | 0 | 360 | 0 | 2,230 | 110 | 20 |
| | Fellows | Total | 4,020 | 3,200 | 195 | 0 | 370 | 80 | 175 |
| | | Predoc. | 315 | 0 | 115 | 0 | 0 | 50 | 150 |
| | | Postdoc. | 3,705 | 3,200 | 80 | 0 | 370 | 30 | 25 |
| 1986 | TOTAL | Total | 12,545 | 7,450 | 1,140 | 725 | 2,600 | 330 | 300 |
| | | Predoc. | 6,070 | 4,250 | 650 | 725 | [d] | 190 | 255 |
| | | Postdoc. | 6,475 | 3,200 | 490 | 0 | 2,600 | 140 | 45 |
| | Trainees | Total | 8,515 | 4,250 | 935 | 725 | 2,230 | 250 | 125 |
| | | Predoc. | 5,755 | 4,250 | 535 | 725 | [d] | 140 | 105 |
| | | Postdoc. | 2,760 | 0 | 400 | 0 | 2,230 | 110 | 20 |
| | Fellows | Total | 4,030 | 3,200 | 205 | 0 | 370 | 80 | 175 |
| | | Predoc. | 315 | 0 | 115 | 0 | 0 | 50 | 150 |
| | | Postdoc. | 3,715 | 3,200 | 90 | 0 | 370 | 30 | 25 |
| 1987 | TOTAL | Total | 12,595 | 7,450 | 1,190 | 725 | 2,600 | 330 | 300 |
| | | Predoc. | 6,070 | 4,250 | 650 | 725 | [d] | 190 | 255 |
| | | Postdoc. | 6,525 | 3,200 | 540 | 0 | 2,600 | 140 | 45 |
| | Trainees | Total | 8,560 | 4,250 | 980 | 725 | 2,230 | 250 | 125 |
| | | Predoc. | 5,755 | 4,250 | 535 | 725 | [d] | 140 | 105 |
| | | Postdoc. | 2,805 | 0 | 445 | 0 | 2,230 | 110 | 20 |
| | Fellows | Total | 4,035 | 3,200 | 210 | 0 | 370 | 80 | 175 |
| | | Predoc. | 315 | 0 | 115 | 0 | 0 | 50 | 150 |
| | | Postdoc. | 3,720 | 3,200 | 95 | 0 | 370 | 30 | 25 |

[a]These are total numbers of recommended awards. See Table 1.1 for number of actual awards made in FY 1981 and FY 1982. The number of new starts in any given year is sensitive to fluctuations in the funding level and thus oscillates more rapidly than does the total number of awardees.

[b]Recommendations for biostatistics, epidemiology, community and environmental health, and other training fields not specifically shown in this table are included here.

[c]The allocation of awards in the behavioral science fields between traineeships and fellowships is based on the distribution that prevailed in FY 1976, i.e., 82% traineeships, 18% fellowships.

[d]A program of short-term research training (3 months) for health professions students during summer and off-quarters was authorized in 1978. The Committee has endorsed this program in principle but makes no recommendations for the number of students to be supported under it. The 1978 amendments to the NRSA Act authorized expenditures for this program of up to 4% of appropriated training funds. In FY 1982 1,339 trainees were awarded stipends.

**TABLE 1.5 Estimated Cost of Recommended NIH/ADAMHA/HRSA Training Programs for FY 1985-87 (millions of dollars)[a]**

| Fiscal Year | Type of Program | TOTAL ALL FIELDS | Biomedical Sciences | Behavioral Sciences | Clinical Sciences | | | | Health Services Research | Nursing Research |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Total | MSTP | Short-Term Training[b] | Other | | |
| 1985 | TOTAL | 202.7 | 107.5 | 18.2 | 68.0 | 10.8 | 2.1 | 55.1 | 5.1 | 3.9 |
| | Trainees | 131.1 | 49.6 | 15.2 | 60.6 | 10.8 | 2.1 | 47.7 | 4.0 | 1.7 |
| | Fellows | 71.6 | 57.9 | 3.0 | 7.4 | – | – | 7.4 | 1.0 | 2.2 |
| | *Predoc.* | *77.1* | *49.6* | *9.4* | *12.9* | *10.8* | *2.1* | – | *2.2* | *3.0* |
| | *Postdoc.* | *125.6* | *57.9* | *8.8* | *55.1* | – | – | *55.1* | *2.9* | *0.9* |
| 1986 | TOTAL | 205.9 | 108.5 | 20.0 | 68.4 | 11.1 | 2.1 | 55.2 | 5.1 | 3.9 |
| | Trainees | 134.0 | 50.6 | 16.7 | 61.0 | 11.1 | 2.1 | 47.8 | 4.0 | 1.7 |
| | Fellows | 71.9 | 57.9 | 3.3 | 7.4 | – | – | 7.4 | 1.1 | 2.2 |
| | *Predoc.* | *78.6* | *50.6* | *9.6* | *13.2* | *11.1* | *2.1* | – | *2.2* | *3.0* |
| | *Postdoc.* | *127.3* | *57.9* | *10.4* | *55.2* | – | – | *55.2* | *2.9* | *0.9* |
| 1987 | TOTAL | 209.4 | 109.5 | 21.9 | 68.8 | 11.4 | 2.1 | 55.3 | 5.2 | 4.0 |
| | Trainees | 137.0 | 51.6 | 18.3 | 61.4 | 11.4 | 2.1 | 47.9 | 4.0 | 1.7 |
| | Fellows | 72.4 | 57.9 | 3.6 | 7.4 | – | – | 7.4 | 1.2 | 2.3 |
| | *Predoc.* | *80.4* | *51.6* | *9.9* | *13.5* | *11.4* | *2.1* | – | *2.3* | *3.1* |
| | *Postdoc.* | *129.0* | *57.9* | *12.0* | *55.3* | – | – | *55.3* | *2.9* | *0.9* |

[a]Calculations were based on 1982 average cost figures derived from NIH data and assumed the following: 1) a 5% increase in stipends for FY 1983, held constant for later years; 2) a 5% per year increase in tuition; and 3) a reduction in institutional costs to a maximum per year of $1,500 for predoctoral trainees and fellows, $2,500 for postdoctoral trainees, and $3,000 for postdoctoral fellows. The stipend increase and the reduction in institutional allowances are regulations that became effective in FY 1983.
[b]Estimate assumes 1,200 trainees.

**ESTIMATED TRAINING COSTS PER AWARD IN FY 1982 (dollars)**

| | Predoctoral | | | | | | Postdoctoral | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Clinical Sciences | | | | | | | | |
| FY 1982 | Biomed. Sci. | Behav-ioral Sci. | MSTP | Short-Term Training | Health Services Research | Nursing Research | Biomed. Sci. | Behav-ioral Sci. | Clinical Sci. | Health Services Research | Nursing Research |
| Trainees | 11,613 | 13,602 | 13,776 | 1,699 | 11,613 | 11,613 | 20,596 | 21,953 | 20,987 | 20,596 | 20,596 |
| Fellows | 11,613 | 13,602 | - | - | 11,613 | 11,613 | 17,321 | 18,535 | 19,263 | 17,321 | 17,321 |

# ADDENDUM

It has been the Committee's practice following the publication of its reports to hold a meeting at which interested persons can present their reactions and comments to the Committee. The last report was issued in 1981 and a public meeting was held in 1982. A number of significant points were made which we feel deserve mention and further consideration. The meeting is summarized below.

## PUBLIC MEETING, JUNE, 1982

Following the publication of the Committee's 1981 Report, a public meeting was held on June 2, 1982, to receive comments from the scientific community. Twelve speakers representing a variety of organizations made brief statements about different aspects of the report to the Committee and an audience of about 100 persons. The list of speakers in order of appearance and their affiliations are as follows:

| | |
|---|---|
| Gerald D. Shockman | American Society for Microbiology |
| James Ferguson Jr. | University of Pennsylvania School of Medicine |
| Frank G. Standaert | Georgetown University |
| Robert W. Krauss | Federation of American Societies for Experimental Biology |
| Thomas Kennedy | Association of American Medical Colleges |
| James M. Jones | Minority Fellowship Program Director |
| Ora Strickland | American Nurses' Association |
| Michael S. Pallak | American Psychological Association |
| Mortimer Appley | Clark University |
| Edward J. Callahan | West Virginia University Medical Center |
| Martha Pitel | American Association of Colleges of Nursing |
| Mitzi Duxbury | University of Minnesota School of Nursing |

Copies of prepared remarks from several of the speakers are available upon request to the Committee. Some of the major points made by the speakers at the meeting are summarized below:

1. The Committee may have overlooked a growing demand for certain types of bioscientists outside the academic sector, especially in the new biotechnology industry. The Committee's estimate of about 1,000 positions per year opening up for biomedical Ph.D.s in industry is probably too conservative.
2. The role of the M.D. in basic research should be examined and encouraged. Medical students are often insulated from basic research and researcher role models.

3. Data from the placement service of the Federation of American Societies for Experimental Biology (FASEB) show a stable number of job applicants and employers. There is no evidence in these data that an oversupply of bioscientists exists.
4. Identifying physician scientists and enumerating them remains a critical problem because of the absence of any certification process. An accurate assessment of supply or demand cannot be made without an accurate count of physician scientists.
5. At least 85 percent of funds for training minority students should be used at the predoctoral level.
6. The Committee is urged to reconsider its recommendation for training in the behavioral sciences that drastically shifts the emphasis to postdoctoral training. Although it is recognized that the need for postdoctoral training is growing in some behavioral subfields, the magnitude of the recommended shift is unrealistic. The decline in predoctoral support by the agencies has been devastating. There is no objection to increasing research training at the postdoctoral level, but it should not be at the expense of predoctoral training support.
7. The Committee should extend its horizons beyond the short-term analysis it has traditionally employed. A longer-term view is necessary because scientists needed in the 1990s are already in training. We need to know what the situation will be in the 1990s when many people trained in the 1960s will be retiring.
8. Nursing research includes many more areas than health services research and should not be combined with it in the report. The Committee's support for Nursing Research Emphasis Grants is to be commended. Although progress has been made in providing training in the area of nursing research, we still lack a substantial nucleus of nurse researchers as principal investigators engaged in nursing research programs.

The Committee acknowledges these comments and appreciates the constructive manner in which they were presented. The suggestions have been given careful consideration in our deliberations and those of the Panels. While perhaps not all of them are reflected in this report to everyone's satisfaction, the comments are highly valued by our members as representing important points of view on these difficult issues.

## ISSUES RELATED TO APPOINTMENTS TO PGY-2 POSITIONS

### Background

At the Spring 1983 meeting of the Executive Council, AAMC staff was asked to investigate the nature and dimensions of problems associated with the selection of students into a number of specialty programs. The presenting problems arose primarily in the context of "career" specialty selection where this is not contiguous with PGY-1 selection. Eight specialties were identified as following a different timetable and/or using a different match program for filling their programs: Anesthesiology, Dermatology, Neurology, Neurosurgery, Ophthalmology, Otolaryngology, Psychiatry, and Radiology. The causes for concern were identified as follows:

> "These earlier and different schedules pose an undue burden on our students by requiring earlier decisions, two or more applications and interview cycles, and by advancing the time of the application and interview, require a dean's letter be prepared with less than optimal amount of information."

The deans who brought the problem to the AAMC suggested that the goals should be a single deadline and a single matching program which would deal simultaneously with both PGY-1 and PGY-2 placement of students currently in their senior year of medical school.

### Progress

Information was received from program directors and involved individuals from the eight specialties and from the chairmen of 18 relevant CAS societies (see pages 77-87).

Discussion at the CAS Administrative Board meeting on September 22, 1983 and in the AAMC Executive Council focused on constructive solutions and the following plan was adopted:

1. The NRMP Board should have an Advisory Panel with representatives of each of the 23 specialties which match for residents. The membership proposed for this panel (see page 88) and the concept have gone to the NRMP Board for a vote.

2. The specialty groups currently matching senior medical students and not using the NRMP computer match (Dermatology, Neurology, Neurosurgery, Ophthalmology, Otolaryngology) have been invited to meet with AAMC Chairman Robert Heyssel and staff from the AAMC Department of Academic Affairs on December 7, 1983. This meeting will provide the opportunity for further discussion of the needs of the program directors and their desires for a match and the sometimes conflicting needs of medical schools and senior medical students.

Data from the AAMC Survey of Program Directors Who Match Senior Medical Students to PGY-2 Positions

Initial discussions with representatives of societies of chairmen or program directors (summarized on the following pages) indicated a significant interest in the problems identified and in pursuing their resolution. The steering committee of the Group on Student Affairs endorsed the resolution of these problems as deserving a very high priority for the AAMC. To date, the strategy of the AAMC has been to stimulate consideration of these issues by all of those affected and to identify the legitimate interests of the various parties which must be accommodated in any successful resolution of the situation. To that end, AAMC President John A. D. Cooper has written to the 18 chairmen of societies listed on page

PROBLEM LIST

The problems associated with the selection of and appointment to "career" specialty training positions may be categorized under three major headings: timing, fit, and suitability of a match.

Timing

- Pressures for premature career decisions;
- Turbulence created by resignations resulting from changed career aspirations;
- Late deciding candidates foreclosed from early filling programs;
- Candidates have little clinical experience to evaluate at time of application process;
- Student difficulty in arranging relevant clerkships, especially electives prior to the application process;
- The perceived value of concurrent travel for PGY-1 and "career" positions;
- The need for proper sequencing and timing of PGY-1 and "career position" selection decisions to minimize necessity for students' geographic moves.

Fit

- Numerous configurations of programs with variety of entry levels, make a national description of the process difficult, e.g., in radiology there are:
  - Five year comprehensive programs;
  - Four year programs which begin after one year general medicine or surgery;
    - -- first year elsewhere, then apply

      (or)

    - -- first year same institution, match to medicine or surgery, then continue in radiology

- Four year programs, no general medicine or surgery required

- Four year programs, which generally accept only candidates who are board eligible in another specialty;

- Difficulty of match to achieve balance in each residency cohort (e.g., M.D./Ph.D.'s versus those with more clinical experience) of a program;

- Complexity of application process, e.g, a senior student interested in neurosurgery must deal with:

  -- categorical programs in NRMP
  -- programs in NRMP beginning in PGY-2
  -- programs in Colenbrander match
  -- independent programs

Suitability of a Matching Program

- General -

  - The existence of rules without effective sanctions tends to reward non-compliance and penalize compliance.

  - Matching programs limit flexibility of program directors to respond to particular needs and situations.

- NRMP -

  - Perceived by many program directors as unable and/or unwilling to respond to unique needs of particular specialties.

  - Seen as wanting to force all problems into a general and uncomfortable solution.

- Colenbrander -

  - Originally viewed as particularly responsive to unique needs of contracting specialties.

  - Now sometimes viewed as overcommitted and unresponsive.

Discussion

Not all regard the present situation as problematic. For example, the President of the Association of University Professors of Ophthalmology responded to Dr. Cooper expressing a high level of confidence that what others are regarding as a problem, his specialty regards as a very satisfactory situation.

> "Your letter cites concern about pressure on students to make early career decisions. I would counter that students choosing ophthalmology through OMP actually are making career choices only

a few weeks earlier than are students electing career choices which begin with the PGY-1 year (such as general surgery and the primary care specialties.) Further, the timing of the OMP match with the release of its results prior to the deadline for submission of rank order lists for the NRMP allows the student to make a more intelligent PGY-1 choice based upon the location of his PGY-2 training in ophthalmology. Also, since there is nearly a 100 percent excess of serious applicants for the available ophthalmology positions, this timing allows the unsuccessful applicants to reassess their career goals. Finally, the timing of the decision does not appear to be a problem for the students since there continues to be an excess of applications and a very low rate of decision change once the match has been made.

Your letter also cites concern about the requirement for early letters of recommendation from academic officials. It has been my experience that dean letters generally are based upon the first three years of medical school and are prepared approximately at the beginning of the fourth year. Since most ophthalmology programs now conduct interviews during September and October, preparation of these letters by September 1 should pose little hardship for academic deans."

On the other hand, the Association of University Professors of Neurology is now in the process of studying the issue. It has distributed a relatively detailed questionnaire to all program directors and all residents in a residency in July, 1983. A 100% response is being sought and the hope is that by early fall the Association will have a very realistic assessment of these problems. This assessment will include an evaluation of the specialty participation in the Colenbrander match.

The President of the Otolaryngologist's Association reports:

"The overwhelming sentiment of NRMP process by the program directors in my specialty is that they were unwilling to adapt to our specific needs at a time when we desperately needed a match process. I think that if adaptations had been made last year rather than this, we might have found it desirable to rally around the cause. As it stands now though the endorsement of our own matching system is uniform and unanimous and all of us look forward to a process this year that is less stressful to the applicant and less taxing to the programs themselves."

The Chairmen of Psychiatry report that their association urges its members to work within the NRMP match as much as possible. Nevertheless, these are some difficulties, particularly for freestanding programs which may take residents in both PGY-1 and PGY-2; programs which take residents only beginning in PGY-2 do not participate in the match for this reason. A majority of programs participate in the NRMP program for PGY-1 in spite of the fact that a number of medical schools do not feel that the program meets the needs of psychiatry. The Chairmen are strongly opposed to a required match for PGY-2 and would vigorously resist its imposition.

The response of the radiologists is probably epitomized by the following excerpt from their chairman:

> "At this year's Society of Chairmen of Academic Radiology Departments meeting and in conjunction with the Association of University Radiologists, this was a debated and heated subject, that is, the entire process of selecting candidates. After all of this discussion, it was the consensus, I believe, that the system was working reasonably well and no definite suggestions to change things were established. As you are well aware, very few of our positions are presently filled through the matching programs. This would appear to be the way that most of the program directors would like."

Nevertheless, both Dr. Cooper and Dr. Graettinger have been invited to participate in the combined meeting of the Society of Chairmen and the Association of University Radiology Departments next May.

The Association of Orthopaedic Chairmen admits that the match in orthopaedics is currently in some disarray and plans an indepth discussion at its fall meeting.

> "At the present time we do not have an official statement or position on the matter of selection of applicants into residency training programs. On the other hand, a majority of programs do match either as 1 and 4 or 0 and 5 directly into orthopaedics. It is only the northeastern part of the United States that contains programs that do not match in this manner, that are 2 and 3 and 2 and 4 year programs.

The chairmen of Pathology are concerned about the "seemingly widespread habit of making commitments to prospective applicants prior to the NRMP match. " The matter will be on the agenda of the next Council meeting to be held in July, 1984.

The Chairmen of Pediatrics, and Family Medicine regard the match as a non-problem. The Chairmen of Surgery identify lack of communication between the various specialties in medicine and the intense competition for the very best and brightest as problems deserving attention at the next meeting of the society at the time of the AAMC annual meeting. The Chairmen of Thoracic Surgery regard the selection process as "something of a free-for-all and have asked a member of the society executive council to survey "the attitudes of the members" and to initiate a discussion at their January meeting. The Professors of OB/GYN have no official statement, but most of the training programs use the NRMP. The matter will be on the council's next agenda.

The Chairmen of Medicine did not respond to Dr. Cooper's letter, but there are plans to discuss some concerns of the members with Dr. Graettinger at the next meeting.

The GSA Steering Committee is unique of all of the correspondents in its unqualified support of the NRMP:

"We are absolutely confident that NRMP is able to develop suitable and appropriate matching programs for all contingencies." Nevertheless, the GSA appears to recognize that the NRMP has had difficulty being persuasive about its capabilities and responsiveness. It suggested that one approach might be to augment the NRMP staff to deal with "consumer relations," particularly to provide more specialty specific and user specific information and communications.

## Conclusion

Conditions precedent to a satisfactory situation may be developing:

- the buyer's market situation of programs in many specialties may reduce the incentives for cheating;
- the developing pyramidal systems in medicine and surgery may make the "fundamental first year" more readily available and assist in rationalizing institutional responses to the situation;
- the specialty boards' requirements, now in flux, may be standardized and facilitate less complex program and entry configurations.

Most of all, significant attention is now being directed at the problems by those affected.

| Specialty | Current System | Presenting Problem | Obstacles to Change | Remarks |
|---|---|---|---|---|
| UROLOGY | • 3 yrs. ago Society of University Urologists agreed to make no agreements with students until December of senior year | • Some program directors making agreements in advance<br>• Some programs aren't in Match<br>• System is chaotic; asking too much of students, inexperienced and unprepared to chose too early<br>• Mind changing later on leaves holes in programs | • Too many Urologists<br>• Many now being trained with no place to go but pressure is on program directors to keep programs filled and to perform academic mission | • Important issue; AAMC should focus attention on it and keep pot stirring |
| DERMATOLOGY | • Colenbrander Match; all materials in by September, Match in October<br>• Timing designed to give students maximum flexibility (to continue in medicine for example if unmatched)<br>• Two-thirds match during PGY 1 year; remainder have 2 years or Boards in another specialty<br>• 1,300 inquire; 400 participate in match for 200 slots | • No PGY 1 problem<br>• No conflict with NRMP Match | • Too many Dermatologists<br>• FTC oversight precludes Board action | • NRMP approached first and wasn't interested<br>• Meeting next week for dialogues on continuing the match<br>• 4-6 schools listed in both NRMP and Derm. Match--e.g., Flex PGY 1 - Derm PGY 2-4; no forewarning, other schools consider this offensive; caused vast confusion among students<br>• Candidates quality is way up |

| Specialty | Current System | Presenting Problem | Obstacles to Change | Remarks |
|---|---|---|---|---|
| *RADIOLOGY* | • Approximately 40% match thru NRMP<br>Variety of Routes:<br>• Match to 4 yr. program (all Radiology)<br>• Match to 5 yr. program with PGY 1 fundamental skills year<br>• Take transition year and match to a program<br>• Match to Med. or Surg. PGY 1 with inhouse<br>• Finish Med., Peds. or 2 yrs. of surgery | • Match not the issue<br>• Lack of uniform notion of what training should be is issue<br>• Problems arise from fear that if training programs wait until time appropriate from academic point of view, best candidates will be committed elsewhere | • Resistence of Med. and Surg., etc. to give training to those leaving specialty<br>• Fear of not filling or losing best candidates | • Noting new flexibility in both Med. & Surg. willing to free up PGY 1 positions to permit own program to be more pyramidal |
| *ANESTHESIOLOGY* | • Approximately 50% categorical in NRMP<br>• Problems similar to Radiology | • Omni-present problems of--cheating by program directors<br>• Need a match at the PGY 2 level | • Hubris of program directors<br>• Fighting last war (scarcity of applicants) | • Now plethora of applicants may lessen fears/facilitate willingness to comply with rules |
| *ORTHOPAEDIC SURGERY* | • Chaotic; approximately 50% match directly<br>• Some programs require PGY 1 in Gen. Surgery; many prefer 2 yrs. in surgery or 1 in surgery and 1 in radiology | • Variety of program configurations cause confusion<br>• No problem with NRMP or PGY 1 | • Any match will have problems because there are no adequate enforcement mechanisms<br>• Those who comply are disadvantaged | • Spotted history; tried a career match for 3 yr abandoned about 6 yrs. ago; failed for lack of compliance<br>• Believe there should be room for candidates to change their minds; shouldn't force early decisions |

| Specialty | Current System | Presenting Problem | Obstacles to Change | Remarks |
|---|---|---|---|---|
| *NEUROLOGY* | • Colenbrander Match Nov. Senior Year; 18 months before start | • Concern about forcing early decision<br>• Any match will be difficult because uniform compliance unlikely | • Don't want to be "phagocytized" by NRMP<br>• Pressure to fill positions<br>• Small specialty paranoia | • Colenbrander Match not working well<br>• Proposal to change from 18 months to 7 month prior to entry under consideration |
| *NEUROSURGERY* | • Joining Colenbrander Match<br>• Will match before NRMP--e.g., December | • Need to interdigitate fundamental skills year with career match to avoid 2 moves<br>• Question need for a career match--numbers small; should be possible without bureaucratic machinery<br>• System for Program Director's convenience--not candidates<br>• Candidates insufficiently experienced to make career choice at this time<br>• Behavior and character of candidates insufficiently tested at this time<br>• Both candidates and Program Directors should be able to change minds | • New approach being tried but its being viewed with some skepticism<br>• Match won't work if not supported by strong programs which appears at least questionable | • Have no interest in working with NRMP; appeared both insensitive to specialty's problems and incompetent to handle them |

TABULATION OF NRMP LETTER RESPONSES/Societies & Associations of The Council of Academic Societies

| | Name | Response Received | Comments |
|---|---|---|---|
| 1. | Frank C. Moody, M.D.<br>President<br>Society of Surgical Chairmen | x | 1) To be disc. @ AAMC Annual Meeting; no official statement developed; program going from bad to worst; main problem--lack of communication btw specialties in med. |
| 2. | Morton Stenchever, M.D.<br>President<br>Association of Professors of Gynecology & Obstetrics | x | 2) Does not have offical statement or position on the matter of selection of applicants into residency programs using NRMP. Most programs use NRMP; to be disc. at next council meeting. |
| 3. | William F. Denny, M.D.<br>President<br>Association of Program Directors in Internal Medicine | | |
| 4. | John P. Kampine, M.D.<br>President<br>Society of Academic Anesthesia Chairmen | | |
| 5. | Thomas B. Fitzpatrick, M.D.<br>President<br>Association of Professors of Dermatology, Inc. | | |
| 6. | William Stewart, M.D.<br>President<br>Association of Departments of Family Medicine | x | 6) No official statement; while not written policy, stance is that all acad. depts. should abide by NRMP rules & regulations. Not aware of any particular problems w/ NRMP. |
| 7. | Hartwell G. Thompson, M.D.<br>President<br>Association of University Professors of Neurology | x | 7) Dr. Dyken responded (Indiana U); in process of distributing questionnaire re: match--end of summer should have firm statistics and Dr. Thompson will ask to further respond. |
| 8. | Frank R. Wrenn, M.D.<br>President<br>American Association of Neurological Surgeons | x | 8) Now past-president; referred ltr. to Dr. Pevehouse of San Francisco. |

| | Name | Response Received | Comments |
|---|---|---|---|
| 9. | Joseph E. Johnson, III, M.D.<br>President<br>Association of Professors of Medicine | | |
| 10. | Robert E. Kalina, M.D.<br>President<br>Association of University Professors of Ophthalmology | x | 10) Initiated OMP to meet students' needs; AUPO membership very satisfied w/ OMP; virtually all positions in US offered thru OMP; bringing matter to attn of AUPO Trustees at next meeting. |
| 11. | C. McCollister Evarts, M.D.<br>Presidents<br>Association of Orthopaedic Chairmen | x | 11) No official statement or position; Ortho. chairmen are working towards the institution of a nat'l match |
| 12. | Charles W. Cummings, M.D.<br>President<br>Association of Academic Departments of Otolaryngology | x | 12) Grp w/drew from NRMP due to inability to accommodate multiple variables assoc. w/ trng programs, fewer than 60% of programs participated in NRMP match. Currently use Colenbrander program. |
| 13. | Thomas K. Oliver, M.D.<br>President<br>Association of Medical School Pediatric Dept. Chairmen, Inc. | x | 13) It is a non-problem w/ respe. to pediatrics; majority of prog. in peds grad. med. educ. use the NRMP program for 1st year; 2nd & 3rd yr. grads no match. |
| 14. | Robert L. Leon, M.D.<br>President<br>American Association of Chairmen of Depts. of Psychiatry | x | 14) Although NRMP program not entirely satisfactory for psych., members of AACDP adhere as closely as poss. to program for PGYI. PGYII match does not meet need. |
| 15. | Charles E. Putman, M.D.<br>President<br>Society of Chairmen of Academic Radiology Departments | x | 15) Corresponded w/ Dr. Cooper; interested in exploring ways NRMP could be more effective in meeting needs of prog. directors; lack of present understanding of board standards; Cooper suggested meeting at summit--poss. attd at SCARD/AUR meeting in May, '84. |
| 16. | Clarence S. Weldon, M.D.<br>President<br>Thoracic Surgery Directors Association | | 16) No official statement or position member of exec. council to look into matter w/ assn. members & report @ next mtg. in Janua at present it is a free for many program directors desire to offer residencies approx. 2 years in advance of starting residency. |
| 17. | Victor A. Politano, M.D.<br>President<br>Society of University Urologists | | |

| | Name | Response Received | Comments |
|---|---|---|---|
| 18. | Werner H. Kirsten, M.D.<br>President<br>Association of Pathology Chairmen, Inc. | x | 18) No official statement or position; Council has disc. issue on several occasions. Concerned about widespread habit of making commitments to prospective applicants prior to NRMP match; matter placed on Council agenda for July, 1984 meeting. |

ADVISORY PANEL TO NRMP - SUGGESTED MEMBERSHIP

Society of Academic Anesthesia Chairmen
Association of Professors of Dermatology, Inc.
Society of Teachers of Emergency Medicine
Association of Departments of Family Medicine
Association of Professors of Medicine
Association of Program Directors in Internal Medicine
Society of Neurological Surgeons
Association of University Professors of Neurology
Association of Professors of Gynecology and Obstetrics
Association of University Professors of Ophthalmology
Association of Orthopaedic Chairmen
Association of Academic Departments of Otolaryngology
Association of Pathology Chairmen, Inc.
Association of Medical School Pediatric Chairmen, Inc.
Association of Academic Physiatrists
Plastic Surgery Educational Foundation
American Association of Chairmen of Departments of Psychiatry
American Association of Directors of Psychiatric Residency Training
Society of Chairmen of Academic Radiology Departments
Association of Program Directors in Surgery
Society of Surgical Chairmen
Thoracic Surgery Directors Association
Society of University Urologists

# UPDATE ON THE AAMC CLINICAL EVALUATION PROGRAM

The AAMC Clinical Evaluation Program, designed to assist clinical faculties in assessing students during their undergraduate and graduate clinical education, is now in the implementation phase. An advisory group has been formed and will be asked to react to the materials and proposals generated by program staff. A list of the thirteen advisers appears on the following pages.

Two projects are in progress:

1. Self-assessment materials are being developed for medical schools, clinical departments, and affiliated hospitals and clinical training sites. These materials will be used by interested institutions to help identify strengths and weaknesses within their current evaluation systems, in order to determine the extent and kind of changes desired and to select the best strategy for implementing these changes. The conceptual framework for the self-assessment materials has been pretested in two U.S. medical schools. The initial set of materials will be piloted in the Spring of 1984. Approximately 60 medical schools have expressed interest in the self-assessment tools.

2. Information is being compiled for a paper on education and evaluation along the clinical continuum, to be available in early 1984. The paper will collate questions raised in the research literature and examine the usefulness of the findings in the context of the problems of evaluating clerks and residents posed in the booklet The Evaluation of Clerks: Perceptions of Clinical Faculty (AAMC, 1983) and the editorial "Clinical Judgment of Faculties in the Evaluation of Clerks" (JME, March, 1983). Areas under study include the identification and use of evaluators, the handling of different types of students (e.g., failing, marginal, excellent), the purpose of evaluation, the influence of setting on the evaluation process, the different kinds of characteristics assessed and the integration of methods of assessment into a comprehensive evaluation system.

## CLINICAL EVALUATION PROGRAM ADVISERS

Daniel D. Federman, M.D.
Dean for Students and Alumni
Harvard Medical School

Daniel X. Freedman, M.D.
Judson Braun Professor of Psychiatry
and Pharmacology
Director of the Division of Adult Psychiatry
and Vice-Chairman, Department of Psychiatry
University of California, Los Angeles
Neuropsychiatric Institute

Joseph S. Gonnella, M.D.
Professor of Medicine and Acting Dean
Director, Center for Research in
Medical Education and Health Care
Jefferson Medical College

Julius R. Krevans, M.D.
Chancellor
University of California -
San Francisco

Jack H. Medalie, M.D., M.P.H.
Chairman
Department of Family Medicine and
Dorothy Jones Weatherhead Professor
Case Western Reserve University
School of Medicine

William L. Morgan, Jr., M.D.
Associate Chairman and Professor
Department of Internal Medicine
University of Rochester School of
Medicine and Dentistry

George L. Nardi, M.D.
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Victor R. Neufeld, M.D.
Chairman, Undergraduate
Education Committee
McMaster University School
of Medicine

Richard Reitemeier, M.D.
Professor of Medicine
Mayo Clinic

Joseph St. Geme, Jr., M.D.
Executive Chairman
Department of Pediatrics
Harbor-UCLA School of Medicine

David C. Sabiston, Jr., M.D.
Professor and Chairman
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Duke University School of Medicine

Lloyd H. Smith, Jr., M.D.
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Morton A. Stenchever, M.D.
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Department of Obstetrics and Gynecology
University of Washington
School of Medicine

AAMC Staff Contact: Xenia Tonesk, Ph.D.
Director, Clinical Evaluation Program

# UPDATE ON THE GENERAL PROFESSIONAL EDUCATION OF THE PHYSICIAN PROJECT

The Association's project on the General Professional Education of the Physician and College Preparation for Medicine has been in an information gathering mode during the past year. From presentations at hearings in the four AAMC regions and written reports from 82 medical schools, 21 academic societies, and 24 colleges, the perspectives of faculties and students on medical education and college preparation have been obtained. A pamphlet, "Emerging Perspectives on the General Professional Education of the Physician," condenses these into four major areas -- learning, clinical education, college preparation and admission to medical school, and faculty involvment. The problems, priorities, and prospects raised in the pamphlet will be the focus of a Special General Session on Tuesday, November 8, in the East Ballroom of the Washington Hilton Hotel from 2:00 to 4:00 pm.

Four major problems have been identified:

1. The incongruity between how medical students are taught on the one hand with the almost universal goal to prepare them to be lifelong learners capable of critical analysis and able to apply new scientific principles to medical care on the other is targeted as a problem worthy of major attention. The institutions are cognizant that there is a problem, but effective solutions face formidable obstacles.

2. The clinical clerkship, the traditional foundation of clinical education, too often appears to fall short as a setting for the accomplishment of the goals of general professional education for medical students. In many cases, the delineation of the knowledge and skills that students should acquire is poor. The diversity of clinical services and the highly specialized faculties that staff them make students' educational experiences quite variable. The insufficient involvement of senior clinicians in direct supervision and evaluation of medical students provides few guarantees that all students acquire the fundamental clinical skills.

3. College and medical school faculties alike desire to improve the college education of students who aspire to enter medical school. A balanced liberal education with greater emphasis on the social sciences and humanities is mentioned frequently, but the growing science-base of medicine is invoked as a reason for greater emphasis on scientific preparation in college.

4. It is recognized that significant improvement in the general professional education of medical students will depend upon the ingenuity of faculties in developing new approaches and their greater personal involvement in guiding students' learning. The time and intellectual effort necessary to accomplish needed changes are considered to be severely constrained by competitive demands for research and clinical service productivity.

The project panel, chaired by Steven Muller, president of the Johns Hopkins University, has been studying these and the subsidiary problems that have been identified during the course of the project. A final report recommending approaches that faculties might apply to their solution will be presented at the 1984 Annual Meeting.

## Status of Student Aid Programs

HEALTH PROFESSIONS STUDENT LOANS--On June 30, 1983 final HPSL regulations went into effect specifying an institutional performance standard of a five percent delinquency rate based on 60 days past due. The regulation also permitted a 6 month period of "probation" for schools unable to meet the performance standard by that date. Those schools unable to meet the performance standard by December 31, 1983 or to make a 50 percent improvement in their delinquency rate would be put on suspended status and would have until the end of June, 1984 to either meet the 5 percent standard or to improve their collection rate by 50 percent. Schools unable to conform to either the 50 percent improvement or 5 percent delinquency rate by June 30, 1984 would be terminated from the program.

Suspension and termination results in loss of the school's ability to receive new or allocated current HPSL funds. At this writing 114 medical schools have reported HPSL collection data to the Bureau of Health Professions in the Department of Health and Human Services. Thirty-three of those schools, or 28.9 percent, were over the 5 percent standard. Eighteen of those schools had delinquency rates of 6-10 percent, nine had rates of 11-15 percent, three had rates of 16-20 percent and three were over 20 percent.

One of the principal purposes of this new HPSL regulation was to bring the schools' collection procedures and performance in line with those in the business or commercial fields. The justification used by the Bureau for the 5 percent standard was that the delinquency rate for commercial loans was even less. However, the Bureau apparently was unaware that generally accepted business practice is to determine delinquency rates based on delinquent principal, not total outstanding delinquent principal on delinquent loans. For example, if John Jones were to borrow $5,000, pay off $1,000 of the principal and then become 60 days overdue on a $50 monthly payment, by commercial standards his delinquency would be $50. However, by HHS standards, his delinquency is $4,000, or the total outstanding principal on his $5,000 loan. Needless to say, this practice substantially inflates a school's delinquency rate. Last June the Association asked that schools provide copies of their HPSL Annual Operating Reports. Analysis of the 71 reports received to date reveals that sixteen schools have delinquency rates over 5 percent based on the Bureau formula, but only three are over the standard based on the commercial practice previously outlined.

HEALTH EDUCATION ASSISTANCE LOANS--The interest rate for the HEAL program has dropped to 11.75 percent (plus a 1.5 percent per year charge to provide funds for the federal guarantee). HEAL borrowing in 1982-83 rose approximately 50 percent to $50.4 million. The federal credit limit for the program is likely to remain at over $200 million, a figure deemed adequate for all the health professions using the program.

ARMED FORCES HEALTH PROFESSIONS SCHOLARSHIP PROGRAM--A proposal introduced in the House Defense Appropriations Subcommittee to put a ceiling on tuition benefits under the Armed Forces Health Professions Scholarship Program has been defeated through the joint efforts of the AAMC and the potentially affected schools in states represented on the Subcommittee. The proposal would have capped program tuition benefits at the 80th percentile of national tuition levels.

The Subcommittee was urged not to adopt this proposal because it would have the potential to dissuade some of the most promising students at some of the nation's most distinguished medical schools from military service. Although these efforts have proved effective thus far, it is always possible that this concept could reappear at the full committee level or elsewhere in the legislative process.

Student Indebtedness

The table below shows the indebtedness of graduating medical students in 1983 and recent years.

INDEBTEDNESS OF GRADUATING MEDICAL STUDENTS
REPORTING DEBT*

| YEAR | PERCENT OF SENIORS REPORTING INDEBTEDNESS | AVERAGE INDEBTEDNESS | PERCENT CHANGE FROM 1971 |
|---|---|---|---|
| 1971 | 72 | 5,500 | 0 |
| 1975 | 71 | 9,000 | + 63.6 |
| 1978 | 76 | 13,800 | +150.9 |
| 1979 | 76 | 15,800 | +187.3 |
| 1980 | 77 | 17,200 | +212.7 |
| 1981 | 76 | 19,700 | +258.2 |
| 1982 | 83 | 21,100 | +283.6 |
| 1983 | 86 | 23,600 | +329.1 |

*For 1971, -75 and -78: based on surveys of senior medical students.
For 1979, -80, -81, -82 and -83: based on seniors reporting indebtedness on the AAMC Graduation Questionnaire.

While the indebtedness of graduating students continues to rise, Liaison Committee on Medical Education data indicates that for academic year 1982-83, students overall received less aid than in the previous year. The data also shows a decrease in the number of students receiving financial aid. The reduction, the first since 1954, occurred in spite of the fact that needs analyses performed by financial aid officers revealed more students to require more aid. Speculation is that perceived and real reductions in financial aid resources and lessening of students' expenditures brought on in part by awareness of the implications of debt are responsible.

# FUTURE MEETING DATES

AAMC Annual Meeting Dates

1984 - October 27 - November 1 (Chicago, Illinois)
CAS meetings tentatively scheduled for October 28 and 29

1985 - October 26 - 31 (Washington, DC)
CAS meetings tentatively scheduled for October 27 and 28

1986 - October 25 - 30 (New Orleans, Louisiana)
CAS meetings tentatively scheduled for October 26 and 27

CAS Interim Meeting Date (Tentative)

1984 - April 10 - 11 (Washington, DC)

CAS Administrative Board Meeting Dates (1984)

January 18 - 19

April 11 - 12

June 13 - 14

September 12 - 13