AGENDA
FOR
COUNCIL OF ACADEMIC SOCIETIES

ADMINISTRATIVE BOARD

Thursday, September 13, 1973

9:30 AM - 4:00 PM

Room 827, 8th Floor
1 Dupont Circle, N.W.
Washington, D.C.
AAMC Annual Meeting
Washington Hilton Hotel
Washington, D.C.

November 4 - 8, 1973

FUTURE CAS MEETINGS

CAS Business and General Sessions
10:00 a.m. - 5:00 p.m.
Washington Hilton Hotel
Washington, D.C.

November 4, 1973

CAS Symposium on Ethics
of Biomedical Research
2:00 p.m. - 5:00 p.m.
Washington Hilton Hotel
Washington, D.C.

November 5, 1973

CAS Spring Meeting
Mayflower Hotel
Washington, D.C.

March 7, 8, 9, 1974

CAS Administrative Board Meetings
Washington, D.C.

December 13, 1973
March 21, 1974
June 20, 1974
September 19, 1974
CAS ADMINISTRATIVE BOARD

AGENDA

September 13, 1973
9:30 am - 4:00 pm
1 Dupont Circle
Room 827, 8th Floor
Washington, D.C.

I. Approval of Minutes of Administrative Board Meeting of June 21, 1973

II. Chairman's Report

III. Action Items:

1. Approval of Distinguished Membership Category and Recommendations for Nominees

2. Proposal for Modification of CAS Nominating Committee

3. Assembly Representation

4. Sprague Committee Report

5. Membership Application
   Association for Academic Psychiatry
   Drs. Petersdorf and Clark

IV. Discussion Items:

1. Goals for CAS in 73-74

2. Regionalization of the CAS

3. Biomedical Research Manpower Working Conference
   Battelle Seattle Research Center
   October 1, 2, 3, 1973
IV. Discussion Items, continued:

4. Joint Meeting with the Council of Deans to Discuss:
   a. Status of HR 1 (P.L. 92-603)
   b. Status of Proposals for Research Training Programs (Administrative & Congressional)
   c. 1974 HEW Appropriations Bill

V. Information Items:

1. Program for Fall Meeting
   a. CAS Fall Program
      1. CAS Business Session - Sunday, November 4, 10:00 a.m. - 12:00 Noon
      2. CAS General Session - Sunday, November 4, 1:30 p.m. - 5:00 p.m.
   b. CAS Symposium on Ethics of Biomedical Research
      Monday, November 5, 2:00 p.m. - 5:00 p.m.
   c. Breakfast with Professorial Societies
   d. Invitations to Societies Meeting in Conjunction with AAMC Annual Meeting

2. Withdrawal of the American Academy of Pediatrics

3. Activities of the CCME and LCGME

4. NIH Health Manpower Reporting Form

5. Activities of the Institute of Medicine - Dr. David Challoner
MINUTES
ADMINISTRATIVE BOARD
COUNCIL OF ACADEMIC SOCIETIES

June 21, 1973

AAMC Headquarters
Washington, D.C.

PRESENT: Board Members

Robert G. Petersdorf, Chairman (Presiding)
David R. Challoner
**Sam L. Clark, Jr.
Ludwig Eichna
Ronald W. Estabrook
Charles F. Gregory

Guest

*Charles Sprague

ABSENT: Board Members

Robert M. Blizzard
Robert E. Forster, II
Rolla B. Hill, Jr.
**Ernst Knobil
William B. Weil, Jr.

Staff

Michael F. Ball
Connie Choate
William G. Cooper
*John A. D. Cooper
*Charles Fentress
Mary H. Littlemeyer
August G. Swanson

I. Adoption of Minutes.

The minutes of the CAS Administrative Board meeting held March 15, 1973 were adopted with one correction: page 5, top two lines should read Ralph J. Wedgwood, M.D., Professor of Pediatrics (not Chairman of the Department).

*For part of meeting
**Ex Officio
II. Chairman's Report.

Dr. Petersdorf reported on the AAMC study to assess the projected impact of the Administration's budget proposal for FY/74, which was discussed later. The CAS workshops held in March were very successful. Selected papers from the Categorical Grants program will be published. The proceedings of the Workshop on Individualized Medical Education will also be published.

III. Action Items.

1. Policy Statement on Rights of Patients to Choose to Participate in Educational Exercises.

ACTION: The CAS Administrative Board approved the "AAMC Policy Statement -- The Patient in the Teaching Setting," as printed in the Agenda, pp. 9-10.

2. Proposal for Modification of Nominating Committee.

ACTION: The CAS Administrative Board approved in principle the revised procedure for selection of the CAS Nominating Committee as proposed in the Agenda, pp. 15-16. To be added are stipulations that 3 each be from the basic & clinical sciences. Also, the question re the Past-Chairman of the Administrative Board being Chairman of the Nominating Committee vis-a-vis the problem this would raise by his being on the AAMC Nominating Committee, where he might be a nominee for Chairman of the Assembly needs to be addressed. The question also of making the CAS Board terms three-year terms to be con-
sistent with terms of the Executive Council will be explored.

3. Establish 35 voting members for Assembly.

Regarding the establishment of 35 voting members in the Assembly, the Board reviewed the 35 current voting members as listed in the Agenda, pp. 17-18, among the Council's 51 members.

ACTION: The CAS Administrative Board adopted the motion that representation in the AAMC Assembly by the Council of Academic Societies be increased to reflect one vote for each of the constituent societies but not to exceed the representation of the Council of Deans (in the Assembly).

NOTE: If the above does not pass the Executive Council, the CAS voting members in the Assembly will be designated by the historical rotation system, with no more than one per society, with a balance between the basic and clinical sciences, assuring that some of the delegates represent older societies and alternates in the event that a society designated will not be able to send a delegate.

4. Report of the Committee on Financing Medical Education.

ACTION: The CAS Administrative Board approved in principle the Report of the Committee on Financing Medical Education.

NOTE: At its meeting on June 22, the Executive Council took no action on the report, and written comments subsequently were solicited from members of each of the three AAMC Councils' Administrative Boards.

5. The Role of Basic Science in the Goal of Health Care Delivery by the Veterans Administration.

ACTION: The CAS Administrative Board approved in principle the following resolution:
The value of basic biomedical scientists working in concert with clinicians in an educational environ is long recognized. This is particularly true in the function of the VA Hospital. On behalf of the Council of Academic Societies, its Administrative Board strongly endorses and reaffirms the role of basic science in the goal of health care delivery by the VA. The Council of Academic Societies Administrative Board urges the transmittal of this resolution by the Executive Council of the Association of American Medical Colleges to the Administrator of the Veterans Administration with its full support and continued appreciation.

IV. Discussion Items.

1. Increased Faculty Participation in CAS.

Regarding increased faculty participation in the CAS, the CAS Administrative Board favored making available ($10 per individual) the President's Weekly Activities Report, which was felt to be a valuable communications device. Also members of constituent societies will be invited to attend all future CAS meetings, except the Business Meeting.

2. Future Meetings.

The CAS Fall program is: Sun. morning/CAS Business Session; Sun. afternoon/CAS Session on pertinent issues; Mon. afternoon/CAS Symposium on Ethical Aspects of Biomedical Research as outlined in the Agenda, p. 20. The possibility of adding an attorney to the program is to be explored. The format favored is to have short presentations, followed by five-minute discussions, and concluded with a panel discussion.

The CAS Spring meeting is tentatively scheduled for March 7-8-9, 1974, at the Mayflower Hotel, Washington, D.C. The Administrative Board was enthusiastic in selecting as the topic for this meeting faculty tenure, problems of the rotating chairmanship, departmental review,
governance, early retirement plans, etc., perhaps with a formal debate. Participants suggested were Kingman Brewster, Don Seldin.

The September Administrative Board agenda will be planned at a later date. Topics named at this time included goals for CAS for coming year; communication with constituents; Sprague report; activities of IOM; and possible regional activities for CAS.

3. CAS Nominating Committee Report.

The CAS Administrative Board accepted the slate developed by the CAS Nominating Committee.

4. COD Administrative Board's Resolution.

The CAS Administrative Board discussed the COD Administrative Board's resolution on the need for an AAMC strategic planning effort as outlined in the Agenda, p. 27. CAS Administrative Board members to the Executive Council were authorized to act in this regard at the June 22 Executive Council meeting.

NOTE: The Executive Council approved the proposal for development of an Association policy document, setting forth a summary of where the Association stands on major issues facing the nation in the areas of medical education, biomedical research, delivery of health services, and financing of these activities. The document, which would be prepared and periodically updated by the AAMC staff, would clearly set out the status of the AAMC's efforts in the areas of policy formulation and progress toward identified goals, with respect to each of the issues.

5. Federal Liaison.

The CAS Administrative Board opposed discussion or implementation as inappropriate the current status of the efforts to develop a telephone network with selected societies, and proposed guidelines on "How do I
talk to my Congressman?" (Agenda, pp. 29-31).


The CAS Administrative Board discussed dissemination of the impact study of six departments (in light of the small N tallied, 42 out of 114 possible schools) and agreed that copies should go to the chairmen of all departments in the survey (not only those who responded), to each CAS representative, and to the OMB.

7. The Medical College Assessment Program.

The CAS Administrative Board were invited to name individuals from key disciplines for input for entrance assessment of the new "MCAT" (Medical College Assessment Program).

8. Membership Application.

The application for membership from the Association for Academic Psychiatry was assigned for review.

VI. Adjournment.

The meeting was adjourned at 4:00 p.m.
III. Action Items:

1. **SENIOR MEMBERSHIP IN THE AAMC**

At the June meeting of the Council of Deans Administrative Board, the AAMC staff was asked to explore the possibility of utilizing the Senior membership category to provide continued participation of individuals once active in the Association who no longer are members of any Council. The Executive Council, meeting the following day, considered this matter and approved a motion to:

1. direct the staff to prepare a proposal based on the recommendations discussed;

2. place this item on the agenda of the three administrative boards at their September meetings.

In accordance with the Executive Council directive, AAMC staff has developed the following Guidelines:

1. Senior members shall henceforth be called Distinguished Members.

2. Distinguished Members shall be elected by the Assembly on recommendation of the Executive Council and one of the Council Administrative Boards.

3. The principal criterion for selection of Distinguished Members shall be active and meritorious participation in AAMC affairs while a member of one of the AAMC Councils. Additional criteria may be established by the Executive Council or constituent Councils responsible for nominating Distinguished Members.

4. Each Distinguished Member shall have honorary membership status on the Council which recommended his/her election, i.e., he/she would be invited to all meetings and would have the privileges of the floor without vote.

5. Distinguished Members shall meet as a group once a year at the Annual Meeting and elect a Chairman and/or Chairman-Elect.

6. Distinguished Members shall be eligible for Emeritus Membership at age 65; Emeritus Membership would be mandatory at age 70.

7. AAMC Bylaws shall be modified to incorporate these changes and to provide Distinguished Members with voting representation on the Executive Council through a 21st member of that Council. This position shall be filled by the Chairman of the Distinguished Members.
### CAS ADMINISTRATIVE BOARD MEMBERS
AND TERMS OF OFFICE

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<thead>
<tr>
<th>Name</th>
<th>Years</th>
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<tr>
<td>Thomas Kinney</td>
<td>1967-1971</td>
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<td>Jonathan Rhoads</td>
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<td>Daniel Tosteson</td>
<td>1967-1970</td>
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<td>Eben Alexander</td>
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<td>Harry Feldman</td>
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<td>Sam Clark, Jr.</td>
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<td>Patrick Fitzgerald</td>
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<td>John Nurnberger</td>
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<td>Ralph Wedgwood</td>
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<td>James Warren</td>
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<td>Charles Gregory</td>
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<td>William Weil</td>
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<td>William Longmire</td>
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<td>Louis Welt</td>
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<td>Robert Forster</td>
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<td>Ludwig Eichna</td>
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<td>Ernst Knobil</td>
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The Board will need to provide nominees to the Executive Council for Distinguished Membership status.
2. Proposal for Modification of CAS Nominating Committee

This proposal is in response to the recommendations of the CAS Administrative Board for modification of the CAS Nominating Committee procedure.

COUNCIL OF ACADEMIC SOCIETIES
NOMINATING COMMITTEE

The Nominating Committee shall be comprised of seven members of the Council. The Chairman of the Administrative Board shall be the non-voting Chairman of the Nominating Committee. For purposes of selecting a Nominating Committee, six individuals (3 basic science and 3 clinical science) shall be chosen from among the representatives present at the Annual Fall Meeting of the Council by a majority vote of the representatives present at that meeting. The Officers of the Council and its representatives to the Executive Council of the Association of American Medical Colleges are eligible to serve on the Nominating Committee with the exception of the Chairman-Elect. No Society may be represented on the Nominating Committee by more than one person. The Nominating Committee shall meet in person to select a slate of Officers prior to June 1st of the year of the election. In the event of a tie vote, the Chairman of the Nominating Committee shall break the tie with a vote.

The Nominating Committee shall nominate not more than two individuals for each office. The committee will also recommend to the AAMC Nominating Committee candidates for Council of Academic Societies vacancies on the Executive Council as well as Council of Academic Societies recommendation for Association of American Medical Colleges Chairman-Elect.
3. REPRESENTATION IN THE AAMC ASSEMBLY

The AAMC Assembly presently consists of all U.S. members of the Council of Deans (114), 35 designated representatives of the Council of Academic Societies, 35 designated representatives of the Council of Teaching Hospitals, and ten (10) percent of the members of the Organization of Student Representatives (11). The Association Bylaws further indicate that all other members shall have the privileges of the floor without vote.

Since the adoption of this formula for Assembly representation, the voting membership of the COD has expanded with the addition of new medical schools, while the representation of both CAS and COTH has remained fixed. At the most recent meeting of the CAS Administrative Board this pattern of representation was questioned.

At its meeting on June 21, 1973 the CAS Administrative Board adopted a motion requesting that CAS representation in the Assembly be increased to reflect one vote for each constituent society, not to exceed the representation of the COD. The Association's Executive Council discussed this issue at its meeting on the following day and requested that each Administrative Board at its next meeting reassess the pattern of representation in the Assembly. Recommendations of the Administrative Boards are to be forwarded to the Executive Council for consideration at its September 14 meeting.
NAME OF SOCIETY: Association For Academic Psychiatry

MAILING ADDRESS: c/o Larry B. Silver, M.D.
Department of Psychiatry
Rutgers Medical School
University Heights
Piscataway, N.J. 08854

PURPOSE:
1. To provide a forum for exchange of ideas concerning education at the medical school and post-doctorate levels.
2. To promote psychiatric education.
3. To foster the recruitment, development, and support of professionals as teachers of Psychiatry.
4. To serve as an advisory group on educational matters within training centers and with other organizations.

MEMBERSHIP CRITERIA:

1. National Institute of Mental Health Career Teachers completing the program during 1968-1973 are charter members.
2. All National Institute of Mental Health Career Teachers completing the program from its inception in 1955 to 1967 and all participants in the 1973 National Institutes of Mental Health Psychiatrists as a Teacher Conference are eligible for membership.
3. Other teachers of Psychiatry who are recommended by two or more members of the Association on the basis of their making a major commitment to psychiatric education may be elected to membership by a simple majority.

NUMBER OF MEMBERS: 60 current members. Anticipate a membership of 200 by 1974, representing all American Medical Schools.

NUMBER OF FACULTY MEMBERS: All 60 current members are Faculty; same will be true of new members.

DATE ORGANIZED: October 1970

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

October 17, 1970 1. Constitution & Bylaws
See Attached 2. Program & Minutes of Annual Meeting

(Continued - over)

APR 9 1973
QUESTIONNAIRE FOR TAX STATUS

1. Has your society applied for a tax exemption ruling from the Internal Revenue Service?

   X YES    ___ NO

2. If answer to (1) is YES, under what section of the Internal Revenue Code was the exemption ruling requested:

   Section 501(c) 3 and 509(a) of IRS Act of 1969

3. If request for exemption has been made, what is its current status?

   ___ a. Approved by IRS
   ___ b. Denied by IRS
   X  c. Pending IRS determination

4. If your request has been approved or denied, please forward a copy of Internal Revenue letter informing you of their action.

   (Completed by - please sign)

   April 3, 1973

   (Date)

   Larry B. Silver, M.D.
   Department of Psychiatry
   Rutgers Medical School
   University Heights
   Piscataway, N.J. 08854
August 23, 1973

Dr. Carl D. Douglass  
Deputy Director  
Division of Research Grants  
National Institutes of Health  
Bethesda, Maryland  20014

Dear Dr. Douglass:

We are writing to invite you to attend a meeting to be sponsored by the Association of American Medical Colleges and hosted by the University of Washington School of Medicine to be held at the Battelle Seattle Research Center on October 1, 2 and 3, 1973.

The purpose of the meeting is to bring together individuals from selected institutions, which have been major sites for training biomedical research scientists, to act as regional representatives for all schools with training programs at a meeting with representatives from government, foundations, and other groups interested and active in the support of training in the biomedical sciences. These representatives will engage in discussions regarding their past experiences and develop plans for meeting the Nation's biomedical research manpower needs in the future.

During the past year, the national policy debate on whether an ongoing biomedical research scientist training program is necessary at all has been intense. Although favorable Congressional and Administration decisions have been made to continue training programs, the institutions must now consider what their future obligations and responsibilities are in the development of long-range strategies to identify manpower needs. An important effort will be to develop monitoring systems for determining numbers and types of students being trained, and to follow their ultimate career placement and productivity.

Major topics for the meeting will be:

1. The experience of each participating institution during the past six to seven years regarding how many individuals have been trained, in what disciplines, and where they are now.
2. How can a continual monitoring system be developed which will satisfy future data needs, and what responsibilities do the institutions have to assure that the monitoring system works?

3. What policies should institutions and granting agencies develop to ensure that individuals with research talent are provided the best possible education and training?

4. What mechanisms, if any, can be developed to predict research manpower needs in the various disciplines sufficiently far in advance to meet those needs by encouraging young investigators to enter promising fields?

Dael Wolfle, in his book, "The Home of Science," points out that the university became the principal site of scientific research endeavor in this country through a series of historical opportunities which led to critical decisions, ranging from passage of the Morrill Land Grant Act to the establishment of the National Science Foundation and the National Institutes of Health. It appears that another critical decision period vis-a-vis the role of the university in American science is at hand. The education and training of biomedical scientists is of vital importance to the institutions and to Federal policy-makers (both in the Administration and Congress). Foundations and voluntary agencies are also concerned. Therefore, representatives from these groups, as well as the selected institutions, will be invited to the meeting.

It will be a working meeting. Institutions will be asked to prepare in advance data on their experiences with biomedical scientist training. A special data-collecting instrument will be furnished to each participant accepting this invitation to accomplish the task of assessing their past experience in biomedical research manpower development.

The Battelle Seattle Research Center is an excellent facility for this type of meeting. The cost of attending the meeting will be borne by the participant's institution or agency. Lodging at the center will be provided at the rate of $14 per day (single), and $9 per day (double). Meals are provided at relatively low cost. Accessory meeting costs will be covered by Battelle and the AAMC.
It is important that you advise us of your interest in attending this meeting at your earliest convenience in order that appropriate planning may be accomplished.

Sincerely,

John A.D. Cooper, M.D.
President
Association of American Medical Colleges

Robert L. Van Citters, M.D.
Dean
University of Washington
School of Medicine

Enclosure
August 2, 1973

Dr. Saul J. Farber  
Chairman, Dept. of Medicine  
New York U. School of Medicine  
550 First Avenue  
New York, New York 10016

Dear Dr. Farber:

In order to both encourage greater liaison between the various societies of departmental chairmen and to increase the ability of the AAMC staff to represent the concerns of department chairmen, the Council of Academic Societies is sponsoring a breakfast for the Presidents of the various Chairmen’s Societies during the Annual Meeting of the AAMC. The meeting will be held Monday, November 5, 1973 from 7:30 to 9:00 a.m. in the Hemisphere Room of the Washington Hilton Hotel in Washington, D.C.

On behalf of Robert G. Petersdorf, Chairman of the Council of Academic Societies and August C. Swanson, Director of the Department of Academic Affairs, I am writing to invite you as President of the Association of Professors of Medicine to attend this meeting. Since this is the first meeting of this group, we would also appreciate your suggestions as to subjects which might be discussed.

To expedite planning, would you indicate your interest in attending this meeting on the attached form prior to September 5, 1973.

Sincerely yours,

Michael F. Ball, M.D.  
Director  
Department of Academic Affairs

Enclosure

MFB:ms
CAS - CHAIRMEN SOCIETIES BREAKFAST MEETING

Mailing List - Invitations

Howard Barnhard, M.D.
Society of Chairmen of Academic Radiology Departments

G.W.N. Eggers, Jr., M.D.
Society of Academic Anesthesia Chairmen, Inc.

Guy McKhann, M.D.
Association of University Professors of Neurology

Dr. Jerome Sutin
Association of Anatomy Chairman

Dr. Edwin Kilbourne
Association of Medical School Microbiology Chairmen

Walter B. Shelley, Chairman
Association of Professors of Dermatology

Dr. Saul J. Farber
Association of Professors of Medicine

J. George Moore, M.D.
Association of Professors of Gynecology and Obstetrics

Dr. David Shoch
Association of University Professors of Ophthalmology

Dante Scarpelli, M.D.
Association of Pathology Chairmen, Inc.

Melvin M. Grumbach, M.D.
Association of Medical School Pediatric Chairmen, Inc.

Dr. James B. Preston
Association of Chairmen of Departments of Physiology

Ewald W. Busse, M.D.
Association of Chairmen of Departments of Psychiatry

William P. Longmire, Jr., M.D.
Society of Surgical Chairmen

Rubin H. Flocks, M.D.
Society of University Urologists

George F. Reed, M.D.
Society of University Otolaryngologists

Thomas M. Devlin, Ph.D.
Chairmen of Biochemistry Departments
July 6, 1973

Rubin H. Flocks, M.D.
American Board of Urology
University of Iowa Hospitals
Iowa City, IA 52240

Dear Dr. Flocks:

The Administrative Board of the CAS is pleased that the Society of University Urologists is meeting in conjunction with the AAMC Annual Meeting in November 1973, in Washington, D.C.

The Board wishes to extend an invitation to all of your members to attend two afternoon sessions of the Council of Academic Societies. The first one will be held the afternoon of Sunday, November 4th, and will focus on issues of national concern to biomedical faculties. The second program will be on Monday, November 5th, and will deal with the pressing issue of ethics in biomedical research.

If you will send us your mailing list (mailing labels if available), we will send each of your members information on both sessions.

Sincerely yours,

August G. Swanson, M.D.
Director of Academic Affairs

AGS:cc

Letter sent to:
Association of Academic Physiatrists
Society of University Urologists
Society of University Otolaryngologists
Association of Professors of Medicine
Society of Teachers of Family Medicine
Association of Orthopaedic Chairmen
Association of Chairmen of Departments of Psychiatry
Association of Anatomy Chairmen
Association of Pathology Chairmen, Inc.
Association of Chairmen of Departments of Physiology
Association of University Professors of Ophthalmology
August G. Swanson, M.D.
Director of Academic Affairs
Association of American Medical Colleges
Suite 200, One DuPont Circle, N.W.
Washington, D. C. 20036

Dear Gus:

The Executive Board has again reviewed the question of membership in the Council of Academic Societies in the AAMC and has decided that it will withdraw its membership from the Council effective immediately.

The Executive Board has discussed this matter with other pediatric societies represented on the Council and feel that their participation is more appropriate to the purposes of the Council and will provide sufficient liaison to the Academy in those matters of special interest to the AAMC and the Council on Academic Societies.

The Academy looks forward to continued opportunities to cooperate with the AAMC in areas of mutual interest.

Sincerely yours,

Robert G. Frazier, M.D.
Executive Director

RGF:wf

cc-Gerald E. Hughes, M.D.
TO: American Board of Medical Specialties  
   John C. Nunemaker, M.D., Executive Director  
American Hospital Association  
   John Alexander McMahon, President  
American Medical Association  
   Ernest B. Howard, M.D., Executive Vice President  
Association of American Medical Colleges  
   John A. D. Cooper, M.D., President  
Council of Medical Specialty Societies  
   William C. Stronach, Executive Secretary
FROM: C. H. William Ruhe, M.D., Secretary  
Coordinating Council on Medical Education
DATE: June 20, 1973
SUBJECT: Actions of the CCME to be Transmitted to the Parent Organizations

The Coordinating Council on Medical Education was established in 1972 through ratification of a specific proposal by five parent organizations: American Board of Medical Specialties, American Hospital Association, American Medical Association, Association of American Medical Colleges, and Council of Medical Specialty Societies. The first meeting of the Coordinating Council was held on January 3, 1973. There have been two subsequent meetings, one on March 19 and one on May 21. At its most recent meeting, the Coordinating Council voted that "when the CCME takes formal action which should be transmitted to the parent organizations, that action should be transmitted by the CCME staff to the chief staff officer of each of the parent organizations." As Secretary of the CCME, I am hereby formally transmitting to each parent organization actions taken by the CCME at its last three meetings which should be transmitted to the parent organizations.

1. Election of Officers.

The election of officers was considered by the CCME at its first meeting and a rotation schedule was proposed.

Action: The Coordinating Council voted to accept a revised schedule of rotation of officers whereby, for the calendar year 1973, the AAMC assumes the chairmanship of the CCME and the AWA assumes the vice-chairmanship. (Schedule of rotation attached as Appendix A.)
2. Five Points of Agreement.

At its January 3 meeting the CCME discussed the "Five Points of Agreement" which had been approved by the five parent organizations. In discussing the second of the Five Points, it was noted that, while one could interpret this to mean that the CCME itself could generate policy as well as to consider policy matters, this was not actually stated. It was suggested that this statement be amended by inserting the words "generate or" in the third line.

Action: The Coordinating Council voted to amend the second of the Five Points of Agreement to read as follows: "Simultaneously, there will be established a Coordinating Council on Medical Education composed of representatives from each of the five organizations to generate or consider policy matters for both undergraduate and graduate medical education for referral to the parent organizations."

3. Liaison Committee on Allied Health Education.

At its first meeting the Coordinating Council spent considerable time discussing the concept of a Liaison Committee on Allied Health Education.

Action: The Coordinating Council voted to accept the concept of a Liaison Committee on Allied Health Education as a part of the existing structure to be under the supervision of the CCME in the future.


A Task Force on Operating Rules for CCME had drafted by-laws for consideration by the CCME. These were adopted by the CCME at its March 19 meeting.

Action: The CCME voted to adopt the proposed by-laws of the CCME. (These by-laws are attached as Appendix B for consideration by the parent organizations.)

5. Position Statements of the AMA and the AAMC on the Subject of "Corporate" Responsibility.

At its second meeting the CCME spent considerable time discussing the following position statements of the AMA and the AAMC on the subject of "corporate" responsibility: 1) the AMA Statement on Unified Responsibility; 2) the AAMC Statement on Graduate Medical Education; and, 3) the AAMC Statement on the Implications of Academic Medical Centers Taking Responsibility for Graduate Medical
Education. The CCME took the following action:

**Action:** The Coordinating Council on Medical Education voted to affirm its high interest in the concept of corporate or institutional responsibility for graduate medical education to ensure its continuity with undergraduate medical education. Implementation of this concept raises problems and issues that require full discussion within the organizations concerned. The CCME calls upon its parent organizations to address promptly these problems and issues as they arise to ensure that the basic concept will be realized.

6. Items referred to the CCME from the Liaison Committee on Graduate Medical Education.

The Liaison Committee on Graduate Medical Education had requested that the approval of "Essentials" relating to graduate training programs become the responsibility of the LCGME, and also that the CCME confirm that consideration of additions, revisions, and deletions in "Essentials" be delegated to the LCGME. The CCME considered this at its May 21 meeting and took the following action:

**Action:** The CCME voted to approve the request of the LCGME that the approval of "Essentials" relating to graduate training programs become the responsibility of the LCGME, and confirmed that consideration of additions, revisions, and deletions in "Essentials" be delegated to the LCGME. The LCGME would then determine the order and manner in which approval would be sought of the parent bodies involved in the production of the documents.

7. Procedure for Transmitting CCME Actions to Parent Organizations.

At its May 21 meeting the CCME had agreed that it would be desirable to reach agreement on a standardized procedure which might be followed by organizational representatives and staff in transmitting CCME actions to the parent organizations. The following action was taken:

**Action:** The CCME voted to approve the following procedures for transmitting its actions to parent organizations:

1. When the CCME takes formal action which should be transmitted to the parent organizations, that action should be transmitted by the CCME staff to the chief staff officer of each of the parent organizations. Copies of the letter of transmittal should be sent to the official representatives of each organization, as well as to the other staff members of that organization who normally attend the CCME meetings.
2. When CCME takes an action which may affect "policy," the CCME should decide that the action does or does not constitute a policy decision and whether it need be transmitted to the parent organizations, either for action or for information.

3. Complete minutes of CCME meetings should be forwarded to the chief staff officer of each parent organization, as well as to the official representatives of each organization, and other staff members of that organization who normally attend the CCME meetings.

4. Organizational representatives may or may not choose to make their own formal reports to their parent organizations. Such reports should be independent of the notification of CCME actions to the parent organizations by CCME staff and independent of transmission of CCME minutes. CCME actions affecting either LCME or LOGME should be transmitted by CCME staff to LCME staff and LOGME staff respectively, as appropriate. Complete minutes of CCME meetings should not be sent routinely to LCME or LOGME.

In accordance with the above action on transmitting actions of the CCME to its parent organizations, we shall plan to send following each CCME meeting a copy of the complete minutes of that meeting as well as a formal letter transmitting those actions from the CCME meeting which should be transmitted to the parent organizations for consideration.
### Rotation of Officers

**Coordinating Council on Medical Education:**

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<td>AAMC (Association of American Medical Colleges)</td>
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<td>AMA (American Medical Association)</td>
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<td>Vice-Chmn.</td>
<td>Chmn.</td>
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<tr>
<td>ARMS (American Board of Medical Specialties)</td>
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<td>CMS (Council of Medical Specialty Societies)</td>
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<td>AHA (American Hospital Association)</td>
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<td>Vice-Chmn.</td>
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*Adopted by CCME, 1/3/73

**Liaison Committee on Graduate Medical Education:**

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*Recommended to LCME, 1/3/73
BY-LAWS OF THE
COORDINATING COUNCIL ON MEDICAL EDUCATION

FOREWORD: These by-laws are based on and intended to conform with the previously adopted statement titled: "A proposal for the establishment of a coordinating council on medical education as developed from the five points of agreement by the ABMS, AHA, AMA, AAMC and CMSS on January 25, 1972 in Washington, D.C."

Article I - NAME

The name of this organization shall be the Coordinating Council on Medical Education.

Article II - PURPOSES

Section 1. Objectives:

(a) This Council shall provide a forum for the members of the agencies represented to discuss and develop policies on all issues related to medical education and to initiate the necessary steps for their consideration by the five (5) parent organizations.

(b) This Council shall supervise and coordinate the activities of (1) the existing Liaison Committee on Medical Education (Undergraduate), (2) the new Liaison Committee on Graduate Medical Education, and (3) such other Liaison Committees related to Medical Education as deemed mutually agreeable and advisable by the five (5) parent organizations and the CCME.

Section 2. Authority. This Council was established by mutual agreement of the American Board of Medical Specialties, the American Hospital Association, the American Medical Association, the Association of American Medical Colleges, and the Council of Medical Specialty Societies. By virtue of those agreements, the CCME was authorized to recommend policy concerning undergraduate and graduate medical education to the five (5) parent professional organizations.

Section 3. Functions:

(a) The Council shall review all matters of policy and make recommendations concerning such policies to the parent professional organizations.

(b) The Council shall implement the overall policies agreed to by the parent organizations under which the individual Liaison Committees operate.

(c) The Council shall arrange for the coordination of the activities of these Liaison Committees to avoid duplication of efforts.
(d) The Council shall recommend improvements in review and accreditation procedures of the Liaison Committees.

(e) The Council may organize, conduct and supervise studies directed toward improvement in the standards for the organization and conduct of programs in medical education.

(f) The Council may generate policy recommendations concerning education in medical and related fields to be considered by the parent organizations and/or existing Liaison Committees.

Article III - MEMBERSHIP

Section 1. Membership on the Council shall consist of three (3) designated representatives from each of the following:

- American Board of Medical Specialties
- American Hospital Association
- American Medical Association
- Association of American Medical Colleges
- Council of Medical Specialty Societies

In addition, one public member and one representative of the Federal Government shall serve on the Council.

Section 2. Each organization so designated shall select its representatives in the manner it chooses, but each is urged, insofar as possible, to provide staggered terms to provide continuity of service.

The public member shall be selected by the representatives appointed to the Council by the professional organizations.

The representative from the Federal Government shall be designated by the Secretary, Department of Health, Education, and Welfare.

Section 3. Representatives of professional organizations shall, except for the initial formation of the Council, be appointed for three-year terms, with a maximum of six consecutive years.

The public member shall be elected for one year with a maximum term of six consecutive years.

The Federal Representative shall serve at the discretion of the appointing official.

Article IV - OFFICERS

Section 1. The positions of Chairman and Vice-Chairman shall rotate, on an annual basis, among the parent organizations according to a schedule determined by the Council.
Section 3. The officers shall be named by their respective organizations.

Section 3. The new officers shall take office at the conclusion of each annual meeting.

Section 4. The term of office shall be one year.

Article V - MEETINGS

Section 1. The Council shall hold meetings on a basis that is felt to be appropriate by the membership of the Council.

Section 2. The first meeting of each calendar year shall be considered the annual meeting.

Section 3. A majority of the members of the Council shall constitute a quorum, provided representatives from at least three (3) of the five (5) parent organizations are present.

Section 4. Development of the agenda shall be the joint responsibility of the staff of the five (5) parent organizations.

Section 5. Special meetings may be called by the Chairman or at the written request of any five (5) members of the Council representing a minimum of at least three (3) of the five (5) parent organizations. The purpose of such Special meetings shall be stated in the call. At least twenty-one (21) days notice shall be given for a Special meeting.

Article VI - COMMITTEES

Section 1. The Chairman shall appoint standing or special committees for the Council as shall from time to time be deemed necessary to carry on the work of the Council.

Section 2. The Chairman shall appoint a finance committee to consider the financial support of any activities involving expenditures of Council beyond those in Article VII.

Article VII - FINANCES

Section 1. The expenses of Council representatives from the various organizations shall be borne by those organizations. The expenses of the Public member shall be shared equally by the other organizations. The expenses of the Federal Government representative shall be borne by the Federal Government.

Section 2. Primary staff and secretarial services for the CCME shall be provided by the AMA with staff assistance being provided by other members of the parent organizations as shall from time to time be deemed appropriate and necessary.
Article VIII - PARLIAMENTARY AUTHORITY

The rules contained in the current edition of Sturgis' Standard Code of Parliamentary Procedure shall govern the Council in all cases to which they are applicable and in which they are not inconsistent with these by-laws and any special Rules of Order the Council may adopt.

Article IX - AMENDMENTS

These by-laws can be amended at any regular meeting of the CCME by a two-thirds vote of the members of the Council provided that the amendment has been submitted in writing and read at the previous meeting.

Adopted by CCME
3/19/73
August 2, 1973

TO: CAS Administrative Board
FROM: Connie Choate, Secretary to August G. Swanson, M.D.
SUBJECT: Next Meeting

The next meeting of the CAS Administrative Board will be on Thursday, September 13, in Washington.

On Wednesday evening, September 12, 6:30 p.m., Dupont Plaza Hotel, there will be a meeting, followed by dinner of all three Administrative Boards to discuss the Sprague Committee, Cost of Undergraduate Medical Education Report. The report was mailed to each of you last month, requesting written comments. We would appreciate receiving your comments as soon as possible.

Hotel reservations have been made for each of you at the Dupont Plaza Hotel. Please indicate on the attached form whether or not you will attend the meeting and/or need a hotel room for the night of the 12th. New AAMC policy states that all individuals must pay their hotel bills upon checking out and not to sign hotel bills over to the AAMC. Please pay when you leave and submit an expense voucher to this office.

Thank you.

Attachment

Robert G. Petersdorf, M.D.          Robert E. Forster, II, M.D.
Ronald W. Estabrook, Ph.D.          Charles Gregory, M.D.
William B. Weil, Jr., M.D.          Rolla B. Hill, Jr., M.D.
Robert M. Blizzard, M.D.            Sam L. Clark, Jr., M.D.
David R. Challoner, M.D.            Ernst Knobil, Ph.D.
Ludwig Eichna, M.D.

cc: Charles C. Sprague, M.D.
    Dan C. Tosteson, M.D.
    AAMC Staff
PLEASE FILL OUT AND RETURN TO CONNIE CHOATE AS SOON AS POSSIBLE

I will ___ will not ___ attend the dinner meeting on the evening of September 12.

I will ___ will not ___ attend the CAS Administrative Board meeting on September 13.

I do ___ do not ___ wish a hotel room for the night of September 12.

Signed

Date
Dr. John A. D. Cooper  
President  
Association of American Medical Colleges  
One Dupont Circle, N. W.  
Washington, D. C. 20036

Dear John:

Throughout its history, the National Institutes of Health has supported biomedical research through various mechanisms such as research fellowships, training grants, research grants, and center grants. However, because of administration and budgetary decisions during the last fiscal year, we announced the phase-out of the training programs. Now, DHEW has approved a modified training program provided that NIH maintains a continuing monitoring of the total research manpower needs in the biomedical sciences. Hopefully, much of this information can be obtained by requesting specific data from principal investigators of NIH research grants and contracts and we have, therefore, developed a manpower reporting form (copy enclosed). Dr. Michael Ball of your staff served as a consultant to an NIH committee charged with development of the form and made substantive comments regarding it.

In general, the type of information requested will permit NIH to obtain responses on several significant areas of interest:

1. Research Manpower Pool. How many individuals work on NIH supported research? What is their occupational mix—faculty, other professional, predoctoral or postdoctoral in training status, or nonprofessional? What are their disciplines or fields of specialization? What is the dollar amount of support received under NIH research grants and contracts?

2. Impact of Policy and Funding Changes. What are the manpower effects of shifts in NIH funding patterns and changes in levels of funding?

Please be assured that all of the data obtained will not be released on an individual basis but will be used only in the form of statistical summaries.
I would appreciate your comments and welcome any suggestions which would help to expedite the retrieval of this information from your member institutions.

Sincerely yours,

Robert S. Stone, M.D.
Director

Enclosure
Please complete both parts of this report:

Part I. Paid Personnel: All persons receiving payment from this grant or contract.

Part II. Unpaid Personnel: All persons who performed some work on the research project for which no payment was received from this grant or contract.

Individual reports will be treated as confidential and will be used only in the form of statistical summaries. Names and Social Security numbers are necessary to avoid duplicate counting.

GENERAL INSTRUCTIONS

If data are not available on all questions, please supply as much information as you can. Reasonable estimates will be satisfactory. Write "N.A." (Not Applicable) if such is the case, rather than leave a blank space.

All information requested applies to the budget period specified above.

If there are any questions or if additional copies of this form are needed, write to:

DEFINITIONS

(Part I and Part II)

PROFESSIONAL: Individuals who hold positions which normally; (1) require a baccalaureate, equivalent, or higher degree, and (2) are considered as performing professional work. Exclude all consultants.

Faculty Status: All professional persons paid by this grant or contract--including temporary, part-time and retired—who hold appointments designated as "faculty" by an institution of higher education.

Non-faculty: All professional persons paid by this grant or contract who do not hold appointments designated as "faculty" by an institution of higher education. This includes all non-faculty professional staff employed by nonacademic institutions (independent hospitals, research institutes, nonprofit foundations, and private companies). Postdoctorals considered as primarily in a training status should be reported under "In Training Status."

In Training Status: Include only those individuals who, while employed on a grant or contract, are considered to be in a predoctoral or postdoctoral training status. This includes graduate students registered in institutions of higher education for part-time or full-time study leading to an academic (PhD, ScD, MA, MS, MPH, or equivalent) or professional (MD, DDS, DVM, or equivalent) degree. Predoctorate students working on their dissertation should be entered in this section. Individuals who already have an academic or professional doctorate but are considered as being primarily in a training status should be included. Residents and interns receiving some salary from the grant or contract should also be reported here. Undergraduate students should be counted as "All Other Staff."

ALL OTHER STAFF: All other personnel paid from this grant or contract. Include undergraduate students. Exclude all consultants.

SPECIFIC INSTRUCTIONS FOR PART I

1. List in Items 1, 2, and 3 the names of all professional personnel who worked on activities supported by this grant or contract during the budget period specified who received any salary from the grant or contract.

2. In Item 4, "All Other Staff," count all other personnel who received any salary from the grant or contract during the budget period specified. Give total number of persons in each of the four categories listed and estimate total manweeks and personnel costs.

3. Exclude employer payments for Social Security and other fringe benefits from all amounts reported for salaries and personnel expenditures.

4. Social Security Number (Items 1, 2, and 3, Column b): If the individual does not have a Social Security Number, enter the month and day of birth. Example: 06-15 for June 15.

5. Number of Weeks Worked (Items 1, 2, and 3, Column f): Weeks worked during the budget period specified on activities supported by the grant or contract for which salary was received from grant or contract funds. Count each week regardless of number of hours worked.

6. Estimated Total Manweeks (Item 6, Column r): The total number of weeks all persons counted were paid for their work on the project. Reasonable estimates are acceptable. Part-time work should be computed on the basis of 40 hours a week or the accepted work week in the grantee institution if it is less than 40 hours.

7. Total Personnel Expenditures (Item 5): The amount given should be the sum of the professional salaries and the expenditures reported for the "all other" staff. If continuation pages have been used, be sure to include all personnel listed for a given professional category regardless of the page on which the name appears.
### PART I: PAID PERSONNEL

**INSTRUCTIONS BEFORE COMPLETING FORM USE TYPEWRITER, IF NECESSARY, USE CONTINUATION PAGES.**

<table>
<thead>
<tr>
<th>NAME</th>
<th>SOCIAL SECURITY NUMBER</th>
<th>SEX</th>
<th>YEAR OF BIRTH</th>
<th>HIGHEST DEGREE HELD</th>
<th>CODE</th>
<th>HOURS AND EARNINGS IN BUDGET PERIOD</th>
<th>TOTAL SALARY FROM PROJECT</th>
<th>OTHER SOURCES OF INCOME WHILE ON PROJECT (LACK EMPLOYEE PAYMENTS)</th>
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**PROFESSIONAL: FACULTY STATUS**

|                   |               |                      |                      |                      |                      |                                      |                          |                                                               |
|-------------------|---------------|----------------------|----------------------|----------------------|----------------------|--------------------------------------|                          |                                                               |

**PROFESSIONAL: NON-FACULTY**

|                   |               |                      |                      |                      |                      |                                      |                          |                                                               |
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**PROFESSIONAL: IN TRAINING STATUS (Predoctorals and postdoctorals)**

|                   |               |                      |                      |                      |                      |                                      |                          |                                                               |
|-------------------|---------------|----------------------|----------------------|----------------------|----------------------|--------------------------------------|                          |                                                               |

**TOTAL: ALL OTHER STAFF**

|                   |               |                      |                      |                      |                      |                                      |                          |                                                               |
|-------------------|---------------|----------------------|----------------------|----------------------|----------------------|--------------------------------------|                          |                                                               |

- **CLINICAL SUPPORTING STAFF** - those whose duties primarily involve patient care (orderlies, practical nurses, etc.)
- **TECHNICAL** - includes technicians, laboratory assistants, animal caretakers, etc.
- **CLERICAL AND ADMINISTRATIVE STAFF**
- **OTHER**

**TOTAL PERSONNEL EXPENDITURES IN BUDGET PERIOD**

(Exclude employer payments for Social Security and fringe benefits).

SEE CODE SHEET ON PAGE 4
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<tr>
<th>NAME</th>
<th>SOCIAL SECURITY NUMBER</th>
<th>SEX</th>
<th>YEAR OF BIRTH</th>
<th>HIGHEST DEGREE HELD</th>
<th>CODE</th>
<th>HOURS WORKED</th>
<th>WEEKLY EARNINGS</th>
<th>TOTAL EARNINGS</th>
<th>OTHER SOURCES OF INCOME WHILE ON PROJECT</th>
<th>NON-FACULTY</th>
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<th>IN TRAINING STATUS (Predoctorals and postdoctorals)</th>
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CODE SHEET ON BACK
### I. Degree Codes: Highest degree held and degree sought

1. Degree unknown
2. No degree
3. Baccalaureate
4. Masters
5. PhD, ScD, D.Engr, DPY or equivalent foreign or domestic academic degree
6. MD, DO, DDS, DVM or equivalent foreign or domestic professional degree
7. MD and PhD (any combination of both academic and professional doctorates)

### II. FDS Code for Project Employment: Field, Discipline, and Specialty

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<th>Clinical Medicine (Except Internal)</th>
<th>Other Health-Related Fields</th>
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<td>H1 Anesthesiology</td>
<td>N1 Audiology &amp; Speech Therapy</td>
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<tr>
<td>A2 Anatomy, NEC</td>
<td>H2 Chemotherapy, Cancer</td>
<td>N2 Dental Hygiene</td>
</tr>
<tr>
<td>A3 Biochemistry</td>
<td>H3 Chemotherapy, Other</td>
<td>N3 Dietetics</td>
</tr>
<tr>
<td>A4 Biochemistry, Enzyme/Metabolism</td>
<td>H4 Dermatology</td>
<td>N4 Epidemiology</td>
</tr>
<tr>
<td>A5 Biochemistry, Hormone/Vitamin</td>
<td>H5 Neurology</td>
<td>N5 Health Administration</td>
</tr>
<tr>
<td>A6 Biochemistry, Protein-Amino Acid</td>
<td>H6 Nuclear Medicine</td>
<td>N6 Nursing</td>
</tr>
<tr>
<td>A7 Biochemistry, NEC</td>
<td>H7 Obstetrics and Gynecology</td>
<td>N7 Optometry</td>
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<tr>
<td>A8 Biology, Developmental</td>
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<td>P1 Imaging</td>
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<td>H9 Ophthalmology</td>
<td>P2 Physical Therapy</td>
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<td>P3 Social Work</td>
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<tr>
<td>B3 Biophysics, NEC</td>
<td>J2 Radiology, Diagnostic</td>
<td>P4 Veterinary Medicine</td>
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<tr>
<td>B4 Botany</td>
<td>J3 Radiology, Therapeutic</td>
<td>P5 Physical Therapy</td>
</tr>
<tr>
<td>B5 Cell Biology, Molecular</td>
<td>J4 Radiology, NEC</td>
<td>P6 Veterinary Medicine</td>
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<tr>
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<td>J5 Surgery, Cardiovascular</td>
<td>P7 Physical Therapy</td>
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<td>B7 Cellulose</td>
<td>J6 Surgery, General</td>
<td>P8 Veterinary Medicine</td>
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<tr>
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<td>J7 Surgery, Neurological</td>
<td>P9 Other Health-Related Fields</td>
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<tr>
<td>B9 Cellulose, NEC</td>
<td>J8 Surgery, Orthopedic</td>
<td>Environmental Sciences and Engineering</td>
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<tr>
<td>B10 Cellulose, NEC</td>
<td>J9 Surgery, Plastic</td>
<td>Q1 Air and Water Pollution</td>
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<td>Q2 Engineering</td>
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<tr>
<td>B12 Cellulose, NEC</td>
<td>K2 Surgery, Thoracic</td>
<td>Q3 Engineering, Biomedical</td>
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<td>K3 Surgery, Urology</td>
<td>Q4 Engineering, Environmental</td>
</tr>
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<td>K4 Surgery, Urology</td>
<td>Q5 Other Environmental Sciences</td>
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<td>K5 Surgery, Urology</td>
<td>Mathematics, Statistics, and Computer Sciences</td>
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<td>R1 Biostatistics</td>
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<tr>
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<td>R2 Computer Applications</td>
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<td>K8 Surgery, Urology</td>
<td>R3 Computer &amp; Information Systems</td>
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<td>B19 Cellulose, NEC</td>
<td>K9 Surgery, Urology</td>
<td>R4 Mathematics</td>
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<td>Physical Sciences</td>
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<td>S1 Chemistry, Inorganic</td>
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<td>K9 Surgery, Urology</td>
<td>S2 Chemistry, Organic</td>
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<td>S3 Chemistry, Medicinal</td>
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<td>S4 Chemistry, Physical</td>
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<td>S5 Chemistry, NEC</td>
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<td>S6 Physics</td>
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<td>K9 Surgery, Urology</td>
<td>S9 Other Physical Sciences</td>
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<td>K9 Surgery, Urology</td>
<td>Other Fields</td>
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<td>B31 Cellulose, NEC</td>
<td>K9 Surgery, Urology</td>
<td>T1 Arts and Humanities</td>
</tr>
<tr>
<td>B32 Cellulose, NEC</td>
<td>K9 Surgery, Urology</td>
<td>T2 Audio-Visual</td>
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<td>T3 Education</td>
</tr>
<tr>
<td>B34 Cellulose, NEC</td>
<td>K9 Surgery, Urology</td>
<td>T4 Library Science</td>
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<td>T9 Other, Specify</td>
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<tr>
<td>B36 Cellulose, NEC</td>
<td>K9 Surgery, Urology</td>
<td>Other Fields</td>
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</table>

### Other Fields

- T1 Arts and Humanities
- T2 Audio-Visual
- T3 Education
- T4 Library Science
- T9 Other, Specify
The purpose of this portion of the report form is to obtain information to help evaluate the contributions to NIH research programs by individuals who perform significant work on a NIH research project for which no salary is received from that NIH research grant or contract.

If no individuals performed unpaid work on this project as defined in the instructions below, please check box.

### Specific Instructions for Part II

Exclude interns and residents working on this project on rotation as part of their regular medical training.

- **Column (a):** Estimate the number of individuals in each occupational category given in the table below who contributed at least 80 hours of unpaid work on the research project during the budget period and received no monetary compensation from the grant or contract. Enter these numbers in Column (a). Exclude those individuals who contributed less than 80 hours of unpaid work. Individuals who performed both paid and unpaid work are reported in Column (c).

- **Column (b):** For each of the individuals entered in Column (a) estimate the total number of unpaid hours worked and divide by 40 hours (or the accepted work week in the grantee institution if it is less than 40 hours) to secure man-weeks. Add the number of manweeks for all individuals in a given occupational category and enter in Column (b).

- **Column (c):** Estimate the number of individuals in each occupational category who received salary for work performed on the grant or contract but also performed any amount of work on the project without receiving salary from the grant or contract. Enter this number in Column (c).

- **Column (d):** For all of the individuals entered in Column (c), estimate the total numbers of unpaid hours worked. Convert to occupational category manweeks as described in paragraph 3 above and enter in Column (d).

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<thead>
<tr>
<th>Occupational category</th>
<th>Persons not paid by this grant or contract who worked at least 80 hours on project</th>
<th>Persons paid by this grant or contract who also performed unpaid work on project</th>
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<tr>
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<td>Number</td>
<td>Total unpaid manweeks</td>
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<td><strong>Total: All individuals</strong></td>
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<tr>
<td>Post-doctoral</td>
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</tr>
<tr>
<td><strong>ALL OTHER STAFF</strong></td>
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### I. Degree Codes: Highest degree held and degree sought

1. Degree unknown
2. No degree
3. Baccalaureate
4. Masters
5. PhD, ScD, D.Eng, DPH or equivalent foreign or domestic academic degree
6. MD, OD, DDS, DVM or equivalent foreign or domestic professional degree
7. MD and PhD (any combination of both academic and professional doctorates)

### II. FDS Code for Project Employment: Field, Discipline, and Specialty (NEC = Not elsewhere classified)

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<th>Basic Medical and Biological Sciences</th>
<th>Clinical Medicine (Except Internal)</th>
<th>Other Health-Related Fields</th>
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<td>H1 Anesthesiology</td>
<td>N1 Audiology &amp; Speech Therapy</td>
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<td>A2 Anatomy, NEC</td>
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<td>N5 Health Administration</td>
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<td>A6 Biochemistry, Protein/Amino Acid</td>
<td>H6 Nuclear Medicine</td>
<td>N6 Nursing</td>
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<td>P1 Pharmacy</td>
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<td>P4 Veterinary Medicine</td>
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<td>J3 Osteoarthritis &amp; Gynecology</td>
<td>P9 Other Health-Related Fields</td>
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<td>J4 Osteoarthritis &amp; Gynecology</td>
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<td>Q1 Air and Water Pollution</td>
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<td>Q2 Engineering</td>
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<td>J7 Osteoarthritis &amp; Gynecology</td>
<td>Q3 Engineering, Biomedical</td>
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<td>Q4 Engineering, Environmental</td>
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<td>R5 Statistics</td>
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<td>D7 Physiology, Renal</td>
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<td>T9 Other, Specify</td>
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</tr>
</tbody>
</table>

**AND TITLE OF PERSON COMPLETING FORM**

**WE OF ORGANIZATION**

**ADDRESS**

**TELEPHONE** (Include area code, number and extension)
Michael F. Ball, M.D.
Associate Director
Department of Academic Affairs
for Research
The Association of Amer. Med. Colleges
Suite 200, One Dupont Circle, N.W.
Washington, D. C. 20036

Dear Mike:

Recently, I had a communication from Dr. John Layne, who as you know, is one of our Regents and also is well acquainted with Senator Mike Mansfield. He had sent a very detailed letter to Senator Mansfield and reported that Mansfield was very pleased with the general support of medical education research such as we have all been striving for. He also suggested that John see that many physicians, and especially those in a knowledgeable position, keep letters going to their Senators and Representatives, and when they do this they should by all means send a copy of the letter to Warren G. Magnuson.

He suggested that you might wish to urge all of your academic people to continue to do this in a sort of continuing manner rather than to snow them at one time. I have written a letter suggesting that our own official family, which amounts to about 100 Governors, Officers, and Regents, do this. I am enclosing a copy of this for your information. It was our specific intention not to mention any particular bills by number because I am a little afraid that we can't keep all of our people aware of the status of any one of the bills. In any case I hope this is all helpful.

Best regards,

Cordially,

Edward C. Rosenow, Jr., F.A.C.P.
Executive Vice President

ECR:dmm
Enclosure
TO: The Officers, Regents and Governors

FROM: Edward C. Rosenow, Jr., F.A.C.P.
Executive Vice President

We have continuing interest in supporting adequate financing of medical education and research by the Federal Government. It is obvious that the major help for this will have to come from Congress.

Please write or otherwise communicate to your Senators and Representatives how you feel. The status of various legislative proposals is pretty confused at the present time and so it is probably not necessary or useful to give numbers of bills, etc. It is important to stress in your own words the following:

1. Training grants and other methods of continued development of able teachers is essential if the medical schools of this country are expected to turn out enough physicians and other health professionals to serve the public.

2. Federal scholarships or loans of some kind are necessary to support young people who wish to enter medical or related professional schools.

3. Some direct funding to medical schools to encourage increasing the number of new doctors and other health professionals is necessary. This could well be done by a capitation system which should be adequate to stimulate the increased enrollment.

4. The members of Congress should be reminded that medical schools have another very important function and that is to develop new biomedical knowledge. This makes the medical schools a prime resource in this country. This can only be done by generous support of biomedical research so that new researchers can be educated and they can be provided with all facilities to make new discoveries possible.

5. Adequate funds should also be made available for construction of health science facilities.
Please remember the following:

1. When you communicate with your Senators or Representatives, be sure you indicate you are one of his constituents, and that you speak as an individual physician with high interest in the whole problem.

2. Do not quote the American College of Physicians or any one else for that matter.

3. Send a copy of your letter to:

   The Honorable Warren G. Magnuson
   Chairman
   Sub-Committee on Labor and Education
   The Senate Appropriations Committee
   The United States Senate
   Washington, DC 20510

ECR: dg
### FISCAL YEAR 1973 APPROPRIATIONS

(Thousands)

#### FELLOWSHIPS

<table>
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<tr>
<th>INSTITUTE</th>
<th>ORIGINAL BUDGET ESTIMATE</th>
<th>HOUSE RECOMMENDATION</th>
<th>SENATE RECOMMENDATION</th>
<th>LESSER OF THE TWO</th>
<th>ESTIMATED OBLIGATIONS</th>
<th>PRESIDENTIAL BUDGET 1974</th>
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</thead>
<tbody>
<tr>
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### Fiscal Year 1973 Appropriations

(Thousands)

#### Training Grants

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<th>Original Budget Estimate</th>
<th>House Recommendation</th>
<th>Senate Recommendation</th>
<th>Lesser of the Two</th>
<th>Estimated Obligations</th>
<th>Presidential Budget 1974</th>
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</table>
August 3, 1973

Mr. Charles E. Tentress
Director of Public Relations
Association of American Medical Colleges
One DuPont Circle
Washington, D. C. 20036

Re: National Council of Community Mental Health Centers v. Weinberger,
C.A. No. 1223-73, D.C.D.C.

Dear Charlie:

I am pleased to enclose a copy of the Court's final judgment in the above case. The Court has required compliance with its Order by September 1, 1973, and has denied a stay. Accordingly, the Government will as a practical matter have to decide on whether to appeal before that date.

You will also note that the Court's language was inspiringingly clear and strong with respect to the Executive's duty to obey the law. (Opinion, pp. 3-5). It is particularly gratifying to have had this principle upheld so vigorously.

With respect to 1974, although the Court technically denied relief as premature, it can be hoped that the Executive will apply the principles of the decision to fiscal 1974. Future action for this fiscal year is by no means foreclosed.

Sincerely yours,

Jerome S. Wagshal

Enclosure
IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF COLUMBIA

NATIONAL COUNCIL OF COMMUNITY
MENTAL HEALTH CENTERS, INC.,
ET AL., on behalf of themselves
and others similarly situated,

Plaintiffs,

v.

CASPAR WEINBERGER, ET AL.,

Defendants.

CIVIL ACTION NO. 1223-73

FINAL ORDER

In accordance with the Court's Memorandum Opinion
filed this day, it is hereby
ORDERED that on or before September 1, 1973,
defendants shall:

(1) take all steps necessary to review under normal
procedures and criteria in effect prior to February 23, 1973, all
pending applications for first-year grants for community mental
health centers staffing, initiation and development, and for
construction and staffing of mental health treatment centers for
children under the Community Mental Health Centers Act, as
amended, 42 U.S.C. §§ 2688-2688a, 2688u;

(2) submit all qualifying applications reviewed by
HEW Regional Offices to the National Advisory Mental Health
Council for approval;

(3) decide, through Regional Directors or otherwise,
but in accordance with all regulations and requirements in effect
prior to February 23, 1973, which grant applications approved by
the National Advisory Mental Health Council shall be funded and
in what amount, in order that the full $52,050,000 of appropriated
funds available shall be awarded in grants;

(4) take all steps and prepare all documents necessary
legally/to notify grantees of their awards under (3) above and to obligate
to said grantees their share of $52,050,000 appropriated for
expenditure;
(5) take the necessary steps to send by check to grantees their grant awards in accordance with established funding control procedures; and it is

FURTHER ORDERED that this Order shall not be stayed by this Court pending appellate review and plaintiffs shall have their normal costs for this litigation.


(Handwritten) GERARD A. CESARI
UNITED STATES DISTRICT JUDGE
NATIONAL COUNCIL OF COMMUNITY
MENTAL HEALTH CENTERS, INC.
ET AL., on behalf of themselves
and others similarly situated,

Plaintiffs,

v.

CASPAR WEINBERGER, ET AL.,

Defendants.

Civil Action No. 1223-73

MEMORANDUM OPINION

Plaintiffs as a class bring this action seeking an
order requiring defendants to review, approve, and obligate to
the plaintiffs funds in the amount of $52,050,000 for first-year
grants for staffing of community mental health centers and for
construction and staffing of mental health treatment centers for
children under the Community Mental Health Centers Act, as
amended, 42 U.S.C. §§ 2688-2688d, 2688u (hereinafter referred to
as the Act). The class, certified by the Court under Rule 23,
Fed. R. Civ. P., consists of all those having applied for
first-year grants under these provisions of the Act.

Defendants have moved to dismiss this action on the
grounds that the Court lacks jurisdiction over the subject
matter of this action; that plaintiffs have failed to join an
indispensable party; that there is no justiciable case or
controversy presented by this action; and that the complaint
fails to state a claim upon which relief can be granted. In
addition, plaintiffs and defendants have each cross-moved for
summary judgment as a matter of law. The issues have been
thoroughly briefed and the underlying facts are not in dispute.

Administration of the Act lies with the Secretary
of the Department of Health, Education and Welfare (HEW). The
Regional Offices of HEW review applications and then send them
to the National Advisory Mental Health Council for approval. If
that approval is obtained, each of the ten HEW Regional Directors
then makes the final determination on which of the applications as recommended favorably by the National Advisory Mental Health Council will be finally approved for award, the amount to be awarded, and the priority order for payment. Accordingly, although a Regional Health Director may not award a grant that has not been recommended for approval by the National Advisory Mental Health Council, a favorable recommendation by the National Advisory Mental Health Council neither constitutes effective approval of a grant application nor obligates the respective Regional Health Directors to award a grant to the applicant.

On February 23, 1973, the Director of the National Institute of Mental Health issued a directive to the HEW Associate Regional Directors for Mental Health which in pertinent part:

1. Noted that because of the revised 1973 budget "no new staffing grants will be awarded in 1973."

2. Noted that "[a]ll activities of the Regional Offices pertaining to the development of additional staffing grant applications should be discontinued since they cannot be funded."

3. Discouraged potential applicants for grants from making application: assistance in the form of "staffing application kits" was directed "not [to] be distributed to potential applicants;" applications received and not yet reviewed were not to be "site visited or reviewed for funding but should be acknowledged to the applicant in a letter explaining the reason the application will not be reviewed...;" staffing grant applications already reviewed by the Regional Office were ordered "not [to] be duplicated or presented to the National Advisory Mental Health Council."

As of February, 1973, a total of 77 grant applications had been recommended for approval by the National
Advisory Mental Health Council, in total sum of $39,026,565, and many other applications had been received and were under review, or had been initially approved by Regional Directors. After February 23, 1973, defendants ceased procuring and developing first-year grant applications by members of the plaintiff class and applications have not been processed or developed. No action was taken by defendants after February 23, 1973, to obligate or expend funds for the 77 approved grant applications, or for any other first-year grant applications in fiscal 1973, although the defendants made available funds in fiscal 1973, to applicants to meet the continuation costs of previously funded grants.

By continuing resolution, for fiscal year 1973 Congress has appropriated for obligation and expenditure the sums of $165,000,000 for Community Mental Health Center staffing and $20,000,000 for Mental Health for Children.* Although approximately $52,050,000 of this appropriation is available for funding first-year grant applications, none of this amount had been obligated or expended as of the date of suit. On June 28, 1973, the Court entered a preliminary injunction ordering defendants to review and fully process by normal criteria all pending applications, and to take measures necessary under 31 U.S.C. § 200 to prevent all unobligated and unspent funds for the first-year grant programs from lapsing at the end of fiscal 1973, and thus returning to the general treasury fund pursuant to 31 U.S.C. § 701(a)(2).

Before turning to the merits, the issues raised by defendants’ motion to dismiss must be considered.

The defendant Government officials raise standard objections so typical in these cases and many other categories of current Government litigation. They plead sovereign immunity

and say that citizens directly affected as potential beneficiaries of appropriations have no standing to complain because these appropriation matters raise transcendent political issues which a Federal Court should not venture to resolve.

It is time this litany was displaced by a modicum of common sense. When Congress directs that money be spent and the President, as Chief Executive, declines to permit the spending, the resulting conflict is not political. The President, after being advised, believes he has the power because of economic conditions and other reasons to refuse to spend at his discretion. Yet he is charged by the Constitution faithfully to execute the laws. If the President is in all good faith mistaken as to the meaning and effect of the law, or his inherent power under the Constitution, what is more normal and consistent with our American system of government than for the courts to interpret the law and thus resolve the apparent conflict one way or the other.

This dispute can readily be resolved by the customary exercise of judicial power, and therefore is not a non-justiciable political question. *Powell v. McCormack*, 395 U.S. 486 (1969); *Baker v. Carr*, 369 U.S. 186 (1962). Furthermore, any affirmative order of this Court would be premised on a determination that official action by the defendants in refusing to spend is beyond their statutory or constitutional powers. This would go no further than to require the spending of funds already appropriated by Congress to achieve the declared purposes of the Act. Accordingly, there can be no effective assertion of sovereign immunity and the defendants' actions are reviewable by the courts. See *Dungan v. Rank*, 372 U.S. 609 (1963); *Larson v. Domestic & Foreign Corp.*, 337 U.S. 682 (1949); *Scanwell Laboratories, Inc. v. Shaffer*, 137 U.S. App. D.C. 371, 424 F.2d 859 (1970). The Court has jurisdiction pursuant to 5 U.S.C. §§ 701-706, and 28 U.S.C. §§ 1331 and 1361.
An issue of statutory interpretation and constitutional construction is presented. To say that the Constitution forecloses judicial scrutiny in these circumstances is to urge that the Executive alone can decide what is best and what the law requires. To say that persons immediately and seriously affected by failure to commit funds authorized by the Legislature cannot go to court is to ignore the democratic base of our society. Indeed, it is only when the three equal and coordinate branches of government function that a stable government can be assured. Cf. Marbury v. Madison, 5 U.S. (1 Cranch) 137 (1803). The rule of law dictates calm judicial determination rather than political confrontation. Such confrontations are either resolved by naked power utilized in many irrelevant ways, or the issue stalemates. We are a government of law, not men, and the law must be determined and upheld. This is the never-ending process by which the Constitution is molded to the exigencies of the times and will be made rational in this and succeeding centuries. These cases should move to higher courts for prompt, definitive determination shorn of the confusing inconsequential defenses so typical of Government legalese these days. The defendants' motion to dismiss is denied.

The controlling question on the merits is whether the money authorized under the legislation was appropriated to be spent at the discretion of the Executive, or appropriated with an affirmative direction that the money be fully spent within the fiscal year. This issue is to be resolved without regard for the merits or demerits of the particular program involved, although it is perhaps of some significance in weighing the matter to note that this particular appropriation does not affect our foreign or military affairs. Rather, it falls squarely in an area of domestic concern in which the President's responsibility to execute the laws must be viewed without regard to issues of national defense or foreign policy, where the
Constitution may recognize some special authority of the President to deal with developing conditions.

The defendants emphasize the overall economic problems confronting the nation, the heavy demand for funds in areas where national security considerations abound, and the absence of any national procedure for reconciling various appropriations in the light of current budgetary pressures, in part exacerbated by debt limitations. All of this is indeed pertinent, but whatever may be the President's power to limit expenditures to accommodate the total moneys available, he does not have complete discretion to pick and choose between programs when some are made mandatory by conscious, deliberate congressional action. At least with respect to the programs involved here, there is no basis for defendants' assertion of inherent constitutional power in the Executive to decline to spend in the face of a clear statutory intent and directive to do so. Kendall v. United States ex rel. Stokes, 37 U.S. 522 (1838); Youngstown Sheet & Tube Co. v. Sawyer, 343 U.S. 579 (1952); State Highway Comm'n v. Volpe, ___ F.2d ___, No. 72-1512 (8th Cir: decided April 2, 1973); Local 2677, Am. Fed'n Gov't Employees v. Phillips, ___ F. Supp. ___, C.A. No. 371-73 (D.D.C. decided April 11, 1973).

The Court concludes that Congress intended to require a full commitment of the fiscal 1973 appropriated funds by the end of the fiscal year. This intent is established by the following facts and circumstances, among others.

Through the Act, Congress has constructed an elaborate scheme to advance the cause of community mental health treatment, and has continually appropriated money to achieve the purposes of the Act. The object of the Act is to provide federal money to establish new community mental health centers and programs throughout the nation. Once begun, the federal moneys continue to be available in succeeding years at somewhat
reduced levels. In extending the program to make available initial grants in additional fiscal years, Congress has necessarily also permitted additional centers to be eligible for the substantial succeeding year grants. In the face of vast unmet mental health needs throughout the nation, Congress has continuously appropriated money for new grants to extend the benefits of the Act. The Act was never viewed by Congress as a demonstration program to get communities to follow the examples of others and start their own centers, but rather a national effort to redress the presently wholly inadequate measures being taken to meet increasing mental health treatment needs.*/

The defendants' present efforts to shut down these programs, perhaps in favor of others, on the grounds these initial general funding grants were for demonstration programs and have served their purpose, is not only inconsistent with the Act, its continuing support and expansion by Congress, and the congressional intent found in the legislative history, but is a view recently explicitly rejected by Congress in extending the programs, with appropriations, through fiscal 1974, so that community facilities can be further expanded.**/ Therefore, while the internal language of this Act is "discretionary," it would appear Congress did not intend that the Executive shall have discretion simply to end the program in total without regard to the essential purposes of the Act. See State Highway Comm'n v. Volpe, supra.


Given this intent, the question then arises whether this intent was anywhere made sufficiently explicit by the statutes as to constitute a mandatory directive to the President.

Subsequent to the passage of the Act, an amendment (hereinafter "Section 601") was enacted which provided as follows:

**Notwithstanding any other provision of law, unless enacted after the enactment of this Act expressly in limitation of the provisions of this section, funds appropriated for any fiscal year ending prior to July 1, 1973, to carry out any program for which appropriations are authorized by . . . or the Retardation Facilities and Community Mental Health Centers Construction Act of 1963 (Public Law 83-164, as amended) shall remain available for obligation and expenditure until the end of such fiscal year. Medical Facilities Construction and Modernization Amendments of 1970, Pub. L. No. 91-296; Title VI, § 601, 84 Stat. 353, 42 U.S.C.A. §§ 201 note and 2661 note (emphasis added).**

While the meaning of the language "shall remain available for obligation and expenditure until the end of such fiscal year" is not readily apparent on its face nor free from doubt, read in the light of the legislative history of Section 601 and the meaning commonly given and accepted for such language, the Court must conclude that this provision makes mandatory the spending of funds appropriated under the Act for fiscal 1973.

Before initial passage by Congress, the Executive recognized that all other statutory provisions notwithstanding, Section 601 converted "HEW health-related programs into mandates to spend regardless of considerations of common-sense economy and prudent use of the taxpayers' money." Letter from Robert P. Mayo, Director, Bureau of the Budget, to Rep. Harley D. Staggers, May 11, 1970. This section was originally a Senate amendment

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*/ Language like that used in Section 601 has previously been used by Congress with the intent to make mandatory the spending of appropriated funds. Such an intent of similar language has been recognized by the Executive, and the courts have so interpreted it. See 20 U.S.C. § 1226 and 23 U.S.C. § 113(a); S. Rep. No. 91-634, 91st Cong., 2d Sess. 75-79 (1970); 114 Cong. Rec. 29014-16 (1968) (remarks of Senators Morse and Yarborough); State Highway Comm'n v. Volpe, supra.
and its mandatory nature was agreed to by the House conferees only after it was limited to funds for fiscal years through 1973 and to the three health programs with the greatest needs. Moreover, the floor debates and committee reports reflect a clear understanding that Section 601 made spending mandatory "to prevent administration imposed freezes, reductions and rollbacks from applying to health programs." H.R. Rep. No. 91-1167, 91st Cong., 2d Sess. 25-26 (1970). See 116 Cong. Rec. 22266, 22268, 22271-73 (1970) (remarks by Senators Yarborough, Dominick, Javits and Kennedy). The President vetoed Section 601 principally because Congress was insisting that fiscal 1973 funds "to carry out the programs involved must be spent." 116 Cong. Rec. 20876 (1970) (Veto Message of President Nixon). With this meaning clearly in mind, Congress overrode the President's veto. Finally, with this legislative background and the current debate over Executive spending well in mind, Section 601 has recently been extended through fiscal 1974. The Health Programs Extension Act of 1973, Pub. L. No. 93-45, § 401(a), 87 Stat. 95 (June 18, 1973). In so doing, the committee reports make explicitly clear that the language in question here requires the expenditure of funds. H.R. Rep. No. 93-227, 93d Cong., 1st Sess. 10 and 15 (1973).

Money has been appropriated to achieve the purposes of the Act and the defendants are given the non-discretionary statutory duty to spend those funds for grants that meet the pre-February 23, 1973, lawful criteria embodied in rules and regulations promulgated to achieve the purposes of the Act. The defendants have no residual constitutional authority to refuse to spend the money. Accordingly, the plaintiffs' motion for summary judgment is granted and the motion of defendants for summary judgment is denied. An appropriate Final Order accompanies this Memorandum Opinion.
As to the question of relief, the Court must address one point pressed by plaintiffs. Because the Act, Section 601, and supporting appropriations have in effect been carried over to fiscal year 1974 (87 Stat. 94 and 95, §§ 203, 207, 401(a) (1973), and 87 Stat. 130 (1973)), plaintiffs seek relief applicable to fiscal year 1974 as well as 1973. The Court must decline such relief. There is no controversy as to fiscal 1974 before the Court and ripe for determination. Congress has various proposals under consideration which may affect this controversy, and the Executive has substantial time in which to formulate a position on expenditure of 1974 funds before new applicants would face injury. If and when such injury is real, those aggrieved can proceed by a separate action.


(Signed) UPGHEARD A. GESELL
UNITED STATES DISTRICT JUDGE
MEMORANDUM

TO: John A. D. Cooper, M.D.
FROM: Joseph A. Keyes
SUBJECT: Impounded Health Funds

September 12, 1973

In fiscal 1973, the Administration impounded $1.095 billion of appropriated funds for NIH ($527,845,000) and HSMHA ($567,586,000). Of particular interest to the AAMC are the funds impounded in the following categories:

I. NIH - TRAINING GRANTS $ 32,687,000
   FELLOWSHIPS 12,509,000
   RESEARCH GRANTS 66,698,000
   (see attached tables for breakdown by institute) $ 111,204,000

II. CONSTRUCTION GRANTS $ 100,000,000

III. SPECIAL PROJECT GRANTS $ 28,600,000

IV. NEW SCHOOLS START-UP $ 4,200,000

The figures cited above represent the difference between the funds appropriated through a series of Continuing Resolutions (there being no signed Appropriations Act for DHEW) and the FY 1973 Spending Plan adopted by the Administration. At one point, the actual amounts appropriated by this complex process were uncertain, and this gave rise to disputes between the Administration and the Congress over whether or not funds were being impounded. The Congressional intent was subsequently clarified by the Congress and its interpretation has been adopted by every court ruling on the matter.

What makes the situation this year different from previous Presidential impoundments is not only the magnitude of the funds involved, far greater than ever before, but the use of this technique to dismantle Congressionally authorized and funded programs. Used in this way, impounding funds amounts to the exercise of an item veto, an authority the president does not have.
In conversation with the Association's Counsel, we have considered structuring four suits for the release of these funds. We have been encouraged in this by the sympathy of the courts for entertaining such suits, and the uniformly favorable rulings handed down so far, even though these have not been final determinations of the ultimate issues. The case is strengthened with respect to the release of funds appropriated to carry out programs authorized by the Public Health Service Act (which includes those cited above) by a provision in the Hill Burton extension of 1970, understood by both the Congress and the President as an anti-impoundment provision.

Comments Related to the Four Suits

I. NIH Training Grants, Fellowships and Research Grants.

The Administration's purpose in impounding these funds is to reduce the budget in areas of low visibility for the purpose of fighting inflation etc., while giving priority to highly visible and politically sensitive areas. In addition, the intent is to phase out the training grants and fellowships under the rationale that they are not needed, that there are artificial surpluses of training manpower being developed, and that the market forces should be allowed to work to rectify the imbalances.

Virtually every medical school is affected by the reductions in these category and it is our Counsel's preliminary view that a suit could be brought in the name of the Association. The case is viewed as having substantial merit and could be
bought at a cost of between $10,000 and $20,000.

II. Construction Grants:

As of the last Advisory Council Meeting held on August 14, 1972 there were 26 medical schools with approved but unfunded grant applications totalling 251 million dollars. In October/November 1972 these schools were notified that these applications would not be funded because of a lack of appropriated funds. They were further notified that because no funding was anticipated there would be no backlog maintained and that should funding become available, they would be required to resubmit their applications.

NOTE: Texas Tech has received notification of a grant award of $6 million for a construction project. The source of these funds has not yet been identified to the Bureau of Health Manpower.

In the House Committee Report on the FY 1974 appropriations bill, the Congress continues to refer to a "large backlog of approved but unfunded construction grant applications," not withstanding the Administration's denial that such a backlog exists.

A suit for the release of these funds might be brought in the name of the individual schools, by one as a class action, or conceivably by the AAMC on behalf of its members.
III. Special Projects

No new applications were funded in FY 73, although a number of applications, judged to be for high priority purposes, were reviewed and of these, some were "approved but unfunded."

A total of 165 applications for continuation awards received from medical schools were approved by the Advisory Committee for payment at a level of $44.657 million. These were paid at 64 cents on the dollar.

The total dollar level for all professions approved for continuation equalled $54.4 million. Had all the funds appropriated been available for obligation, these could have been paid in full with $8.6 million available for new awards.

Virtually all medical schools are affected and again the suit could conceivably be brought in the name of the AAMC on behalf of its members.

IV. New School Start-Up Assistance

No funds were obligated or expended for this program in FY 1973 even though $4.2 million was appropriated.

Six medical and six dental schools had approved but unfunded applications totalling $2,963,694. Of these five medical and five dental schools were eligible for continuation of previously awarded grants, the remaining two were in for the first time in FY 73. All received notices that funds were not to be awarded because "funds were not available to make an award."
Eastern Virginia Medical School had initiated a suit for these funds on its own. Each of the other schools have been queried as to their desire to join with this Association and the AADS in a suit to recover these funds. One medical school has given a firm yes, one will be considering the matter at a board of trustees meeting on September 13, 1973, (a dental school in the same University will also be at issue in the same meeting). Three medical schools have said no. The AADS is querying its members with a similar response.
## Fiscal Year 1973 Appropriations

### Training Grants

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<th>HOUSE RECOMMENDATION</th>
<th>SENATE RECOMMENDATION</th>
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## FISCAL YEAR 1973 APPROPRIATIONS (Thousands)

### RESEARCH GRANTS

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### Fiscal Year 1973 Appropriations

(Thousands)

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<th>Institute</th>
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<th>House Recommendation</th>
<th>Senate Recommendation</th>
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PROPOSED AAMC BYLAWS REVISIONS

1. **Title I, Section 2, Paragraph B:**

Delete the existing paragraph B and insert:

B. **Distinguished Members** - Distinguished Members shall be persons who have been actively involved in the affairs of the Association and who no longer serve as AAMC representatives of any members described under Section 1.

2. **Title I, Section 3**

Add Paragraph E:

E. Distinguished members will be recommended to the Executive Council by the Administrative Board of either the Council of Deans, Council of Academic Societies or Council of Teaching Hospitals.

3. **Title VI, Section 2**

The Executive Council shall consist of fourteen members elected by the Assembly and ex officio, the Chairman, Chairman-Elect, President, the Chairman of each of the three councils created by these bylaws, and the Chairman of the Organization of Student Representatives, all of whom shall be voting members. Of the fourteen members of the Executive Council elected by the Assembly, three shall be members of the Council of Academic Societies; two shall be members of the Council of Teaching Hospitals; eight shall be members of the Council of Deans, and one shall be a Distinguished Member. The elected members of the Executive Council shall be elected by the Assembly at its annual meeting, each to serve for three years (except for the Distinguished Member who shall serve for one year) or until the election and installation of his successor. Each shall be eligible for reelection for one additional consecutive term of three years. Each shall be elected by majority vote and may be removed by a vote of two-thirds of the members of the Assembly present and voting.
ARTICLES OF INCORPORATION OF THE
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Under the Illinois General Not for Profit Corporation Act

1. The name of the corporation is Association of American Medical Colleges.

2. The period of duration of the corporation is perpetual.

3. The address of its registered office in the State of Illinois is 135 South LaSalle Street, Chicago, Illinois. The name of its registered office in the District of Columbia is One Dupont Circle, Washington, D.C. The name of its registered agent at said address is James W. Quiggle.

4. [Names of initial Board of Directors omitted.]

5. The purpose for which the corporation is organized is the advancement of medical education. The purpose is exclusively educational, scientific, and charitable. Any net earnings of the corporation or of any of its activities shall be devoted exclusively to such purpose and shall not inure to the benefit of any individual. There shall be no shareholders of the corporation.

6. The Board of Directors shall be known as the Executive Council, and the directors shall be called Executive Council Members. The Executive Council shall have the complete direction and control of the property and affairs of the corporation, and the acts of the Executive Council shall be the acts of the corporation for all purposes.

7. The membership of the corporation shall consist of classes known as Institutional Members, Provisional Institutional Members, Academic Society Members, and Teaching Hospital Members, and such other members as shall be provided in the Bylaws. Institutional Members shall have the right to vote. Provisional Institutional Members, Academic Society Members, and Teaching Hospital Members shall have the right to vote to the extent and in the manner provided in the Bylaws. Other classes of members shall have no right to vote and no action of theirs shall be necessary for any corporate action. The membership of all classes shall consist of such persons as may from time to time be designated pursuant to the Bylaws.

8. In the event of dissolution of the corporation, all of its assets (after payment of, or provision for, all its liabilities) shall be transferred or conveyed to one or more domestic or foreign corporations, societies, or organizations engaged in activities substantially similar to those of the corporation, to be used by them for the purpose set forth in Article 5.
9. Provided, however, the purposes stated in Article 5 shall not be deemed to authorize the corporation to receive any child for care or placement apart from its own parent or guardian, nor shall the corporation act as or perform any of the functions of a post-secondary or vocational institution.*

*This sentence has been inserted to avoid any question of compliance or noncompliance with certain Illinois legal requirements.
I. **MEMBERSHIP**

Section 1. There shall be the following classes of members, each of which that has the right to vote shall be (a) an organization described in Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any subsequent Federal tax laws), and (b) an organization described in Section 509(a)(1) or (2) of the Internal Revenue Code of 1954 (or the corresponding provisions of any subsequent Federal tax laws), and each of which shall also meet (c) the qualifications set forth in the Articles of Incorporation and these Bylaws, and (d) other criteria established by the Executive Council for each class of membership:

A. **Institutional Members** - Institutional Members shall be medical schools and colleges of the United States.

B. **Affiliate Institutional Members** - Affiliate Institutional Members shall be medical schools and colleges of Canada and other countries.

C. **Graduate Affiliate Institutional Members** - Graduate Affiliate Institutional Members shall be those graduate schools in the United States and Canada closely related to one or more medical schools which are institutional members.

D. **Provisional Institutional Members** - Provisional Institutional Members shall be newly developing medical schools and colleges of the United States.

E. **Provisional Affiliate Institutional Members** - Provisional Affiliate Institutional Members shall be newly developing medical schools and colleges in Canada and other countries.

F. **Provisional Graduate Affiliate Institutional Members** - Provisional Graduate Affiliate Institutional Members shall be newly developing graduate schools in the United States and Canada that are closely related to an accredited university that has a medical school.

G. **Academic Society Members** - Academic Society Members shall be organizations active in the United States in the professional fields of medicine and biomedical sciences.

H. **Teaching Hospital Members** - Teaching Hospital Members shall be teaching hospitals in the United States.
Section 2. There shall also be the following classes of honorary members who shall meet the criteria therefore established by the Executive Council:

A. Emeritus Members - Emeritus Members shall be those retired individuals who have been active in the affairs of the Association prior to retirement.

B. Senior Members - Senior Members shall be persons who have been actively involved in the affairs of the Association and who have been appointed to university or institutional administrative positions with broad responsibilities related to academic health centers.

C. Individual Members - Individual Members shall be persons who have demonstrated a serious interest in medical education.

D. Sustaining and Contributing Members - Sustaining and Contributing Members shall be persons or corporation who have demonstrated over a period of years a serious interest in medical education.

Section 3. Election to membership:

A. All classes of members shall be elected by the Assembly by a majority vote on recommendation of the Executive Council.

B. All institutional members will be recommended by the Council of Deans to the Executive Council.

C. Academic society members will be recommended by the Council of Academic Societies to the Executive Council.

D. Teaching hospital members will be recommended by COTH to the Executive Council.

Section 4. Revocation of Membership - A member with any class of membership may have his membership revoked by a two-thirds affirmative vote of the Assembly on recommendation with justification by the Executive Council; provided that the Executive Council shall have given the members written notice of the proposed revocation prior to the Assembly at which such a vote is taken.

Section 5. Resignation - A member with any class of membership may resign upon notice given in writing to the Executive Council. However, any such resignation shall not be effective until the end of the fiscal year in which it is given.

II. COUNCILS

Section 1. There shall be the following Councils of the Association each of which shall be governed by an Administrative Board and each of which shall be organized and operated in a manner consistent with rules and regulations approved by the Executive Council:
A. Council of Deans - The Council of Deans shall consist of the Dean or the equivalent academic officer of each institutional member and each provisional institutional member that has admitted its first class of students.

B. Council of Academic Societies - The Council of Academic Societies shall consist of two representatives from each academic society member who shall be designated by each such member for a term of two years.

C. Council of Teaching Hospitals - The Council of Teaching Hospitals shall consist of one representative from each teaching hospital member who shall be designated annually by each such member.

III. ORGANIZATION OF STUDENT REPRESENTATIVES

There shall be an Organization of Student Representatives related to the Council of Deans, operated in a manner consistent with rules and regulations approved by the Council of Deans and comprised of one representative of each institutional member that is a member of the Council of Deans chosen from the student body of each such member. The Organization of Student Representatives shall meet at least once each year at the time and place of the annual meeting of the Council of Deans in conjunction with said meeting to elect a Chairman and other officers, to recommend student members of committees of the Association, to recommend to the Council of Deans the Organization's representatives to the Assembly, and to consider other matters of particular interest to students of institutional members. All actions taken and recommendations made by the Organization of Student Representatives shall be reported to the Chairman of the Council of Deans.

IV. MEETINGS OF MEMBERS AND COUNCILS

Section 1. Meetings of members of the Association shall be known as the Assembly. An annual Assembly shall be held at such time in each October or November and at such place as the Executive Council may designate.

Section 2. Special meetings of the Assembly may be called for any purpose by the Chairman, by a majority of the voting members of the Executive Council, or by twenty voting members of the Association.

Section 3. All meetings of the Assembly shall be held at such place in Illinois, the District of Columbia or elsewhere as may be designated in the notice of the meeting. Written or printed notice stating the place, day and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than
five nor more than forty days before the date of the meeting, either personally or by mail, by or at the direction of the Chairman or persons calling the meeting, to each member entitled to vote at such meeting.

Section 4. The Institutional Members and Provisional Institutional Members that have admitted their first class shall be represented in the Assembly by the members of the Council of Deans and a number of members of the Organization of Student Representatives equivalent to 10 percent of the members of the Association having representatives in said Organization. Each of such representatives of Institutional Members and Provisional Institutional Members that have admitted their first class shall have the privilege of the floor in all discussions and shall be entitled to vote at all meetings. The Council of Academic Societies and the Council of Teaching Hospitals each shall designate no more than thirty-five of their respective members as members of the Assembly, each one of whom shall have one vote in the Assembly. All other members shall have the privileges of the floor in all discussions but shall not be entitled to vote at any meeting.

Section 5. A representative of each voting member shall cast its vote. The Chairman may accept the written statement of the Dean of an institutional member, or provisional institutional member, that he or some other person has been properly designated to vote on behalf of the institution, and may accept the written statement of the respective Chairmen of the Council of Academic Societies and the Council of Teaching Hospitals designating the names of individuals who will vote on behalf of each member society or hospital. The Chairman may accept the written statement of the Chairman of the Council of Deans reporting the names of the individuals who will vote as the representatives chosen by the Organization of Student Representatives.

Section 6. One-third of the voting members of the Association shall constitute a quorum at the Assembly. Except as otherwise provided herein, action at any meeting shall be by majority vote at a meeting at which a quorum is present, provided that if less than a quorum be present at any meeting, a majority of those present may adjourn the meeting from time to time without further notice.

Section 7. Each Council of the Association shall meet at least once each year at such time and place as shall be determined by its bylaws and designated in the notice thereof for the purpose of electing members of the Administrative Board and officers.

Section 8. Regional meetings of each Council may be held in each of the geographical regions established by the Executive Council for the purpose of identifying, defining and discussing issues relating to medical education and in order to make recommendations for further action at the national level. Such meetings of each Council shall be held at such time and place as determined in accordance with procedures approved by the Executive Council.

Section 9. No action of the Association shall be construed as committing any member to the Association's position on any issue.

V. OFFICERS

The officers of the Association shall be those elected by the Assembly and those appointed by the Executive Council.

Section 1. The elected officers shall be a Chairman, who shall preside over the Assembly and shall serve as Chairman of the Executive Council, and a Chairman-Elect, who shall serve as Chairman in the absence of the Chairman. The Chairman-Elect shall be elected at the annual meeting of the Assembly, to serve in that office for one year, and shall then be installed as Chairman for a one-year term in the course of the annual meeting of the Assembly the year after he has been elected. If the Chairman dies, resigns, or for any other reason ceases to act, the Chairman-Elect shall thereby become Chairman and shall serve for the remainder of that term and the next term.

Section 2. The officers appointed by the Executive Council shall be a President, who shall be the Chief Executive Officer, a Vice President, a Secretary and a Treasurer, who shall be appointed from among the Executive Council members. The Executive Council may appoint one or more additional officers on nomination by the President.

Section 3. The elected officers shall have such duties as are implied by their title or are assigned to them by the Assembly. The appointed officers shall have such duties as are implied by their titles or are assigned to them by the Executive Council.

VI. EXECUTIVE COUNCIL

Section 1. The Executive Council is the Board of Directors of the Association and shall manage its affairs. The Executive Council shall have charge of the property and financial affairs of the Association and shall perform such duties as are prescribed by law and the Bylaws. It shall carry out the policies established at the meetings of the Assembly and take necessary interim action for the Association and carry out duties and functions delegated to it by the Assembly. It shall set educational standards and criteria as prerequisites for the election of members of the Association, it shall consider applications for membership and it shall report its findings and recommendations with respect thereto to the Assembly.

Section 2. The Executive Council shall consist of thirteen members elected by the Assembly and ex officio, the Chairman, Chairman-Elect, President, the Chairman of each of the three councils created by these Bylaws, and the Chairman of the Organization of Student Representatives, all of whom shall be voting members. Of the thirteen members of the Executive Council elected by the Assembly, three shall be members of the Council of Academic Societies; two shall be members of the Council of Teaching Hospitals; eight shall be members of the Council of Deans. The elected members of the Executive Council shall be elected by the Assembly at its annual meeting, each to serve for three years or until the election and installation of his successor. Each shall be eligible for reelection for one additional consecutive term of
three years. Each shall be elected by majority vote and may be removed
by a vote of two-thirds of the members of the Assembly present and voting.

Section 3. At least one elected member of the Executive Council shall be
from each of the regions of the Association.

Section 4. The annual meeting of the Executive Council shall be held within
eight (8) weeks after the annual meeting of the Assembly at such time and
place as the Chairman shall determine.

Section 5. Special meetings of the Council may be called by the Chairman or
any two (2) Council members, and written notice of all Council meetings,
unless waived, shall be mailed to each Council member at his home or usual
business address not later than the tenth business day before the meeting.

Section 6. A quorum of the Council shall be a majority of the voting
Council members.

Section 7. In the event of a vacancy on the Executive Council, the remaining
members of the Council may appoint a successor to complete the unexpired term.
appointed members may not serve more than two consecutive full terms on the
Council following appointment to an unexpired term. The Council is authorized
in its own discretion to leave a vacancy unfilled until the next annual meeting
of the Assembly.

VII. COMMITTEES

Section 1. The Chairman shall appoint from the Assembly a Resolutions
Committee which shall be comprised of at least one representative from each
Council of the Association and from the Organization of Student Representatives.
The Resolutions Committee shall present resolutions to the Assembly for action
by it. No resolution shall be considered for presentation by the Resolutions
Committee unless it shall have been received at the principal office of the
Association at least fourteen days prior to the meeting at which it is to
be considered. Additional resolutions may be considered by the Assembly
upon a two-thirds vote of the members of the Assembly present and voting.

Section 2. The Executive Council shall appoint the Chairman and a Nominating
Committee of not less than four nor more than six additional members, including
the Chairman of the Nominating Committee of each of the Councils provided in
Paragraph II. The Nominating Committee so appointed will report to the Assembly
at its annual meeting one nominee for each officer and member of the Executive
Council to be elected. Additional nominees for any officer or member of the
Executive Council may be made by the representative of any member of the
Assembly. Election shall be by a majority of the Assembly members present
and voting.

Section 3. The Executive Council, by resolution adopted by the vote of a
majority of the voting Council members in office, may designate an Executive
Committee to act during intervals between meetings of the Council, consisting
of the Chairman, the Chairman-Elect, the Treasurer, the President, and three or more other Council members, which committee, to the extent provided in the resolution, shall have and exercise the authority of the Council in the management of the Association. At all times the Executive Committee shall include at least one member of each of the Councils provided in Paragraph II hereof. The designation of such a committee and the delegation to it of authority shall not relieve the Council, or any members of the Council, of any responsibility imposed upon them by law.

Section 4. The Executive Council may appoint and dissolve from time to time such standing or ad hoc committees as it deems advisable, and each committee shall exercise such powers and perform such duties as may be conferred upon it by the Executive Council subject to its continuing direction and control. The Chairman will appoint members of the committees with appropriate consultation with the Executive Council.

VIII. GENERAL PROVISIONS

Section 1. Whenever any notice whatever is required to be given under the provisions of these Bylaws, a waiver thereof in writing signed by the persons entitled to such a notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

Section 2. The Council may adopt a seal for the Association, but no seal shall be necessary to take or to evidence any Association action.

Section 3. The fiscal year of the Association shall be from each July 1 to June 30.

Section 4. The annual dues of each class of members shall be in such amounts as shall be recommended by the Executive Council and established by the Assembly. The Executive Council shall consult with the respective administrative boards of the Council of Deans, the Council of Academic Societies and the Council of Teaching Hospitals in arriving at its recommendations.

Section 5. Any action that may be taken at a meeting of members or of the Executive Council may be taken without a meeting if a consent in writing setting forth the action so taken is signed by all members of the Association entitled to vote with respect to the subject matter thereof, or by all members of the Executive Council as the case may be.

Section 6. No part of the net earnings of the Association shall inure to the benefit of or be distributable to its members or members of the Executive Council, officers, or private individuals, except that the Association may pay reasonable compensation for services rendered and make payment and distributions in furtherance of its purposes. No
substantial part of the activities of the corporation shall be the carrying on of propaganda or otherwise attempting to influence legislation, and the Association shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of these articles, the Association shall not carry on any activities not permitted to be carried on (a) by an organization exempt from Federal income tax under Section 501(a) as an organization described in Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law) or (b) by an organization, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law).

Section 7. Upon dissolution of the corporation, the Executive Council shall, after paying or making provision for the payment of all of the liabilities of the Association (including provision of a reasonable separation pay for its employees), dispose of all of the assets of the Association among such non-profit organizations having similar aims and objects as shall qualify as exempt organizations described in Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provisions of any future United States Internal Revenue Law).

Section 8. These Bylaws may be amended by a two-thirds vote of the voting members present and voting at any duly called meeting of the Assembly, provided that the substance of the proposed amendment is included with the notice of the meeting. Amendments to the Bylaws may be proposed by the Executive Council or by the written sponsorship of ten voting members, provided that the proposed amendment shall have been received by the Secretary at least forty-five days prior to the meeting at which it is to be considered.

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DRAFT

CAS BUSINESS MEETING
November 4, 1973

I. Approval of Minutes of CAS Business Meeting of March 28, 1973

II. Chairman's Report

Chairman-Elect's Report (Plans for 73-74)

Director, Dept. of Academic Affairs, Report (in house)

III. Action Items.

1. Assembly representation
2. CAS Nominating Committee
3. Election of members of Administrative Board
4. Nominees for 1974 Nominating Committee
5. Distinguished Membership
6. Membership Applications

IV. Information Items:

1. Report of Committee on Financing Medical Education
2. Availability of Weekly Activities Report
3. CAS Annual Meeting Programs
4. Batelle-Seattle Meeting

Non-member members (tax status problems)
Information Items, continued:

5. LCGME - CCME Activities
6. Development of Clearinghouse - Educational Resources
7. Management Advancement?
8. NIRMP
10. Committee for Health Manpower Legislation
11. Primary Care Activities
12. HR1 227
13. Quality of Care - PSRO's
COUNCIL OF ACADEMIC SOCIETIES GENERAL SESSION*

Sunday, November 4, 1973
2:00 PM - 5:00 PM
Ballroom East

2:00 p.m. Programs and Plans at the NIH
Robert S. Stone, M.D.
Director, National Institutes of Health

2:45 p.m. Health Care in the Teaching Setting:
The Impact of HRI
Arnold S. Relman, M.D.
Chairman, Department of Medicine
University of Pennsylvania

3:30 p.m. Implications of the Reorganization of HEW
for the University Health Center
Kenneth Endicott, M.D.
Administrator, Health Resources Administration
National Institutes of Health

4:15 p.m. A Discussion with John A.D. Cooper, M.D., Ph.D.
President
Association of American Medical Colleges

*All registrants of AAMC Annual Meeting Welcome
COUNCIL OF ACADEMIC SOCIETIES PROGRAM*

CERTAIN ETHICAL ASPECTS OF BIOMEDICAL RESEARCH

Monday, November 5, 1973
2:00 PM - 5:00 PM
Ballroom Center

CHAIRMAN: Robert G. Petersdorf, M.D.
University of Washington
School of Medicine

2:00 p.m. Evolution of Concepts of Ethical Standards
James F. Toole, M.D.
Bowman Gray School of Medicine

2:45 p.m. The Consequences of Over-Regulation of Clinical Research
Thomas C. Chalmers, M.D.
Dean
Mt. Sinai School of Medicine

3:30 p.m. Some Practical Problems of Peer Review
Robert L. Levine, M.D.
Professor of Medicine
Yale University School of Medicine

4:15 p.m. Non-Therapeutic Research on Children, An Ethical Dilemma
Charles U. Lowe, M.D.
National Institutes of Health

*All registrants of AAMC Annual Meeting Welcome
BIOMEDICAL RESEARCH MANPOWER WORKING CONFERENCE
OCTOBER 1, 2, 3, 1973
BATTLE SEATTLE RESEARCH CENTER
SEATTLE, WASHINGTON

PROGRAM

Monday, October 1, 1973

8:30 a.m. - 8:40 a.m. Welcome
Robert L. Van Citters, M.D.
Dean, University of Washington

8:40 a.m. - 8:50 a.m. Introduction and Description of Goals of the Meeting
John A.D. Cooper, M.D., Ph.D., President, or
August G. Swanson, M.D., Academic Affairs,
Association of American Medical Colleges

8:50 a.m. - 9:15 a.m. History of Federal Support for Research Training
Richard B. Stephenson, M.D.
National Institutes of Health

9:15 a.m. - 9:40 a.m. The NAS/NRC Studies of NIGMS Training Programs and
and NIH Training Programs

9:40 a.m. - 10:00 a.m. Presentation on The American Heart Association Es-
tablished Investigator Program
Roland Schneckloth, M.D.
American Heart Association

10:00 a.m. - 10:30 a.m. Discussion

10:30 a.m. - 10:45 a.m. Coffee Break

10:45 a.m. - 11:10 a.m. Presentation on Some Basic Issues for Discussion
Leonard Laster, M.D.
National Academy of Sciences

11:10 a.m. - 11:30 a.m. The Relationship Between Research and Research Training
Russell Ross, D.D.S., Ph.D.
Associate Dean, University of Washington

11:30 a.m. - 12:30 p.m. Discussion

12:30 p.m. - 2:00 p.m. Lunch
Monday, October 1, 1973

2:00 p.m. - 3:00 p.m.  Presentation on and Discussion of the Current Status of The NIH/NIMH Research Training Programs
   Robert S. Stone, M.D.
   Director, National Institutes of Health

3:00 p.m. - 3:20 p.m.  Coffee Break

3:20 p.m. - 4:20 p.m.  The Current Situation as Viewed By Basic Science
   Discussion Leaders:
   Daniel Tosteson, M.D., Duke University and
   Ronald Estabrook, Ph.D., U. of Texas Southwestern

4:20 p.m. - 5:30 p.m.  The Current Situation as Viewed By Clinical Science
   Discussion Leaders:
   Robert G. Petersdorf, M.D., U. of Washington and
   Eugene Braunwald, M.D., Harvard Medical School

6:00 p.m.  Refreshments

Tuesday, October 2, 1973

9:00 a.m. - 9:20 a.m.  Quantification of Need: Experiences in Estimation of Manpower

9:20 a.m. - 9:40 a.m.  Complexities in Manpower Planning: Utilizing Manpower Attrition as a Model
   August G. Swanson, M.D.

9:40 a.m. - 10:30 a.m.  Discussion

10:30 a.m. - 10:50 a.m.  Coffee

10:50 a.m. - 11:10 a.m.  Data Sources as Substrate for Manpower Evaluation
   Michael F. Ball, M.D.

11:10 a.m. - 11:30 a.m.  Complications Which Evolve from Allowing The Federal Government to Assume Primary Responsibility for Determination of Manpower Requirements
   Carl D. Douglass, Ph.D.
   National Institutes of Health

11:30 a.m. - 12:30 p.m.  Discussion
Tuesday, October 2, 1973

12:30 p.m. - 2:00 p.m.  Lunch

2:00 p.m. - 4:15 p.m.  Discussion Groups

1) How does one build into a research manpower training system, mechanisms for ensuring the rapid transfer of new knowledge to the clinical practice of medicine?

   Chairman: Carleton B. Chapman, M.D.
   Secretary: Michael F. Ball, M.D.

2) What should be the characteristics for an institutional system for reviewing research and manpower training priorities?

   Chairman: Daniel Steinberg, M.D.
   Secretary: Russell Ross, D.D.S.

3) How should the various academic institutions and societies develop a system for manpower monitoring which will permit responsible planning for development of research personnel and medical school faculty?

   Chairman: Clayton Rich, M.D.
   Secretary: Edgar Lee, Jr., M.D.

4) How can we begin to approach the issue of predicting the need for research manpower and medical school faculty?

   Chairman: Daniel C. Tosteson, M.D.
   Secretary: Parker Small, M.D.

5) What do we need to know about career decision-making and how directive should we be? How do we begin to approach the problem?

   Chairman: Joseph E. Rall, M.D.
   Secretary: August G. Swanson, M.D.

6) Should research training be apprenticeships in various research laboratories or an organized educational program?

   Chairman: James B. Wyngaarden, M.D.
   Secretary: Robert A. Kreisberg, M.D.

4:15 p.m. - 4:30 p.m.  Coffee
Preliminary Program
Page Four

Tuesday, October 2, 1973

4:30 p.m. - 5:30 p.m.  Cross Fertilization of Ideas from the Discussion Groups
6:00 p.m.  Refreshments
8:00 p.m. - 10:00 p.m.  Further Deliberation by the Discussion Groups

Wednesday, October 3, 1973

8:30 a.m. - 9:45 a.m.  Reports from the Group Discussions
9:45 a.m. - 10:00 a.m.  Coffee Break
10:00 a.m. - 12:00 noon  Charting a Program of Action
12:00 noon  Adjournment
### INSTITUTIONAL REPRESENTATIVES

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<tr>
<td>U. of California San Francisco</td>
<td>Dr. Julius R. Krevans</td>
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<tr>
<td>Yale University</td>
<td>Dr. Arthur Ebbert, Jr. (Not Participating)</td>
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<tr>
<td>Harvard University</td>
<td>Dr. Robert H. Ebert, Representative - Henry C. Meadow, Assoc. Dean</td>
</tr>
<tr>
<td>Johns Hopkins University</td>
<td>Dr. Russell H. Morgan (Participating)</td>
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<tr>
<td>University of Chicago</td>
<td>Dr. Leon Jacobson (Not Participating)</td>
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<tr>
<td>Stanford University</td>
<td>Dr. Clayton Rich (Participating)</td>
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<tr>
<td>Washington U., St. Louis</td>
<td>Dr. M. Kenton King, Representative - Dr. Oliver H. Lowry</td>
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<tr>
<td>Columbia University</td>
<td>Dr. Paul A. Marks, Representative - Frederick B. Putney, Ph.D.</td>
</tr>
<tr>
<td>U. of Pennsylvania</td>
<td>Dr. Alfred Gellhorn, Representative - James J. Ferguson, Jr., M.D., Ph.D.</td>
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<tr>
<td>UCLA</td>
<td>Dr. Sherman Mellinkoff, Representative - A.F. Rasmussen, M.D., Ph.D.</td>
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<tr>
<td>Albert Einstein</td>
<td>Dr. Ernst R. Jaffe, Representative - Stephen Baum, M.D.</td>
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<tr>
<td>University of Rochester</td>
<td>Dr. J. Lowell Orbison, Representative - Frank E. Young, M.D., Ph.D.</td>
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<tr>
<td>U. of Wisconsin, Madison</td>
<td>Dr. Robert Cooke</td>
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<tr>
<td>New York University</td>
<td>Dr. Ivan Bennett (Not Participating)</td>
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<tr>
<td>U. of North Carolina</td>
<td>Dr. Christopher Fordham, Representative - Robert Ney, M.D.</td>
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</table>
INSTITUTIONAL REPRESENTATIVES

University of Colorado
Invited - Dr. Harry P. Ward
Representative - Seymour Katsh, Ph.D.

Case Western Reserve
Invited - Dr. Frederick Robbins
Representative - Dr. Edgar Lee, Jr.

Boston University
Invited - Dr. Ephraim Friedman

U. of Florida, Gainesville
Invited - Dr. Chandler Stetson, Jr.
Representative - Dr. Parker Small

Duke University
Invited - Dr. Thomas Kinney
Representative - James B. Wyngaarden, M.D.

U. of Minnesota, Minneapolis
Invited - Dr. N.L. Gault, Jr.
Representative - Dr. Frederick Shideman

U. of Texas Southwestern
Invited - Dr. Charles C. Sprague
Representative - Ronald W. Estabrook, Ph.D.

University of Alabama
Invited - James A. Pittman, M.D.
Participating

U. of California, San Diego
Representative - Daniel Steinberg, M.D.
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Daniel X. Freedman, M.D.

Carmine D. Clemente, Ph.D.  
Participating

Daniel C. Tosteson, M.D.  
Participating

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Representative - Robert A. Kriesberg, M.D.

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Harvey Blank, M.D.

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Fred Plum, M.D.  
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Eugene Braunwald, M.D.  
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Wolfgang K. Joklik, Ph.D.  
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Chairman-Elect, AAMC

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Harvard Medical School

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U. of Texas Southwestern

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U. of Miami

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Cornell University

Peter Bent Brigham Hospital  
Biomedical Research Cmte.

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Biomedical Research Cmte.

Duke U. Medical Center  
Biomedical Research Cmte.
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  Participating

Joseph E. Rall, M.D.
  Participating

Paul Saltman, M.D.
  Participating

University Hospitals, Ohio
  Biomedical Research Cmte.

NIH
  Biomedical Research Cmte.

U. of California, San Diego

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Richard S. Ross, M.D.
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Victor Zaffra
Ann Stone
Dave Peary
  **Not Participating

Dr. Robert S. Stone, Director
  Participating

Dr. Thomas Kennedy
  Representative - Dr. Solomon Schneyer

Dr. Richard B. Stephenson
  Participating

Dr. John R. Hogness
  Representative - Roger J. Bulger, M.D.

William C. Kelly
  Representative - Allen Singer

David Rogers, M.D.

John H. Knowles
  **Not Participating

Quigg Newton
  Representative - Carleton B. Chapman

Charles E. Edwards, M.D.
  Representative - Lionel M. Bernstein, M.D.

American Heart Association

Office of Management & Budget

National Institutes of Health

National Institutes of Health

National Institutes of Health

Institute of Medicine

National Research Council

Robert Wood Johnson Foundation

Rockefeller Foundation

Commonwealth Fund

HEW
## OTHER AGENCIES

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Institution</th>
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<tbody>
<tr>
<td>Dr. Carl Douglass</td>
<td>Deputy Director, Div. of Research Grants, NIH</td>
</tr>
<tr>
<td>Sidney Udenfriend, Ph.D.</td>
<td>Roche Institute of Molecular Biology, Nutley, New Jersey 07110</td>
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<tr>
<td>Dr. Beverly C. Morgan</td>
<td>U. of Washington (National Research Council)</td>
</tr>
<tr>
<td>Leonard Laster, M.D.</td>
<td>Division of Medical Science, NRC/NAS</td>
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<tr>
<td>Dr. Anderson, Dermatology</td>
<td>Missouri</td>
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CAS Administrative Board Meeting 9/13/73
Suggestions for change in Sprague Committee Report

1. Change "Other Activity" category to "Administration & Other Scholarly & Professional Activities Related to Medical Education" (the 10% category)

2. Allocate the whole 100%

3. Criticism--the term "environmental costs" comes up in the middle of the thing without it ever having been defined.

4. The data for the 12 schools should more clearly indicate that this is the real universe

5. Clark did not think it was clear when you were talking about a theoretical construct vs the real world application (Petersdorf agreed with this criticism)

6. On p. 5 of the appendix, table A, col C - the figure is the salary, support people, etc.--or total budget $P$ for all clinical activity, divided by total faculty clinicians--no where is that defined. Should not the report show the undated number for each school for research costs, for clinical costs as an absolute amount with raw data? You have raw data for instructional costs. For comparability, Weil urges this. (For credibility, the raw figure for research should be shown before you manipulate it). & for clinical activity.

7. Delete col. marked on p 5 by JADC

(6 continued, Dr. Cooper recap--What you want is the total for each school the total clinical costs for all the students & the total research costs for all students. Unless I come up with some hazard to doing that, we will...) Weil thinks it is no hazard & it gives a credibility because it gives a real world number--because all the others are derived numbers...

8. Note change of col. heading on p. 5 noted by JADC

Summarized from tape by MHL 9/16/73
ASSOCIATION OF
AMERICAN MEDICAL COLLEGES

FOR REVIEW BY EXECUTIVE COUNCIL
SEPTEMBER 1973

UNDERGRADUATE MEDICAL EDUCATION
ELEMENTS -- OBJECTIVES -- COSTS

Report of the
Committee on Financing of
Medical Education
Charles C. Sprague, M.D.
Chairman
August 1973

Copyright - Association of American Medical Colleges
Contemporary medical education takes place in institutions engaged in a broad range of interrelated activities designed to serve and further national purposes and objectives in health. The growing need for information to illuminate the complex programmatic and fiscal circumstances governing medical schools has long been a concern of the Association of American Medical Colleges and of the medical education community. To help meet this need, the Association in 1970 formed the Committee on the Financing of Medical Education to conduct and sponsor studies designed to provide the data base for recommendations on matters of policy relating to medical education and its financing.

Shortly after it was formed, the Committee recognized that before it could turn to a consideration of how medical education should be financed it would have to develop guideline estimates of the costs of the resources required for contemporary medical education. Attention was focused initially on the cost of the education program leading to the doctor of medicine degree.

The Committee has tried to place the estimation of the cost of undergraduate medical education within the perspective of the total education and training of the physician and the other programs and activities of the complex modern medical school. To accomplish this goal, the report describes the institutional setting in which education takes place and defines the elements and objectives of the undergraduate medical education program. The resources required for this educational process measured in dollar terms are estimated from studies carried out in medical schools. The quantitative cost measurements are then presented, followed by a discussion of the
Committee's views on the issues surrounding cost measurement.

The findings of this first study of the cost of undergraduate medical education may be relevant for an assessment of the current Federal policy to provide financial support for undergraduate medical education, based on the number of medical students enrolled. There have been suggestions that future levels of such support be determined by estimates of the costs of the educational program leading to the M.D. degree.

It is the intention of the Committee to present in a subsequent report its views of the mechanism through which the costs of undergraduate medical education should be financed. An equitable distribution of these costs among the immediate beneficiaries of the process and society, and the maintenance of the institutions in which the educational process necessarily takes place must be assured if the benefits which have flowed from the medical school can continue to play their important role in advancing the health of the Nation.

The Committee wishes to express its deep appreciation and gratitude for the assistance of the members of its Task Force groups, the representatives of the medical centers that were studied, and the Association's staff in developing the data on which this report is based.

Charles C. Sprague
Chairman
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This first report of the Association's Committee on the Financing of Medical Education presents an analysis of the cost of the resources required for the educational program leading to the doctor of medicine degree; it represents the necessary first phase of the Committee's ongoing consideration of the appropriate sources of funds for medical education. The report is made available prior to the completion of the full study in response to the Association's objective to provide pertinent data on all phases of medical education as quickly as such information becomes available.

The Committee's findings may be summarized as follows:

1. The annual cost per medical student of the educational program leading to the M.D. degree is estimated to range from $12 to $21 thousand, in 1972 dollars. The estimates are based on an intensive review of the cost allocation studies completed by a selected group of eight medical centers, supplemented by information developed by the centers involved, and by the Committee, specifically for this purpose.

2. The costs of the educational resources required for the M.D. program at the eight centers reflect the varied educational objectives, programs, and techniques essential for a flexible approach to the training of students with differing interests and career aspirations. Because medical education is characterized by a considerable degree of variation in form and manner of
presentation, the costs for any one center are not to be considered as typical or average. The range of costs are guideline estimates, embracing a spectrum of diversity in the institutional approach to providing undergraduate medical education.

3. Training for the M.D. Degree requires elements of instruction, research, and exposure to clinical practices and procedures. These can only be provided by the contemporary medical school, some of whose broader objectives in health— to advance biomedical knowledge through research, and to provide for the health needs of the community are performed jointly with the activities essential for the undergraduate medical education program. Assumptions have to be made, therefore, in order to allocate to undergraduate medical education its share of these joint costs.

4. The cost of undergraduate medical education represents only a part of the total cost of preparing a physician. A period of graduate medical education is required for the further development of the knowledge and skills acquired as a medical student to qualify the physician for the independent practice of medicine. There is also a need for continuing education to keep the practicing physician abreast of the day-to-day developments in medicine.

5. The ability of the medical school to carry out any segment of the total education and training of the physician requires that it receive support for the total costs of the programs essential to this process. This means not only the costs identified with
the instructional programs but the entire costs of the joint activities related to the instructional program such as research and professional services. Such joint activities can not be carried out at a level of support identified in cost studies as related to their contributions to undergraduate medical education. The remaining part of any joint activity related to the costs of other programs must also be supported if the activity is to be viable and make its contribution to undergraduate medical education.
MEDICAL EDUCATION IN PERSPECTIVE

The Organizational Setting

It may have been true some decades ago that the education leading to an M.D. degree took place in a setting almost entirely devoted to that sole objective. But the contemporary medical school, and thus the framework for medical education has become increasingly complex, in a growth pattern that has seen:

- The total teaching responsibility of the medical school increased from 65,000 students (medical student equivalents) in 1961 to 110,000 in 1972. In the earlier year, undergraduate medical students comprised almost half this student population. By 1972, however, they accounted for two out of five students taught by the medical school faculty. All other students as a group--interns, residents, pre- and postdoctoral students in the basic and clinical sciences and the full-time equivalent students in the other health professions--comprised three-fifths of the student population.

- The medical schools respond to the decisions made by the Congress and the Executive Branch after World War II that biomedical research was in the public interest and that public funds should be appropriated to support broad-ranging investigations in living systems and in the changes brought about by disease, with the conquest of disease the ultimate goal. Through this support, which has grown from less than $10 million in 1950 to more than
$400 million by 1972, medical schools working with the National Institutes of Health, have developed a biomedical research establishment in the medical schools which has no peer in the world. It has not only provided new knowledge on which to base more definitive methods for the prevention, diagnosis, and treatment of disease, but it has also provided the medical school milieu required for the education and training of the modern physician.

- Expenditures by medical schools to support their regular operating programs grow from $200 million in 1961 to $780 million in 1971; and in the same period, expenditures for all sponsored programs increase from $220 million to $930 million, including support for application of fundamental biomedical and clinical research discoveries to improved health care. Medical schools have thus emerged into a multi-billion dollar enterprise.

- University hospitals and their major teaching affiliates together account in 1970 for one-fifth of all the health care provided by the nation's hospitals, increasing from a proportion of less than fourteen percent of all hospital operating expenditures in 1965, almost a fifty percent increase in the importance of these teaching hospitals as a provider of health care.

This general description of academic medical centers as institutions with the same objectives to educate health professionals, to advance biomedical knowledge through research, and to provide health services to the communities in which they are located may be misleading because it is an over-simplification of the situation. Each medical school is a
unique institution, with its own arrangements, programs, and means for accomplishing the national objective to bring to the American people the best possible levels of health.

Each medical school has developed its own individual characteristics and mix of programs to make its contribution to improving health for the following reasons:

1. The capabilities and educational requirement of medical students and the wide variety of career opportunities in medicine, ranging from primary care through the more specialized branches of medicine to teaching and biomedical research, requires diversity among the medical schools and the nature of their programs to permit the most effective development of the individual's capabilities.

2. There are a number of different institutional arrangements for medical schools; some are components of large multi-versities while others are free standing, some are located on the campus of the parent university where there can be a greater sharing of resources and responsibilities for educating other students than where the medical school is geographically separated.

3. Responsibilities for the delivery of health care vary with the organizational arrangements regarding the clinical facilities and the location of the medical school; some medical schools are involved in the full management and operation of a hospital while others make use of facilities under the control of others, some are in large urban settings where additional resources and facilities are available to provide health care while others are in smaller
more isolated communities and must provide a broad range of services to the local population and specialized services to an entire state or a region.

The unique capabilities and interests of the medical school faculty determine the degree of involvement of the medical school in advancing fundamental knowledge in the health sciences and in searching for new and improved modes of prevention, diagnosis and treatment of disease.

The Continuum of Medical Education

Consideration of the cost of undergraduate medical education requires an understanding of its nature and essential elements and its relationship to the total span of education and training of the physician.

The undergraduate medical education process provides the student with:

An understanding of the fundamental principles involved in human development, from its normal sequence to the disorders of development, structure, and function -

To reach this understanding, the student must acquire through classroom, laboratory, seminar, and self-instruction the basic knowledge concerning the physical, chemical, biological, psychological, and social factors which affect human development.

Training in the basic problem-solving process requisite to the diagnosis of disease and disorders in the patient -

To acquire these skills, the student must be trained to obtain
information from patients through participation under supervision in the solution of actual problems of health and illness as they occur in individuals and a population group, and be provided the opportunity to engage in the practice of clinical acts and procedures until they can be performed with an acceptable degree of accuracy and predictability but with full awareness of the limitations and unknown involved.

An awareness of the techniques and resources for the prevention of disease and disorders –

The student must be provided with knowledge concerning the means available to the individual and to the community for the prevention of disease and for the maintenance of health.

The attitudes and motivations that will enable him to keep abreast of the developments in medicine after he has earned the M.D. degree –

To develop those characteristics that will lead to a continuous, critical self-instruction throughout his professional life, the student, in the period of his formal education, must have an opportunity to be associated with faculty who, through their own activities in keeping abreast of medical advances, provide the model for the student to emulate.

The exponential rate at which medical knowledge has grown in the recent past, and the likelihood that it will continue to
expand at an exponential rate in the future make it imperative that the student be exposed to the scientific method, rigors, and techniques of the biomedical research process. The student will then be able to evaluate for himself the results of scientific investigations, and he will have the ability to discern their usefulness in application.

In summary, undergraduate medical education is composed of interacting elements integral to a unified process leading to the M.D. degree. The elements in this process are the instructional activities covering the imparting of disciplinary and inter-disciplinary subject matter through lectures, seminars, and laboratory exercise; participation in the care and management of patients, training in research methods for the solution of problems in health.

Fundamental to the process for quality medical education is the requirement that the student be instructed by educators who are capable of teaching up-to-date medicine. This can be accomplished only by a faculty that is involved, in adequate measure, with developments at the frontiers of scientific knowledge in the health sciences through such scholarly pursuits as their own biomedical research activities, and in the application of that knowledge through their involvement with contemporary health care practices.

Undergraduate medical education is but the beginning of a continuous process. Upon graduation from medical school, there is a period of further formal training in particular areas of medicine.

The period of undergraduate medical education is no longer considered
adequate to prepare an individual for medical practice. A substantial period of graduate medical education has become established as an integral part of the total education and training of a physician, whether it be for a career in family practice or the most complex medical or surgical specialty. The continuum of medical education and training from admission to medical school to the beginning of independent practice has become more than mere rhetoric. Furthermore, the growth of biomedical knowledge and medical science has convinced the faculties that it is no longer possible to produce a physician broadly competent in medicine. As a result there are increasing opportunities for undergraduate medical students to undertake an educational program more tailored to his or her ultimate goal in medicine. This in turn has blurred the traditional sharp boundaries between undergraduate and graduate medical education. This of course has important implications for any attempt to segregate and isolate the costs of undergraduate medical education.

Even after the physician finishes his formal period of education and training he must continue learning during this entire career to maintain his competence and keep abreast of the advances in knowledge, technology and medical practice. Thus any meaningful concept of medical education must encompass the full spectrum of undergraduate, graduate and continuing medical education. The medical school plays a critical role in all of these.

Other Educational and Training Programs

To a considerable degree, the training of students in health professions
other than medicine also takes place in the medical school. This arrangement not only provides for the best use of faculty and facility resources where the same body of medical science and technology is appropriate for the education of other health professionals, but it also emphasizes for all students the complex inter-relationship of the many specialties and skills essential for modern medical care. In addition, because of the unique capabilities of their faculty, academic medical centers have increasingly assumed the responsibility for the education of masters and doctoral candidates in some of the basic sciences. The presence of these students has broadened the educational environment for the centers' entire student population, enriching the mix of viewpoints and objectives. At the same time, the presence of these students has increased the responsibility of the medical school faculty and medical center administration in providing the resources essential for their training.

Health Services

Because of the sophisticated array of skills and services available in the medical schools, they also serve as an essential referral or tertiary care resource in the structure of community medical services. In addition, these institutions have assumed a substantial role relating to community health care which goes beyond the relationship to specific patients. This clinical activity interacts with and is essential to the educational and training programs and the research activities of the medical school. The faculties of the medical schools thus provide an
important segment of the health care in the nation. This health care involves the undergraduate medical students and residents who are at the same time being educated and trained.

Biomedical Research

In addition to the education and patient care activities, medical schools participate in and contribute to broad national research programs directed to the advancement of the biomedical sciences or in the solution of specific problems. Most of the nation's significant biomedical research is carried out in its medical schools. As Dael Wolfle has pointed out in his book "The Home of Science" this close interrelationship of research and education has strengthened both and made American science preeminent in the world.

In summary, the foregoing review of the character of present-day medical education, its institutional setting, and the practice of medicine is intended to emphasize:

- The basic continuum comprising the process of medical education in which the undergraduate program leading to the M.D. degree is an increasingly less discrete segment of the entire educational span.
- The integrated nature of the educational process for the principal health professions and related occupations, and the complex institutional framework essential for that process.
- The crucial role of the clinical teaching resources in education, in health care and community service, no single element of which
The essentiality of a basic body of research to medical education to engender scientific attitudes in students, to assure and maintain faculty competence, and to advance knowledge.

These attributes have generated a distinct institutional form, the academic medical center, which embraces in a comprehensive and unified way the full scope of these complex processes. The attainment of all the social purposes and national objectives in respect to the education of health personnel, in advancing medical science and technology, and in providing for community health needs are critically dependent upon the productivity, the viability, and the integrity of these institutions as functioning entities.
In addition to the difficulties associated with the fact that undergraduate medical education is but one segment of the varied and interrelated responsibilities of the academic medical center, cost determination efforts are confronted with problems of data limitation and conceptual and theoretical issues of cost distribution.

Data limitations

The Association of American Medical Colleges has been involved in sponsoring and conducting cost studies of medical education since 1958. Most recent efforts have centered around the development and improvement of cost allocation methodology and its application to additional academic medical centers, initiated in 1967 with HEW sponsorship. The initial purpose of these studies was to provide the institution with information to enhance its own understanding of the distribution of costs within the institution. Uniform guidelines and costing principles were provided, but their application varied, reflecting the widely differing administrative and program arrangements among the centers. Since only institution needs were contemplated, little attention was directed to the use of the data for cost comparisons among institutions.

The Committee made an intensive effort to make use of the cost allocation studies completed in recent years by a selected group of eight academic medical centers. With the cooperation of the staffs of these centers, additional data were developed where necessary to supplement and improve
the coverage of the data available in the completed cost allocation studies.
The objective of the Committee's effort was to assure that all aspects of
the undergraduate medical education program and the cost of the required
resources were accounted for as completely as possible. It was intended
that data for the programs at each of the medical centers be comparable
and reflect valid differences in the educational curricula, educational
techniques, and educational objectives of the institutions involved. An
essential element of this accounting was the measurement or imputation
of resource costs not appearing in the medical school budget.

The set of data, obtained as a result of this cooperative effort on
the part of the medical centers studied, underlie the derivation of the
costs of the resources for each of the essential components--- instruction,
research and clinical activity -- required for the education program leading
to the M. D. degree at each of the eight selected centers.

A variety of approaches to the educational program leading to the M. D.
degree characterize the eight medical schools selected for this study. Four
of the schools are private institutions, four are publically owned; all eight
are part of a university or university system. For the year in which the
school completed its cost allocation study undergraduate medical student
enrollment was in the 300-399 range ofr three schools, in the 400-499 range
for four schools, and one school had more than 500 medical students.

Some evidence of the differing characteristics of the eight schools
is shown by their rankings in the quartile
distributions, compiled regularly by the Association for all full-operational medical schools:

Quartile Rankings of the Eight Selected Medical Schools (1970-71)

<table>
<thead>
<tr>
<th>ITEM</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of medical students</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Number of full-time students 1]</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Number of full-time faculty</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Sponsored research expenditures</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

1] Includes medical students, interns, residents, pre- and post doctoral students in the basic and clinical sciences and full-time equivalent students in other health professions.

Conceptual issues surrounding joint costs

For all three elements of undergraduate medical education the activities essential for that program serve other objectives as well. The classroom lecture in a basic science for instance may be directed to medical students and to other health professions students; instruction by the clinical faculty may be to groups composed of house staff and medical students; the research and clinical activity deemed essential to maintain the competence of the faculty to teach modern medicine serves other objectives at the same time; namely, the advancement of knowledge and the provision of clinical care.
We are thus confronted with the problem of distributing the costs of functions and activities that serve more than one end-purpose, and for which there is no fundamental basis for allocation of such costs to the individual purposes served.\footnote{A discussion of joint costs in medical education is given in Koehler, J. E. and Slighton, R. L., "Activity Analysis and Cost Analysis in Medical Schools", J. Med. Ed., 48 (1973) 531-550.} The costs of joint activities can be distributed to the end-purpose programs in a variety of ways, but the results depend on the method chosen for distribution.

For the instruction component, the allocation to undergraduate medical education of costs for activities that serve more than one objective utilized primarily a proportionate distribution based on a head count of the different categories of students taught.

The allocation to undergraduate medical education of costs for the research and clinical activity components has been based on actual faculty effort reports for each school in combination with determinations of the minimum amount of professional and scholarly activities needed to maintain faculty competence. These determinations are based on a consensus of medical educators and the available empirical data on the level of scholarly and clinical activity for those actual faculty members most heavily involved in education.

It has been determined that the faculty members who spend the most time in all instruction (undergraduate, graduate, postdoc etc.) do not on the average, spend more than 35% of their time in instruction. For this reason 35% effort in instruction is considered to be "full involvement in instruction." Therefore, any faculty member who spends 35% of his time in
instruction." Therefore, any faculty member who spends 35% of his time in instruction would have all of his "environmental costs" attributed to the instructional programs. If the full 35% of his time in instruction was spent in the undergraduate M. D. program, then, the environmental costs would be fully allocable to that program. If, on the other hand, the faculty member spends only 10% of his time in instruction of undergraduate M.D. students, then .10/.35 or 2/7 of his environmental costs are allocable to the undergraduate M.D. program.

On a schoolwide basis, one need only examine the average percent of effort to the undergraduate for both basic and clinical science faculty and divide those percentages by 35% in order to determine the portion of the environmental cost which is allocable to the undergraduate M. D. program.

The section on technical notes provides a description of the methodology for the derivation of the empirical data and a discussion of the assumptions underlying the estimates of the costs for the instruction, research and clinical activity components of the undergraduate medical education program.
THE STUDY FINDINGS

In 1972 dollars, the estimated annual costs of the undergraduate medical education program at the eight medical centers range from $12 to $21 thousand per medical student. 1

Table 1
Annual Cost Per Student Undergraduate Medical Education
- at Eight Medical Centers
(in thousands of 1972 dollars)

<table>
<thead>
<tr>
<th>Center</th>
<th>Total cost</th>
<th>Instruction</th>
<th>Research</th>
<th>Clinical Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$21.0</td>
<td>$9.7</td>
<td>$8.2</td>
<td>$3.1</td>
</tr>
<tr>
<td>B</td>
<td>20.5</td>
<td>9.6</td>
<td>8.0</td>
<td>2.9</td>
</tr>
<tr>
<td>C</td>
<td>12.0</td>
<td>5.7</td>
<td>4.4</td>
<td>1.9</td>
</tr>
<tr>
<td>D</td>
<td>15.6</td>
<td>6.9</td>
<td>6.1</td>
<td>2.6</td>
</tr>
<tr>
<td>E</td>
<td>13.1</td>
<td>7.1</td>
<td>4.1</td>
<td>1.9</td>
</tr>
<tr>
<td>F</td>
<td>13.4</td>
<td>7.2</td>
<td>4.8</td>
<td>1.4</td>
</tr>
<tr>
<td>G</td>
<td>18.4</td>
<td>9.7</td>
<td>6.1</td>
<td>2.6</td>
</tr>
<tr>
<td>H</td>
<td>16.8</td>
<td>8.8</td>
<td>4.9</td>
<td>3.1</td>
</tr>
</tbody>
</table>

1 From studies of hospital procedures by the Commission on Professional and Hospital Activities (Professional Activity Study), the Committee found no evidence to suggest that there are additional costs (for increased laboratory or radiological studies, or length of patient stay) associated with the management of patients where medical student instruction is conducted within the clinical setting. Such additional costs, if they exist, would conceptually be allocable to the undergraduate medical education program. An analysis of these studies will be published by the Association.
This range of costs should be viewed as guideline measures of the resources required for the M.D. program reflecting varied institutional settings and educational approaches. The quantitative results for any one center, therefore, can not be considered as typical or average, or the desired level for all. It is the Committee's belief that the eight medical centers studied present a spectrum of the different educational programs; but it is not suggested that the costs at a particular institution of the remaining one-hundred medical schools will necessarily fall within this range of estimates. Furthermore, the means are not presently available by which to relate a practicing physician's effectiveness in health care to the training received as a medical student; the varied cost estimates are not to be considered as indicative of qualitative differences, if such exist, in undergraduate medical education programs.

Cost of Instruction Component

The Committee requested its Task Force on the Cost of Medical Education to focus upon the instruction component of the undergraduate medical education program at the eight medical centers.

The objective of the Task Force was to derive for each of the eight centers, an aggregate cost for the instruction component at each institution so that differences in the aggregate figures among the institutions would be due to differences in educational objectives, and the use and cost of the resources necessary to carry out the institution's program of instruction. These cost estimates are presented in Table 2.
Table 2

Annual Cost per student of Instruction Component of Undergraduate Medical Education at Eight Medical Centers
(in thousands of 1972 dollars)

<table>
<thead>
<tr>
<th>Center</th>
<th>Total Instructional Cost</th>
<th>Instructional Staff</th>
<th>Supporting Staff</th>
<th>Other Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$ 9.7</td>
<td>$ 4.0</td>
<td>$ 1.8</td>
<td>$ 3.9</td>
</tr>
<tr>
<td>B</td>
<td>9.6</td>
<td>5.4</td>
<td>1.1</td>
<td>3.2</td>
</tr>
<tr>
<td>C</td>
<td>5.7</td>
<td>2.9</td>
<td>.6</td>
<td>2.1</td>
</tr>
<tr>
<td>D</td>
<td>6.9</td>
<td>2.9</td>
<td>1.5</td>
<td>2.6</td>
</tr>
<tr>
<td>E</td>
<td>7.1</td>
<td>3.9</td>
<td>.9</td>
<td>2.3</td>
</tr>
<tr>
<td>F</td>
<td>7.2</td>
<td>2.9</td>
<td>1.0</td>
<td>3.3</td>
</tr>
<tr>
<td>G</td>
<td>9.7</td>
<td>4.3</td>
<td>2.6</td>
<td>2.9</td>
</tr>
<tr>
<td>H</td>
<td>8.8</td>
<td>3.3</td>
<td>1.7</td>
<td>3.8</td>
</tr>
</tbody>
</table>

The centers, of course, differ in their organizational structure, and have differing curricula, so that the distribution of the total instructional cost by organizational units is not uniform for all eight institutions. The extent to which medical school resources are utilized, for instance, as compared with the use of teaching hospital resources differs considerably among the eight centers studied. It is due in part to the varying organizational and financial arrangements between the institutions and their clinical teaching facilities. For this reason, comparisons of the instructional costs are appropriate only at the aggregate center level, although
to assure comprehensive coverage the total cost for each center had to be built up by considering each of the organizational and object of expense components that are involved in the instruction program. The data in Table 2 show the cost of the instructional and supporting staff, and the other costs appropriate to the center's instructional program. This has been defined as classroom lectures, seminars, laboratory exercises, and the exposure of the student to clinical practices and procedures through direct involvement with patients.

Instructional staff costs cover the input to the instruction of medical students on the part of medical school faculty, hospital based clinicians and house staff, and imputations of salary costs that would otherwise have to be paid were volunteer faculty services not available.

The costs of the supporting staff reflect the allocation of a proportionate share of the salaries of nurses, laboratory technicians, clerical, and administrative staff which reflects the extent to which these employees of the medical center are involved in the instruction program.

Other costs include faculty and employee fringe benefits, and all non-salary expenses, associated with medical student instruction, of academic departments, laboratories, vivarium, library, and business services. It also includes estimates of equipment purchases (or allowances for its depreciation) physical facilities depreciation allowances and costs of plant operation that can be properly chargeable to the instruction of the medical student.
Cost of Research Component

The costs per medical student for the research component of the undergraduate medical education program at the eight medical centers were derived by the Committee following suggestions provided by the Association's Committee on Biomedical Research and Research Training.

The research committee viewed the total research program of the center as being composed of the following: First, a level of research activity sufficient to provide for the requirements of the educational program; second, a level of research initiated by the investigators at medical centers to advance fundamental knowledge in the health sciences; and third, a level of research conducted at the medical center in response to nationally targeted objectives in specific health areas.

The earlier discussion of the elements and objectives of undergraduate medical education set forth the rationale for the consensus that if the medical student is to be educated to practice up-to-date medicine, he must be instructed by a scientifically competent faculty, and that this can be accomplished only where the faculty is engaged in at least a minimum level of scholarly activities, including biomedical research.

It is evident that there is a dual objective served by even the first level of research engaged in by the faculty - it provides a required element of the undergraduate medical education program and at the same time it increases the fund of biomedical knowledge. Nevertheless, the Committee decided to include the entire cost of the first level of research as an educational cost, and to allocate a portion of that cost to the undergraduate M.D. program.
Once these decisions were made, the Committee was able to find an empirical basis for distributing research costs to the undergraduate program, but judgment was still necessary to determine what that first level may be. The Committee approached this by considering an idealized or model faculty member fully involved in instruction. Details of the concept are provided in the technical notes, but the basic idea is that the required amount of research and other scholarly activities for the faculty member fully involved in education is at the minimum (first) level described above, and therefore all costs of his research and professional development are a proper cost of medical education. Actual faculty behavior in instruction is measured against the model, and only a fraction of the minimum level research costs and professional development costs are allocated to education for those not fully involved in instruction.

The actual research costs at each of the eight centers were taken into account in establishing the costs for the research and professional development of the model faculty member.

The Committee will continue to consider alternative solutions for determining the level of research essential for the educational program. Additional medical centers will be included in these further investigations, and the opinions of medical school administrators, educators, researchers, and students will be surveyed. These further studies will either confirm the judgmental decision underlying the estimates arrived at for the eight medical centers, or will provide the data to modify them.

The result of these calculations for the eight centers is shown in Table 3.
Table 3

Annual Cost per student of Research Component of Undergraduate Medical Education at Eight Medical Centers (in thousands of 1972 dollars)

<table>
<thead>
<tr>
<th>Center</th>
<th>Total Research Cost</th>
<th>Basic Science Faculty</th>
<th>Clinical Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$8.2</td>
<td>$4.6</td>
<td>$3.6</td>
</tr>
<tr>
<td>B</td>
<td>8.0</td>
<td>3.3</td>
<td>4.7</td>
</tr>
<tr>
<td>C</td>
<td>4.4</td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>D</td>
<td>6.1</td>
<td>2.9</td>
<td>3.3</td>
</tr>
<tr>
<td>E</td>
<td>4.1</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>F</td>
<td>4.8</td>
<td>3.0</td>
<td>1.8</td>
</tr>
<tr>
<td>G</td>
<td>6.1</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>H</td>
<td>4.9</td>
<td>1.0</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Cost of Clinical Activity Component

The cost per medical student, shown in Table 1, for this component of the undergraduate medical education program reflects the requirement that the clinical faculty must be engaged in a certain level of professional services to patients, without the presence of medical students, in order to maintain competence and skills as educators.
The derivation of these estimates is based solely on medical school costs; no hospital patient care costs are involved. Hospital costs are excluded because the care of the sick was considered by the Committee to be the essential purpose, which must take place irrespective of the concurrent educational program. 1)

As in the case of research activities, the costs of clinical activity to maintain the competence and the skill of the faculty was allocated to the educational program by reference to a model faculty member fully involved in instruction. The entire cost of the clinical activity of the faculty member fully involved in instruction is judged an educational cost, and only a fraction of the cost of the same amount of clinical activity is allocated to education for those faculty involved in instruction to a lesser degree. The application of these assumptions for the derivation of the estimates is described in the technical notes.

The Committee will continue to investigate this aspect of the educational program, as it expects to do for the research component.

1) The Committee found no evidence to suggest that there are additional costs (for increased laboratory or radiological studies, or length of patient stay) associated with the management of patients where medical student instruction is conducted within the clinical setting. Such additional costs, if they exist, would, conceptually, be allocable to the undergraduate medical education program.
SIGNIFICANCE OF THE COST MEASURES

The derivation of estimates of the cost of undergraduate medical education is but the necessary prelude to the fulfillment of the Committee's principal objective -- the development of recommendations for the most appropriate and equitable financing of medical education, which would also assure the continued viability and fiscal stability of the educational institution as an entity, capable of performing all of its inter-related functions to the degree and in the fashion society's needs dictate.

The cost measures for the eight centers studied are being made available now, prior to the completion of the Committee's full study since they may be helpful to other medical schools as benchmarks against which to compare their own cost measures. The report also provides the methodology underlying the derivation of the published estimates which may also serve as a protocol for cost studies by other educational institutions.

The estimates for the eight medical schools show a narrower range than might otherwise have been anticipated, in view of the spectrum of educational approaches represented by the schools in the study. The annual costs of the M.D. program range from $12 to $21 thousand per student, the highest cost being 75 percent greater than the lowest cost. For the eight centers, the resources required for the instruction component represent approximately half of the total costs for the undergraduate medical education program. The spread in costs for the instruction component is also 70 percent, but for the research and clinical activity components, the cost for the school at the upper range in each of these components is about twice that of the school at the lower range. This suggests that the kinds
of research being performed differ considerably among the institutions in terms of the costs involved, and that the costs of the clinical activity engaged in also vary more widely than the elements that go into the instruction component.

The range of estimates for the cost of undergraduate medical education reflects the variety of approaches to the content and structure of the educational curriculum, and the educational objectives of the institutions studied by the Committee for the purposes of this report. This diversity has been brought about by the differing historical backgrounds and community settings of the institutions; faculty and student perceptions, values, and interests; and the goals of the institution's leadership. It may be that differences in the quality of the medical care provided by the practicing physician may also be a reflection of his educational training, but data are not now available to establish this. Since institutional characteristics vary so widely, no measure of the cost of undergraduate medical education in a single school or small groups of schools can be representative of the cost in the United States, of providing the education leading to the M.D. degree. Moreover, differences among institutions are essential, if the flexibility in educational approach required for a vigorous and innovative educational system is to be retained.

The review of the educational process and the institutional setting requisite for the education of persons for the practice of medicine has emphasized the entire spectrum of medical education, with the program leading to the professional degree being only the initial phase. Moreover, distinctions between undergraduate and graduate medical education have now become less sharp and less meaningful; the relationship of the education of other health professionals has become more intimate and interdependent; and
the institution's research and clinical activities constitute essential and inseparable components of the educational process. The productive entity essential to all the major educational programs in the health field and to much of the national objective in medical research and health care is the academic medical center. It provides their common structure and is concerned with the relationship of each to each other and to the larger social needs and problems being served. The use of cost data for an individual education program in isolation may ignore the integrity and coherence of this essential institutional framework. Cost data for individual programs do not cover the resources needed to cultivate the development of new and different programs, or new approaches to old ones, and to assure the institutions future viability and relevance. It is these needs that must be provided for if the Nation is to have vigorous and capable institutions serving society's objectives in health that depend upon academic resources and capabilities.

These are the considerations which the Committee plans to investigate in subsequent phases of its study of the financing of medical education.
A. Derivation of the empirical data

The Committee's Task Force on the cost of medical education developed the empirical data underlying the derivation of the estimates of the undergraduate medical education program at the eight medical schools. The data were obtained principally from the cost allocation studies completed by the schools, and additional information provided by the institutions.

Cost allocation studies present the most comprehensive set of fiscal data available on the educational programs of the medical schools. These studies, however, were conducted primarily to serve the institution's own needs. Although uniform guidelines were provided, there were variations in their application because of differing administrative and program arrangements. The Task Force, therefore, requested a sub-committee to conduct intensive reviews of these studies, in conjunction with the staffs of the individual schools.

The purpose of these intensive reviews was to correct for any vagaries of accounting or reporting procedures in order to derive valid measures of the resources required for the school's educational program. Differences in the levels of the required resources would then reflect program differences in content, form, and manner of presentation.

The eight schools were selected for the purpose of this study from the schools with experience and expertise with the cost allocation principles and guidelines established by the Association of American Medical Colleges.

The selected schools have the following characteristics:

(1) four are private, four are public institutions; (2) all are part of a university or university system; (3) two of the centers had undertaken their cost studies for the 1968-69 FY, five for 1969-70, and one for 1970-71. (All costs were adjusted to 1972 dollars); (J) three had undergraduate M. D. enrollments (during their cost study year) in the 300-399 range, four 400-499, and one in excess of 500; (F) research program costs were below $5 million at two of the institutions, $5-10 million at three, and $11-14 million at three.

The sub-committee members were Dr. Edgar Lee of Case Western Reserve University School of Medicine, Dr. John Bartlett of the University of Texas Medical School at Houston, and Mr. William Hilles and Mr. Thomas Campbell of the AAMC staff.
The schools were grouped in pairs to facilitate the intensive studies by the sub-committee, and to provide the means for the medical school's staff to discuss differences in programs with their colleagues at the paired institution. The schools were paired on the basis of their having, approximately, similar characteristics of student enrollment, faculty size, research and operating expenditures, and organizational structure.

Instructional staff costs

Strict full-time faculty, part-time faculty, and professional staff costs were derived by distributing the salaries paid by the institution on the basis of individually completed activity reports. Among the eight schools in the study, the activity report varied in structure; in some instances it took the form of a percentage of effort, in other schools, activities were reported in hours. These measures of effort spent in instruction were applied to the salaries paid by the school. For the house staff, a variety of procedures were followed in deriving the costs of their effort in instructing medical students; for some schools the interns and residents were requested to complete activity reports, in other schools, the allocation of their effort was determined by the department chairman. The percentage of effort spent in instructing medical students was applied to the stipends paid, and to the costs of such fringe benefits as allowances for meals, laundry, etc.

Geographic full-time faculty base salaries paid by the medical school are generally lower than the strict-full time salaries, because the geographic full-time faculty member is permitted to receive fees paid for his professional services to patients. An adjustment had to be made to the medical schools costs for the geographic full-time faculty, since if the costs for instruction of a school with strict-full time clinical faculty were compared with the costs to a school with geographic full-time clinical faculty, the costs would be understated for the latter school. The following procedure was used to impute a cost to the instruction program to avoid understating the costs of the geographic full-time faculty:

1. Median GFT base (institution-provided) salaries were computed by rank and department;
2. These medians were compared with corresponding median salaries by rank and department for strict full-time faculty on a national basis;
3. The difference between the two medians was multiplied by the number of faculty by rank and by clinical department.
4. The result was multiplied by the aggregated faculty effort assigned to M.D. instruction for the clinical departments.
Volunteer faculty make significant contributions to the instruction of medical students at some of the schools in this study. These volunteers are either totally uncompensated or are given a token payment. In the latter case, the token payment was included as an actual medical school expense. An adjustment had to be made to the instruction costs for a school where volunteers are used, to provide data that would be comparable with the instruction costs at schools with no volunteer faculty. The following procedure was used to impute a cost to the instruction program for the services of the volunteer faculty:

1. personnel at the medical school (generally the clinical department chairman) evaluated the contribution of volunteer faculty assigned to their respective departments;

2. a full-time equivalent value was established by rank and specialty;

3. the results were multiplied by salary scales either at the school level or at the regional or national level;

4. these salaries were prorated to M.D. instruction based usually upon the evaluation of the individual clinical department chairmen.

It should be emphasized that the above procedure was followed only where it was determined that the volunteer faculty would have to be replaced by paid faculty, if the services of the volunteer faculty were no longer available.

Faculty vacancy adjustment was necessary where a school during the year of its cost study had a relatively high number of vacant budgeted full-time faculty positions. For the last two or three years the average percentage of vacancies to total full-time faculty positions had been around 6%. If an institution with a vacancy rate significantly above that national percentage is compared with an institution at the national average or below, the former center's cost will generally be understated. The following procedure was used to impute a cost to correct for abnormally high vacancy rates:

1. a number was calculated to represent the difference between reported budgeted vacancies by the institution and the number which would be sustained by this one school to keep it at the national average;

2. the results were multiplied by the average full-time faculty salary;

3. that product was divided by the aggregated faculty effort assigned to M.D. instruction;
Supporting staff costs

Salaries of the staff supporting the instructional program were allocated to M.D. instruction, estimated on an effort distribution basis. This was derived by supervisors, or department chairmen, where appropriate. The employees covered in this category included nurses, laboratory technicians, librarians, clerical, and administrative staff.

Other costs

Included in this category are the faculty and other employee fringe benefits, prorated to undergraduate M.D. instruction on the basis of the distribution of the salary costs allocated to M.D. instruction. Fringe benefits were also imputed on the imputed costs for volunteer and geographic full-time faculty.

Costs for operation and maintenance of plant were allocated to M.D. instruction on basis of functional space use. The same basis was used to impute a cost for depreciation of physical facilities.

Equipment purchases may have been charged to the cost of the instruction program, if this was in accordance with the school's accounting policy, alternatively a use or depreciation charge was included in the instruction cost.

Library, vivarium, and other expenses were allocated to M.D. instruction on the basis of the number of medical students as a proportion of the total number of students.

Adjustment of costs to 1972 base

Because the costs identified with some of the centers in this study were incurred as early as 1968-69, all costs had to be equated to a common year (1972).

Instructional staff costs of medical schools and expenses of the academic departments were adjusted by an index of the median salary for a strict full-time faculty associate professor, 1972 = 100. House staff stipends were adjusted by an index of the national average of house staff stipends, 1972 = 100.

All other expenses were adjusted by the GNP implicit price deflator, 1972 = 100.
B. Research and Clinical Activity Components of the Cost of Undergraduate Medical Education

Fundamental to the process for quality medical education is the requirement that the student be instructed by educators who are capable of teaching up-to-date medicine. This can be accomplished only by a faculty that is involved, in adequate measure, with developments at the frontiers of scientific knowledge in the health sciences through such scholarly pursuits as their own biomedical research activities, and in the application of that knowledge through their involvement with contemporary health care practices.

It has been determined that the faculty members who spend the most time in all instruction (undergraduate, graduate, postdoc, etc.) do not on the average, spend more than 35% of their time in instruction. For this reason, 35% effort in instruction is considered to be "full involvement in instruction." Therefore, any faculty member who spends 35% of his time in instruction would have all of his "environmental costs" attributed to the instructional programs. If the full 35% of his time in instruction was spent in the undergraduate M. D. program, then, the environmental costs would be fully allocable to that program. If, on the other hand, the faculty member spends only 10% of his time in instruction of undergraduate M. D. students, then .10/.35 or 2/7 of his environmental costs are allocable to the undergraduate M. D. program.

On a school-wide basis, one need only examine the average percent of effort to the undergraduate for both basic and clinical science faculty and divide those percentages by 35% in order to determine the portion of the environmental cost which is allocable to the undergraduate M. D. program.

As an example, consider the clinical activity environmental cost. It has been determined that the "fully involved (35%) in instruction clinical faculty member" should spend at least 25% of his time in clinical activity which is necessary to maintain his skills as a good clinical instructor. The cost of this clinical activity is fully allocable to the instructional programs. This cost is simply 25% of the cost of maintaining an FTE clinician at each institution.

Let us assume we have a hypothetical school with 100 clinical faculty who spend, on the average, 10% of their time teaching undergraduate M. D. students. In addition, assume that there are 300 undergraduate M. D. students and that the cost of maintaining an FTE clinician is $75,000 per year. Then, the environmental cost of clinical activity attributable to the undergraduate M. D. program on a per student basis is:

\[
100 \text{ fac} \times \left[\frac{10\%}{35\%} \times (25\% \times \$75,000)\right] \div 300 \text{ students}, \text{ or, } \$1,786 \text{ per undergrad MD student}
\]
The methodology for arriving at the environmental cost of research per student is similar except that now we must use the percentage of time which a "fully involved in instruction" faculty member should spend in research in order to maintain his skills as a good instructor. In addition, the cost of maintaining an FTE researcher must be substituted for the cost of maintaining an FTE clinician.

From the data, it has been shown that "fully involved in instruction" basic science faculty should spend at least 40% of their time in research in order to maintain their skills as good instructors. For clinical faculty the amount has been shown to be 15%.

Looking at the same hypothetical school, but, now adding the facts that there are 50 basic science faculty who also spend 10% of their time on the average, in instructing undergraduate M. D. students, and, that the cost of maintaining an FTE researcher is $80,000 we have the following environmental costs of research:

\[
\begin{align*}
\text{Clin fac} &= 100 \times 10\% \times (15\% \times $80,000) \div 300 \text{ students} = \$1,143 \\
\text{Research} &= 35\% \\
\text{Basic fac} &= 50 \times 10\% \times (40\% \times $80,000) \div 300 \text{ students} = \$1,524 \\
\text{Research} &= 35\% \\
\text{Tot Res} &= \$2,667
\end{align*}
\]

So, the environmental costs per student at this hypothetical school are $1,786 for clinical activity, and $2,667 for research for a total environmental cost of $4,453 per undergraduate M. D. student.

Two models were constructed for the purpose of determining the proper cost per undergraduate M. D. student for the research and clinical activities of the faculty which may be considered necessary for the support of an effective educational program. In determining the costs, the models take into account the "degree of involvement" of the faculty member in instruction of the undergraduate M. D. students as well as the cost of conducting research or clinical activity at the institutions.

The model used to determine the clinical activity cost per student will be discussed first, as it is a less detailed model and will make an understanding of the model for the research component easier.

We define the model clinical science faculty member "fully involved in instruction", as one who spends a fraction $I_{oc}$ of his time in instruction, including $M_{oc}$ for undergraduate medical education and $G_{oc}$ for graduate medical education and other instructional responsibilities of the medical school faculty ($M_{oc} + G_{oc} = I_{oc}$). Such a person should spend a fraction $P_{oc}$ of his time in clinical activities in order to maintain his skills as a competent clinical science instructor.

The cost of the clinical activity necessary to maintain the skills of this model faculty member who is "fully involved in instruction" is fully allocable to all instruction. A fraction of that cost equal to the ratio of the undergraduate instruction to total instruction ($\frac{M_{oc}}{M_{oc} + G_{oc}}$) is allocable to the undergraduate medical education program.
This cost of clinical activity on a per student basis is computed as follows:

If $C_p$ is the cost of maintaining a full-time clinician at a given school, then $P_{oc} \cdot C_p$ is the cost of clinical activity for the model faculty member who is "fully involved in instruction". All of this cost is allocable to the instructional programs. The portion of this cost allocable to the undergraduate medical education program would be

$$\frac{M_{oc}}{M_{oc} + G_{oc}} \cdot P_{oc} \cdot C_p$$

This model clinical faculty member is a construct required for the calculation, but very few real faculty members are fully involved in instruction in this sense. Most are involved in clinical activity to a much greater extent than that of the model, and most faculty members usually have correspondingly smaller fractions of their effort devoted to undergraduate medical instruction. If the actual faculty member is involved to a lesser degree in undergraduate medical instruction than the model faculty member, then, a smaller part of the cost of those activities which maintain his professional competence ought to be allocated to undergraduate medical education. If his undergraduate medical education involvement is half the model amount, only half as much cost should be allocated, if his involvement is one-third that of the model, one-third of the model cost should be assigned, and if he has no involvement with undergraduate medical education, no cost should be assigned.

If $M_{oc}$ is the average fraction of effort devoted to undergraduate medical education at a particular school, then, with this approach, the clinical activity cost to be assigned to the undergraduate medical education program for the average faculty member is,

$$\left( \frac{M_{oc}}{M_{oc} + G_{oc}} \right) \cdot P_{oc} \cdot C_p$$

The above reduces to

$$\left( \frac{M_{oc}}{M_{oc} + G_{oc}} \right) \cdot P_{oc} \cdot C_p$$

which can be expressed as

$$\left( \frac{M_{oc}}{I_{oc}} \right) \cdot P_{oc} \cdot C_p$$

Since $M_{oc} + G_{oc} = I_{oc}$, which is the model percentage of effort to instruction for a "fully involved" faculty member.

Multiplying by the number of clinical faculty and dividing by the number of undergraduate medical students will put such clinical activity costs on a per student basis.

$$C = N_f \cdot \left( \frac{M_{oc}}{I_{oc}} \right) \cdot P_{oc} \cdot C_p / N_s$$
Where \( N_f \) is the number of full-time clinical faculty, \( N_s \) is the number of undergraduate medical students and \( C \) is the cost of the clinical activity per student.

Data is available for all the parameters of the above equation except for the model percent of effort in instruction for a "fully involved in instruction" clinical faculty member \( I_{oc} \), and the model percentage of effort to clinical activity for maintenance of competence of this "fully involved in instruction" clinical faculty member \( F_{oc} \).

An empirical methodology was used in conjunction with the judgment of medical educators to arrive at the percentages of effort for the model faculty members. The methodology used was as follows: Faculty effort reports from one of the eight centers were analyzed. The upper quartile in effort to instruction was used in order to develop the model faculty members. This group of faculty were considered to be "fully involved in instruction", and the manner in which they allocated their time was used as the standard for the model "fully involved instructor". This effort breakdown was then reviewed and adjusted by a panel of medical educators to arrive at the following allocation of effort of the "fully involved faculty member".

<table>
<thead>
<tr>
<th>BASIC SCIENCE</th>
<th>CLINICAL SCIENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Instruction</td>
<td>35%</td>
</tr>
<tr>
<td>Research</td>
<td>40%</td>
</tr>
<tr>
<td>Clinical Activity</td>
<td>--</td>
</tr>
<tr>
<td>Other Activity</td>
<td>25%</td>
</tr>
</tbody>
</table>

Applying the percentages of effort of 35% and 20% for model levels of instruction and clinical activity respectively to the cost equation above, the following table may be constructed showing the cost per student for clinical activity allocable to the undergraduate M. D. program.

<table>
<thead>
<tr>
<th>TABLE A</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>Med. Student</td>
</tr>
<tr>
<td>A</td>
<td>338</td>
</tr>
<tr>
<td>B</td>
<td>364</td>
</tr>
<tr>
<td>C</td>
<td>487</td>
</tr>
<tr>
<td>D</td>
<td>402</td>
</tr>
<tr>
<td>E</td>
<td>473</td>
</tr>
<tr>
<td>F</td>
<td>484</td>
</tr>
<tr>
<td>G</td>
<td>392</td>
</tr>
<tr>
<td>H</td>
<td>595</td>
</tr>
</tbody>
</table>

* \( M_{oc} \) is the mean effort of the clinical faculty to instruction in the undergraduate M. D. program.

** \( C_p \) is the total cost of maintaining a full-time equivalent clinician.
A similar methodology will now be used to develop the costs of research allocable to the undergraduate M. D. program.

The model clinical science faculty member "fully involved in instruction", is defined, as one who spends a fraction $f_{oc}$ (35%) of his time in instruction. Such a person should spend a fraction $p_{oc}$ (20%) of his time in clinical activities, as well as a fraction $r_{oc}$ (25%) of his time in research in order to maintain his skills as a competent instructor. Going through similar derivations as for the cost per student of clinical activity we arrive at equations for the cost per student of research for clinical science faculty as follows.

$$ R_c \text{ (research cost per student) } = N_f \left( \frac{N_{oc}}{I_{oc}} \right) \cdot R_{oc} \cdot C_{cr}/N_s $$

for clinical faculty

Where: $N_f$, $N_s$, $N_{oc} + I_{oc}$ are as previously defined.

- $R_{oc}$ = the model percent of effort in research for maintenance of skills for clinical faculty (25%).
- $C_{cr}$ = the cost of maintaining a full-time equivalent researcher at the institution.

For the basic science faculty, the equation is essentially similar;

$$ R_b \text{ (research cost per student for basic science faculty) } = N_{bf} \left( \frac{R_{ob}}{I_{ob}} \right) \cdot R_{ob} \cdot C_{br}/N_s $$

Where:

- $N_{bf}$ = number of basic science faculty
- $R_{ob}$ = mean percentage of effort of the basic science faculty to the undefined M. D. program
- $I_{ob}$ = the model percentage of effort to instruction for basic science faculty (also 35%)
- $R_{ob}$ = the model percentage of effort to research for maintenance of skills as a competent basic science instructor (40%)
- $C_{br}$ = the cost of maintaining a full-time basic science researcher.

Applying the above models to the data from the eight centers provides us with the following table of costs per student of undergraduate medical education.
### TABLE B

**PER STUDENT COSTS OF THE UNDERGRADUATE M. D. PROGRAM WITH MODEL PARAMETERS OF**

\[ I_{ob} = 35\% \quad R_{ob} = 40\% \]
\[ I_{oc} = 35\% \quad R_{oc} = 25\% \quad C_{oc} = 20\% \]

<table>
<thead>
<tr>
<th>CENTER</th>
<th>RESEARCH COSTS PER STUDENT</th>
<th>CLINICAL ACTIVITY COST PER STUDENT</th>
<th>INSTRUCTIONAL COST PER STUDENT</th>
<th>TOTAL COST PER STUDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$4.6 \quad $3.6 \quad $8.2 \quad $3.1 \quad $9.7 \quad $21.0</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3.3 \quad 4.7 \quad 8.0 \quad 2.9 \quad 9.6 \quad 20.5</td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>2.0 \quad 2.4 \quad 4.4 \quad 1.9 \quad 5.7 \quad 12.0</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>2.9 \quad 3.3 \quad 6.1 \quad 2.6 \quad 6.9 \quad 15.6</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>1.7 \quad 2.4 \quad 4.1 \quad 1.9 \quad 7.1 \quad 13.1</td>
<td>E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>3.0 \quad 1.8 \quad 4.8 \quad 1.4 \quad 7.2 \quad 13.4</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>2.8 \quad 3.3 \quad 6.1 \quad 2.6 \quad 9.7 \quad 18.4</td>
<td>G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>1.0 \quad 3.9 \quad 4.9 \quad 3.1 \quad 8.8 \quad 16.8</td>
<td>H</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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Page 2

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THE ATTACHED TECHNICAL NOTE PRESENTS AN ALTERNATIVE SET OF ESTIMATES FOR ENVIRONMENTAL COSTS WHICH INCLUDES A COST OF PROFESSIONAL DEVELOPMENT IN ADDITION TO THE COSTS OF THE RESEARCH AND CLINICAL ACTIVITY COMPONENTS.
Fundamental to the process for quality medical education is the requirement that the student be instructed by educators who are capable of teaching up-to-date medicine. This can be accomplished only by a faculty that is involved, in adequate measure, with developments at the frontiers of scientific knowledge in the health sciences through such scholarly pursuits as their own biomedical research activities, and in the application of that knowledge through their involvement with contemporary health care practices.

It has been determined that the faculty members who spend the most time in all instruction (undergraduate, graduate, postdoc etc.) do not on the average, spend more than 35% of their time in instruction. For this reason, 35% effort in instruction is considered to be "full involvement in instruction." Therefore, any faculty member who spends 35% of his time in instruction would have all of his "environmental costs" attributed to the instructional programs. If the full 35% of his time in instruction was spent in the undergraduate M.D. program, then, the environmental costs would be fully allocable to that program. If, on the other hand, the faculty member spends only 10% of his time in instruction of undergraduate M.D. students, then .10/.35 or 2/7 of his environmental costs are allocable to the undergraduate M.D. program.

On a schoolwide basis, one need only examine the average percent of effort to the undergraduate for both basic and clinical science faculty and divide those percentages by 35% in order to determine the portion of the environmental cost which is allocable to the undergraduate M.D. program.
As an example, consider the clinical activity environmental cost. It has been determined that the "fully involved (35%) in instruction clinical faculty member" should spend at least 25% of his time in clinical activity which is necessary to maintain his skills as a good clinical instructor. The cost of this clinical activity is fully allocable to the instructional programs. This cost is simply 25% of the cost of maintaining an FTE clinician at each institution.

Let us assume we have a hypothetical school with 100 clinical faculty who spend, on the average, 10% of their time teaching undergraduate M.D. students. In addition, assume that there are 300 undergraduate M.D. students and that the cost of maintaining an FTE clinician is $75,000 per year. Then, the environmental cost of clinical activity attributable to the undergraduate M.D. program on a per student basis is:

\[
100 \text{ fac} \times \frac{10\%}{35\%} \times \left(25\% \times \frac{$75,000}{300 \text{ students}}\right), \text{ or, } $1,786 \text{ per undergrad MD student.}
\]

The methodology for arriving at the environmental cost of research per student is similar except that now we must use the percentage of time which a "fully involved in instruction" faculty member should spend in research in order to maintain his skills as a good instructor. In addition, the cost of maintaining an FTE researcher must be substituted for the cost of maintaining an FTE clinician.

From the data, it has been shown that "fully involved in instruction" basic science faculty should spend at least 40% of their time in research in order to maintain their skills as good instructors. For clinical faculty the amount has been shown to be 15%.
Looking at the same hypothetical school, but, now adding the facts that there are 50 basic science faculty who also spend 10% of their time on the average, in instructing undergraduate M.D. students, and, that the cost of maintaining an FTE researcher is $80,000 we have the following environmental costs of research;

\[
\text{Clin fac} = 100 \times \frac{0.1}{0.35} \times \left(0.15 \times 80,000 \right) \div 300 \text{ students} = \frac{1,143}{100} \\
\text{Basic fac} = 50 \times \frac{0.1}{0.35} \times \left(0.4 \times 80,000 \right) \div 300 \text{ students} = \frac{1,524}{100}
\]

So, the environmental costs per student at this hypothetical school are $1,786 for clinical activity, and $2,667 for research for a total environmental cost of $4,453 per undergraduate M.D. student.

Two models were constructed for the purpose of determining the proper cost per undergraduate M.D. student for the research and clinical activities of the faculty which may be considered necessary for the support of an effective educational program. In determining the costs, the models take into account the "degree of involvement" of the faculty member in instruction of the undergraduate M.D. students as well as the cost of conducting research or clinical activity at the institutions.

The model used to determine the clinical activity cost per student will be discussed first, as it is a less detailed model and will make an understanding of the model for the research component easier.

We define the model clinical science faculty member "fully involved in instruction," as one who spends a fraction \( I_{oc} \) of his time in instruction, including \( M_{oc} \) for undergraduate medical education and \( G_{oc} \) for graduate medical education and other
instructional responsibilities of the medical school faculty
\((M_{oc} + G_{oc} = I_{oc})\). Such a person should spend a fraction \(P_{oc}\) of
his time in clinical activities in order to maintain his skills as
a competent clinical science instructor.

The cost of the clinical activity necessary to maintain
the skills of this model faculty member who is "fully involved in
instruction" is fully allocable to all instruction. A fraction
of that cost equal to the ratio of the undergraduate instruction
to total instruction \(\left(\frac{M_{oc}}{M_{oc} + G_{oc}}\right)\) is allocable to the undergraduate
medical education program.

This cost of clinical activity on a per student basis is
computed as follows:

If \(C_p\) is the cost of maintaining a full-time clinician at
a given school, then \(P_{oc} \cdot C_p\) is the cost of clinical activity for
the model faculty member who is "fully involved in instruction."
All of this cost is allocable to the instructional programs. The
portion of this cost allocable to the undergraduate medical education
program would be \(\left(\frac{M_{oc}}{M_{oc} + G_{oc}}\right) \cdot P_{oc} \cdot C_p\)

This model clinical faculty member is a construct required
for the calculation, but very few real faculty members are
fully involved in instruction in this sense. Most are involved
in clinical activity to a much greater extent than that of the
model, and most faculty members usually have correspondingly
smaller fractions of their effort devoted to undergraduate
medical instruction. If the actual faculty member is involved
to a lesser degree in undergraduate medical instruction than the
model faculty member than a smaller part of the cost of those activities which maintain his professional competence ought to be allocated to undergraduate medical education. If his undergraduate medical education involvement is half the model amount, only half as much cost should be allocated, if his involvement is one-third that of the model, one-third of the model cost should be assigned, and if he has no involvement with undergraduate medical education no cost should be assigned.

If $M_{oc}$ is the average fraction of effort devoted to undergraduate medical education at a particular school, then, with this approach, the clinical activity cost to be assigned to the undergraduate medical education program for the average faculty member is,

$$
\left( \frac{-M_{oc}}{M_{oc} + G_{oc}} \right) \left( \frac{M_{oc}}{M_{oc} + G_{oc}} \right) \cdot P_{oc} \cdot C_p
$$

The above reduces to

$$
\left( \frac{-M_{oc}}{M_{oc} + G_{oc}} \right) \cdot P_{oc} \cdot C_p
$$

which can be expressed as

$$
\left( \frac{-M_{oc}}{I_{oc}} \right) \cdot P_{oc} \cdot C_p
$$

since $M_{oc} + G_{oc} = I_{oc}$, which is the model percentage of effort to instruction for a "fully involved" faculty member.
Multiplying by the number of clinical faculty and dividing by the number of undergraduate medical students will put such clinical activity costs on a per student basis.

\[ C = N_f \cdot \left( \frac{\bar{I}_{OC}}{I_{OC}} \right) \cdot P_{OC} \cdot \frac{C_p}{N_s} \]

Where \( N_f \) is the number of full-time clinical faculty, \( N_s \) is the number of undergraduate medical students and \( C \) is the cost of the clinical activity per student.

Data is available for all the parameters of the above equation except for the model percent of effort in instruction for a "fully involved in instruction" clinical faculty member \( (I_{OC}) \), and the model percentage of effort to clinical activity for maintenance of competence of this "fully involved in instruction" clinical faculty member \( P_{OC} \).

An empirical methodology was used in conjunction with the judgment of medical educators to arrive at the percentages of effort for the model faculty members. The methodology used was as follows: Faculty effort reports from one of the eight centers were analyzed. The upper quartile in effort to instruction was used in order to develop the model faculty members. This group of faculty were considered to be "fully involved in instruction," and the manner in which they allocated their time was used as the standard for the model "fully involved instructor." This effort breakdown was then reviewed and adjusted by a panel of medical educators to arrive at the following allocation of effort of the "fully involved faculty member."
Applying the percentages of effort of 35% and 25% for model levels of Instruction and clinical activity respectively to the cost equation above, the following table may be constructed showing the cost per student for clinical activity allocable to the undergraduate M.D. program.

<table>
<thead>
<tr>
<th>Center</th>
<th>Med Student</th>
<th>Clin. Fac.</th>
<th>( \bar{M}_{oc} )</th>
<th>( C_p ) (1,000's)</th>
<th>Clinical Activity Cost Per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>338</td>
<td>248</td>
<td>8.2%</td>
<td>$88.9</td>
<td>$3,821</td>
</tr>
<tr>
<td>B</td>
<td>364</td>
<td>230</td>
<td>12.1</td>
<td>46.3</td>
<td>3,628</td>
</tr>
<tr>
<td>C</td>
<td>487</td>
<td>141</td>
<td>15.8</td>
<td>72.4</td>
<td>2,366</td>
</tr>
<tr>
<td>D</td>
<td>402</td>
<td>109</td>
<td>21.5</td>
<td>76.9</td>
<td>3,203</td>
</tr>
<tr>
<td>E</td>
<td>473</td>
<td>164</td>
<td>18.2</td>
<td>53.3</td>
<td>2,403</td>
</tr>
<tr>
<td>F</td>
<td>484</td>
<td>106</td>
<td>18.0</td>
<td>64.3</td>
<td>1,811</td>
</tr>
<tr>
<td>G</td>
<td>392</td>
<td>428</td>
<td>8.1</td>
<td>52.3</td>
<td>3,304</td>
</tr>
<tr>
<td>H</td>
<td>595</td>
<td>269</td>
<td>16.7</td>
<td>72.6</td>
<td>3,915</td>
</tr>
</tbody>
</table>

* \( \bar{M}_{oc} \) is the mean effort of the clinical faculty to instruction in the undergraduate M.D. program.

** \( C_p \) is the total cost of maintaining a full time equivalent clinician.

A similar methodology can be used to develop the costs of research allocable to the undergraduate M.D. Program and the costs of Professional Development allocable to the undergraduate M.D. program.
The model clinical science faculty member "fully involved in instruction", is defined as one who spends a fraction $I_{OC}$ (35%) of his time in instruction. Such a person should spend a fraction $P_{OC}$ (25%) of his time in clinical activities, as well as a fraction $R_{OC}$ (15%) of his time in research and a fraction $D_{OC}$ (15%) of his time in professional development in order to maintain his skills as a competent instructor. Going through similar derivations as for the cost per student of clinical activity we arrive at equations for the cost per student of research and professional development for clinical science faculty as follows.

$$R_C = N_f \frac{M_{OC}}{I_{OC}} \cdot R_{OC} \cdot C_{CR} / N_s$$

and

$$D_C = N_f \frac{M_{OC}}{I_{OC}} \cdot D_{OC} \cdot C_{Cd} / N_s$$

Where:
- $N_f$, $N_s$, $M_{OC} + I_{OC}$ are as previously defined
- $R_{OC}$ = the model percent of effort in research for maintenance of skills for clinical faculty (15%)
- $C_{CR}$ = the cost of maintaining a full-time equivalent researcher at the institution
- $D_{OC}$ = the model percentage of effort in professional development for maintaining of skills for clinical faculty (15%)
- $C_{Cd}$ = the cost of maintaining a clinical faculty member spending all his time in professional development (the amount used was the mean salary of clinicians)
For the basic science faculty, the equations are essentially similar:

\[ R_b = \left( \frac{\bar{M}_{ob}}{I_{ob}} \right) \cdot R_{ob} \cdot C_{br} / N_s \]

and

\[ D_b = \left( \frac{M_{ob}}{I_{ob}} \right) \cdot D_{ob} \cdot C_{bd} / N_s \]

Where:

- \( N_{bf} \) = number of basic science faculty
- \( \bar{M}_{ob} \) = mean percentage of effort of the basic science faculty to the undefined M.D. program.
- \( I_{ob} \) = the model percentage of effort to instruction for basic science faculty (also 35%)
- \( R_{ob} \) = the model percentage of effort to research for maintenance of skills as a competent basic science instructor (40%)
- \( C_{br} \) = the cost of maintaining a full-time basic science researcher.
- \( D_{ob} \) = the model percentage of effort to professional development for maintenance of skills as a competent basic science instructor (15%)
- \( C_{bd} \) = the cost of maintaining a basic science faculty member spending all his time in professional development (the amount used was the mean salary of the clinicians)
Applying the above models to the data from the eight centers provides us with the following table of costs per student of undergraduate medical education.
TABLE B

Costs Per Undergraduate M. D. Student of the Components of the Cost of Undergraduate Medical Education

Model Faculty  \( I_{ob} = 35\% \)  \( I_{oc} = 35\% \)  \( Rob = 40\% \)  \( Roc = 15\% \)  \( D_{ob} = 15\% \)  \( D_{oc} = 15\% \)  \( P_{oc} = 25\% \)

<table>
<thead>
<tr>
<th>Center</th>
<th>Basic</th>
<th>Clinical</th>
<th>Total</th>
<th>Research Costs</th>
<th>Professional Development Costs</th>
<th>Clinical Activity Costs</th>
<th>Instructional Costs</th>
<th>Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$4.6</td>
<td>$2.2</td>
<td>$6.7</td>
<td>$0.4</td>
<td>$0.8</td>
<td>$3.8</td>
<td>$9.7</td>
<td>$21.5</td>
</tr>
<tr>
<td>B</td>
<td>3.3</td>
<td>2.8</td>
<td>6.2</td>
<td>0.4</td>
<td>1.2</td>
<td>3.6</td>
<td>9.6</td>
<td>21.0</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>1.4</td>
<td>3.4</td>
<td>0.2</td>
<td>0.7</td>
<td>2.4</td>
<td>5.7</td>
<td>12.3</td>
</tr>
<tr>
<td>D</td>
<td>2.9</td>
<td>2.0</td>
<td>4.8</td>
<td>0.3</td>
<td>0.7</td>
<td>3.2</td>
<td>6.9</td>
<td>16.0</td>
</tr>
<tr>
<td>E</td>
<td>1.7</td>
<td>1.4</td>
<td>3.1</td>
<td>0.2</td>
<td>0.8</td>
<td>2.4</td>
<td>7.1</td>
<td>13.6</td>
</tr>
<tr>
<td>F</td>
<td>3.0</td>
<td>1.1</td>
<td>4.1</td>
<td>0.3</td>
<td>0.5</td>
<td>1.8</td>
<td>7.2</td>
<td>13.8</td>
</tr>
<tr>
<td>G</td>
<td>2.8</td>
<td>2.0</td>
<td>4.8</td>
<td>0.4</td>
<td>1.0</td>
<td>3.3</td>
<td>9.7</td>
<td>19.2</td>
</tr>
<tr>
<td>H</td>
<td>1.0</td>
<td>2.3</td>
<td>3.3</td>
<td>0.1</td>
<td>1.0</td>
<td>3.9</td>
<td>8.8</td>
<td>17.2</td>
</tr>
</tbody>
</table>
THE ATTACHED TECHNICAL NOTE PRESENTS AN ALTERNATIVE SET OF ESTIMATES FOR ENVIRONMENTAL COSTS WHICH INCLUDES A COST OF PROFESSIONAL DEVELOPMENT IN ADDITION TO THE COSTS OF THE RESEARCH AND CLINICAL ACTIVITY COMPONENTS.
B. Research, Clinical Activity and Professional Development

Components of the Cost of Undergraduate Medical Education

Fundamental to the process for quality medical education is the requirement that the student be instructed by educators who are capable of teaching up-to-date medicine. This can be accomplished only by a faculty that is involved, in adequate measure, with developments at the frontiers of scientific knowledge in the health sciences through such scholarly pursuits as their own biomedical research activities, and in the application of that knowledge through their involvement with contemporary health care practices.

It has been determined that the faculty members who spend the most time in all instruction (undergraduate, graduate, postdoc etc.) do not on the average, spend more than 35% of their time in instruction. For this reason, 35% effort in instruction is considered to be "full involvement in instruction." Therefore, any faculty member who spends 35% of his time in instruction would have all of his "environmental costs" attributed to the instructional programs. If the full 35% of his time in instruction was spent in the undergraduate M.D. program, then, the environmental costs would be fully allocable to that program. If, on the other hand, the faculty member spends only 10% of his time in instruction of undergraduate M.D. students, then .10/.35 or 2/7 of his environmental costs are allocable to the undergraduate M.D. program.

On a schoolwide basis, one need only examine the average percent of effort to the undergraduate for both basic and clinical science faculty and divide those percentages by 35% in order to determine the portion of the environmental cost which is allocable to the undergraduate M.D. program.
As an example, consider the clinical activity environmental cost. It has been determined that the "fully involved (35%) in instruction clinical faculty member" should spend at least 25% of his time in clinical activity which is necessary to maintain his skills as a good clinical instructor. The cost of this clinical activity is fully allocable to the instructional programs. This cost is simply 25% of the cost of maintaining an FTE clinician at each institution.

Let us assume we have a hypothetical school with 100 clinical faculty who spend, on the average, 10% of their time teaching undergraduate M.D. students. In addition, assume that there are 300 undergraduate M.D. students and that the cost of maintaining an FTE clinician is $75,000 per year. Then, the environmental cost of clinical activity attributable to the undergraduate M.D. program on a per student basis is;

$$\frac{100 \text{ fac} \times \left(\frac{10\%}{35\%} \times 25\% \times \$75,000\right)}{300 \text{ students}} = \frac{100 \times 0.2857 \times 0.25 \times 75000}{300} = \frac{285700000}{300} = 95233.33$$

or, $1,786 per undergrad MD student.

The methodology for arriving at the environmental cost of research per student is similar except that now we must use the percentage of time which a "fully involved in instruction" faculty member should spend in research in order to maintain his skills as a good instructor. In addition, the cost of maintaining an FTE researcher must be substituted for the cost of maintaining an FTE clinician.

From the data, it has been shown that "fully involved in instruction" basic science faculty should spend at least 40% of their time in research in order to maintain their skills as good instructors. For clinical faculty the amount has been shown to be 15%.
Looking at the same hypothetical school, but, now adding the facts that there are 50 basic science faculty who also spend 10% of their time on the average, in instructing undergraduate M.D. students, and, that the cost of maintaining an FTE researcher is $80,000 we have the following environmental costs of research:

\[
\text{Clin fac} = 100 \times \frac{10\% \times (15\% \times 80,000)}{35\%} \div 300 \text{ students} = 1,143 \\
\text{Basic fac} = 50 \times \frac{10\% \times (40\% \times 80,000)}{35\%} \div 300 \text{ students} = 1,524 \\
\text{TOT RES} = 2,667
\]

So, the environmental costs per student at this hypothetical school are $1,786 for clinical activity, and $2,667 for research for a total environmental cost of $4,453 per undergraduate M.D. student.

Two models were constructed for the purpose of determining the proper cost per undergraduate M.D. student for the research and clinical activities of the faculty which may be considered necessary for the support of an effective educational program. In determining the costs, the models take into account the "degree of involvement" of the faculty member in instruction of the undergraduate M.D. students as well as the cost of conducting research or clinical activity at the institutions.

The model used to determine the clinical activity cost per student will be discussed first, as it is a less detailed model and will make an understanding of the model for the research component easier.

We define the model clinical science faculty member "fully involved in instruction," as one who spends a fraction \(I_{\text{OC}}\) of his time in instruction, including \(M_{\text{OC}}\) for undergraduate medical education and \(G_{\text{OC}}\) for graduate medical education and other
instructional responsibilities of the medical school faculty
\( (M_{oc} + G_{oc} = I_{oc}) \). Such a person should spend a fraction \( P_{oc} \) of
his time in clinical activities in order to maintain his skills as a competent clinical science instructor.

The cost of the clinical activity necessary to maintain the skills of this model faculty member who is "fully involved in instruction" is fully allocable to all instruction. A fraction of that cost equal to the ratio of the undergraduate instruction to total instruction \( \left( \frac{M_{oc}}{M_{oc} + G_{oc}} \right) \) is allocable to the undergraduate medical education program.

This cost of clinical activity on a per student basis is computed as follows:

If \( C_p \) is the cost of maintaining a full-time clinician at a given school, then \( P_{oc} \cdot C_p \) is the cost of clinical activity for the model faculty member who is "fully involved in instruction." All of this cost is allocable to the instructional programs. The portion of this cost allocable to the undergraduate medical education program would be \( \left( \frac{M_{oc}}{M_{oc} + G_{oc}} \right) \cdot P_{oc} \cdot C_p \)

This model clinical faculty member is a construct required for the calculation, but very few real faculty members are fully involved in instruction in this sense. Most are involved in clinical activity to a much greater extent than that of the model, and most faculty members usually have correspondingly smaller fractions of their effort devoted to undergraduate medical instruction. If the actual faculty member is involved to a lesser degree in undergraduate medical instruction than the
model faculty member then a smaller part of the cost of those activities which maintain his professional competence ought to be allocated to undergraduate medical education. If his undergraduate medical education involvement is half the model amount, only half as much cost should be allocated, if his involvement is one-third that of the model, one-third of the model cost should be assigned, and if he has no involvement with undergraduate medical education no cost should be assigned.

If $\bar{M}_{OC}$ is the average fraction of effort devoted to undergraduate medical education at a particular school, then, with this approach, the clinical activity cost to be assigned to the undergraduate medical education program for the average faculty member is,

$$\left(\frac{\bar{M}_{OC}}{\bar{M}_{OC} + G_{OC}}\right) \cdot \frac{M_{OC}}{M_{OC} + G_{OC}} \cdot P_{oc} \cdot C_{p}$$

The above reduces to

$$\left(\frac{\bar{M}_{OC}}{M_{OC} + G_{OC}}\right) \cdot P_{oc} \cdot C_{p}$$

which can be expressed as

$$\left(\frac{\bar{M}_{OC}}{I_{OC}}\right) \cdot P_{oc} \cdot C_{p}$$

since $M_{OC} + G_{OC} = I_{OC}$, which is the model percentage of effort to instruction for a "fully involved" faculty member.
Multiplying by the number of clinical faculty and dividing by the number of undergraduate medical students will put such clinical activity costs on a per student basis.

\[ C = N_f \left( \frac{N_{oc}}{I_{oc}} \right) \cdot P_{oc} \cdot C_p / N_s \]

Where \( N_f \) is the number of full-time clinical faculty, \( N_s \) is the number of undergraduate medical students and \( C \) is the cost of the clinical activity per student.

Data is available for all the parameters of the above equation except for the model percent of effort in instruction for a "fully involved in instruction" clinical faculty member \( (I_{oc}) \), and the model percentage of effort to clinical activity for maintenance of competence of this "fully involved in instruction" clinical faculty member \( P_{oc} \).

An empirical methodology was used in conjunction with the judgment of medical educators to arrive at the percentages of effort for the model faculty members. The methodology used was as follows: Faculty effort reports from one of the eight centers were analyzed. The upper quartile in effort to instruction was used in order to develop the model faculty members. This group of faculty were considered to be "fully involved in instruction," and the manner in which they allocated their time was used as the standard for the model "fully involved instructor." This effort breakdown was then reviewed and adjusted by a panel of medical educators to arrive at the following allocation of effort of the "fully involved faculty member."
Applying the percentages of effort of 35% and 25% for model levels of Instruction and clinical activity respectively to the cost equation above, the following table may be constructed showing the cost per student for clinical activity allocable to the undergraduate M.D. program.

**TABLE A**

<table>
<thead>
<tr>
<th>Center</th>
<th>Med Student</th>
<th>Clin. Fac.</th>
<th>$M_{oc}$</th>
<th>$C_p$ (1,000's)</th>
<th>Cost Per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>338</td>
<td>248</td>
<td>8.2%</td>
<td>$88.9</td>
<td>$3,821</td>
</tr>
<tr>
<td>B</td>
<td>364</td>
<td>330</td>
<td>12.1%</td>
<td>46.3</td>
<td>3,628</td>
</tr>
<tr>
<td>C</td>
<td>487</td>
<td>141</td>
<td>15.8%</td>
<td>72.4</td>
<td>2,366</td>
</tr>
<tr>
<td>D</td>
<td>402</td>
<td>109</td>
<td>21.5%</td>
<td>76.9</td>
<td>3,203</td>
</tr>
<tr>
<td>E</td>
<td>473</td>
<td>164</td>
<td>18.2%</td>
<td>53.3</td>
<td>2,403</td>
</tr>
<tr>
<td>F</td>
<td>484</td>
<td>106</td>
<td>18.0%</td>
<td>64.3</td>
<td>1,811</td>
</tr>
<tr>
<td>G</td>
<td>392</td>
<td>428</td>
<td>8.1%</td>
<td>52.3</td>
<td>3,304</td>
</tr>
<tr>
<td>H</td>
<td>595</td>
<td>259</td>
<td>16.7%</td>
<td>72.6</td>
<td>3,915</td>
</tr>
</tbody>
</table>

* $M_{oc}$ is the mean effort of the clinical faculty to instruction in the undergraduate M.D. program.

**$C_p$** is the total cost of maintaining a full time equivalent clinician.

A similar methodology can be used to develop the costs of research allocable to the undergraduate M.D. Program and the costs of Professional Development allocable to the undergraduate M.D. program.
The model clinical science faculty member "fully involved in instruction", is defined as one who spends a fraction \( I_{OC} \) (35%) of his time in instruction. Such a person should spend a fraction \( P_{OC} \) (25%) of his time in clinical activities, as well as a fraction \( R_{OC} \) (15%) of his time in research and a fraction \( D_{OC} \) (15%) of his time in professional development in order to maintain his skills as a competent instructor. Going through similar derivations as for the cost per student of clinical activity we arrive at equations for the cost per student of research and professional development for clinical science faculty as follows.

\[
R_{c} = N_f \left( \frac{M_{OC}}{I_{OC}} \right) \cdot R_{OC} \cdot C_{cr} / N_s
\]

and

\[
D_{c} = N_f \left( \frac{M_{OC}}{I_{OC}} \right) \cdot D_{OC} \cdot C_{cd} / N_s
\]

Where:
- \( N_f \), \( N_s \), \( M_{OC} + I_{OC} \) are as previously defined
- \( R_{OC} \) = the model percent of effort in research for maintenance of skills for clinical faculty (15%)
- \( C_{cr} \) = the cost of maintaining a full-time equivalent researcher at the institution
- \( D_{OC} \) = the model percentage of effort in professional development for maintaining of skills for clinical faculty (15%)
- \( C_{cd} \) = the cost of maintaining a clinical faculty member spending all his time in professional development (the amount used was the mean salary of clinicians)
For the basic science faculty, the equations are essentially similar:

\[ R_b = N_{bf} \left( \frac{\bar{M}_{ob}}{I_{ob}} \right) \cdot R_{ob} \cdot C_{br} / N_s \]

and

\[ D_b = N_{bf} \left( \frac{\bar{M}_{ob}}{I_{ob}} \right) \cdot D_{ob} \cdot C_{bd} / N_s \]

Where:

- \( N_{bf} \) = number of basic science faculty
- \( \bar{M}_{ob} \) = mean percentage of effort of the basic science faculty to the undefined M.D. program.
- \( I_{ob} \) = the model percentage of effort to instruction for basic science faculty (also 35%)
- \( R_{ob} \) = the model percentage of effort to research for maintenance of skills as a competent basic science instructor (40%)
- \( C_{br} \) = the cost of maintaining a full-time basic science researcher.
- \( D_{ob} \) = the model percentage of effort to professional development for maintenance of skills as a competent basic science instructor (15%)
- \( C_{bd} \) = the cost of maintaining a basic science faculty member spending all his time in professional development (the amount used was the mean salary of the clinicians)
Applying the above models to the data from the eight centers provides us with the following table of costs per student of undergraduate medical education.
<table>
<thead>
<tr>
<th>Letter</th>
<th>Research Costs</th>
<th>Professional Development Costs</th>
<th>Clinical Activity Costs</th>
<th>Instructional Costs</th>
<th>Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Basic</td>
<td>Clinical</td>
<td>Total</td>
<td>Basic</td>
<td>Clinical</td>
</tr>
<tr>
<td>A</td>
<td>$4.6</td>
<td>$2.2</td>
<td>$6.7</td>
<td>$0.4</td>
<td>$0.8</td>
</tr>
<tr>
<td>B</td>
<td>3.3</td>
<td>2.8</td>
<td>6.2</td>
<td>0.4</td>
<td>1.2</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
<td>1.4</td>
<td>3.4</td>
<td>0.2</td>
<td>0.7</td>
</tr>
<tr>
<td>D</td>
<td>2.9</td>
<td>2.0</td>
<td>4.8</td>
<td>0.3</td>
<td>0.7</td>
</tr>
<tr>
<td>E</td>
<td>1.7</td>
<td>1.4</td>
<td>3.1</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>F</td>
<td>3.0</td>
<td>1.1</td>
<td>4.1</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>G</td>
<td>2.8</td>
<td>2.0</td>
<td>4.8</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
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<td>1.0</td>
<td>2.3</td>
<td>3.3</td>
<td>0.1</td>
<td>1.0</td>
</tr>
</tbody>
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