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aamc association of american medical colleges

COUNCIL OF ACADEMIC SOCIETIES

1983 INTERIM MEETING

REGISTRATION INFORMATION

The Effects of Changing Federal Policies on Academic Medical Centers: Implications for Biomedical Research

PRE-REGISTRATION BY DECEMBER 31

IS ESSENTIAL!!

THERE WILL BE NO REGISTRATION AT THE DOOR!

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

COUNCIL OF ACADEMIC SOCIETIES
INTERIM MEETING
FEBRUARY 14-15, 1983
WASHINGTON HILTON HOTEL
WASHINGTON, D.C.

In recent years, the activities of the nation's academic medical centers have been disrupted by multiple, uncoordinated changes in Federal policies. The collective impact of these changes and their implication for university-based biomedical research will be the focus of the 1983 CAS Interim Meeting. Similar to last year's extremely successful Interim Meeting, key Congressional staff and Executive Branch officials will be invited to attend the plenary session and participate in informal discussion groups on the afternoon of February 14 (see schedule). Topics for discussion will include Federal support for biomedical research, threats to the institutional base of research, the proliferation of disease-specific institutes within the NIH, the efforts of animal welfare groups to limit the use of animals in research, and the potential politicization of the NIH. You will be receiving background materials on these and other issues in late January.

The main purpose of the meeting is to provide a forum for open discussion between CAS Representatives and the invited guests. Another goal of the meeting is the establishment of personal contacts between CAS Representatives and the health aides of their respective Congressmen and Senators. To facilitate this interaction, CAS Representatives and the appropriate staff persons will be assigned to the same discussion group. In addition, the health aides of the respective Congressmen and Senators of all meeting attendees will be invited to the cocktail reception on February 14. THEREFORE, IF THE MEETING IS TO BE EFFECTIVELY ORGANIZED IN THIS MANNER, THE CAS STAFF MUST KNOW IN ADVANCE OF THE MEETING WHICH CAS REPRESENTATIVES AND SOCIETY OFFICERS PLAN TO ATTEND. PRE-REGISTRATION IS ESSENTIAL!

A registration form appears on the following page. Please complete and return the form by December 31. Also enclosed is a Hilton Hotel reservation card which should be completed and returned to the hotel by January 24. If you have any questions about the purpose and/or format of the meeting, please call Lynn Morrison or Lucy Theilheimer at 202-828-0480.

MEETING SCHEDULE

February 14

11:00 a.m.	Plenary Session (CAS Representatives and AAMC Staff) Presentation of Legislative Update and other important background information	Jefferson West Room
12:30 p.m.	Lunch	
1:30 p.m.	Plenary Session (CAS Representatives, AAMC Staff and Invited Guests) Program and Policy Directions of the NIH *James B. Wyngaarden, M.D.* *Director, National Institutes of Health*	Jefferson West Room

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Political Control and Its Effects on Federal Sponsorship of Biomedical and Behavioral Research

Theodore Cooper, M.D.
Executive Vice President, Upjohn Company

The Collective Impact of Federal Policy Changes on Academic Medical Centers

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

A Specific Example: Animal Research Legislation

Gerald S. Levey, M.D.
Chairman, Department of Medicine, University of Pittsburgh

3:30 p.m. — Small Group Discussion Sessions — (Rooms to be Assigned)

5:30 p.m. — Cocktail Reception

Entertainment by "The Capitol Steps" -- a small group of Congressional staffers who describe themselves as "purveyors of intelligent and witty political satire since 1981"

February 15

9:00 a.m. — CAS Meeting (CAS Representatives and AAMC Staff Only) — Jefferson West Room

12:30 p.m. — Adjournment

REGISTRATION INFORMATION

To cover the cost of the February 14 reception, a registration fee of $20 is being charged. Checks should be made payable to AAMC. Please complete the form below and return it along with the registration fee by December 31 to:

Lucy Theilheimer
AAMC, Division of Biomedical Research
One Dupont Circle, N.W. #200
Washington, DC 20036

COUNCIL OF ACADEMIC SOCIETIES 1983 INTERIM MEETING

NAME: _____

ADDRESS: _____

_____

_____

SOCIETY: (Do not abbreviate) _____

I will attend the Interim Meeting and have enclosed my $20 registration fee.

Reminder: Hotel reservations must be made by returning the enclosed Hilton reservation card to the hotel.

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BACKGROUND INFORMATION

FOR THE

1983 INTERIM MEETING

OF THE

COUNCIL OF ACADEMIC SOCIETIES

"The Effects of Changing Federal Policies on Academic Medical Centers: Implications for Biomedical Research."

FEBRUARY 14-15, 1983

WASHINGTON HILTON HOTEL
WASHINGTON, D.C.

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5:30 p.m.	Cocktail Reception Entertainment by "The Capitol Steps"-- a small group of Congressional staffers who describe themselves as "purveyors of intelligent and witty political satire since 1981"	Ballroom West

FEBRUARY 15

9:00 a.m. — CAS Meeting — Jefferson West Room
(CAS Representatives and AAMC Staff Only)

Reports from Discussion Group Leaders

CAS Involvement in AAMC Geriatrics Project

John Sherman, M.D.
Vice President, AAMC

Future Directions for Academic Geriatrics

John Rowe, M.D.
Director, Division of Aging, Harvard Medical School
Director, Geriatric Research Education Clinical Center,
Veterans Administration Outpatient Clinic, Boston

12:30 p.m. — Adjournment

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PURPOSE OF THE CAS INTERIM MEETING

The 1982 CAS Interim Meeting proved extremely successful in establishing contact between CAS representatives and key Congressional staff and Executive Branch officials. The CAS Administrative Board felt it would be appropriate and timely to plan a similar meeting for 1983 to provide the opportunity for further dialogue.

The theme of the 1983 Interim Meeting will be, "The Effects of Changing Federal Policies on Academic Medical Centers: Implications for Biomedical Research." This broad focus will allow for discussion of not only those issues which impact directly upon the research effort (e.g., the NIH/ADAMHA budgets, animal research legislation) but also of issues which affect the institutional base of biomedical and behavioral research--the academic medical center. In addition to the research-related issues discussed at last year's meeting, the meeting will focus on topics such as changes in Medicare reimbursement policies, reductions in student financial aid programs, and reductions in state funding. These multiple, uncoordinated changes in policy are disrupting the activities of the nation's academic medical centers. Decision makers on the Federal side need to be educated about the activities of these institutions and what is required to assure the viability of high-quality teaching, research and patient care. Given the current political, economic, and social climate, such a dialogue is increasingly important in order to avoid further erosion of the institutional base of the research effort.

It is hoped that the 1983 Interim Meeting will again provide a forum for open and *broad* discussion that will lay the groundwork for a greater mutual understanding between the two sectors. CAS representatives should have a basic understanding of the provisions of the Administration's proposed FY 1984 and other specific legislative issues (background information will be available at the February 14 morning session). However, the discussion with the Federal policymakers should be of a *general* nature. It is hoped that CAS representatives will discuss the activities of their own local programs and the potential impact of:

- fluctuation in the support of biomedical and behavioral research
- other research related issues (the potential consequences of additional limits on the use of animals in research, the loss of morale within the research community, threats to the peer review system stemming from workload problems at the national level, etc.)
- changing Medicare reimbursement policies (It is particularly important to emphasize the increasing reliance of academic medical centers on clinical income to offset reductions in other areas.)

In addition, many of the Federal policymakers need to be educated regarding the importance of *basic* research. It would be useful to discuss some of the major achievements resulting from research of a fundamental nature and to highlight some of the medical innovations which have been predicated upon knowledge acquired through basic research (e.g., vaccines against polio, rubella and hepatitis, improved medical and surgical treatment of cardiovascular disease, transplantation procedures). The importance of assuring the ability of the research community to capitalize upon the current explosion of biomedical knowledge should be emphasized.

It is hoped that an effective dialogue on these and other *broad* issues will enhance any discussion of specific legislative proposals for years to come.

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THE CONGRESSIONAL BUDGET PROCESS

BACKGROUND

The current budget process is dictated in large part by the provisions of the 1974 Budget Control and Impoundment Act. Prior to 1974, no budget committees existed in the House and Senate, and the authorizing* and appropriating* committees established fiscal policy for the Congress. The decisions of these committees were usually made in isolation from one another, and it was difficult to establish overall budget policy for the country, to limit spending, or to keep track of hundreds of separate appropriation items. In addition, Congress had no means by which to get a handle on the entire Federal budget since less than half of the budget was controllable with the majority of Federal money going to such entitlement programs as Medicaid, Medicare, and indexed Social Security programs. Congress was also involved in a never-ending debate with the Nixon Administration over what most members considered the Administration's improper and illegal impoundment* of funds. These problems, together with the alarming growth in Federal deficits, the growing number of supplemental* appropriation requests, and the increasing use of continuing resolutions* to fund programs and agencies whose regular appropriations bill had bogged down, prompted Congress to enact the Budget Control and Impoundment Act.

Key features of this law that influence today's budget process are:

- the establishment of House and Senate budget committees to oversee the entire Federal budget
- the requirement that Congress adopt biannual concurrent resolutions on the budget--the first to set non-binding spending targets to guide Congressional committees during the first part of the year;

*See Glossary for definition of terms.

the second to set binding spending ceilings

- the provision of a means by which Congress can reconcile* its revenue and spending totals with the binding Concurrent Budget Resolution
- the establishment of a new budget calendar based on an October 1 to September 30 fiscal year
- the establishment of new procedures to reduce spending in the current fiscal year (rescission* and deferral*)
- the establishment of a Congressional Budget Office to provide Congress with its own source of budget information and analyses.

These provisions of the 1974 law were intended to turn chaos into order in terms of the annual process of determining the Federal budget. While it is undoubtedly true that Congress has a greater ability now to see the whole budget picture, the reform of the process did not solve certain problems. First, the orderly timetable outlined by the law and highlighted on the attached flow chart has not, for the most part, been adhered to. Second, continuing resolutions are still a fact of life. For example, the NIH and ADAMHA are operating under a continuing resolution for the fourth straight year in the absence of an appropriations bill.

Following is a table depicting the Congressional Budget Process and a Glossary of Common Federal Budget Terms.

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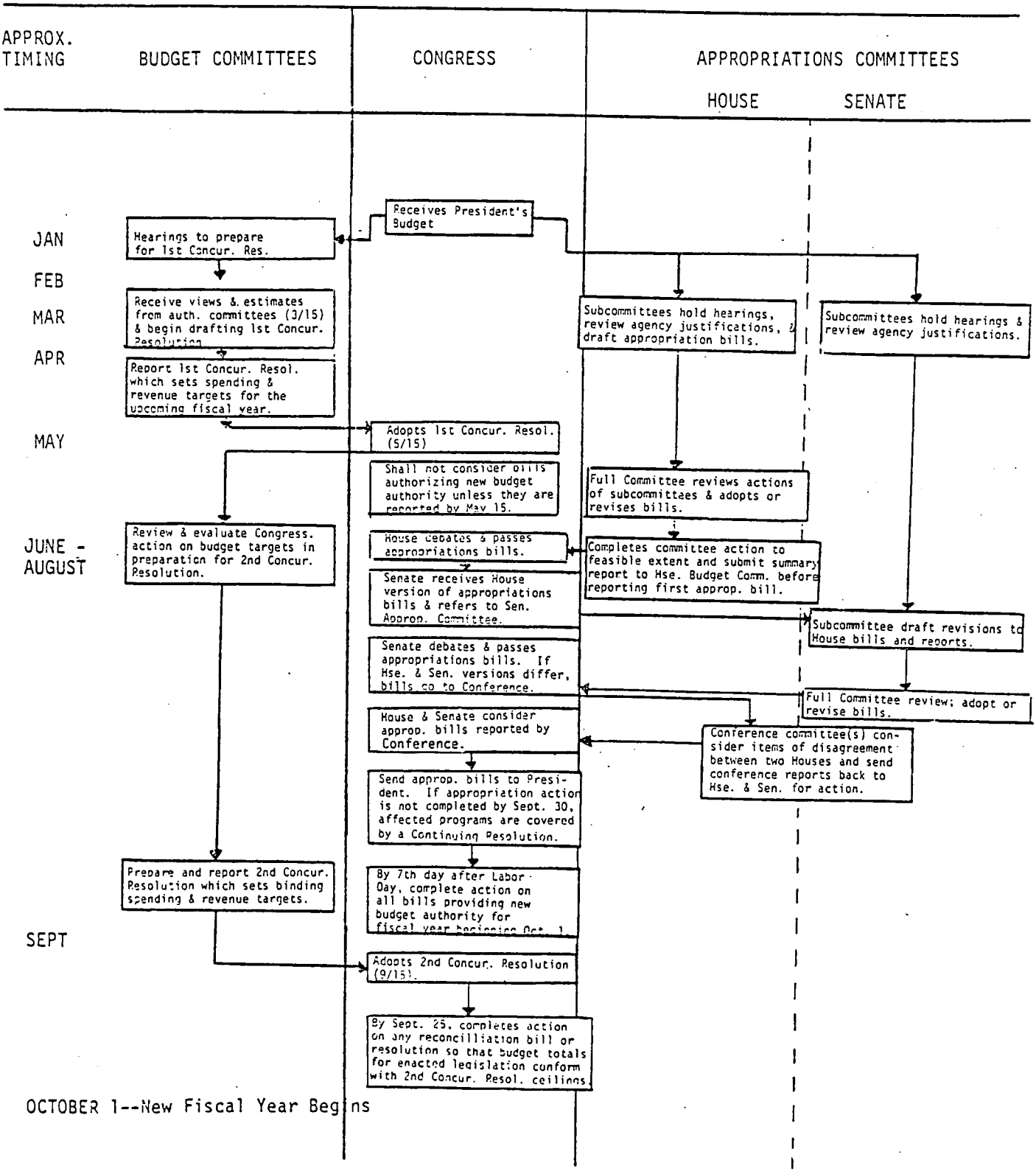
CONGRESSIONAL BUDGET PROCESS



GLOSSARY OF COMMON FEDERAL BUDGET TERMS

AUTHORIZATION: Substantive legislation enacted by Congress that sets up or continues the legal operation of a Federal program or agency. Authorizing legislation for health is handled by specific committees, most notably the Senate Labor and Human Resources Committee and the House Interstate and Foreign Commerce's Subcommittee on Health and Environment. Such legislation is normally a prerequisite for subsequent appropriations, but does not usually provide budget authority (see below).

BUDGET AMENDMENT: A revised request that the President transmits to the Congress after he formally transmits the budget but before the Congress has completed appropriations action.

BUDGET AUTHORITY: Authority provided by law that permits government agencies to incur obligations. The amount authorized by the Congress to become available for obligation in a given fiscal year is called budget authority for such year.

There are three basic kinds of budget authority--appropriations, contract authority, and authority to spend debt receipts. Although the amount of budget authority is usually specified in the legislation that makes it available (definite authority), the amount is left indefinite in some instances and is determined by subsequent circumstances (indefinite authority), e.g., percentage of specified receipts. Most authority to obligate funds requires action by the Congress each year (current authority). However, under some laws budget authority becomes available from time to time without further action by Congress (permanent authority).

APPROPRIATION: An act of Congress that allows federal agencies to incur obligations and to make payments out of the Treasury for specified purposes. This is the most common form of budget authority.

Appropriations are categorized in a variety of ways, such as by their period of availability (one-year, multiple-year, no-year), the manner in which they become available (current, permanent), and the manner in which the amount of the appropriation is determined (definite, indefinite).

Appropriations for health programs are handled by the House and Senate Appropriations Subcommittees on Labor - Health and Human Services.

BUDGET DEFICIT: For any given year, an excess of budget outlays over budget receipts. The amount of the deficit is the difference between outlays and receipts. Deficits are financed primarily by borrowing from the public.

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CONTINUING RESOLUTION: Legislation enacted by the Congress to provide authority for agencies to continue operations until their regular appropriations are enacted. Continuing resolutions are enacted when action on appropriations is not completed by the beginning of a fiscal year.

CONTROLLABILITY: The ability of the Congress and the President to increase or decrease outlays in the year in question; generally the current or budget year. "Relatively uncontrollable" refers to spending that the government cannot increase or decrease without changing existing substantive law. Such spending is usually the result of open-ended programs and fixed costs, (i.e., Social Security, Medicare) and payments coming due on commitments made earlier.

DEFERRAL: Any action or inaction by an officer or employee of the United States that temporarily withholds, delays, or effectively precludes the obligation or expenditure or budget authority. Deferrals may not extend beyond the end of the fiscal year and may be overturned at any time by either House of the Congress.

FISCAL YEAR: Currently, the year running from October 1 to September 30, and designated by the calendar year in which it ends.

FUNCTIONAL CLASSIFICATION: A means of presenting budgetary data in terms of the major purposes being served. Each program or activity is placed in the particular category (e.g., national defense, health, agriculture) that best represents its major purpose, regardless of the spending agency or department.

IMPOUNDMENT: A term used to characterize any executive branch action that precludes the obligation of funds appropriated by the Congress. (See also DEFERRAL and RESCISSION).

OBLIGATIONS: Amounts or orders placed, contracts awarded, services received, or similar legally binding commitments made by Federal agencies during a given period that will require outlays during the same or some future period.

OUTLAYS: Checks issued, interest or the public debt, or other payments made, offset by refunds and reimbursements.

RECONCILIATION: A directive in the concurrent resolution on the budget that calls on various committees of the Congress to recommend legislative changes that reduce outlays or increase receipts by specified amounts.

RESCISSION: Enacted legislation reducing or cancelling budget authority previously provided by the Congress. Funds proposed for rescission must be made available for obligation if Congress does not adopt a rescission bill within 45 days after receipt of the President's request for rescission.

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SUPPLEMENTAL APPROPRIATIONS: An appropriation enacted as an addition to a regular annual appropriation act. Supplemental appropriation acts provide additional budget authority beyond original estimates for programs or activities (including new programs authorized after the date of the original appropriation act) for which the need for funds is too urgent to be postponed until the next regular appropriation.

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ASSOCIATION OF AMERICAN MEDICAL COLLEGES

MEMORANDUM #82-63 December 30, 1982

TO: Council of Deans
Council of Academic Societies
Council of Teaching Hospitals

FROM: John A. D. Cooper, M.D., President

SUBJECT: Highlights of the Final Actions of the 97th Congress

The 97th Congress finally adjourned on December 23, following an unexpectedly fractious lame duck session.

The major foci of the Congress during the prolonged December session were enactment of: a gasoline tax increase; and the Continuing Resolution needed to provide funds for the myriad Federal agencies and programs that were not covered by regular appropriations bills. Predictably, legislators could not resist the temptation to press for passage of their pet projects which included the creation of a new Arthritis Institute, prohibitions on the use of animals in research, and the transfer of the National Institute of Occupational Safety and Health (NIOSH) to the National Institutes of Health (NIH). In almost all instances, however, these efforts eventually proved fruitless, although several missed enactment by only a cat's whisker. The following memo details the major issues either resolved or ultimately left in abeyance by the now defunct 97th Congress.

The Continuing Resolution

The legislation that helped to insure that the President would call the Congress back for a special session after the November elections was the stop-gap FY 1983 appropriations Continuing Resolution (CR) that expired on December 17, 1982. The CR, as enacted in October, embodied necessary operating and programmatic funds for nearly every Federal enterprise ranging from health to defense. However, the CR's mid-December expiration date made it necessary for Congress to reconvene and either pass the requisite appropriations bills or enact yet another CR in order to keep the government financially afloat.

During the course of the lame duck session the Congress made some promising progress toward final passage of a Labor/Health and Human Services/Education funding bill. Senator Harrison Schmitt's Appropriations Subcommittee lost little time in marking up an HHS bill, H.R. 7205, after the Congress returned to action in late November. Shortly thereafter, during full Committee debate on the bill, Senator Schmitt expressed strong optimism that H.R. 7205 would actually come to the chamber floor for a vote. However, the

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Senate's preoccupation with the gas tax legislation and the fact that the Labor/HHS/Education appropriations measure would have undoubtedly attracted myriad controversial amendments (e.g., fetal research, school prayer, forced busing etc.,) served to effectively kill the bill's chance for floor consideration. Thus, in FY 1983 funding for health programs was once again accomplished via a CR, House Joint Resolution (H.J. Res.) 631.

The newest CR is a mammoth spending measure that includes funds for a substantial number of agencies, including defense. In addition, many other items not related to appropriations were tacked on in unusual and hard to discover places. The Congress worked frantically to craft the measure and initially included billions in funds for Washington's newest preoccupation---special jobs programs. Ultimately however, Appropriations conferees eliminated the job program to avoid a threatened Presidential veto. The Congress finally completed action on the CR on December 20, and the President, allaying the fears of the legislators, agreed to sign it on the 21st.

The newly enacted CR contains extremely good news for the biomedical and behavioral research enterprise. It covers the duration of fiscal year 1983 and provides the National Institutes of Health with an increase over its FY 1982 dollar level of some $360 million, or roughly 10 percent, by adopting as the final funding level the mid-point between the House and Senate designated appropriations. Usually, the Congress simply accepts the "lower of" the two chambers funding recommendations. The research budgets of the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) also fared well under the new CR: funds for the National Institute on Drug Abuse's budget increased by 16 percent and the National Institute of Alcoholism and Alcohol Abuse enjoyed a whopping 43 percent increase over FY 1982. In addition, both chambers denied the Administration's request that the indirect costs of NIH and ADAMHA's research grants be reduced by an arbitrary 10 percent.

In the student aid arena, the Health Education Assistance Loan (HEAL) program---currently authorized at $225 million for FY 1983 ---was spared the Administration's proposed cap of $80 million, and new capitalization for the Health Professions Student Loan (HPSL) program continued, even though only $1 million was allotted. Report language embodied in the House bill addressed a serious concern in relation to the HPSL program: the Department was urged to reconsider its proposed regulations to ensure..."that final rules do not unfairly penalize schools..." Exceptional Financial Needs Scholarships fared well, emerging with an increase of nearly $1 million over the President's budget request. Unfortunately, the National Health Service Corps Scholarship program was allotted only enough money to sustain current recipients---some $11 million, a 70 percent decrease from FY 1982; no "new starts" can be funded.

Under the new CR, health professions special projects generally held their own. Family Medicine Training enjoyed the largest single increase, some $11.5 million above the President's request.

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Renewal of the President's Commission

The Congress failed to pass an authorization measure to extend the life of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. However, concerned legislators were successful in convincing the conferees to use the CR as a vehicle for providing a nonrenewable, three-month continuance for the Commission..."so that it can file its final report no later than March 31, 1983."

Health Planning

In the face of a Congressional stalemate on renewal of the controversial Health Planning law, CR conferees were persuaded to continue funding for the program at its current level, $64.4 million through fiscal year 1983. In addition, states were also freed from the specific sanction and penalty dates for changes in Certificate of Need (CON) programs which had been imposed by prior legislation.

Renewal of Authorities under the National Institutes of Health

Despite the fact that the so-called NIH bill, H.R. 6457, passed the House overwhelmingly this fall, similar legislation, S. 2311, became irretrievably bogged down in the Senate and thus was not enacted during the lame duck session. Specifically, some conservative Senators threatened to attach a "Dannemeyer" type prohibition on fetal research to the NIH bill should it come to the floor for debate. This provoked several Senators, including Robert Packwood (R-OR) and Edward Kennedy (D-MA), to place a "hold" on the bill. Essentially, this indicated to the Senate leadership, which was already pressed for time, that the NIH measure was controversial and would be attended by prolonged debate. Thus, the NIH renewal bill was effectively shelved. Operations will, of course, continue under the basic authority in Section 301 of the Public Health Service Act and with the fiscal authorizations contained in the CR.

The Arthritis Institute

Undaunted, advocates of the formation of a new Arthritis Institute prevailed upon Senator Orrin Hatch (R-UT) to amalgamate that proposal with one that would have provided for a moratorium on the creation of any new institutes pending the results of a study on that subject into a separate bill, S. 1939, and bring it to the floor for a vote. At approximately 2 a.m. on December 21, the senate approved the makeshift bill and sent it to the House for its approval. However, in order to achieve final passage, the House would have had to approve the identical bill enacted by the Senate. Thus, enactment was effectively torpedoed in the House by Representative John Dingell (D-MI) when he introduced an amendment calling for the transfer of the NIOSH to the NIH, an addition which, if adopted, would have altered the bill and necessitated a conference with the Senate and reapproval by both chambers. However, Representative William Dannemeyer (R-CA) saved the Congress the time and trouble of further action on the bill by objecting to its

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consideration. According to the rules under which S. 1939 was considered, an objection raised by any member renders the bill ineligible for further House action. Shortly thereafter the proposal died, at least for this year, when the House formally adjourned.

Animal Welfare

Despite threats from the House's Health and Environment Subcommittee that the newly crafted animal welfare legislation, H.R. 6928, would side step consideration by the full Energy and Commerce Committee and head straight to the House floor, the bill was never called up for consideration. Similarly, the Dole bill never reached the floor in the Senate. However, Labor and Human Resources Committee Chairman Hatch has reportedly agreed, as a favor to the Senate sponsor of animal welfare legislation, Robert Dole (R-KS), to hold hearings on the matter early next session.

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APPROPRIATIONS

(in millions)

	FY 1982	President's Request FY 1983	House Subcommittee Allocation FY 1983	Senate Subcommittee Allocation FY 1983	2nd and Final CR FY 1983	1st Continuing Resolution FY 1983
NIH						
NCI	$ 943.0	955.4	981.4	985.7	983.6	--
NHLBI	559.6	577.1	620.9	624.5	622.7	--
NIDR	72.0	74.5	80.3	77.4	78.9	--
NIADDK	368.2	379.0	408.5	415.8	412.2	--
NINCDS	265.9	274.5	294.4	297.1	295.7	--
NIAID	235.9	246.0	276.4	270.8	273.6	--
NIGMS	335.5	345.6	367.0	372.1	369.6	--
NICHHD	226.3	233.6	251.6	255.7	253.6	--
NEI	127.4	131.5	138.8	144.4	141.6	--
NIEHS	154.3	157.4	162.7	166.0	164.4	--
NIA	81.9	84.5	96.1	91.9	94.0	--
RR	184.2	191.0	227.6	200.0	213.8	--
FIC	9.2	10.1	10.1	10.1	10.1	--
NLM	45.0	46.0	46.0	46.0	46.0	--
Director	23.6	24.3	24.7	24.7	24.7	--
Building, etc.	9.9	17.5	17.5	17.5	17.5	--
TOTAL	3,641.9	3,748.8	4,004.1	3,999.9	4,002.0	3,954.3
NIH Research Training	(155.8)	(151.7)	(170.3)			(--)
ADAMHA						
NIHM						
Research	141.1	150.0	152.3	152.3	152.3	141.1
Research Training	15.4	14.4	14.4	15.4	15.3	15.4
Clinical Training	42.2	--	18.0	25.0	21.5	42.2
NIDA						
Research	41.0	46.3	47.4	47.4	47.4	41.0
Research Training	.8	.9	.9	.9	.9	.8
Clinical Training	2.7	--	--	--	--	2.7
NIAAA						
Research	23.4	32.9	33.5	33.5	33.5	23.4
Research Training	1.1	1.1	1.1	1.1	1.1	1.1
Clinical Training	.9	--	--	--	--	.9
HEALTH SERVICES ADMINISTRATION						
National Health Service Corps Scholarship	36.4	11.0	11.0	11.0	11.0	36.4
NHSC Field Program	95.0	103.4	93.0	93.7	93.4	95.0
Health Professions Students Loans (HPSLs)	5.6	--	2.0	--	1.0	5.6

	FY 1982	President's Request FY 1983	House Subcommittee Allocation FY 1983	Senate Subcommittee Allocation FY 1983	2nd and Final CR FY 1983	1st Continuing Resolution FY 1983
HEALTH SERVICES ADMINISTRATION (cont.)						
Exceptional Need Scholarships	4.7	--	6.5	4.7	5.6	4.7
Primary Care Block Grant (4 programs)	448.8	416.7	446.2	468.0	460.3	448.8
Maternal & Child Health Block Grant (9 programs)	373.7	350.0	373.0	373.0	373.0	373.7
Health Education Assistance Loans (HEAL) -- Credit Limit	200.0	80.0	225.0	225.0	(225.0)	200.0
HEALTH RESOURCES ADMINISTRATION						
Family Medicine Training	26.9	22.5	26.9	34.0	34.0	34.0
Family Medicine Department	7.7	7.0	7.7	10.0	8.8	7.7
General Internal Medicine and Pediatrics	16.3	11.4	11.4	11.4	11.4	16.3
Area Health Education Centers	18.2	13.9	17.9	17.9	17.9	18.2
Disadvantaged Assistance	16.9	17.2	17.2	17.2	17.2	16.9
Preventive Medicine Residencies	--	1.0	1.0	1.0	1.0	--
Curriculum Development	--	4.4	--	4.0	2.0	--
Health Planning	64.4	2.1	defer	defer	64.4	64.4
ASSISTANT SECRETARY FOR HEALTH						
National Center for:						
Health Services Research	16.2	16.1	16.1	16.1	16.1	16.2
Health Statistics	38.2	40.3	40.3	40.3	40.3	38.2
Preventive Health Block Grant	81.6	82.6	82.6	90.0	86.3	81.6
ADAMHA Services Block Grant	432.0	432.0	424.0	446.0	439.0	432.0
OFFICE OF HUMAN DEVELOPMENT SERVICES						
National Institute for Handicapped Research	28.6	26.5	28.6	30.1	30.06 Conference Allocation	28.6
VETERANS ADMINISTRATION						
Medical Care	7,101.0	7,495.9	7,512.7	7,493.8	7,510.6	--

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	FY 1982	President's Request FY 1983	House Subcommittee Allocation FY 1983	Senate Subcommittee Allocation FY 1983	Conference Allocation FY 1983	1st Continuing Resolution FY 1983
VETERANS ADMINISTRATION (cont.)						
Medical & Prosthetic Research	140.8	138.0	155.0	150.3	152.7	--
Construction						
Major Projects	372.3	419.4	427.1	409.4	407.4	--
Minor Projects	102.0	192.1	141.7	141.7	141.7	--

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RESTAURANT GUIDE

Dominique's
1900 Pennsylvania Ave.,NW
Downtown
452-1126
Expensive
Hours: Mon-Fri--11:45-2:30 - 5:30-12:00 Midnight
Sat--5:30-1:00 A.M.

Located close to the White House, this restaurant serves traditional French dishes, as well as unusual dishes, such as boar, rattlesnake and shark.

Jacqueline's
1990 M St., NW
Downtown
785-8877
Expensive
Hours: Mon-Thur--11:30-2:30 - 6:00-10:30 P.M.
Fri & Sat--6:00-10:45 P.M.

Rustically decorated, Jacqueline's serves excellent seafood and veal dishes and has a charming cocktail lounge.

The Jockey Club
2100 Massachusetts Ave., NW
Downtown
Reservations advised
659-8000
Very Expensive
Hours: Open 7 days 12:00-2:30 - 6:00-11:00 P.M.

Now owned by the "21 Club" of New York, the Jockey Club is elegantly decorated and serves excellent veal and seafood dishes.

La Manouche
1724 Connecticut Ave., NW
Dupont Circle
462-8771
Expensive
Hours: Mon-Thur--11:30-2:30 - 5:30-11:30 P.M.
Fri--11:30-2:30 - 5:30 to 12 midnight
Sat--5:30-12 midnight

La Manouche is the newest French establishment in the Dupont Circle area and features fine meat and seafood specialties, imaginative specials, and homemade pastries.

Le Provencal
1234 20th St., NW
Downtown
223-2420
Reservations advised
Very Expensive
Hours: Mon-Sat--12:00-3:00 - 6:00-10:30 P.M.

Recently redecorated, Le Provencal continues its long tradition of fine classic French cuisine.

Le Lion D'Or
1150 Connecticut Ave., NW
Downtown
296-7972
Reservations advised
Very Expensive
Hours: Mon-Fri--12:00-2:00 - 6:00-10:00 P.M.
Sat--6:00-10:00 P.M.

Lion D'Or is considered to be Washington's finest haute cuisine restaurant and under the direction of Chef Jean-Pierre Goyenvalle serves meticulously prepared classic French dishes.

Mo & Jo's
1211 Connecticut Ave., NW
Downtown
659-1211
Expensive
Hours: Mon-Fri--11:30-11:00 P.M.
Sat--6:00-11:00 P.M.

Tastefully decorated with Audobon prints, Mo & Jo's has the sophistication and excellent fish and veal dishes of New York's East Side establishment.

The Palm
1225 19th Street, NW
Downtown
293-9091
Very Expensive
Hours: Mon-Fri--11:45-10:45 P.M.
Sat--6:00-12:00 midnight

If you enjoyed the Palm in New York, you'll enjoy the understated decor and the excellent dishes, especially veal and beef.

The President Adams
(Hay Adams Hotel)
800 16th Street, NW
Downtown
638-2260
Expensive
Hours: Open 7 days 11:30-10:00 P.M.

The wood panelling, mirrors, and soft light enhance the Continental dishes prepared at one of Washington's oldest hotels.

1789 Restaurant
1226 36th St., NW
Georgetown
965-1789
Very Expensive
Hours: Open 7 days 6:00-11:00 P.M.
11:00-12:30 A.M.-after theater supper

A warm atmosphere and a Georgetown setting make the 1789 a relaxing place to enjoy their classic French dishes.

Tiberio
1915 K St., NW
Downtown
452-1915
Very Expensive
Hours: Mon-Fri-12:00-2:30 - 6:00-10:30 P.M.
Sat--5:30-11:30 P.M.

Impeccable service, light pastas with subtle sauces, and the finest veal dishes rank Tiberio as one of the top northern Italian restaurants in Washington.

209 ½
209 ½ Pennsylvania Ave., SE
Capitol Hill
544-6352
Reservations advised
Expensive
Hours: Mon-Fri--11:30-2:30 - 6:00-10:30 P.M.
Sat 6:00-10:30 P.M.

A small and friendly establishment, 209½ features the imaginative, beautifully presented, and tasty dishes of the "nouvelle cuisine".

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FEBRUARY 15 CAS INTERIM MEETING SESSION

After follow-up discussion of the February 14 sessions, *Dr. John Sherman, AAMC Vice President,* will discuss the Association's recent activities and future strategies in assisting faculty to integrate information on geriatrics and gerontology into curricula. The following document, Undergraduate Medical Education Preparation for Improved Geriatric Care--A Guideline for Curriculum Assessment, has been approved by the AAMC Executive Council for publication and distribution. It is not intended as a model curriculum but as a series of guidelines on how to cope with the challenge of a rapidly increasing elderly population.

John Rowe, M.D., Director, Division of Aging, Harvard Medical School and Director, Geriatric Research Education Clinical Center, Veterans Administration Outpatient Clinic, Boston, will address the CAS on the subject of "Future Directions for Academic Geriatrics."

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UNDERGRADUATE MEDICAL EDUCATION
PREPARATION FOR IMPROVED
GERIATRIC CARE

A GUIDELINE FOR CURRICULUM ASSESSMENT

Association of American Medical Colleges

January 1983

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FOREWORD

Among the changes that will occur in our society by the end of the century, the growth in the number and proportion of elderly people will be striking in its dimensions and significant in its portents. The impacts of this change will range from the mounting influences of an already discernible political force to greater demands on our medical service systems.

The dimensions of the challenges of providing care to this growing segment of our population led the Association of American Medical Colleges to depart from its traditional reluctance to address categorical subjects in the curriculum and promote greater emphasis on geriatric medicine in medical education.

The approach selected to enhance efforts already under way in medical schools and their teaching hospitals was a series of four Regional Institutes on Geriatrics in Medical Education held in 1982 for faculty members, teaching hospital directors and medical school officials. There was broad representation from almost 90 percent of the nation's academic medical centers that participated in the Institutes. In addition to making important contributions to the Institutes, the participants will serve as ambassadors for the effort in their institutions.

Presentations of papers on current concepts of the aging process and the management of disease and disabilitiy in the elderly were followed by small group discussions. The discussions were focused on a draft document suggesting learning objectives in these areas for consideration by the faculties in examining the adequacy of their efforts to prepare medical students for meeting the challenge of practice in a graying America.

The Association staff revised the document on the basis of recommendations made at the Regional Institutes and by selected consultants for consideration by the Steering Committee appointed to oversee the project. The final document is based on the input from all of these groups. It does not propose a model curriculum. Rather it recognizes the remarkable diversity in medical education in our schools and outlines ways in which current courses in the basic sciences and clinical medicine can be strengthened in the areas of geriatrics and gerontology.

The generous support for the project provided by the Pew Memorial Trust and the National Institute on Aging was of critical importance in assisting the Association to fulfill its responsibilities in helping medical education institutions meet the challenges of the changing demography of our population in the future.

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ACKNOWLEDGEMENT

The Association acknowledges with gratitude the contributions of the following individuals in both the design and implementation of the Regional Institutes as well as the preparation of this document.

Steering Committee Members:

Chairman: Joseph E. Johnson, III, M.D.
Chairman
Department of Medicine
Bowman Gray School of Medicine

Members: Ruth Bennett, Ph.D.
Deputy Director, Center for Geriatrics & Gerontology
Columbia University
College of Physicians and Surgeons

Ewald W. Busse, M.D.
Associate Provost and Dean
Medical and Allied Health Education
Duke University
School of Medicine

Evan Calkins, M.D.
Professor of Medicine
Head Division of Geriatrics/Gerontology
Department of Medicine
State University of New York at Buffalo

Jack M. Colwill, M.D.
Chairman, Department of Family and Community Medicine
University of Missouri-Columbia
School of Medicine

John D. Loeser, M.D.
Assistant Dean, Curriculum
University of Washington
School of Medicine

Mrs. Florence Mahoney
Washington, D.C.

Ruth M. Rothstein
President
Mount Sinai Hospital Medical Center of Chicago

Frederick E. Shideman, M.D.
Chairman
Department of Pharmacology
University of Minnesota Medical School- Minneapolis

Judy A. Spitzer, Ph.D.
Professor of Physiology and Medicine
Louisiana State University Medical Center

Knight Steel, M.D.
Chief, Geriatrics Section
Boston University Medical Center

Consultants: Eugene Stead, Jr., M.D.
Professor of Medicine Emeritus
Duke University

Harland Wood, Ph.D.
Department of Biochemistry
Case Western Reserve University
School of Medicine

AAMC Project Staff: John A. D. Cooper, M.D.
President

John F. Sherman, Ph.D.
Vice President

Kat Turner
Special Assistant to the President

Rosemary Choate
Administrative Secretary

Rose Napper
Executive Secretary

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INTRODUCTION

The changing demographics of American society have created an imperative for medical schools to increase their emphasis on the education and training of medical students in the care of the elderly. The Association of American Medical Colleges has accepted the challenge to assist its members in meeting this responsibility. This document is a major component of the Association's response to that challenge.

The document is directed primarily at the general education and training of the undergraduate medical student and early periods of residency training. It does not propose a model curriculum or courses in geriatric medicine. Rather, it provides guidelines for faculty use in assessing how well their education and training programs are preparing the next generation of physicians to treat the elderly with dignity and understanding and to deal more effectively with their medical and psychosocial problems. The Association believes that providing guidelines instead of proposing a specific curriculum more appropriately accommodates the diversity of educational programs and settings which characterizes American medical education and which is a source of its strength.

The guidelines are presented under four principal headings: Attitudes, Basic Knowledge, Clinical Skills, and Responsibilities of the Medical Schools. In each case, the adequacy of the basic education and training of students is assumed; only the special aspects relating to the aging and the medical care of the elderly are included. These guidelines are not comprehensive but provide examples of material that should be integrated into the regular curriculum. It is expected that faculties will extend these recommendations on the

basis of their own knowledge and understanding as new information is developed about the aging process and the care of the elderly.

ATTITUDES

By discussion and precept, the faculty and housestaff of each institution should assist students (a) in recognizing the worth of the elderly as contributors to society and (b) in developing the proper attitudes towards the special responsibilities of the physician to provide the elderly with medical care based on the following principles:

- Humane, compassionate, and supportive care of the elderly is a responsibility of the physician.
- Sickness and disability are not inevitable consequences of advancing years; most elderly people can live active, independent lives.
- The range of functional capabilities and limitations is greater among those in their older years than in their younger years; there is no valid stereotype for the elderly.
- The effects of specific diseases are often combined with the aging process in the etiology and manifestation of clinical problems in the elderly.
- Attitudes of those providing care affect not only the medical treatment but also the mental state and physiological response of the older patient.
- In addition to enhancing patients' medical well-being, care should be directed toward enhancing their self-respect, self-determination and productivity.
- Attention must be given to preventing illnesses as well as to treating both chronic and acute diseases.
- Rehabilitation is of special importance in assisting patients to overcome the disabilities of disease and to delay the onset of dependency.
- Geriatric care usually requires a multi-disciplinary team approach; physicians should work with other health professionals to most effectively meet the needs of the older patient.
- Knowledge of community resources is important in planning for the return of patients recovering from disease to their daily lives and in assisting patients to cope with any resulting increase in dependency.
- Many ethical issues arise in the care of the elderly. In resolving these questions, the physician should seek counsel and guidance from the

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patient and the patient's family and, where appropriate, from those knowledgeable of the patient's religious attitudes and convictions.

BASIC KNOWLEDGE

Basic Knowledge--Socioeconomic and Psychosocial

This is a time when increasing scientific attention is given to the interplay among social conditions and the changes with aging in the brain and in the interrelated endocrine, immunological, and other physiological systems; a time when the unprecedented extension of longevity means that human competence endures far beyond the average age of retirement; a time when imperious demands are placed on society by the increasing numbers of older people; and a time when the disabilities, dependencies, and institutionalization of the very old must be forestalled before they become overwhelming.

1. **Demography.** The growth in the older population is causing a major change in our society and in the requirements for medical services. The following factors will affect the future practice of medicine:

- The portion of the population over 65 years of age is currently increasing at a more rapid rate than younger age groups. It is predicted that the over-65 age group will increase from the 1980 figure of 25.5 million (11 percent of the population) to as high as 55 million (18 percent of the population) in 2030.
- The fastest growing segment of this population of the elderly at present is the over-85 age group, which is also the largest per capita consumer of medical care in the entire population.
- A 65-year-old man has a life expectancy of 13 years; a 75-year-old man has a life expectancy of 9 years.
- A 65-year-old woman has a life expectancy of 17 years; a 75-year-old woman has a life expectancy of 12 years.
- The differential in the life expectancy of men and women will result in an even greater proportion of widowed women. In 1979, about 79 percent of the males over 65 years of age were married and 14 percent were widowed; a smaller proportion (52 percent) of the women in this same age group were married.

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- The longer individuals live, the more likely it is that they will suffer the loss of spouses, family and friends, and that they will have less adequate economic support and diminished social contacts. Widowed men have two and one-half to four times the mortality rate of non-widowed males.

- In 1979 more than eight of every ten older men but fewer than six of every ten older women lived in a family setting.

- At any one time, 5 percent of the elderly are institutionalized in any of several types of facilities; 20 percent are involved with formal support systems at some time.

- During the period 1990 to 2010, a majority of males over age 65 will be veterans who will be eligible for Veterans Administration care under current policies.

2. Financial Status of the Elderly. With the passage of the Social Security Act in 1935, the Medicare and Medicaid Amendments in 1965, and other assistance programs, our retired citizens can be more hopeful about living out their lives with dignity. However, increased living costs combined with decreased income cause significant financial problems for large numbers of the elderly. The following summarizes some economic data related to the aged:

- Retirement from the labor force usually brings a one-half to two-thirds cut in income.

- In 1979 the median income for families headed by an older person was $11,316. The median income for all families was $21,201.

- The average annual Social Security benefit for retired individuals in 1979 was $3,528.

- Fifteen percent of the elderly in 1979 were officially defined as "poverty level" (individuals having an income of less than $3,472).

- Benefits from means-tested federal programs (Supplementary Security Income, food stamps, Medicaid, subsidized federal housing) averaged $328 per elderly person in 1979. This figure for poverty-level elderly persons was $2,183.

- In 1978, health care expenditures averaged $2,026 per elderly individual. Sixty-three percent of these costs were covered by government programs.

- Financial problems arise for many long-term residents of nursing homes because of restrictions on reimbursement by Medicare.

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3. Psychosocial Aspects of Aging. The following aspects of life style, family relationships, and the environment in which the elderly live play a very important role in their health status:

- The aged live in a society in which respect for the contributions of those in their advanced years is lessening; and attention of the media is focused on attractive, energetic youth of the "Pepsi generation."
- A largely false stereotype of aged individuals is widely accepted. This stereotype presents the elderly as people who lack intelligence, have difficulty remembering, have rigid views, spend most of their time drowsing in chairs, and are unpleasant companions.
- In reality, most older people retain their intelligence, compensate for a slower rate of learning by their greater store of knowledge and experience, continue to have problem-solving abilities, and are more flexible than many people think.
- Most older people live active, independent lives; it is only in advanced old age that many suffer disabling mental or physical conditions.
- Contrary to common belief, family ties generally remain strong. While most older people and their children live in separate households, they often live in close proximity and communicate frequently.
- Among the 95 percent of older people who are non-institutionalized elderly, 20 percent need assistance for mobility and 43 percent need assistance in some aspect of their daily lives.
- Family and friends actually provide some 70 percent of the health care services received by physically impaired older people.
- Loss of independence results from a combination of two sources: (1) inadequate social support together with (2) physical or mental disability (such as senile dementia, severe losses in hearing and vision, reduced mobility) which may make it impossible for those in advanced old age to perform the activities necessary for daily living. In this situation, placement in a home for the aged or nursing home may emerge as the most appropriate option.

Basic Knowledge--Biomedical

Changes in the structure and function of the human body begin with fertilization and then progress during the life of the individual. These changes are dramatic in the early phases of development and progress more slowly in later years. Although there is still much to be learned about the nature and extent of these changes in older people, there is available a substantial body

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of knowledge that can be incorporated into the undergraduate educational program. This information provides some scientific basis for the phenomena of aging and make the intellectual challenges presented by the aging process and the care of older people more comparable to those posed by other areas of the biomedical sciences and clinical medicine. Increased understanding of the need and opportunities for advancing knowledge of the aging process and care of the elderly should evoke greater interest in research in all aspects of gerontology and geriatric medicine.

Aging is intrinsic to life. Age-related changes vary in direction and pace among organs and body systems in any given species. Superimposed upon the intrinsic aging processes are a variety of age-related diseases, the patterns of which vary within species and among species. Thus, it becomes both difficult and essential to distinguish, wherever possible, those changes which are age-related from those which are a manifestation of disease or are significantly influenced by underlying disease. That complexity is increased by the relative paucity of scientific knowledge and the evolving nature of the current understanding of the aging process. It should be remembered that the definitions of "normal" have for the most part been derived from studies on populations of young or middle-aged adults, and on cohorts growing old under the unique historical conditions of the mid-twentieth century. Caution must be exercised in extrapolating such definitions to the elderly and in accepting false stereotypes derived from confusing "normal" aging either with disease or with cohort differences between young and old.

Thus, although there are differences of opinion about the changes in structure and function of the human body with aging, the following are some state-of-the-art aspects of the aging process that faculties might consider incorporating into the curriculum:

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1. Theories of Aging. Evidence is accumulating that there is no single cause for aging. It is becoming increasingly clear that aging in humans is not simply a biological process, but rather a "biopsychosocial" process in which changes in the social environment and psychological dispositions as well as genetic factors are involved.

1a. Biological Mechanisms. The following are some of the theories that have been proposed to explain the aging process:

- Programmed alterations in gene expression (neuroendocrine clocks; progressive transcriptional repression, codon restriction, terminal differentiation of cells).
- Stochastic (non-determinative) events: intrinsic mutagenesis; error catastrophe theory (protein synthesis); alterations in protein turnover and post translational modifications in proteins, including cross-linking of macromolecules (e.g. collagen, elastin, DNA); free radical mediated cell injury.
- Immune theory (includes both programmed and stochastic elements): decline in immune response; autoimmunity.

1b. Psychosocial Components of Aging.

- Aging is a psychosocial as well as a biological process. The biological aging process is affected by lifestyles, educational levels, nutrition, self-care, economic status, family relationships, and many other social and psychological factors.
- Aging is not fixed for all time, but changes as society changes. People do not grow old today in the same way as people did a hundred years ago, and people who will be old by the year 2000 will be still different from the elderly of today.
- Because aging is not immutable, it is subject to a degree of human intervention and control. Modifications in attitudes, behaviors, social relationships and environments can often prevent, postpone or reverse some disabilities currently associated with old age.

2. Life Span. The duration of life varies enormously among different species, but within definable limits, it has a relatively consistent range in a given species:

- The current estimate of the life expectancy for human beings is about 85, eliminating disease and accidents as causal factors. However, recent unpredicted declines in mortality at older ages may lead to a longer life expectancy.

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o The characteristics of the environment in which an individual lives influence to a substantial degree that individual's age at death.

3. Cellular Morphology and Function. Age-related changes at the cellular level fall into roughly three groups--in patterns of replication, in cellular content, and in enzymatic activity. These result in the following:

o Declination in replicative potential of certain somatic cells.

o Alterations in morphology and numbers of cellular organelles (e.g., in some cell-types, decreased numbers and altered forms of mitochondria).

o Accumulation of lipofuscin pigments within storage granules in cytoplasm.

o Distortion of nuclei of some cells by clumps of chromatin.

o Elevation in the frequency of chromosomal aberrations.

o Diminution in microsomal enzyme induction and enzymatic activity.

o Reduction in serum albumin synthesis resulting in lower serum albumin levels.

o Modifications in cytosolic and plasma cell membrane receptor activities.

o Increased cholesterol/phospholipid ratios of plasma membranes of some cell types.

o Accumulation of post-translationally altered proteins.

4. Tissues. Age-related changes vary widely from tissue to tissue and may involve both form and function. Some of these are as follows:

o Relative increase in connective tissues and decrease in parenchyma, less uniformity of histological pattern.

o Tissue atrophy interspersed with multi-focal hyperplasias.

o Differential alterations in size of adipocytes (i.e., at various sites).

o Increased relative cholesterol content of tissues.

o Increased unsaturated fatty acids in phospholipids of central nervous system myelin.

o Decreased rate of collagen production but increased intracellular collagen and elastin.

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5. **Endocrinology.** Age-dependent alterations affect hormonal regulation and many post-maturational changes involve decreased responsiveness such as the following:

- o Urinary aldosterone excretion halved and response to sodium depletion reduced by two-thirds.
- o Decreased level of somatomedins.
- o Altered thyroid hormone metabolism and thyrotropin releasing hormone responsiveness.
- o Decreased ovarian hormones at menopause; increased gonadatrophin output.
- o Decreased concentrations of certain hormonal receptors.
- o Increased release of antidiuretic hormone, often under inappropriate circumstances.

6. **Immunology.** Cell-mediated immunity tends to decrease and autoimmunity tends to increase with age. The following changes in many tissues and organs may play an important role in senescence:

- o Increased number of immunoglobin synthesizing plasma cells and increased levels of IgG and IgA.
- o Decreased B-lymphocyte functions, possibly due to altered function of T-lymphocytes.
- o Increased incidence of autoantibodies.
- o Decreased helper T-cell function; increased suppressor T-cell activity.
- o Normal T-cell independent antibody responses to bacterial and viral vaccines.
- o Decreased T-cell response to antigens and diminished T-cell dependent antibody response.

7. **Neurosciences.** There is progressive slowing in the total response of the nervous system in aging with a decrease in fine coordination and rapid

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initial movement involving dysfunction at several levels and including behavioral changes in cognition, memory, and sensory-motor skills. Some of the changes include the following:

- o Loss of neurons at differential rates.
- o Thinning of cerebral cortex and dilatation of ventricles.
- o Changed dendritic arborization and density of dendritic spines.
- o Altered levels of neural hormones and neural peptides.
- o Increased threshold to pain.
- o Reduced thermal regulation.
- o Slowed motor and sensory nerve conduction.

8. **Nutrition.** Although malnutrition frequently afflicts the elderly, data on the effect of aging on the nutritional status are often confusing or even contradictory because of the complexities of such studies on humans or their derivation from research on short-lived animal species. However, certain conclusions are tenable:

- o Elderly patients usually do not need special foods; they need enough but not too much of the right foods.
- o Caloric requirements are reduced; nutritional deficiencies of the essential minerals, vitamins, and amino acids may occur because of restricted or inadequate diets.
- o Serum vitamin B_{12} levels appear to be significantly reduced in the normal elderly, but significant clinical or biochemical changes are not observed.
- o Changes in the senses of smell and taste and of the ability to chew, coupled with a diminished desire for food, often result in poor nutrition.

9. **Pharmacology.** There is greater individual variation in response to many drugs in the elderly than in younger adults, the threshold for the side effects is often lowered, and the following phenomena need to be considered.

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9a. Pharmacodynamics

- o There is evidence that for many (but not all) drugs, a given concentration at an effector site produces a greater pharmacologic response in elderly persons than younger persons.

9b. Pharmacokinetics

- o Absorption of drugs from the gastrointestinal tract is not ordinarily reduced in the elderly.
- o Because of lower serum albumin levels in the elderly, binding of protein bound drugs is decreased and the free fraction is increased.
- o Decline in lean body mass and increase in adipose tissue mass in relation to total body weight in elderly can affect drug distribution.
- o Clearance of drugs partially or completely dependent on renal excretion declines in proportion to reduced glomerular filtration rate in the elderly.
- o Changes in drug clearance by the liver are not always predictable consequences of well-understood alterations in oxidative drug metabolism (principally hydroxylation and N-dealkylation) by this organ.
- o Care must be used in interpreting pharmacokinetic data:
  - Evaluation of clearance rather than half life is important in interpreting drug disposition in old age;
  - Total drug clearance must take into account any alterations in the proportion of free and bound drug in the blood.

9c. Drug Distribution

- o Decline in lean body mass and increase in adipose tissue mass in relation to total body weight in elderly affect drug distribution:
  - Relatively water soluble, lipid insoluble drugs have decreased distribution to tissues in elderly compared to young.
  - Most lipid soluble drugs are more extensively distributed in the elderly.
  - Women with a higher fraction of adipose tissue will have more extensive distribution of lipid soluble drugs and less extensive distribution of relatively water soluble drugs than men.
- o Because of lower serum albumin levels in the elderly, binding of protein bound drugs is decreased and the free fraction is

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increased, resulting in lower ranges of therapeutic and toxic plasma concentration of the total drug.

- o Absorption of drugs from the gastrointestinal tract is not ordinarily reduced in the elderly.

10. **Physiology.** Many physiological changes are associated with age, although there are individual differences and the connection between anatomical and functional changes is not always clear.

10a. **Cardiovascular Physiology.** There are progressive anatomical and chemical changes in the heart and blood vessels that can affect their function:

- o Hypertrophy and fibrosis of the myocardium.
- o Reduced arterial elasticity due to increased collagen, altered elastin, and increased calcium content.
- o Increased thickness of capillary basement membranes.
- o Prolonged isometric contraction and relaxation times.
- o Reduced maximum cardiac output and oxygen consumption.
- o Increased systolic left ventricular wall tension and myocardial oxygen consumption caused by high vascular impedance.
- o Increased after-load resulting from rise in aortic impedance.
- o Slowed early diastolic filling rate.
- o Increased systolic and pulse pressure.
- o Decreased response to catecholamines during stress.

10b. **Pulmonary Physiology.** Decreased pulmonary capacity results from the following:

- o Loss of elasticity and increase in alveolar size.
- o Diminished surface area of alveolar-capillary membrane.
- o Decreased compliance of chest wall.
- o Unchanged total lung capacity but increased residual volume and reduced vital capacity.

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o Decreased ciliary activity.

o Decreased maximum aerobic capacity which can be increased by training.

10c. Kidney and Bladder Physiology. The excretory capacity of the kidney tends to diminish with aging, and the function of the urinary tract is adversely affected by anatomical and functional changes, such as the following:

o Ischemic atrophy of renal parenchyma.

o Decreased number of nephrons (30 to 40 percent) and glomerular filtration rate by age 85.

o Diminished glomerular filtration.

o Altered tubular function.

o Impaired water and electrolyte regulation.

o Decreased bladder capacity.

10d. Gastrointestinal Physiology. Reduced motility and secretion of the gastrointestinal tract in aging accompany the following:

o Atrophy of gastric mucosa.

o Reduction in salivary, gastric and resting pancreatic secretions.

o Diminished and/or disorganized intestinal motility.

o Normal intestinal absorption except possibly for iron and calcium.

o Atrophy of liver and pancreas.

o Reduced hepatic blood flow (40-45 percent) partly due to reduced cardiac output.

10e. Musculoskeletal System. Bone mass decreases, articular surfaces deteriorate, and muscle strength is progressively lost with aging. Other changes are as follows:

o Decreased muscle mass (loss of muscle cells) and disorganization, resulting in loss of muscle strength.

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- o Decreased osteogenesis and increased osteolysis, especially osteoporosis among women.
- o Poor ability to repair cartilage results in progressive loss of joint surfaces and degenerative arthritis.

10f. Special Senses. There is a reduction in function of the sensory organs:

- o Reduced transparency of optical path affects visual acuity.
- o Narrowed visual fields.
- o Slowed light adaptation.
- o Decreased hearing for high frequencies, especially in men.
- o Decreased senses of taste, smell, and touch because of diminished number of receptors for both general and specific somatic perceptions.

10g. Skin. The skin becomes thinner and less effective in protecting individuals against their environment because of the following changes:

- o Atrophy of epidermis.
- o Reduced mitotic activity and regenerative capacity.
- o Decreased sweat gland function and regional losses of subcutaneous fat, resulting in diminished tolerance for temperature change.

11. Behavior. There are behavioral as well as physical changes which accompany aging. Some can be explained on the basis of known physiological and biochemical changes. Others remain intangible and difficult to explain. Three types of processes link behavior to trauma and physical illnesses that accumulate over the life course and can become most pronounced in old age:

- o The familiar health-impairing habits and life styles (smoking, diet, exercise, and so on), since these vary with socio-cultural conditions, and with aging.

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- Direct psychophysical effects of stress-inducing stimuli (e.g., work pressures, family disruption, job loss, geographical mobility). Physiological responses to stress include neural, endocrine, and immunological activities, which can in turn involve a range of bodily processes and diseases which are known to change with aging.

- Reactions to illnesses can also affect pathogenesis--including patient's minimization of symptoms, resistance to immunization, or failure to comply with treatment; and also including the negative stereotypes held by care providers so that doctors spend less time with older patients than with younger ones--they confuse pathology with aging.

CLINICAL SKILLS

In applying the basic knowledge of aspects of aging to the care of the elderly patient, certain considerations deserve special emphasis. The physician must be aware of the effects of the normal aging process and the way in which this process influences the spectrum of diseases which afflict older persons. The physician should also understand the psychological stresses which accompany the normal aging process, including loneliness, sense of uselessness, and anxiety over increasing dependency and, perhaps, impending death. The physician should know how to differentiate these psychological changes of normal aging from the psychiatric disorders which are common among the elderly (especially depression, dementia, and delirium).

The work-up of elderly patients presents a dilemma; it should be effective yet humane and tailored to the limitations and priorities of the patient. In addition to eliciting the information necessary to reach a correct diagnosis, the physician should assess the cognitive and psychological states of elderly patients, their ability to carry out the activities of daily living, and the socio-economic framework in which they live. In the management of the elderly patient, more attention must be paid to the assessment of their functional capacity than is paid to that of younger patients. The physician should be familiar with the array of services available to assist patients in maintaining their independence with the indications and appropriate access to each.

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1. Medical Interviewing with History-taking. In obtaining the medical history, special attention should be given to the following aspects of interviewing the older patient:

a. Special considerations in the conduct of the interview

- o The patient should be accorded recognition as the primary source of information; if doubts arise as to accuracy, other sources should be contacted with due respect to the sensitivities of the patient.
- o More time may be required to obtain the initial medical history from an older patient, and multiple sessions may be necessary because of fatigue of the patient and/or the interviewer.
- o Both patients and interviewers may become frustrated when aphasia, dementia or defects in hearing and sight make communications difficult.
- o It is important to establish at the outset the patient's ability to hear the interviewer; if the patient has difficulty hearing, measures such as using a quiet setting and positioning the patient and interviewer to permit lip reading may be necessary.
- o The interviewer may feel awkward asking questions about sexual history and satisfaction and the excessive use of drugs and alcohol.
- o Structured history-taking may have to be replaced by subsequent reordering of information obtained.

b. Functional Assessment

- o It is important to assess the patient's functional capacity and ability to perform the routine activities necessary to living an independent life (i.e., shopping, cooking, bathing) and to determine the availability and degree of patient's reliance on any support services used (i.e., Meals on Wheels, homemakers, speaking books).
- o Memory deficits may make it difficult for the patient to recall medications prescribed or being taken; the patient should be asked to bring in all medicine from home, including over-the-counter drugs.
- o Patients may have persisting effects of night-time hypnotics in the early morning. If their external stimuli are low during the day, they may experience afternoon and evening confusion.

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- Notice should be taken of any disturbances in rising from sitting position and in gait.

c. Medical Assessment

- Rather than a single "major complaint," elderly patients usually have multiple problems, some related to loss of function in the normal aging process and some to old or new illnesses.

- Certain clinical syndromes (e.g., incontinence, falling, confusional state) are especially important in geriatrics.

- In obtaining data from the history, physical examination or the laboratory, emphasis should be on seeking out those illnesses (e.g., pernicious anemia, polymyalgia rheumatica) which are relatively easily reversible in whole or in part.

- Older patients tend to under-report illnesses because they believe the symptoms are part of normal aging.

- The patient's nutritional history should be obtained, using recall or diary, and should include an assessment of the following factors: frequency of meals; preparation; storage; access to food sources; decreased attractiveness of food because of diminished sight, smell or taste; dietary fads, special diets (low salt, low fat); dietary supplements; alcohol intake.

- The physician should determine whether the patient has a history of vertigo or falls or concomitant loss of consciousness.

- Certain clinical syndromes are largely confined to the elderly: normal pressure hydrocephalus, senile dementia of the Alzheimer's type, temporal arteritis, decubitus ulcer, accidental hypothermia.

- Certain diseases have a higher incidence in the elderly: diabetic hyperosmolar nonketotic coma, stroke, aortic valve sclerosis, prostate cancer, carcinoma of colon, stomach, esophagus, lung, thyroid, gallbladder, benign gammopathies, tuberculosis, especially miliary, herpes zoster, basal cell carcinoma, Parkinson's disease, dementing diseases, diverticulitis of colon, cataracts, senile macular degeneration as well as acute closure and chronic open angle glaucoma.

- Syndromes involving the musculoskeletal system affect over half of the elderly population:

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- The progressive decrease of bone mass often leads to vertebral atrophy and long bone and compression fractures. This situation is exacerbated in patients with inadequate calcium intake or who are subjected to prolonged immobility.

- Rheumatoid arthritis frequently has its onset in elderly individuals, and its manifestation and course in the elderly are somewhat different than in younger adults. Calcium pyrophostate deposition disease ("pseudogout") and polymyalgia rheumatica also occur more frequently in the elderly.

o Diseases may present in the elderly with unusual symptoms: apathetic thyrotoxicosis; painless myocardial infarction; non-breathless pulmonary edema; silent pulmonary embolism; afebrile pneumonia; atypical signs of myxedema, drug intoxication, surgical abdomen; carcinoma of colon, lung or breast.

o Urinary incontinence may be temporary or fixed.

- If temporary, it may be due to urinary tract infection, acute confusional state, interference with normal urinary habits by confinement to bed or acute urinary retention with overflow from fecal impaction or anticholinergic drugs.

- If fixed, it may be due to weakness of bladder outlet, bladder outlet obstruction with overflow, interruption of afferent and efferent sympathetic fibers from sacral bladder center, interruption of central connections of sacral bladder center, destruction of bladder's sensory afferent fibers (e.g., diabetic neuropathy) or loss of frontal lobe inhibitory control of spontaneous bladder contraction.

d. **Psychological Assessment**

o The physician must appraise the patient's mental status including cognitive abilities early in the interview, either through the use of a formal instrument, such as an orientation test or the portable mental status questionnaire, or on the basis of statements and responses of the patient during the interview. If a formal instrument is used, the patient should first be informed of the nature and purpose of the questions.

o Memory impairment may be masked by confabulation.

o The psychological changes of normal aging should be differientiated from the psychiatric disorders which are common among the elderly, especially depression, dementia, and delirium.

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- o Depression is frequent in old age and commonly overlooked. Symptoms of depression in middle age (insomnia, early awakening, loss of appetite, significant weight loss, severe fatigue) are found in the elderly. The physician should question patients about feelings of severe guilt; sadness; anxiety; helplessness; crying; recent loss of family, friends, or animals; and suicidal thoughts.

- o Delirium may be present and is often drug induced in the elderly.

- o Paranoia often does not present as a severe personality disorganization but as a consequence of reduced sensory and cognitive capacity and may be manifested by made-up conversations and implications of hostile motivations to those surroundings the elderly patient.

- o Hypochondriasis may develop in the elderly as a way of gaining approval and support by converting concern over diminishing function to attention on physical disability.

- o Attention should be paid to the concept of reversible mental states in the elderly and the identification of diseases that produce them. These patients must be differentiated from demented patients who also experience medical illnesses and present special problems.

e. <u>Socio-economic Assessment</u>

- o The economic status and concern of patients should be determined, with particular attention being paid to their degree of financial dependence and their awareness of sources of financial aid.

- o The physician should obtain a description of the individual's daily activities and should especially note the patient's social, volunteer, and professional activities and any recent changes in the patient's activity pattern.

- o The patient's family status should be determined including the nature of interpersonal relationships between the patient and individual members of the family and the availability of family care in case of need.

- o If at all possible, a visit to the home should be made a part of the initial assessment of the patient's socio-economic status.

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2. Physical Examination. Particular attention should be paid to the following during the physical examination:

- Fatigue may limit the initial examination to presenting complaints; multiple sessions may be required for a complete physical examination, if the latter is justified.
- The dignity and comfort of patients should be maintained by respecting their modesty and particularly by providing assistance and time for changing position during the examination.
- Patients should be observed rising from a straight chair, walking a distance, turning around, walking back, and resuming sitting position and performing other movements necessary to assess the status of their neuromuscular and skeletal functions.
- Physicians should pay particular attention to possible clues to malnutrition, physical abuse, and falls.
- Since deafness and loss of vision have important consequences for the independence of elderly patients and their ability to interact with others, it is especially important to assess these patients' hearing and vision and to establish the cause for any loss in these functions.
- The status of the dentition in patients should be determined with special attention being given to dentures, including their condition and fit.

3. Selection and Evaluation of Laboratory Studies and Procedures. Procedures and laboratory examinations that are likely to yield information beneficial to the care of the patient should be selected. In each instance, the benefit for the elderly of that procedure or examination should be carefully weighed against any risk associated with the study.

- Physicians should give priority to procedures that assist in the diagnosis and treatment of remediable disease.
- Certain procedures (e.g., intravenous pyelography), although benign in younger individuals, may have a high risk of adverse effects on the renal function in the elderly.
- Values from laboratory tests should be interpreted with an awareness that "normal values," which often have been established on young or middle-aged adults, may not apply to the elderly. For example, the one-hour blood glucose level in a glucose tolerance test increases with age.
- Judicious selection and interpretation of laboratory data may be of primary importance in identifying the presence of certain diseases in the elderly which do not cause the expected clinical symptoms and signs.

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4. Medical Management. Just as infants and children are not young adults, the elderly are not older middle-aged people. For this reason, the management of illnesses in older people differs from the management of the same illnesses in people of other ages. The following should be considered in development of the management plan.

- Insofar as appropriate, independence and self-care should be encouraged.
- The same preventative and therapeutic interventions are used for acute illness as for younger individuals with modifications based upon decreased functional capacity and the presence of chronic diseases in older patients.
- Patients often have multiple chronic diseases; energetic treatment of one disease may affect another and may severely challenge the patient's diminished reserve of functional capacity.
- For many patients, the therapeutic goal should be to slow progression of a disease or to diminish its disabling consequences rather than attempt a rapid cure. Small contributions to comfort and functional capacity can reduce disability and dependency.
- Hazards for hospitalized elderly patients include night-time confusion, falls, inapparent fractures, decubitus ulcers, fecal impaction, urinary retention, and prolonged convalescence.
- The contributions of physical therapy, occupational therapy, and the other rehabilitation techniques to the improvement of functional capacity and capability for self-care should be recognized.
- The physician should identify means to assist the patient in accommodating to or preventing the loss of function and increase in disability brought about by specific diseases or the aging process.
- Physicians should direct patients in an early stage of diseases leading to unpreventable deafness or blindness to special services provided by various agencies to prepare them in advance for these conditions.
- The various health care and social service agencies providing comprehensive care should establish a constructive relationship.
- Resources available in the community should be used to provide health care and social support, whether in the patient's own home, in a long-term care institution, or in other settings.
- Family interrelationships may change over time as aging proceeds in the patient and those providing care or as the care of the patient becomes more demanding.
- Ethical and value issues often play a prominent and difficult part in decisions made about the care of elderly patients:

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- Determination of competency is of vital importance; the outcome of that determination may involve conflict between the best interests of the patient and those of the family, institution, or state.

- Judgments surrounding the discontinuance of life support systems can be enormously difficult and require consideration of patient and family as well as medical and legal factors.

o Social and behavioral factors controlling health risks, environmental stressors, and health attitudes and behaviors are susceptible to interventive strategies and modifications. For example:

- Certain existing old age disabilities can be reversed or alleviated. The performance of older people on intelligence tests improves with added practice, with instructions about strategies for approaching the problem, and with incentives to increase motivation and attention.

- Older people can, and often do, learn to compensate for declines in reaction time, memory, and other age-related deficits.

- Even in nursing homes, helpless, dependent, and unhappy patients can often recover a degree of functional independence when daily regimens encourage interaction, self-care, and a sense of mastery. Routines which stimulate independent behavior can result not only in increased alertness and involvement but also in improvements in general health.

5. **Clinical Pharmacology and Drug Therapy.** The high frequency of multiple diseases and of complaints in elderly patients requires particularly close attention to both prescribed and self-administered medication.

o The aging process greatly affects the response of elderly persons to many drugs:

- The changes experienced include changes in absorption, distribution, metabolism, and excretion of drugs.

- These may result in increased numbers and severity of side effects and overdosage.

o Changes in drug clearance in the elderly will affect the therapeutic index of the drug; daily dose must be adjusted for those with relatively small differences between effective and toxic plasma concentrations to avoid excessive and dangerous accumulation.

o Unfortunately, good pharmacokinetic data are not available for many drugs of importance in the treatment of the elderly.

o The physician should employ the minimal number of drugs to avoid the potential dangers inherent with the simultaneous administration of multiple drugs.

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o Non-compliance is a particular problem with the elderly for a wide variety of reasons.

6. Patient and Family Education. Assistance should be provided to help postpone the loss of each degree of independence and to mobilize available family, volunteer, and governmental support systems toward that end. The patient and the family should be assisted to accept losses of function and decreases in social contacts in extreme cases where these are irreversible.

o Deficits of memory, confusion, paranoia, and incontinence represent major challenges to the families of patients, who should be assisted to understand and adapt to them.

o The patients and their families should:

  - understand the important role that physiotherapy, occupational therapy and dietetics can play in the management of the elderly ill,

  - be provided with assistance in planning and identifying financial resources which are available when the elderly person or family can no longer finance care through "third party" and other resources, and

  - be given sources of information about various aspects of drugs and drug therapy.

o Family members need assistance in understanding the changes occurring in elderly patients, the realities of aging, and, at the appropriate time, the inevitability of death.

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RESPONSIBILITIES OF THE MEDICAL SCHOOLS

To accomplish these goals, the medical schools should accept the following responsibilities:

- To provide a focus for change in the educational and training programs to increase attention to the aging process and elderly patients; this focus should include the establishment of a group of faculty members interested in gerontology and geriatric medicine and the training of other faculty members in these areas.

- To seek support to expand research in aging to improve clinical care, to stimulate medical student interest in the fields of gerontology and geriatrics, and to foster interaction with other specialties and disciplines.

- To offer a variety of clinical settings and patient encounters (including ambulatory, long-term institution, and home care experiences) through which students can learn special arrangements for the care, diagnosis, and treatment of the elderly.

- To arrange for students to interact with healthy, independent elderly persons. This interaction would help students learn about the experiences elderly people have when they seek health care.

- To urge scientific discipline and medical specialty societies to develop and disseminate geriatric educational material in their fields.

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