

Association of American Medical Colleges

COUNCIL OF TEACHING HOSPITALS

**1981
SPRING MEETING**

PROGRAM MATERIALS

Peachtree Plaza Hotel

May 6-8, 1981

Atlanta, Georgia

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**Association of American
Medical Colleges**

**COUNCIL OF TEACHING
HOSPITALS
SPRING MEETING
1981**

**5:00 pm, May 6 — 12:30 pm, May 8
Peachtree Plaza Hotel
Atlanta, Georgia**

**COUNCIL OF TEACHING HOSPITALS
SPRING MEETING**

May 6-8, 1981

**Peachtree Plaza Hotel
Atlanta, Georgia**

AFTERNOON and EVENING, May 6

5:00-6:00 pm REGISTRATION
6:00-7:00 pm OPENING SESSION

WELCOME

Stuart J. Marylander
Chairman, Council of Teaching Hospitals

KEYNOTE ADDRESS

**"HEALTH CARE AND THE AMERICAN
ECONOMY IN THE EIGHTIES"**

Ralph S. Saul, Chairman and Chief Executive
Officer, INA Corporation

7:00 pm COCKTAILS AND DINNER

MORNING SESSION, May 7

PRESIDING

Stuart J. Marylander
President
Cedars-Sinai Medical Center
Los Angeles

9:00-12:00 **"MORBIDITY, MORTALITY
AND POPULATION TRENDS IN THE
UNITED STATES"**
Dorothy P. Rice, Director
National Center for Health Statistics

**"THE IMPLICATIONS FOR
TRADITIONAL AND EMERGING
SERVICES"**

J. Alexander McMahon, President
American Hospital Association

**"THE IMPLICATIONS FOR
EDUCATIONAL AND RESEARCH
OBJECTIVES"**

Saul J. Farber, M.D., Acting Dean
Chairman, Department of Medicine
New York University School of Medicine

**"THE IMPLICATIONS FOR THE
SPECTRUM OF NURSING SERVICES"**

Loretta Ford, Ed.D., R.N.
Dean, School of Nursing
University of Rochester

12:00-1:30 LUNCH

AFTERNOON SESSION, May 7

PLENARY SESSION

PRESIDING

John W. Colloton
Director and Assistant to the President for
Health Services
University of Iowa Hospitals and Clinics

1:45-3:00 pm **"PHYSICIAN PERFOR-
MANCE IN PREPAID MEDICAL PLANS"**

William C. Richardson, Ph.D.
Associate Dean, School of Public Health,
University of Washington

3:15-4:30 pm **WORKSHOPS**

Small group discussions will be held on the
subjects of consumer choice and competition
as they may affect teaching hospitals. Those
attending will be assigned to one of four
groups and will be provided by mail with
appropriate materials prior to the meeting.

3:15-4:30 pm **VETERANS ADMINISTRA-
TION MEDICAL CENTER DIRECTORS
MEETING WITH CHIEF MEDICAL
DIRECTOR**

MORNING SESSION, May 8

PRESIDING

Mitchell T. Rabkin, M.D.
President
Beth Israel Hospital
Boston

8:00-9:00 am **"SOCIAL SECURITY, MEDI-
CARE, AND MEDICAID: LIKELY DEVEL-
OPMENTS IN THE EIGHTIES"**

Congressman Barber B. Conable
Ranking Republican
House Committee on Ways and Means

9:00-10:00 am **"ACQUIRING CAPITAL IN
THE EIGHTIES"**

J. Ira Harris, General Partner
Salomon Brothers, New York City

10:00-10:30 am COFFEE BREAK

10:30-11:30 am **"AMERICAN INDUSTRY:
THE NEW TOUGH BUYER OF HEALTH
CARE"**

Henry E. Simmons, M.D.
Principal
Peat, Marwick, Mitchell and Company

11:30-12:30 pm **REVIEW OF COTH STUDY
ON DIAGNOSTIC CASE MIX AND
OTHER DISTINCTIVE FEATURES OF
THE TEACHING HOSPITAL**

Mark S. Levitan
Executive Director
Hospital of the University of Pennsylvania

12:30 pm Adjourn

**COTH SPRING MEETING, MAY 6-8, 1981, PEACHTREE PLAZA HOTEL, ATLANTA, GEORGIA
MEETING REGISTRATION FORM**

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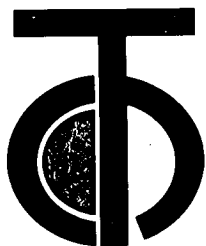
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Enclosed is a check for \$300 to register CEO and accom-
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COUNCIL OF TEACHING HOSPITALS • ASSOCIATION OF AMERICAN MEDICAL COLLEGES

ONE DUPONT CIRCLE, N. W.

• WASHINGTON, D. C. 20036

(202) 828-0490

April 22, 1981

COTH SPRING MEETING PARTICIPANTS

I would like to welcome all of you who have registered for the 1981 COTH Spring Meeting to be held in Atlanta, May 6-8.

The enclosed packet of "program materials" has been prepared for the workshops to be held on Thursday afternoon, May 7, beginning at 3:15pm. COTH Officers will be chairing these four sessions to discuss the subjects of consumer choice legislation and price competition as they may affect teaching hospitals. You will be assigned to a specific discussion group when you register.

Directly following is a discussion paper entitled, "Price Competition in the Health Care Marketplace: Issues for Teaching Hospitals". This paper has been approved by the AAMC Executive Council and was recently sent to COTH members as well as all other AAMC constituents. I hope you take time to read all of the enclosed material before the meeting.

I believe we have an excellent program planned, and I look forward to seeing you in Atlanta.

STUART J. MARYLANDER
Chairman
Council of Teaching Hospitals

enclosures

**COUNCIL OF TEACHING HOSPITALS
SPRING MEETING**

May 6-8, 1981

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Atlanta, Georgia**

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Executive Director
Hospital of the University of Pennsylvania**

12:30 pm Adjourn

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

PRICE COMPETITION IN THE
HEALTH CARE MARKETPLACE:
ISSUES FOR TEACHING HOSPITALS

Discussion Paper Approved
By the AAMC Executive Council
March, 1981

OVERVIEW

Many health economists, business groups, and legislators are advocating fundamental changes in health insurance and medical services to stimulate cost consciousness among providers (hospitals and physicians) and consumers (individuals enrolling in health plans and patients seeking care). These proposals are commonly referred to as the "competitive" approach to cost containment. One approach is designed to influence "consumer choice". It has three underlying principles: employers would be mandated or encouraged to offer multiple choices among health plans to their employees; employers would be required to make the same dollar contribution to an employee's premium regardless of the plan selected; and a dollar limit would be placed on the amount of the premium that could be treated as a deduction for tax purposes. This "consumer choice" level of competition is explicitly articulated in proposed legislation.

A second approach is directed at increasing "price competition" among providers. It assumes that consumer choice principles coupled with the repeal of existing regulations, such as health planning, PSROs, and cost-based reimbursement, would encourage individuals and health insurance plans acting in behalf of their beneficiaries to give greater consideration to hospital costs and physician fees when purchasing or contracting for health care services. As a result, those providing the services -- hospitals, HMOs, physicians -- would be stimulated to provide their services at the lowest possible cost. Although quality of care, access, and other factors might influence consumer decisions, it is presumed that an overriding concern for the price of medical services would bring about major cost savings.

Because there has been no wide-scale experience with consumer choice and price competition, it is not certain that these approaches would achieve their objectives. One could speculate that unit costs would be reduced, but total medical care expenditures might not show a corresponding drop. In fact, competition may actually increase total costs because individuals might choose to buy more rather than less third party coverage and providers would have incentives to market more services and expand their operations. Although these outcomes would not necessarily be undesirable, they would be contrary to the postulated reduction in medical service expenditures that some proponents of price competition believe would occur.

Proponents of price competition have not addressed the potential implications of this approach for certain types of providers, patient populations, and the nation's supply of trained health manpower. If we are to retain the great strengths of our present system of medical care, the following questions about the possible consequences of competition must be posed and answered:

- o Which institutions will be most negatively affected? Are those the ones that should be cutting back or closing their doors?
- o What services will be encouraged? Will there be an excess of services that can be aggressively priced and marketed to healthy populations at the expense of services for the seriously ill and underserved populations?
- o Who will treat indigent patients in the inner city, rural areas, or other locations if it is "bad business" to provide care in those environments?
- o Will all patients, regardless of geographic location and financial status, have reasonable access to an adequate level and scope of services?
- o Will sufficient incentives or standards exist to assure quality care when choices are presented in terms of their price?
- o If some hospitals, in order to compete, are unable to fund depreciation expenses, will funds be available to ensure adequate re-capitalization in the health industry?

In other words, although price competition may stimulate prudent decisions by educated consumers and groups with purchasing power, there are no assurances that those "dollar votes" will result in a medical service system that will achieve the nation's health care goals and meet reasonable needs of all of its citizens.

Teaching hospitals must be concerned about competition because their costs are generally higher than those of non-teaching hospitals. Many of the higher costs of teaching hospitals derive from their educational programs, the nature of the patient case mix, losses on charity care, and their role in the introduction of new and more effective methods for prevention, diagnosis and treatment into medical care. These activities are presently funded by patient care revenues. Under competitive pricing, individual consumers and the third parties, HMOs, and IPAs negotiating on their behalf may be unwilling to pay the cost of programs which provide long term rather than short term benefits. Thus, teaching hospitals may be placed at a distinct disadvantage, and their unique contributions to society threatened. On the other hand, depending on how a free market system is structured, teaching hospitals may be very competitive in those areas of medical care that are not provided by other institutions.

This document provides a basis for assessing the potential impact of competition on teaching hospitals by:

- o describing how policy makers and opinion leaders view teaching hospitals under price competition;
- o describing price competition within the context of other environmental and health policy changes emerging in the eighties; and
- o identifying the critical issues for teaching hospitals under price competition.

HOW THE POLICY MAKERS AND OPINION LEADERS VIEW TEACHING HOSPITALS
UNDER COMPETITION

"I can't believe that economics will doom the greatest medical education system in the world. Price, after all, is not always the controlling factor. Hospitals also survive on their reputations, the quality of their medical staff, and their relationships with other institutions."(1)

--J. Alexander McMahon
President
American Hospital Association

Although these remarks are reassuring, and the comments may very well be accurate, there is little evidence of any serious consideration given to the implications of price competition for teaching hospitals. Paul Ellwood, President, InterStudy, made the following remarks at the 1980 COTH Spring Meeting (2):

Perhaps the most important and lengthy change required by competitive pressures will be to revamp the entire system of paying for medical education. For every teaching hospital, whether the teaching mission is cut back or expanded, intensified competition for patient care dollars will be played under a changed and reasonably well-defined set of rules for health delivery, and an evolving and less clearly defined method for funding graduate medical education.

Most teaching hospitals are located in communities with very high rates of hospital utilization, and are therefore, "easy marks" for organizations that can provide high quality care with even moderate reductions in hospital use.

I suspect that despite their technological supremacy, most teaching hospitals operate under inhibitions that will prevent them from starting the first (alternative health service) plan in town -- inhibitions such as a superstar head of medicine who insists on autonomy, aggravating town/gown disputes; reluctance of the faculty to deliver primary care; and perhaps an unvoiced fear that users of your hospital may pay a high price for its leadership in research and education.

The lead time required to prepare academic institutions to be competitive may be from two to five years, and those entering the competitive market late must pay a high price to get back patients who have left them for the earlier competitors.

Clark Havighurst of Duke University, in an unpublished document titled "Competition in Health Services -- An Equal Number of Questions and Answers," made the following comments about education, research, and charity care (3):

To a significant though unknown degree, university and some other medical centers are dependent on earning monopoly profits to finance educational and research endeavors. In a competitive world, these resources would undoubtedly be jeopardized. It should be no argument against competition, however, that it deprives the industry of discretionary funds with which it does things it regards as desirable. Nevertheless, new subsidies must be found to replace at least some of those that may be eliminated by competition. Resort to other sources of funding will bring subsidies into the open and will require new social judgments about the appropriateness of each. Society may be unwilling to continue subsidies at the rate they have been involuntarily provided in the past, and some worthy activities may in fact go unfunded.

Cross-subsidies within hospitals are currently financing a great deal of indigent care, and competition surely threatens the continuation of these subsidies. In the short run, decisions on certification of need can legitimately protect internal subsidies, but one has to hope that, in the long run, hidden financing will become unacceptable and will be replaced by new public subsidies.

Alain Enthoven, a leading spokesman for competition, has made the following comments about academic medical centers (4):

Today, a great deal of the teaching and research costs of academic medical centers are being piggy-backed onto Medicare and Medicaid patient care costs. However, I believe this funding strategy is going to fail.

I am in favor of accurately identifying the costs of teaching and research activities and defending each on its merits and getting it paid on its merits. I recognize that there are problems of joint products and joint costs, but they can be handled. Each function should be paid for on an open and explicit basis rather than in a covert way.

Eli Ginzberg of Columbia University expressed the concerns about price competition in the New England Journal of Medicine (5):

. . . I see nothing but trouble ahead if the nation's teaching hospitals are forced to compete with community hospitals in providing routine services, since the former's per diem costs are 1 1/2 to two times as high as the latter's, as a result of their diverse output, which goes far beyond performing an appendectomy and involves such critically important societal goals as training the next generation of physicians and adding to the pool of knowledge and technique. Enthoven appreciates this challenge, but the CCHP (Consumer Choice Health Plan) has not addressed it adequately.

There is nothing in the theory of competition to ensure that the resources required by the poor and the isolated for essential medical care will continue to be available. The recent closure of an increasing number of inner-city hospitals raises a warning that may not be disregarded.

Walter McNerney, President of Blue Cross and Blue Shield Associations, cited several questions about the impact of competition on teaching hospitals in his recent New England Journal of Medicine article (6):

How do we avoid the virtual exclusion from the market of the academic medical centers offering the best -- and most expensive -- care? How would a price-competitive system accommodate the costs of educating physicians and allied health professionals?

While several Congressmen who support price competition have indicated that special grants would be provided to teaching hospitals to help support the costs of education, only the Gephardt/Stockman bill has explicitly stated how educational costs would be financed. Section 301 includes the following language (7):

The Secretary shall make grants to, or enter into contracts with, entities (other than educational institutions) to compensate them for not more than 70 percent of the direct costs of providing graduate medical education and training for nurses and other health care professionals through accredited educational programs, to the extent the Secretary finds such compensation is necessary to provide training for needed health care professionals. Such grants and contracts shall be made only with entities which are public or private, nonprofit, charitable organizations.

A summary of the views of those who have addressed the implications of market forces in health care for teaching hospitals suggests that:

- o Because of the multiple and joint products teaching hospitals provide (i.e., education, research, tertiary care, and charity care), they do not fit neatly into competitive models. Although, some believe that a competitive system can be devised that will treat teaching hospitals equitably, insufficient attention has been given to the implications of price competition for teaching hospitals.
- o The societal contributions of the teaching hospitals, with the possible exception of educational programs, have largely been ignored by proponents of competition, and they have advanced no method to preserve these contributions.

- o Charity care has been identified as a troublesome issue, but no one has carefully considered the implications of price competition on access to quality care for indigent patients.

COMPETITION WITHIN THE CONTEXT OF OTHER TRENDS IN HEALTH CARE

The proponents have argued that price competition can revolutionize the way health care is organized and provided, reduce the financial incentives perceived to stimulate increased costs, and lower costs while retaining or even improving quality and access to care. These claims are overly optimistic and probably misleading.

The organization and delivery of health care is a dynamic process which is continually responding to societal and economic changes. The American Hospital Association's (AHA) Environmental Assessment of the Hospital Industry for the next three to five years makes the following statements (8):

- o The growth of multi-institution arrangements will enhance the coordination of services and the linkage of service systems. Increased interest in HMO development by hospitals and IPAs will focus on what is the role of the existing providers in the development of HMOs, rather than whether an HMO is appropriate.
- o The HMO model will be adopted or modified by some hospitals choosing to move away from the exclusive provision of traditional inpatient care and as hospitals explore new sources of revenue and utilization in conjunction with inpatient services. In some instances, this may involve new dimensions in the relationship between hospitals and other sponsors or participants in HMO activity, notably physicians and third party payers.
- o Employers will attempt to reduce their outlays for health insurance by proposing modifications in third-party payment systems by offering cost-sharing insurance programs, health incentives, and health education programs to employees, and by participating in and sponsoring HMOs and other alternative delivery mechanisms.
- o Physicians will increasingly work in multi-physician teams in treating patients. These teams may develop from group practices created by physicians themselves or from new staff organization methods in hospitals that increase the number of full-time employed physicians.

- o The cost of research and teaching conducted at teaching hospitals will increasingly be recognized as a distinct element of the costs incurred by these hospitals. Alternative payment mechanisms will be explored to cover these costs, thus making the cost of patient care at teaching hospitals more readily comparable to costs at non-teaching hospitals.

Most predictions and prescriptions for the medical services of the future ignore quality of care. Pro-competition and regulatory approaches emphasize cost containment and do not provide adequate safeguards to assure the quality of medical care desired by people. As discussion and debate proceed on health care reforms, the following questions should be addressed:

- o In the haste to stimulate competitively priced health plans, what assurances are there that access and quality will be of an acceptable level?
- o Does the possibility exist, as Robert Heyssel has suggested, that if the fee-for-service system supposedly makes money by doing too much, is it not also true that some HMOs might try to make money by doing too little? (9)
- o If primary care physicians, through their participation in prepaid health plans, become increasingly responsible and financially liable for the total range of services provided to their patients, what provisions can be made to assure that they will refer patients for needed tertiary care?
- o Is it possible to assure access to tertiary services by mandating health plan coverage and reinsurance to minimize disincentives to refer?

In theory regulation and price competition represent two very different approaches, but they are not as clearly separable as often portrayed and the potential of either, by itself, to mold the future of the medical services may be overstated. McNerney has articulated this point well by describing what he views as the four cornerstones of medical care in the eighties -- regulation, competition, voluntarism, and innovation (6). Many of the changes described by AHA's environmental assessment are already occurring in areas without price competition or heavy regulation. These changes have taken place not because of new concepts on financing and regulating health care, but from economic realities. The potential benefits ascribed to competition or regulation by their

advocates will be muted by the country's general economic, political, and social environment from which medical care cannot disassociate itself. Price competition could intensify comparison of costs and utilization among hospitals, experimentation with alternative delivery systems, examination of educational costs, more prudent purchasing of health insurance plans by employers, and regionalization of health services. Regulation might do the same through mandatory cost containment, PSROs, planning legislation, technology guidelines, and incentives for HMOs.

An evaluation of price competition must include but go beyond a discussion of the events that are likely to occur regardless of the financing and regulatory structure. The emphasis should be on the degree to which competition facilitates or impedes those changes and the identification of any events that can be uniquely attributable to price competition.

For teaching hospitals, medical schools, and medical faculty, the main question may be how to influence, anticipate, and organize for the possible changes. The potential for teaching hospitals to expand their relationships with community hospitals, nursing homes, ambulatory care sites, HMOs, attending physicians, medical school faculty, physician assistants, nurse practitioners, the community, and patients will have to be examined. However, given the number of organizations and personalities involved and the important and unique contributions to medicine made by academic medical centers under the current mode of operation, organizational changes may be difficult to achieve. It is within this broad context that the specific implications of competition for teaching hospitals should be addressed by teaching hospital administrators, medical school faculty, and other participants in teaching hospitals and health professional education.

ISSUES FOR TEACHING HOSPITALS

Underlying the competitive models is the assumption that hospitals provide a single, relatively standardized product which is identifiable in terms of costs and quality. This assumption raises several issues for hospitals which have multiple products benefiting not only the individual patient, but society as a whole. Because these activities result in higher average costs, presently financed through patient care revenues, competitive pricing resulting from proposed legislation raises questions about the future ability of teaching hospitals to meet these multiple responsibilities.

Price competition may affect eight specific areas:

- o Undergraduate Medical Education,
- o Graduate Medical Education,
- o Allied Health Sciences Education,
- o Applications of Research,
- o Tertiary Care and Case Mix,
- o Charity Care,
- o Ambulatory Care, and
- o Faculty Practice Plans.

Undergraduate Medical Education

Total enrollment in U.S. medical schools, which has more than doubled since 1963, now exceeds 65,000. Since the late sixties, greater emphasis has been placed on primary care training. These two developments have created a dramatic increase in the number and variety of clinical clerkships. As a result, although the university-owned and primary affiliate hospitals are still the principal settings for clerkship training, numerous other community hospitals and ambulatory care settings now participate in undergraduate medical education.

There are both direct and indirect costs associated with the education of undergraduate medical students in the teaching hospital. The direct costs are related to the supervision of the patient care activities of the students. The indirect costs are related to the decrease in productivity as a consequence of the presence of a teaching program in the institutions (10, 11, 12). Both contribute to an increase in the operating costs of a teaching hospital as compared to those institutions without teaching programs.

In a more competitive market, community hospitals and ambulatory care institutions may discontinue their affiliations with medical schools. This would pose serious problems because their resources are essential to meet the clinical clerkship requirements of larger classes and to provide clinical experiences in primary care. A loss of affiliated hospitals would place a greater burden on the major teaching hospitals which might not have enough patients to meet the needs. In addition, students in all hospitals might be pressured to provide more service at the expense of their educational experiences.

Price competition may jeopardize the substantial contributions of volunteer faculty to medical education as pressure increases to maximize physician

productivity. The volunteer faculty may reluctantly find that teaching time compromises efforts to be competitive. It would be unfortunate if competition did not provide incentives for voluntary physicians to continue their important role in clinical medical education.

Graduate Medical Education

There are approximately 65,000 residents presently in training. Total 1978-79 expenditures for housestaff stipends and benefits were about \$1.02 billion (13). About 80 percent of these costs, which average about \$2.4 million in COTH member hospitals, are funded from patient care revenues (14). In addition, there are direct costs of graduate medical education related to physician supervision, support staff, and educational space and equipment. There are also indirect costs and reduced productivity associated with residency training.

The direct costs of graduate medical education, which are larger and easier to quantify than those for undergraduate clinical training, will be carefully scrutinized under competition. Third parties, HMOs, and others contracting with hospitals for medical services may not wish to share in these costs and thus may not permit subscribers to use teaching hospitals except for complex care not available elsewhere. Based on evidence from the past, it also appears that HMOs and other alternative delivery systems will be reluctant to participate in graduate medical education.

In a more competitive system, hospitals may have to reconsider the number and types of educational programs they sponsor. Since the number of entering residency positions is only slightly larger than the number of students graduating from U.S. medical schools, any substantial reduction would pose serious problems

for graduate medical education which is an essential component in the education and training of a physician for independent practice. The high quality of our medical care would be compromised. In addition, the important contributions that residents make in the education of undergraduate medical students would be diminished.

Proponents of price competition must give more thought to the impact of their proposals on all levels of the continuum of medical education and training if we are to provide the next generation of well-trained physicians.

Allied Health Sciences Education

In addition to participation in physician training, teaching hospitals are the settings for a growing number of allied health education programs. This includes not only an increasing number of advanced nursing degree programs, but a large number of technical and specialist programs required to meet the manpower needs of the health care system. Although the total costs associated with these programs are difficult to estimate, many programs could not be sustained without hospital involvement. If educating allied health professionals adds to costs, what incentives will exist under price competition to continue support for these programs? Which hospitals will discontinue participation? Will we be able to maintain a socially-desirable mix of health professionals, or will profit-incentives skew demand for certain types of professionals in an inappropriate direction?

Applications of Research

As biomedical research advances medical knowledge, teaching hospitals have been the settings where this knowledge is translated into medical practice and disseminated to physicians and other health care institutions. The initial applications of new treatment modalities are unquestionably expensive, but can result in cost effective treatment in time. Considerable attention has been given to the proliferation and overutilization of some types of new technology. Perhaps not enough attention has been given to the contributions academic medical centers have made to vastly improving patient outcomes, using relatively cheaper, effective medical treatments. Some noteworthy examples include:

- o Kidney transplantation which has proven to be more effective and efficacious than chronic dialysis for treating many forms of end-stage kidney disease.
- o Development of chemotherapy for treatment of leukemia, lymphomas and other cancers.
- o Bone marrow transplantation for treatment of aplastic anemia and myelogenous leukemia.
- o Evolution of heart surgery for treatment of congenital heart disease, coronary blood vessel disease and conductive defects.
- o Development of major trauma centers.
- o Development of neonatal intensive care units.
- o Development of antimicrobial vaccines such as pneumococcal vaccines.
- o Development of joint prosthesis.

These new treatments are accompanied by large developmental costs associated not only with the specific program but with the total environment required to support evaluation of new treatment protocols. Initial applications are often not cost effective nor do they always result in improved patient outcomes. The financial incentives created by price competition will encourage use of only presently available treatments and not promote development and testing of new

methods of treatment. This environment is not likely to be one in which clinical researchers will feel welcome and be encouraged to flourish.

Tertiary Care and Case Mix

Related to applications of research is the provision of regional, tertiary care services to seriously ill patients. Historically, these services have been provided by teaching hospitals. Present pricing and cost allocation policies in teaching hospitals often result in having the reimbursement for primary and secondary care subsidize tertiary services. Under price competition, teaching hospitals would have to modify these policies. Tertiary services would have to be priced significantly higher while routine care would have to be priced substantially lower.

With changes in pricing policies, teaching hospitals may be able to compete well in providing tertiary services because they have provided a leadership role in this area for many years. The presence of full-time, faculty physicians representing all specialties and supported by housestaff helps to ensure high quality care. Teaching hospitals traditionally are sources of the best, most advanced treatment available, and consumers are likely to demand access to these services even if the price is high.

Competing in secondary and primary care may be more difficult for teaching hospitals. The problem may be most difficult for urban teaching hospitals that have a large number of indigent patients having multiple, chronic problems, which may not require tertiary services but do demand more intense nursing services and more prolonged support services such as social service and discharge placement efforts. Even if these patients were provided a "voucher" to participate in a prepaid, capitation payment plan, many health plans would likely try to avoid

these patients because of their generally more complicated health and social problems.

Caution should be used in developing policies under price competition that would severely limit the teaching hospital's role in primary and secondary care. Steps should be taken to ensure that phasing out routine levels of care would not also mean phasing out access to care for some patient populations. In addition, educational programs cannot be conducted in the absence of primary and secondary care, and it is unreasonable and impractical to believe that an added number of community hospitals would assume these educational responsibilities in a price competitive market. Furthermore the aggregation of intensely ill patients to the exclusion of a reasonable number of the less ill may make for such a stressful hospital work environment that recruiting and retaining staff become a problem.

Charity Care

Many teaching hospitals, particularly in urban areas, provide large amounts of service to the poor and near-poor of their communities. This care includes not only inpatient services, but ambulatory care on a large scale. Economically disadvantaged patients often pay no charge or a charge that is below cost. Hospitals remain financially viable by pricing services to full-paying charge patients at levels sufficient to subsidize the charity care. For hospitals to be price competitive, this cross subsidization would be impossible to maintain, and hospitals might be unable or reluctant to continue any extensive commitment to treating patients who are unable to pay.

If vouchers are provided to the indigent population, a portion of the uncompensated care problem would be lessened. However, many illegal aliens and others who for some reason are ineligible to receive a voucher would still have

no source of payment for medical services. Furthermore, even if the indigent are provided vouchers, many may select low option plans with high out-of-pocket expenses they will be unable to meet when care is required. The combination of uninsured and underinsured patients would encourage a move away from a one class system of care back to a two class system. Market forces and price competition can only sharpen the incentives to provide more adequate services to those for whom payment is assured.

Ambulatory Care

Per visit costs of hospital-based ambulatory care and other ambulatory care settings participating in medical education are often significantly higher than the costs of office visits of community physicians. Many reasons for the differences are typically cited. Visits to teaching hospital clinics are often referrals with a wide range of complex problems that are costly to treat. Productivity is lowered due to the presence of physicians in training. Many states and the Federal government have helped to offset these costs by providing grants for primary care training. For hospital-based ambulatory care, additional costs are incurred because of the cost reimbursement allocation guidelines which burden outpatient departments with overhead costs not present in freestanding clinics.

Most of the literature suggests that the presence of education in ambulatory or outpatient departments makes it very difficult for them to be self-supporting (9, 10, 11, 14). Rarely are fees or costs competitive with fees for office-based visits. Some will argue, however, that free-standing ambulatory care centers with educational programs can be productive, and in cases where the center is a source of inpatient business, the satellite can lead to increases in hospital

inpatient revenue. Thus, the evidence is inconclusive, but it is clear that given current operations, some ambulatory care programs and primary care training sponsored by teaching hospitals and medical schools may suffer with an increased effect of market forces. However, it is imperative that teaching hospitals examine the organization and efficiency of their outpatient services to determine what it would take to succeed in a price competitive market. To the extent that productivity losses from education and indigent care are the problems, special consideration could be sought, but any other reasons for special treatment may be increasingly difficult to support.

Faculty Practice Plans

Medical Schools are increasingly dependent on fees generated by the clinical service of the faculty. Faculty practice plan revenue now constitutes over 14 percent of all medical school revenue, up from 4 percent in 1967-68. Under price competition, health plans are not likely to evaluate physician fees for professional services in isolation from hospital prices. There will be an increased effort to price the package of hospital and medical services together rather than independently. Because the costs of hospital services in teaching settings are typically higher, pressures may be placed on physicians in teaching hospitals to reduce their fees so the package of services will be price competitive, or physicians may choose to admit their patients in hospitals where costs are lower. Either could lead to a decrease in patient volume and faculty practice plan revenue. This situation could also create incentives for physicians and dentists to leave academia for private practice or demand a higher proportion of the practice plan revenue. Either prospect would diminish medical school revenue and jeopardize educational programs.

Separate Funding of Unique Costs

Two generalizations may be drawn from the discussion of the above eight issues. First, teaching hospitals have a wide variety of products, many of which are produced simultaneously and involve more than the delivery of inpatient hospital care. Second, all of these multiple responsibilities and the costs associated with them are related and interdependent.

Academicians, legislators, and third parties may be willing to acknowledge that teaching hospitals have made important societal contributions to the education of future physicians and the advancement of medical practice, and that these contributions do not fit easily into the price competition model. The commonly offered solution is to identify and separately fund these activities on their own merits. In effect, this approach argues for centralization and regulation of decisions for these activities, but decentralization, through price influenced market mechanisms, of all other decisions relating to patient care services. The provision in the Gephardt/Stockman bill authorizing grants "for not more than" 70 percent of the direct cost of graduate medical education is one example of how legislators might try to resolve this issue. Efforts to carve out and separately fund unique, socially desirable attributes of teaching hospitals should recognize potentially negative impacts of this approach:

- o Separate funding of graduate medical education may limit medical schools and teaching hospitals' ability to make local decisions about their residency programs. As Paul Ellwood has stated, "It's clear that whoever bears the cost of medical education will increasingly want to specify the numbers, types, and geographic distribution of those whose education is being subsidized."(2)
- o Federal support for graduate medical education may be subject to the budget and appropriations process which could make such a fund vulnerable to any major efforts to cut federal spending. The level of funding would have to be renegotiated annually before a changing cast of decision-makers who would have varying perspectives and knowledge about graduate medical education financing.

- o The administration of the fund could be extremely complex. How would the necessary funds be collected? How would those responsible for distributing the funds decide which hospitals would get support and what that level of support should be? Even if total funding is adequate, wouldn't individual hospitals be vulnerable to significant yearly fluctuations?

Numerous studies have attempted to separate the costs associated with education, tertiary care services, and research-related costs. No consistent estimates of these costs are available because there is no calculus that permits the allocation of costs for joint products simultaneously produced. Further study should be encouraged, but it should be recognized that the marginal costs of one activity cannot be evaluated from a policy standpoint without considering its relationship to other teaching hospital functions. A policy that would decrease the size of a residency program may also mean a decrease in the scope of services available. A policy that would increase emphasis on primary care education cannot be done without access to patients with routine problems. A policy that advocates a high priority to develop advances in medical care necessitates not simply funds, but clinical fellows, faculty, patients, and other institutional resources. Any attempts to segment the unique characteristics of academic medical centers into measurable units run the risk of ignoring the fact that their contributions are the products of many inter-related programs, which together provide the environment and resources required for teaching future health manpower and advancing medical knowledge and practice.

Summary

Creative solutions to problems in medical services are welcome, and advocates of price competition have made a major contribution to stimulating a re-evaluation of the status quo. Any legislation that would bring about reforms as broad as those advocated by price competition merit careful study. This

document has reviewed the potential impacts of price competition on teaching hospitals. It is not a policy statement, but a document intended to stimulate further discussion of price competition which will result in constructive, sound recommendations to those responsible for charting the future course of the health care system.

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COMPETITION AND THE MARKETPLACE APPROACH TO
CONTAINING THE COST OF MEDICAL CARE

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Four or five years ago, the nation appeared to be moving inexorably toward a medical care system dominated and controlled by federal and state regulatory activities. The 1972 Medicare Amendments, PSRO legislation, federally-mandated health planning, HMO support, efforts to pass federal cost containment legislation, and the initiatives of a handful of states in passing state cost containment bills - all cascaded on to the medical care system during the first part of the 1970's. In 1980, surprisingly, not only is it considered appropriate to talk about the creation of a medical marketplace which is based on competition and either no further regulation or actual deregulation, it has become almost the "in" thing to do.^(1, 2) Words such as "deregulation" and "medical marketplace" cause an almost "knee jerk" response from most of us in the health industry which says "that's great, let's do it - anything but more government intrusion in our institutions." Not only are we delighted to hear these words, but there is a feeling of great relief that maybe for the first time we do have alternatives and a positive choice, rather than constantly being defensive and acting accordingly.

However, we should not be misled or believe that the existence of choice is problem-free, since the real choice is between alternatives which have similar goals. That is, the alternatives are intended to decrease the number of dollars flowing into the medical care system. On the government regulation side, we have witnessed

the absurdities of continued opposition to CAT scanners, planners attempting to regulate the supply of beds plus or minus 5% over a 10 year period, multiple costly delays and legal actions, and proposed federal legislation which moved under the banner of cost containment, but had a pass through for labor costs (fully 60% of hospital costs). If the medical care system continues to follow this course, those of us in it can only see ahead more of the same, yet worse, and a real concern for the continued vitality and quality of the system.

There is no need to further belabor the sins of omission and commission of legislation which seeks to regulate a large dynamic and rapidly changing service industry through an ill-formed and non-accountable bureaucracy. For the federal government to attempt to do so in a continental nation of over 220 million people with over 7,000 hospitals and 400,000 doctors patently has not worked and will not work. To try to move regulation to the state level under federal guidelines and to dictate the behavior of vastly different states with differing needs and with citizens of different views of how to meet the needs are only slightly less ridiculous.

But is a competitive marketplace clearly a better choice? One choice, government regulation attempts to decrease the supply side. The other, competition is aimed at the demand side - both seek to limit the dollars flowing into the medical care system. We ought to look at the possible consequences of the "new" choice. Some of

them may be as unpalatable as regulation. Perhaps the choice is not one or the other, but regulation which fosters some competition based on a restructuring of the tax laws and payment mechanisms for medical services.

In order for the marketplace idea to work, government action will be required. For example, tax laws could mandate (1) a single level of payment by employers on behalf of employees, (2) consumer choice among competing health systems and/or providers, and (3) some limitation on first dollar coverage. Presumably, consumers would make different choices depending upon their circumstances and needs. Some would spend additional dollars in order to buy more expensive services; others would choose the least expensive alternatives. Through control of their costs and therefore their prices, providers would compete for subscribers. Business and labor unions would really bargain with providers concerning the price of services. Catastrophic coverage would be provided, as well as special government support for the care of the aged and the poor.⁽³⁾ Theoretically, problems concerning the distribution of physicians both geographically and by specialty would change over time without government intervention in graduate medical education, given the resulting need for primary care specialists in organized health plans, such as HMO's, prepayment group practices, and IPA's, and the concomitant decline in the need for "super" specialists. The number of hospitals and hospital beds would decline. Cost containment would occur via the

forces of the marketplace and through consumer choice. Undoubtedly, larger hospitals and organized provider systems would grow over time, bringing with them advantages of lower unit costs through volume expansion, reduction of overhead, better capital planning, and generally, greater efficiencies.

It is a model of classical economics. It fits the tenor of the times. But when economists and other proponents write about it so convincingly, they rarely, if ever, look at possible negative consequences. There are at least four which I think must be considered:

1. the potential adverse effect of market competition on the quality of medical care.
2. the effect on the provision of services which are both desirable and necessary, but expensive to provide and therefore cannot be seriously included in a competitive medical care system.
3. the assurance of equity in the amount and quality of services for the poor and near poor, while preserving the institutions, primarily urban hospitals, that currently provide a disproportionate share of services to these groups.
4. the effects of competition on major medical centers and their teaching programs at both graduate and undergraduate levels.

The first concern, the quality of medical care, is a difficult issue.

Except in gross instances of neglect or outright malpractice, the evaluation of the quality of diagnostic and treatment procedures for individual patients in group practices or doctors offices is problematic. Because quality is so difficult to define, we have tended to measure it in terms of inputs rather than outcomes such as the prevention of death and disability, relief of suffering, etc. (4) We have defined educational qualifications for practitioners and a series of standards for hospital practices and operation. In general, the entire system operates on the assumption that more is better. That is, economic incentives in the system have (to an extent not easily quantified) led to doing more procedures than are necessary, both operative procedures and various kinds of tests ranging from simple, high volume blood tests to much more sophisticated procedures such as cardiac catheterization and endoscopy. The fee-for-service system of reimbursement of physicians and the cost reimbursement of hospitals have both fostered this approach to quality and have undoubtedly contributed to the soaring costs of medical care. (5) Since the system is measured on the basis of inputs, a major target for the limitation of costs is the regulation or rationing of inputs such as bed days, tests, procedures and capital expenditures.

On a capitation basis, HMO's have been shown to lower the amount of dollars spent on hospitalization and procedures. Where true competition would exist between organized systems such as HMO's, the

effect on limitation of inputs (and costs) through price competition for premium dollars paid by individuals should be even greater. Moreover, if first dollar coverage (in the form of either copayments or deductibles) were required of individuals, the consumer would probably play a role along with physicians in limiting the number of dollars required for medical care.

However, there is obviously a flip side to this observation. If the present system is criticized for doing too much and if, in fact, the incentives foster doing too much, it may also be true that in the competitive marketplace approach, the incentives will result in doing too little for optimal care. Consumers may seek medical care later than they should if first dollar coverage is significant. Providers may do less than they should if price becomes a major concern, and then limit inputs or services to protect their incomes or profits. No evidence exists to date that well-run HMO's prepayment group practice plans, or IPA's provide less patient care than is necessary. But we must remain conscious of the fact that, if consumer choice and marketplace economics were predominant, and if medical care systems were competing on a price basis, the possibility of loss of quality through doing too little is real.

Of course, one answer to that possibility is for the consumer to know when needed services are being withheld or the best available care is not being provided, either in terms of diagnosis or therapy. Yet, this is usually the case only in terms of access to a physician

or to the amenities in a hospital, and less likely to be true concerning the actual diagnosis and treatment of individual complaints or illnesses. If the answer to the potential erosion in quality is that providers will assure that everything necessary and effective is being done in diagnosis and therapy, then it puts the assurance of using necessary resources on the shoulders of those who have allegedly used too many resources when the incentives were in the opposite direction. In short, we will need additional mechanisms to assure that price does not limit quality by withholding services, just as PSRO, utilization review, etc., were put in place to make sure that the lack of competitive price constraints did not result in unnecessary procedures and hospitalization.

The quality issue has another dimension. Overall, new knowledge and technology in medicine have cost more money, not less. The reluctance of systems based on price competition to introduce new costly technology, even if it were effective, would be natural. On the quality issue then, legitimate questions can be raised to which there are no current answers, especially since they involve predicting human behavior under new, differing and untried circumstances.

The second issue - the provision of services which are necessary and desirable, but which do not fit neatly into a competitive system - is equally difficult. In the main, hospitals are organized and staffed to meet two sets of needs: those of the routine patient, and those of the patient who has an emergency or who develops one

while in the hospital. Standby services for the seriously injured and other specialized services such as cardiac surgery and sophisticated radiotherapy, drive costs up. For that reason, as well as concerns about quality, these services are not provided, nor should they be, in all hospitals. To talk about competition in these areas is therefore unwarranted.

While hospital reimbursement and pricing structures may themselves distort the picture, the facts are that a hospital geared up to provide specialty and emergency services is simply going to be more expensive for routine care than another institution which does not provide these services. In a time of price competition, something would have to be done to preserve the financial integrity of institutions providing special services. There is another and simple illustration of that fact. Through lowered overhead costs and more easily scheduled hours, ambulatory surgical centers can do simple surgical procedures less expensively than hospital operating rooms. However, one cost not calculated in these centers is that associated with emergency standby facilities geared to handle the inevitable, unintentioned accident in patient care such as cardiac arrest or a misadventure with anesthesia. While rare, incidents like these do occur from time to time. To put it bluntly, if hospitals, and/or any organized system of medical care behaved solely as profit-oriented economic instruments, the backup and support services would almost certainly be abandoned. On the assumption that these services

are necessary and desirable for society and do not fit neatly into the competitive model, then some provision would have to be made for their continued availability.

A third concern is how do you assure equity in the amount and quality of services for the poor and near poor. The needs of these groups and the consequent expense of providing for their needs are quite different than those for the population as a whole. Depressed socio-economic groups, for example, often require a variety of costly support services. In an urban hospital serving a poor population, the social work department is large, costly and essential. In hospitals serving a more affluent and self-sufficient population, this department may be and often is nonexistent. Also, differences exist in the burden of disease, much more of it being related to severe forms of malnutrition, alcoholism, drug abuse, etc. Dealing with the problems of teenage pregnancies, as another example, is a much different and more costly process than running an obstetrics practice and an obstetrics suite in a suburban hospital. All told, the hospital in the poor urban area becomes an instrument to deal with social problems, in addition to a marketer of medical services. These special circumstances are not easily subject to or controlled by price competition. Even if government provides funds for the poor, hospitals located in poor areas would clearly be at a competitive disadvantage relative to other institutions.

Fourth and finally is the question of what happens to the large complex, mostly urban, major medical centers as a result of free

market competition. These centers are usually heavily involved in teaching programs at both the graduate and undergraduate levels. In general, they are also characterized by being largely involved in tertiary, highly sophisticated care, and provide a disproportionate share of ambulatory and inpatient care to poor inner-city populations. The peculiarities of cost imposed by these latter two activities, plus the added and real cost of training health professionals (a major proportion of which is paid through patient care dollars), means that there simply is no way that they can compete on a price basis alone. This concern is not an abstract one. Some years ago, the Group Health Association of Washington, a prepaid group practice plan, moved the majority of its patients and physicians from a major teaching hospital in Washington, D.C. on the basis of the high costs of a university teaching hospital. More recently, the same organization proposed to build an affiliated hospital to be operated by the same university hospital, but which would have no medical students or residents in order to hold down costs.⁽⁶⁾ Other prepayment group practice plans, such as those in Minneapolis and in Boston, have either negotiated prices with hospitals for the care of their patients and/or purchased community hospitals in order to avoid the added costs of hospitalizing patients in teaching hospitals.⁽⁷⁾ To date, prepayment group practice plans (HMO's) have not as a whole limited access to very expensive services such as open heart surgery, radiotherapy or cancer care. They have generally approached that problem by buying those services from institutions that provide them. But they have

also avoided both the high capital and high operating costs that are associated with providing those services directly.

If there were a truly competitive system, one of the results would certainly be that the teaching hospital, as we know it today, would become increasingly a place of referral for patients who require the sophisticated, expensive, commonly termed "tertiary" kinds of care. In a competitive system, teaching hospitals would presumably compete for that type of patient only. This raises the question of where teaching would occur if teaching costs were not borne by the competitive systems. Certainly, all instruction for surgeons of the future cannot be on patients who require radical cancer surgery, open heart surgery or neurosurgery done under the microscope. The future internist cannot be trained solely in that environment either.

On the ambulatory care side, no one has successfully addressed the issue of how one absorbs the cost of primary care training in HMO's and competitive practice plans. Most of that training currently occurs in hospital outpatient departments in urban settings. For the system as a whole, the problems posed by a free marketplace and price competition certainly are those related to the continued supply of well trained manpower.

On the one hand, given the possible, probable and already real problems posed if we make the choice of marketplace competition in the medical care system, should we then support this emerging alternative

as a means of controlling the costs of medical care? On the other, if regulation increases, the major alternative seems to be that the provision of medical care becomes a function of government. Without a fundamental change in direction, such as the marketplace concept, it seems a virtual certainty that we will see the emergence of universal coverage through a national health care system, and the consequent loss of the pluralistic system. But whether we choose one or the other, it is important to make clear that the choices are not starkly different ones between regulation and no regulation.

In terms of actual change, the marketplace model would have less effect on the individual practitioner (although it would undoubtedly alter the opportunities for entry into and practice of certain specialties) than on hospitals. The growth of multi-hospital systems, and new and shifting alliances between physicians and hospitals, would likely occur. Perhaps new methods for the financing of graduate medical education would be necessary. Another probable outcome is an acceleration of the process of concentration of tertiary care in expensive and complex large urban hospitals already proceeding through health planning and regionalization. These, along with other consequences examined earlier, are not necessarily undesirable, although they will be very painful to some providers. We ought to understand that they are highly likely to occur.

In the event of a competitive marketplace, government will still be a major actor, and regulation will continue. Hopefully, however,

government will be acting to foster the forces, develop the incentives for behavior change in the system, and provide for those necessary services which are at the margins and/or cannot be provided within a competitive system such as services for the poor. Perhaps government can become less an adversary and more a partner.

But for that to occur it will require a new assumption of responsibility on the part of providers or other and new kinds of arrangements which providers have here-to-fore been unwilling to accept. For instance, PSRO's were originally designed to assure quality of care. Their main function to date has been to retrospectively examine services provided to assure that they were necessary and to recommend withholding payment if deemed unnecessary. Presumably PSRO's could be turned in the direction of assuring that services were reasonably provided and not withheld in this new order of things in order to increase the income to providers. To have providers basically looking for fraud and abuse does not have much credibility in the present system. To have them the sole judges of quality in a competitive system is likely to have even less. Few in our society seem willing to accept the judgments of the automobile manufacturers or the utility companies concerning quality and there is no reason to believe that is true of or likely to be true of the medical care industry in the future, particularly if the system competes on the basis of price for "customers." Unless we are willing to find new mechanisms then to examine "quality" issues, government will still play in the game in the same way. In Maryland, there is a serious proposal to have a statewide commission on quality which is nongovern-

mental, made up of appointed leading citizens, with a responsible scientific staff to examine "quality" issues. It will not be provider dominated nor dominated by government. Whether that is possible to achieve or would work is unknown at this time. But it is at least a possible alternative and some sort of mechanism is necessary.

The one thing that we cannot do is argue for the continuation of the status quo. There is hardly a force on the American scene today, government, business, labor, organized consumer groups, or what have you, willing to accept a "business as usual" approach to the problems of the medical care delivery system and its costs. We in the industry can do better than argue for the status quo or a return to the "good old days". By accepting the need for change, we can help bring it about by unleashing the talents, the skills and the thoughts of the private sector. We can have change by insisting on the restructuring of tax laws and payment systems which will bring to the medical care system some honest incentives for consumers, providers, and government alike. The alternative is the "dead hand" of the government which stifles needed change, does not recognize nor tolerate differences, and once in place, is rarely removed.

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CONSUMER CHOICE: MAJOR POLICY ISSUES

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CONSUMER CHOICE: MAJOR POLICY ISSUES

Executive Summary

The purposes of this Brief are to present a general conceptual definition and framework for analyzing consumer choice approaches to moderating health services demand and to identify significant policy issues that relate to the employed population, the Medicare and Medicaid populations, and a movement toward a competitive marketplace environment. Future Policy Briefs on this subject will investigate various aspects of the major issues outlined in this document in greater depth.

Consumer choice approaches are generally defined to be those proposals, legislative or otherwise, that would:

- Increase the financial involvement of consumers in the purchase of health insurance benefits or of individual services; and
- Increase the number of health benefit plan choices available to the financially-involved consumer.

The American Hospital Association has identified three basic principles for meeting these consumer choice objectives:

- A limitation on the tax-free status of employer contributions to employee health insurance plans;
- A fixed and equal contribution by the employer to all employees; and
- Mandatory choice of insurance plans

Consumer choice approaches should be distinguished from "pro-competitive" approaches, i.e., those that would prescribe specific organizational mechanisms for increasing price competition among insurance carriers and HMOs and, in turn, among health providers. Consumer choice approaches do not mandate changes in community health delivery systems, nor do they necessarily imply a total absence of government regulatory mechanisms.

Major Policy Issues

- The employed population has been the primary focus of consumer choice discussions to date.
- Strategies to increase the financial involvement of the employed consumer raise the following issues:
 - How and at what level should limitations on employer contributions toward employee insurance plans be set?

- Should a limitation on the tax-free status of employer contributions relate not only to the employee's gross income but also to the employer's business expense deduction?
- What safeguards, if any, are necessary to minimize the potential for consumers underinsuring?
- Is it desirable and feasible to test and evaluate these strategies on a limited, experimental basis?
- Strategies to expand the choice of benefit plans for the employed population raise additional issues:
 - Should minimum numbers and/or types of benefit options be required? How should they be defined?
 - Should minimum numbers and/or types of insurers/carriers be required? How should they be defined?
 - What safeguards are necessary, if any, to avoid potential problems of adverse selection?
- Some proponents of the consumer choice concept have advocated its extension to the Medicare and Medicaid populations through the use of vouchers for the purchase of private health benefit plans.
- While voucher systems could lend predictability to governmental financial obligations and promote a more economically rational mix of benefits and continuity of care, a number of major concerns nonetheless exist:
 - The heterogeneity of the over-65 population with respect to their needs for medical insurance may result in a mixed, and sometimes socially undesirable, set of outcomes.
 - The Medicaid population has a limited economic involvement in medical care enrollment and utilization decisions by definition.
 - A voucher system could create significant adverse selection problems for the Medicare and Medicaid populations.
 - A voucher system may result over time in significant benefit reductions for the Medicare population.
 - A voucher system would be administratively complex for both Medicare and Medicaid because of peculiar characteristics of the eligible populations.

Moving From Consumer Choice to Marketplace Competition

- Many proponents of consumer choice approaches theorize that they will

result in a climate of increased marketplace competition, manifested by:

- Price and service competition among new and existing carriers and alternative delivery systems to secure and maintain consumer enrollment; followed by
- Price and service competition among providers for contracts with the various carriers and alternative delivery systems.
- Major questions which arise from this hypothesis include:
 - Will consumer choice in fact increase competition in most communities?
 - In what manner will insurers and ADSs translate competition into contractual and payment arrangements with providers?
 - How will various classes of institutions with unique roles (e.g., education and research) effectively compete on a price basis?
 - What current government regulatory mechanisms should be amended or eliminated in order to support the evolution of market forces at the community level?

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CONSUMER CHOICE: MAJOR POLICY ISSUES

I. Introduction

Containment of health care costs will continue to be a major concern of government. It is probable that government will continue to apply supply-side regulatory controls to limit health and hospital care expenditures in the absence of an alternative mechanism. Consumer choice approaches to health care financing, aimed at greater involvement of consumers in the economic consequences of choosing health insurance and receiving services, represents a promising alternative. Consumer choice approaches are intended to moderate health service demand and to place more of the decision in the hands of the American public as to how much of the nation's resources will be devoted to health care.

The basic purposes of this policy brief are as follows:

- to generally define consumer choice approaches;
- to present a general conceptual framework for analyzing consumer choice approaches; and
- to identify key consumer choice policy issues as they relate to:
 - the employed population
 - the Medicare and Medicaid populations
 - movement toward a competitive marketplace environment

Definitions

For purposes of this discussion, consumer choice approaches are generally defined to be those proposals, legislative or otherwise, that would (1) increase the financial involvement of consumers in the purchase of health insurance benefits and of individual services, and (2) increase the number of health benefit plan choices available to the financially-involved consumer. The American Hospital Association has identified three basic principles for meeting these consumer choice objectives:

- a limitation on the tax-free status of employer contributions to employee insurance plans.
- A fixed and equal contribution by the employer to all employees.
- Mandatory choice of plan.

Theoretically, the concepts of consumer choice can be applied to the employed, the elderly and the medically indigent. An incremental approach to implementation, starting with the employed population, because of its size, has been suggested by many proponents of consumer choice. As is discussed later, many questions have been raised as to whether consumer choice approaches can be effectively applied in any case to the Medicare and Medicaid populations.

Consumer choice approaches need to be distinguished from "pro-competitive" approaches. Proponents of consumer choice legislation view increased consumer financial involvement and expanded choice of benefit plans as a first step toward increased price competition among private carriers and HMOs, and in turn, among hospitals and other providers. Pro-competitive advocates would move one step further, mandating specific competitive forms of organizational arrangements among hospitals, physicians and other providers. Consumer choice approaches do not mandate specific changes in community health care delivery systems, nor do they necessarily imply a total absence of government regulatory mechanisms.

II. Key Policy Issues Associated With Consumer Choice

To follow is a discussion of key choice issues for the employed population, as well as for the Medicare and Medicaid populations. The self-insured and uninsured populations are not examined in this document.

The Employed Population

The primary focus of consumer choice discussions to date has been on its applications to the employed population, the largest simple insured group in the United States.

Traditionally, employer group efforts in moderating health care expenditure increases have been oriented toward influencing provider behavior; i.e., supply-side strategies. Examples of such efforts are business education of corporate staff who are hospital trustees, and business and labor participation in areawide health planning. Consumer choice approaches, on the other hand, are aimed at motivating and assisting employers and/or employees to become prudent purchasers of health benefit programs and services; i.e., demand-side strategies (See Exhibit I).

As indicated in Exhibit IA, there are three basic, inter-related components of consumer choice strategies applied to the employed population: education and health promotion efforts aimed at employers and/or employees; increasing consumer financial involvement in health economic decisions; expanding choice of health benefit plans to the financially-involved consumer are briefly discussed below:

- Education and Health Promotion Strategies

Educational and health promotion efforts of a voluntary or legislated nature can influence health services demand.

It seems likely, that such efforts by themselves will not dramatically moderate consumer demand in the foreseeable future. Increasing consumer financial involvement and expanding choice of benefit plans are believed to be essential to creating the overall climate in which educational and health promotion efforts can have their maximum effect.

• Strategies for Increasing Consumer Financial Involvement

Theoretically, increasing consumer financial involvement in health decisions can be accomplished through voluntary means. From a practical standpoint, however, federal legislation is needed to stimulate a significant level of consumer financial involvement in a timely manner.

Further, of the legislative options available, the most effective strategy is to change tax incentives directed at point of enrollment, rather than at point of delivery.

Effective tax incentive strategies should involve two key features:

- a fixed contribution level by the employer to all employees;
- a limitation on the tax-free status of the employer's contribution.

Key policy issues that need to be addressed within the foregoing context follow:

- How and at what level should the contribution limit be set (e.g., on the basis of dollar amounts or services, adjustments for national and/or regional economic conditions, etc)?
- Should the limitation on the tax-free status of the employer's contribution relate to not only the employee's gross income but also the employer's expense deductions?
- What safeguards, if any, are necessary to minimize the potential for consumer underinsuring? For instance, should there be any limits on the "savings" (i.e., the amount by which the employer's contribution exceeds the cost of the health plan purchased by the employee) that is retainable by the employee as either tax-free or taxable income? For favorable tax treatment, should any benefit plan offered by an employer and selected by the employee be required to meet minimum benefit and/or catastrophic requirements; if so, what should be the nature of those requirements?

- Is it desirable, and feasible, to test and evaluate the application of consumer choice approaches to the employed population on a limited, experimental basis?

- Strategies for Expanding Choice of Benefit Plans

The employee's opportunity to purchase prudently is related to the range of benefit plans available to choose from. Key public policy issues that need to be addressed in this regard are:

- Should there be minimum numbers and/or types of benefit options, and if so, how should they be defined?
- Should there be minimum numbers and/or types of insurers/carriers and if so, how should they be defined?
- What safeguards are necessary, if any, to avoid potential problems of adverse selection, wherein the highest medical risks may be "priced-out" of the market as they gravitate to broad coverage plans (e.g., community rating and periodic open enrollment requirements on qualified health plans, limitations on employee changes in enrollment, geographic limitations on qualified plan operations, minimum assurances of carrier financial solvency, etc.)?

The Medicare and Medicaid Populations

Although the major focus of consumer choice proposals has been the employed population, some proponents of the concept have advocated its extension to Medicare and Medicaid.

In general, consumer choice for these groups would be promoted through the use of a voucher system. Vouchers would be used for the purchase of private health benefit plans chosen by the individual beneficiaries. The amount of the voucher might be scaled to income. Beneficiaries might be permitted a cash rebate of the difference between the amount of the voucher and the price of the plan chosen. Generally, this latter feature has been advocated for Medicare but not for Medicaid.

The general arguments that have been offered in favor of applying consumer choice concepts to the elderly and medically indigent are as follows:

- The current Medicare and Medicaid programs have few incentives to control demand by beneficiaries.
- A voucher system would lend predictability to governmental financial obligations.

- A voucher system could promote a more economically rational mix of benefits and continuity of care for beneficiaries, especially to the extent that it would encourage enrollment in alternative delivery systems.
- A voucher system could promote more uniform eligibility standards for the Medicaid program, thereby potentially improving insurance coverage for the medically indigent.

On the other hand, a number of major concerns have been raised over consumer choice applied to these population groups, including:

- The heterogeneity of the over-65 population with respect to their needs for medical insurance (well vs. chronically ill; poor vs. non-poor) is greater than for the general population and may result in a mixed, sometimes socially undesirable, set of outcomes. For example, the poor aged might buy low-option coverage simply to receive the cash rebate. If the rebates were eliminated, however, there would be little incentive to choose other than the broadest benefit package. The amount of the voucher would have to be large to ensure adequate opportunities for the poor and sick aged to enroll in private insurance plans; however, this also would increase the incentive to take a cash rebate.
- The Medicaid population is unlikely to respond to consumer choice incentives because, by definition, their economic involvement in medical care enrollment and utilization decisions is very limited.
- For both the Medicaid and Medicare populations, an intense education program might be necessary to apprise beneficiaries of the benefits of a voucher system and to assist them in making prudent choices among plan options.
- Unless appropriate safeguards can be established a voucher system could create significant adverse selection problems. Also, it is unclear how many carriers and HMOs in various parts of the country would offer benefit plans to the Medicare and Medicaid populations under consumer choice.
- A voucher system may result over time in significant benefit reductions for a large portion of the Medicare population, without necessarily reflecting consumer choice. To the extent that beneficiaries respond to financial incentives to purchase low-option coverage, they may either reduce their benefits or increase their cost-sharing. The voucher itself may become a mechanism to limit benefits, since positive action would be required to make the amount of the voucher reflective of inflation and changes in the medical care system.
- To the extent that the goal of a voucher system is to promote a more rational mix of benefits and/or continuity of care for the aged, it is administratively complex and uncertain method

of achieving these goals. Because Medicare is a monopsony (single buyer), there may be no need to rely on pseudo-market mechanisms to improve the economic rationality of decision-making.

- A voucher system may create complex administrative problems for the Medicaid program because of the economic and geographic transience of the eligible population. The economics of alternative delivery systems will not be realized to the extent that the transient nature of the population frustrates continuity of services. The moral hazard problem (taking advantage of the fact of coverage) could create financial problems for insurers and especially HMOs, which rely on continuous enrollment to level their actuarial risks.

III. Moving from Consumer Choice to Marketplace Competition

Many proponents of consumer choice theorize that increased consumer financial involvement in health benefit transactions, coupled with expanded choice of insurance options, will result in increased marketplace competition in health care. Specifically, such a result would be manifested in:

- A climate of intensified competition (on a price as well as service basis) among existing and new carriers and alternative delivery systems to secure and maintain consumer enrollment; followed by
- Intensified competition (on a price and service basis) among hospitals and other providers for contracts with the various carriers and ADS.

Major questions which arise with respect to this hypothesis include:

- Will mere enactment of consumer choice legislation in fact result in increased competition among insurers and ADSs in most communities? If so, over what time period would it occur?
- In what manner would insurers and ADSs translate such competition into contractual and payment arrangements with hospitals and other providers (e.g., selective contracting, competitive price-bidding for individual services, negotiated budgets, capitation payments, etc.)?
- How will various classes of institutions with unique roles effectively compete on a price and service basis (e.g., hospitals with significant standby capacity needs, teaching and research institutions, public and private hospitals with significant uncompensated patient care loads)? What legislative or other safeguards may be necessary for such classes of hospitals?
- What current government regulatory mechanisms should be amended or eliminated in order to support the evolution of

market forces at the community level? What if any new forms of regulatory mechanisms may be needed? When, and in what manner, should such changes occur?

Conclusion

This document has presented a general definition of consumer choice approaches as distinguished from pro-competition approaches and has set forth a general framework for analyzing consumer choice approaches to the employed population. In addition, a number of key public policy issues regarding consumer choice are outlined that require in-depth study by the AHA in concert with its various constituencies. These issues include, for example, appropriate tax law changes to financially involve consumers at the point of health plan enrollment, appropriate minimum requirements for choices offered to employees, appropriate safeguards related to under-insurance and adverse selection, and the potential implications for various classes of hospitals in moving from consumer choice to marketplace competition.

EXHIBIT
Conceptual Framework:
Consumer Choice Approaches Applied to the Employed Population

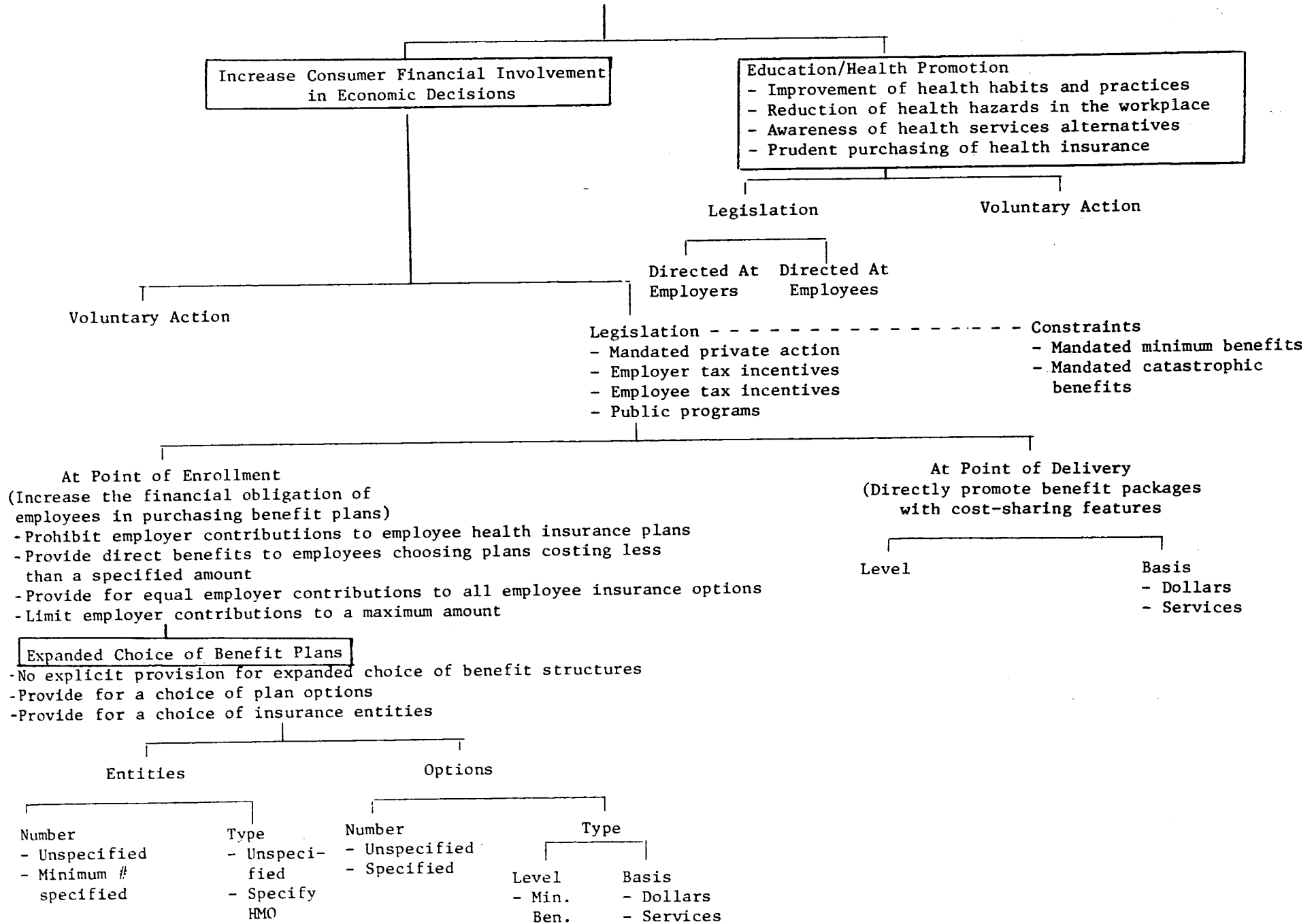
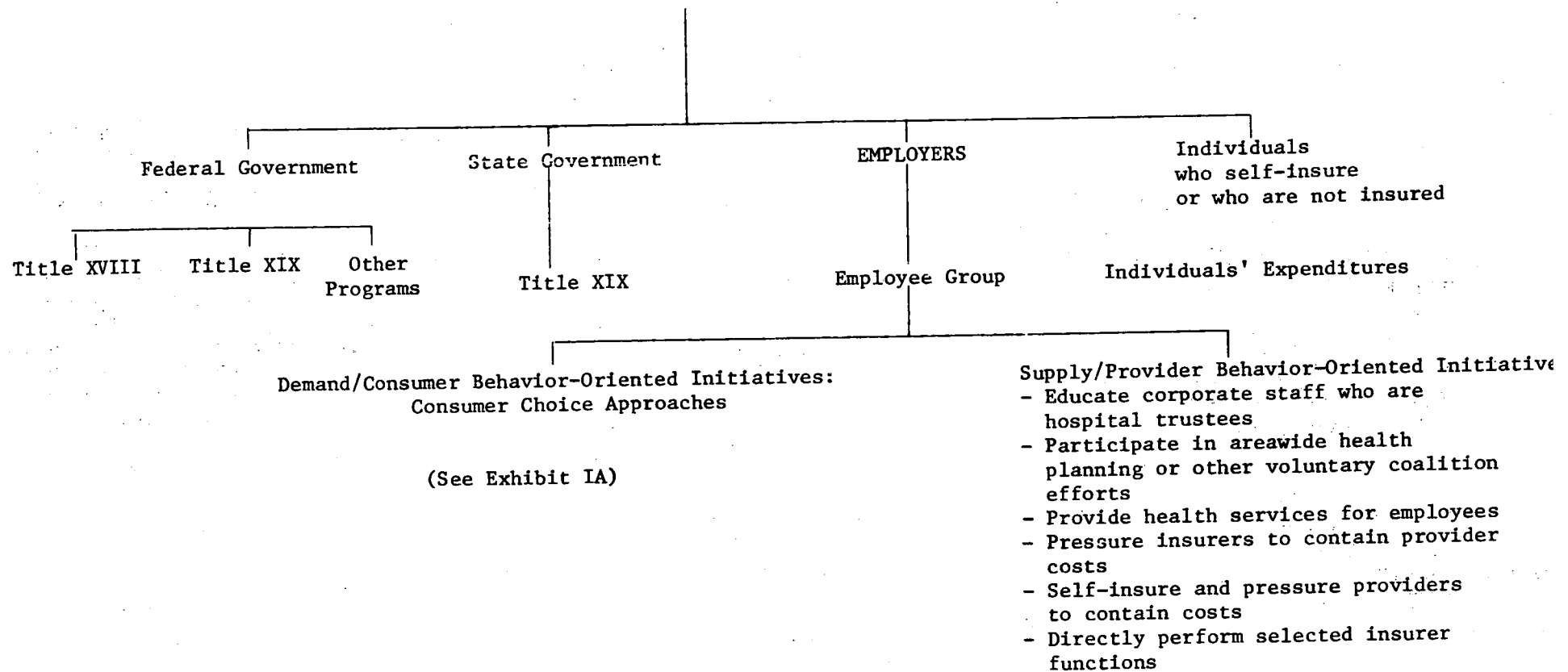


EXHIBIT I
Moderation of Health Care Expenditures Increases



Comparison of Three Bills Promoting Price
Competition in the Health Care Market Place

	<u>Gephardt (H.R.850)</u>	<u>Durenberger (S.433)</u>	<u>Hatch (S.139)</u>
Multiple Choice of Health Plans	Individuals would be permitted to choose among all qualified health plans, regardless of place of employment.	Employers with more than 100 employees would be required to offer at least three health plans, each of which is sponsored by a separate carrier.	Employers with more than 200 employees would be required to offer at least three health plans, each sponsored by a different carrier and one of which requires at least a 25 percent copayment for hospital services up to 20 percent of annual income.
Premium Payments	Employer contribution would have to be the same, regardless of the employee's choice of plans.	Employer contribution would have to be the same, regardless of the employee's choice of plans.	Employer contribution would have to be the same, regardless of the employee's choice of plans.
Rebates for Selection of Lower-cost plans	Employee selecting plan with premium that is less than the employer contribution would receive tax-free rebate.	Employee selecting plan with premium less than employer contribution would receive rebate, but the rebate would be subject to income tax.	Employee selecting plan with premium less than employer contribution would receive tax-free rebate.
Limit on non-taxable status of premium contribution	Employer contribution would be tax-free up to the average premium cost of all qualified plans for the geographic area and actuarial category of the employee.	Employer contribution would be tax-free up to \$125 a month per family.	No limits
Catastrophic Coverage	Out-of-pocket health care expenses for a qualified plan's services that exceeded <u>\$2,900</u> a year must be covered by the plan.	Out-of-pocket health care expenses for a plan's services that exceeded <u>\$3,500</u> a year must be covered by the plan.	Out-of-pocket health care expenses for a plan's services that exceeded 20 percent of the subscriber's income (wage & net earnings from self-employment) must be covered by the plan.

(OVER)

Gephardt
(H.R.850)

Durenberger
(S.433)

Hatch
(S.139)

<p>Medicare Medicaid</p>	<p>Medicare beneficiaries would receive vouchers to select current Medicare coverage or an alternative qualified plan. As soon as 50 percent selected an alternative plan, the voucher contribution would continue but Medicare would no longer participate as a qualified plan. After four years, states could opt out of the Medicaid system in favor of a federally-administered voucher system. State contributions under this approach would be limited to 1981 expenditures indexed for inflation.</p>	<p>no provisions</p>	<p>A 20 percent coinsurance for all hospital days would replace present Medicare coinsurance provisions, and all out-of-pocket expenses above 20 percent of a beneficiary's income would be covered.</p>
<p>Uninsured/ Bad Debts</p>	<p>Individuals not receiving a premium contribution from an employer would be eligible for a tax credit for premium payments. Open enrollment in plans would be required with some exceptions. For individuals not enrolled in a qualified plan, bad debts arising from services to these individuals would be reimbursed at 50 percent of the customarily-billed charge.</p>	<p>Plans must include provisions for continued coverage in the event of unemployment, divorce, or death.</p>	<p>Plans must include provisions for continued coverage for those who would lose coverage due to a change in circumstances. Individuals who cannot obtain insurance through a group plan would be eligible to purchase catastrophic coverage at not greater than 125 percent of the average for large group rates in the area.</p>
<p>Deregulation Provisions</p>	<p>Repeals PSROs, uniform reporting, capital expenditure limitations, health planning, and Hill-Burton requirements. Medicare's customary charge limits for physician services and reasonable cost reimbursement for hospitals would be discontinued.</p>	<p>no provisions</p>	<p>no provisions</p>

AN ANALYSIS OF PROPOSED COMPETITIVE HEALTH SYSTEM PLANS
AND THE IMPLICATIONS FOR TEACHING HOSPITALS

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by

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INTRODUCTION

The substantial escalation in the cost of health care over the past two decades, coupled with significant increases in the demand for funding of other national needs, has prompted close attention to the issue of health costs. Three basic approaches to this issue have evolved: direct price and cost regulation; reliance on the national voluntary effort of hospitals, physicians, and other health professionals; and competition in the health system. In an effort to minimize the necessity for the regulatory approach, a growing number of health professionals, economists, business groups, and congressmen appear to be favorably disposed toward the establishment of an increased level of competition. Such a system would involve fundamental change in the way health insurance and services are selected and purchased as a means to stimulate cost consciousness among providers and consumers who eventually become patients.

Proponents view increased competition in the health care marketplace as a means of reform by which to provide incentives to both consumers and providers to modify their behavior in a manner designed to encourage cost consciousness, reduce demand for services, and trigger other changes in the delivery system. Health insurance plans and Health Maintenance Organizations (HMOs) would be encouraged to compete for enrollees, primarily on the basis of premium rates, but also on the benefits or services they offer. These competitive plans would serve as the foundation of an altered health care system for the nation. The proposals for competition, offered as alternatives to the present financing of the health care system, would initiate changes such as tax reform and/or the requirement that employers offer multiple health plan choices to their employees. One prominent proposal is the Consumer Choice Health Plan, developed by Enthoven, which is designed to adjust consumer and provider behavior, primarily through

financial incentives and rewards. The focus of competition proposals on the service demand issues underlying health care expenditures is attractive because of the potential for cost containment without further regulation. While acknowledging these positive features of the competition approaches, this paper will concentrate on some of the other aspects which have not yet received sufficient attention.

The evolution of these competition proposals has caused a great deal of concern among teaching hospitals because of the potential adverse impact of competition on their multiple responsibilities. Enthoven acknowledged the validity of these concerns when he stated, "For them to be able to compete, the teaching and research costs of university medical centers would need to be separately identified and subsidized on their own merits."¹ The theoretical approach to financing teaching hospitals under competition described later in this paper is set forth as one option to encourage further discussion regarding the implications and practicality of this concept.

This paper will describe the characteristics of health care competition; raise questions concerning some of the assumptions underlying the proposals, including the likelihood of competition being accompanied by increased regulation; present the basis for teaching hospitals' concerns with competition, including the risks to their multiple contributions to society; examine one theoretical approach for recognizing the unique needs of teaching hospitals within a competitive system; and, finally, review some of the related future challenges for teaching hospitals.

CHARACTERISTICS OF HEALTH CARE COMPETITION

The procompetition bills have various combinations of at least six objectives, some of which are in conflict as is usually the case with complex

legislation. A primary objective is control of federal expenditures through removal of open-ended commitments to Medicare and Medicaid and to income tax deductions for health care expenditures. The second objective is to assure a politically acceptable minimum level of services at a controlled level of expenditure. A third objective is to preserve the right of individuals, private industry, and state and local governments to allocate more resources to health, while removing all federal incentives for them to do so. Another objective is to discourage exercise of the freedom provided under the third objective by promoting cost consciousness in an effort to preserve more resources to satisfy other societal needs. The fifth objective is to reduce the regulatory burden of federal and other governmental agencies that has contributed significantly to the health cost increase.² The last objective is to promote flexibility in delivery systems.

In attempting to meet the last two objectives, some of the most serious contradictions arise. From one perspective, removal of such constraints as health planning, rate setting, and restrictions on the corporate practice of medicine may reduce governmental barriers to delivery of health care by qualified individuals and institutions. Others view deregulation as an opportunity to remove many of the limitations on the scope of practice currently enforced by state government through professional licensure, thus permitting nonphysicians to perform many of the tasks now limited to physicians and permitting technicians to perform many of the functions presently limited to professional nurses. Some proponents also perceive deregulation as an opportunity to eliminate state and federal regulations requiring institutional peer review. There is a danger that deregulation of the health care system will be viewed as an opportunity to remove all governmental control of professional licensure so that some of the demand for health care can be satisfied by the unproven and possibly the unqualified.

The promotion of competition is advocated for two distinct markets related to health care. The first is the health care insurance market. Competition would be promoted in several of the proposals by mandating that each consumer be offered a choice among several competitive plans, each with various levels of benefits or out-of-pocket expenses. It is theorized that individuals will opt for low cost plans in making their selection. Several of the proposals offer an incentive for each individual to select a low cost plan, even when the plan is purchased by employers or government, by providing the individual a cash rebate of a portion of the cost savings.

Second is the health care service market, which would be affected through both competitive plans and direct participation of patients in payment. Most proposals are based on the assumption that increased competition in the insurance market will lead insurers to shop for the least expensive providers and limit their purchase of services to these providers. Some plans, as in the case of many HMOs, would actually become providers by operating their own facilities, directly employing professionals, and providing services. Some proposals also seek to promote cost consciousness by the patient when a health care provider and/or services are sought by increasing the use of out-of-pocket payments. With both health plans and patients exhibiting greater cost consciousness, it is expected that physicians, hospitals, and other providers would also become more concerned with costs, leading to direct price competition among providers in some market areas. However, the degree of this competition is likely to vary from area to area depending on factors such as distance between providers, size of the market, and perceived quality of care.

The advocates of broadened competition have introduced several bills in Congress which generally embrace the following principles based on the

work of Enthoven, Ellwood, McClure, and others:

- First, each individual would be allocated a fixed sum of dollars by the employer or by government so that the individual could choose among competitive plans. Indigent individuals or families would be provided a governmental voucher to purchase an approved plan of their choice.
- Second, individuals would select one of the competitive plans, but could choose between health insurance plans with comprehensive or lesser coverage or an HMO-type plan. Plans could also vary in the extent of out-of-pocket expenses imposed, but most proposals require a ceiling on patient or family payments to protect against the financial burden of catastrophic illness or injury. In most approaches, only those plans approved by the federal government would be allowed to compete.
- Third, individuals who choose a plan that provides services at a cost lower than the amount allocated by the employer or the government would receive some or all of the difference as nontaxable income -- a reward for diligence in the medical marketplace.

Competition proposals present the framework for major change in the financing, organization and delivery of health services in this country. Some of the possible outcomes of the enactment of a bill to promote competition include the following:

- First, it will lead toward the evolution of a health care financing system made up predominantly of competing plans, encouraging physicians and hospitals to compete on the basis of price or to convince patients and plans that higher charges and fees are justified by either quality or service characteristics.

- Second, some proposals would limit total governmental investment in health care to a federally determined per capita allotment, terminating the open-ended commitment to Medicare and Medicaid and to tax deductions for health care benefits. Arbitrary limits on aggregate health expenditures are avoided by permitting individuals to spend aftertax dollars for additional health care insurance and/or services. Thus, government would control its expenditures without mandating reduced services for all.
- Third, government would discourage employers from exceeding set maximums for health care expenditures by limiting corporate and personal income tax deductions for health benefits to that maximum.
- Fourth, procompetition legislation could temporarily slow the rate of growth of total expenditures for health care in the United States.³
- Fifth, constraints on physician fees and hospital costs would evolve as competitive plans seek to include fee schedules and hospital rates in their agreements to refer patients and pay for resulting care.
- Sixth, services available to some individuals may decline as they choose less comprehensive plans and as competitive plans and providers are motivated to reduce the scope, timeliness, and quality of their coverage and services in response to financial incentives and constraints. It is possible that competition may move providers too far from the focus on providing an adequate level and quality of service, especially for patients afflicted with complex diseases. If this shift in focus occurs, increased

regulation of the availability and quality of care may be anticipated to offset economic disincentives embodied in various plans. Competition would serve primarily as a substitute for price and cost regulation; it would not be a substitute for regulation of availability and quality of health care.

- Seventh, competition proposals risk the reversal of the trend of the post-Medicare era away from a two-class system of access to care. Although these risks are mitigated in some of the proposals by requiring all qualified plans to cover a minimum acceptable mix of benefits, price competition may result in one system for those who can afford services above the benefit level of the competitive plan and another for those who cannot. To the degree that government alleviates this problem by providing vouchers in an amount closer to the comprehensive level, the objectives of constraint of costs and services would be compromised.
- Eighth, disruption may occur in the administration and delivery of health care when 150 million Americans are thrust into an altered medical marketplace personally seeking to understand, choose and bind themselves to a particular plan for the delivery and payment of services. This experience should be of special concern because differences in health products are often technical, and price and quality information is difficult to obtain and assess.
- Ninth, competition proposals could significantly weaken the ability of teaching hospitals to meet their broad responsibilities of service, education and research for the entire health system.

These characteristics and possible outcomes of competition proposals are based on the theory that marketplace competition will effect change in the

health care system. Careful review of these proposals reveals a number of questionable assumptions and unresolved issues which must be addressed in the consideration of a competitive system of health care for the nation.

QUESTIONABLE ASSUMPTIONS AND UNRESOLVED ISSUES OF COMPETITION PROPOSALS

Competition should not be viewed as a panacea for the complex problems associated with constraining health care costs. First, competition would not completely substitute for regulation. For example, the "National Health Care Reform Act of 1980," introduced by Representatives Gephardt (D-Mo.) and Stockman (R-Mich.), specifies over 50 identifiable elements of governmental regulation by five regulatory agencies, including one new agency, the Health Benefits Assurance Corporation.⁴ Second, competition may not produce the type of effective price competition that would, in the long run, significantly lower hospital costs. Third, many unintended consequences could result from the proposed competitive system, including the erosion of national resources embodied in teaching hospitals. These conclusions are drawn from an analysis of three of the questionable assumptions of the competition proposals.

● The first assumption is:

If consumers are given an incentive to save money on health insurance expenditures, they will have the expertise and desire to choose policies which provide maximum coverage for care needed in the future (and minimum coverage for care not needed), at a minimum total cost and at an appropriate level of quality.

The current public policy regarding health insurance is based on the contrary assumption that individuals often lack the future-mindedness and the ability to predict their families' health needs, and are generally unable to decipher subtle variations in health insurance policies.⁵ The poor and elderly are particularly at risk of being sold high priced and low benefit

policies. Rather than reduce the need for regulation of insurance policy sales and quality of medical care, the competitive system may require more direct regulation of this type because the incentive would be to provide fewer services of lower quality.

● The second assumption is:

Consumers will purchase insurance in a truly competitive market. Insurance providers will compete on both price and product characteristics (including quality) of insurance plans. In such a market, consumers will have real choices from a variety of suppliers.

The health insurance industry currently does not provide the type of competitive market atmosphere conducive to rigorous price competition. Several causes of this are apparent, including: state and federal regulations designed to protect consumers against insurance company failures; the presence of large economies of scale, particularly evident in the cost of administration for group health policies⁶; and the historical dominance of some market regions by nonprofit providers. With reductions in insurance regulation, many regional health insurance markets still may not become rigorously price competitive while the potential for bankruptcy of health insurance plans may increase. Continuation of this current limited competition is particularly likely in rural areas where population densities are low and the extent of the market is small. It will be very difficult for HMOs to attain strong market positions within these areas.⁷ Many regional health insurance markets do not appear to be conducive to the development of rigorous price competition among large numbers of insurance providers. In such markets, rival health insurance companies may compete primarily on minor differences in benefit packages, service, and advertising activities but not engage in broader price competition.

● The third assumption is:

Under the competition proposals, competition among health service providers will force greater market control over the costs of care.

Enthoven has stated, "competition among insurers does not create competition among providers and only the latter offers hope of bringing about changes toward less costly styles of care."⁸ Such competition among providers seems to depend on the ability of competitive plans to bargain and contract with hospitals, physicians and other providers to lower charges and change the style of professional practice. Implicitly, the assumption seems to be that competitive plans, including HMOs and Independent Practice Associations (IPAs), would be able to bargain successfully with providers to secure services at a lower cost, passing the savings on to their membership.⁹ Existing evidence is not convincing that competitive plans will be successful in bargaining with providers to bring about the perceived need for change in style of practice and control of costs. Illustrative of this fact is that HMOs, even with significant subsidies, have experienced quite limited success in establishing advantageous financial arrangements with providers and expanding enrollment. While the first HMO was developed in the United States in the late 1920's, only four percent of the general population is currently enrolled in these plans.¹⁰ In the Federal Employees Health Benefits Program, which has been a model for the Consumer Choice Health Plan, there was only a nine percent enrollment in HMO-type plans during 1980, after 20 years of operation.¹¹

Even in a scenario in which competitive plans make significant inroads in the insurance market, it is possible that long run savings in cost would not occur. There is a demonstrated lower cost for HMO enrollees than for patients with other comparable insurance, but the source of this saving is elusive.¹² The savings in cost appear to be the result of lower hospital admission rates for HMO enrollees.¹³ This lower hospital utilization is for all inpatient hospital services, not merely the discretionary inpatient days.¹⁴ Therefore, increased enrollment in HMOs may not duplicate these initial savings, and this matter thus

deserves additional investigation. Additionally, the actual rate of inflation in costs for HMO services has been the same as the rate for the remainder of the health provider system.¹⁵ Published studies have not reported cost savings for the IPA form of prepaid organization, suggesting that this type of arrangement for care has substantially less impact on costs.¹⁶

Unresolved Issues: The competition proposals also present some unresolved issues. First, how would society be assured that competing plans would not set up barriers to avoid selection of enrollees with poor health status in order to keep premium levels low, and thereby enhance their competitive position in the marketplace? Open enrollment alone as a mechanism for guaranteeing the enrollment of individuals with poor health status is not likely to assure the coverage of health benefits for such individuals. Other barriers to enrollment such as location of facilities and control of market information could be used by competitive health plans to discourage the enrollment of high risk individuals. Community rating would also not solve the problem because it could defeat the underlying purpose of competition by reducing a plan's ability to negotiate a favored position with providers. This issue must be resolved to protect the poor, aged and infirm from vulnerability in a competitive system.

A second major unresolved question is the extent to which the American people would be willing to force individuals to live with decisions made in the marketplace. If health care is viewed as a right in this country, then the competitive system creates a dilemma, as Kinzer has indicated:

... when you think about it, is it really conceivable that the American people will accept as public policy the idea that the consumer of health care can really be put "at risk," starting with the example of the person who chooses a coverage option that excludes dialysis and then develops kidney failure?...You either believe that a person should get all the care that professional judgment dictates he needs, or you don't.¹⁷

This problem could be averted by requiring a sufficiently comprehensive minimum package, but it would be exacerbated if health plans are permitted to exclude specific diseases or therapeutic modalities from coverage. Today, individuals who are ill or injured expect access to at least one hospital, where they may receive care and work out financial arrangements later. Hospitals now accepting patients on this basis would be forced to take steps to compete in the marketplace with hospitals that have more "economically prudent" admission policies.

Finally, it should be recognized that most hospitals are viewed as public service institutions. This raises the question McNerney has posed, "how does a provider institution work with its neighbors in the spirit of serving the overall community need while trying to put them out of business?"¹⁸ Further, it is questionable whether many communities will accept what Kinzer has called "the survival of the fittest approach to future hospital development" when it begins to threaten their hospital.¹⁹ An indication of this public support is voters' historical willingness to accept substantial public bonded indebtedness and other tax levies in support of their community hospitals. Survival of the fittest could be accepted in some communities that have excess hospital capacity, but only until the number was reduced to the level perceived as needed by the community.

BASIS OF TEACHING HOSPITAL CONCERNS WITH THE COMPETITIVE HEALTH SYSTEM

In contrast with traditional beliefs regarding the incompatibility of the health system and marketplace economics, some academic and congressional authorities now hold opinions that the delivery of health services is not "unique" and the features of supply, demand, investment, choice, and efficiency can be made to apply to health care. These proponents urge that payment to

hospitals be converted from cost-based reimbursement to payment based on competitive pricing. Teaching hospitals should have little to fear in a purely competitive environment for health services because of their vast array of human, technological and physical resources. Accordingly, it would be reasonable to expect that they would presumably not be concerned with true price competition within a free marketplace.

However, underlying the competition proposals is the implicit assumption that hospitals provide a relatively standardized product which is identifiable in terms of both cost and quality. This raises several concerns for the nation's teaching hospitals which, in concert with medical and other health science colleges, have multiple products benefiting not only the individual patient, but society as a whole. Because generation of these products results in higher costs, presently financed primarily through patient care revenues, price competition could seriously jeopardize the future capacity of teaching hospitals to make these essential contributions to society. These contributions include graduate medical and other health science education, new technology testing, clinical research, substantial amounts of charity care, highly specialized services, and extensive ambulatory care programs operating on a subsidized basis. Because of these unique characteristics and responsibilities, teaching hospitals must secure specific attention and consideration in any program of health care financing based on price competition.

While the potential reduction in patient care revenues from competition would present all providers with difficulties, teaching hospitals are at special risk. This risk arises because many of their societal contributions are dependent on the cash flow from patient service programs and also because their programs are highly dependent on patient referrals by primary and secondary level providers. It is important to recognize that these multiple responsibilities are highly interdependent in that they bring together the critical

mass of clinical skills, educational and research initiatives, and technological resources essential to the advancement of the total health care system. The strength of academic medical centers and their contributions to society result from the synergism of these multiple functions. The capacity of these institutions to meet future societal needs is contingent upon the continued presence of these integrated programs in the locus of the teaching hospital.

For purposes of this paper, the multiple products of teaching hospitals will be called "societal contributions." Compensated primary and secondary level patient care services provided in teaching hospitals are also contributions to society, but the term "societal contributions" will exclude them so that it can signify the functions of teaching hospitals that are at particular risk under competition proposals. These societal contributions are essential to the entire health care system, making their continuance under a competitive system a vital societal concern.

The 332 nonfederal short-term teaching hospitals comprising the Council of Teaching Hospitals (COH) of the Association of American Medical Colleges (AAMC) constitute only five percent²⁰ of all hospitals in the United States but they:

- admit approximately 20 percent of patients hospitalized in the United States;²¹
- diagnose and treat 31 percent of hospital ambulatory patients;²²
- operate more than half of the burn care units of our nation;²³
- supply 44 percent of organ transplant services;²⁴
- provide 40 percent of open heart surgical services; and²⁵
- operate more than one-third of the nation's newborn intensive care units.²⁶

Health science educational programs dependent upon these and other affiliated teaching hospitals involve more than 600 health science colleges providing instruction to more than 215,000 students in medicine, dentistry, nursing, pharmacy and public health; 66,000 resident physicians and dentists and an estimated 15,000 clinical fellows in specialty training; and, a broad array of allied health trainees.²⁷

The bulk of these educational programs are critically dependent upon 270 nonfederal teaching hospitals which are the major affiliates of medical colleges and members of the COTH. One component of the support of these programs is provided by the estimated \$18.6 billion in total operating expenses of these hospitals in fiscal year 1981.²⁸ An estimated 90 percent of these expenditures are paid from earnings generated by hospital charges for patient care services.²⁹ There is no centralized reporting of the cash flow from fees of teaching physicians for medical services, so it is impossible to develop an accurate estimate of the aggregate professional fees of faculty physicians functioning in teaching hospitals. The estimated \$18.6 billion total expenditure by these teaching hospitals constitutes approximately 18 percent of the current annual national hospital expenditures.³⁰

A risk under competition is that society may suffer severe losses in its health system if the vital contributions of teaching hospitals are not recognized and preserved. McNerney recently described the problem this way: "How do we avoid the virtual exclusion from the market of the academic medical centers offering the best - and most expensive - care?"³¹ Ginsberg further underscored this issue when he stated, "But I see nothing but trouble ahead if the nation's teaching hospitals are forced to compete with community hospitals in providing routine services, since the former's per diem costs are 1-1/2 to

2 times as high as the latter's as a result of their diverse output, which goes far beyond performing an appendectomy or hysterectomy and involves such critically important societal goals as training the next generation of physicians and adding to the pool of knowledge and technique."³² This and other elements of risk confronting teaching hospitals are described in the following section.

TEACHING HOSPITAL SOCIETAL CONTRIBUTIONS AT RISK

The quality of the nation's health care system is anchored by its "core" tertiary teaching hospitals which support the entire system by delivering highly specialized patient care. The teaching hospitals in university academic health centers also serve as the prime clinical base for the discovery, delivery and dissemination of new knowledge and services; initial preparation and replenishment of community-based health professionals; and provision of a conducive environment for extensive continuing education that enables practicing professionals to maintain "state of the art" knowledge. A reduction in the ability of teaching hospitals to finance and maintain these societal contributions could erode the quality of the entire system of health care.

The competition proposals present concerns for teaching hospital's contributions in three primary areas: patient referral patterns, financing, and retention of quality patient care throughout the system. Deterioration in any of these areas would detract from the sophisticated educational setting necessary to prepare the physicians and other health professionals of tomorrow. It is essential that the issues described below be addressed now, while competition proposals are at an early stage of consideration.

Disruption of Patient Referral Patterns

Many teaching hospitals depend on the continuing flow of referred patients in order to provide specialized patient services

economically, provide the clinical base for broad-scale teaching and research programs, and remain attractive to health science faculty. Deterioration of referral arrangements would reduce the critical mass of patients, comprehensive support services, and faculty and staff necessary to preserve high-quality specialty services, education, and research programs now based in the nation's academic health centers. Historically, the ability of specialists to attract referrals from primary care providers has been through assuring that both patients and referring physicians are satisfied with the quality and timeliness of services. While primary care providers are becoming more aware of costs to their patients and this awareness is influencing their referral decisions, such decisions continue to be based largely on the ultimate welfare of the patient, not on the price of the service. Teaching hospitals must be concerned with the implications of competition proposals with financial incentives which discourage community physicians from continuing referral relationships with tertiary care centers.

There is significant risk that competitive plans, which contract with community physicians and hospitals, would not be willing to establish appropriate referral arrangements with high cost, specialized tertiary care centers for their enrollees. As a result, patients could be inappropriately retained in the home community or referred to nonteaching hospitals for specialty care. In making this statement, it is recognized that "super" tertiary patients, such as those requiring burn care or organ transplants, would likely continue to be referred to tertiary teaching hospitals (if plan benefits are available) because such services are not offered elsewhere.

The central question is whether patients with other complex problems would continue to be referred to tertiary-level teaching hospitals, or would they be shifted to secondary-level hospitals or investor-owned institutions which are less expensive because they avoid many of the additional costs intrinsic to tertiary teaching hospitals. Hospitals which concentrate on the high volume, less complicated specialty services would obviously have a significant price advantage over teaching hospitals.

This patient referral constraint may point to the need for implementing associated regulatory controls. As Heysel has stated, "In short, we will need additional mechanisms to assure that price does not limit the quality by withholding services, just as PSRO and utilization review were put in place to make sure that the lack of competitive price constraints did not result in unnecessary procedures and hospitalization."³³ Competition proposals could minimize this concern by prohibiting contractual provisions which place community physicians at financial risk when making a clinical judgment regarding the need for consultative referral to a tertiary care center. Optimally, such decisions should be made in a purely clinical context.

Financing the Societal Contributions of Teaching Hospitals

The financial dilemma is a direct result of the underlying objective of the competition proposals, which is to constrict the amount of payment to hospitals and physicians, in order to free resources to meet other national needs. The following comments and questions are raised to explore further some of the major financial issues influencing the societal contributions of teaching hospitals under a competitive system.

Educational Costs of Teaching Hospitals: One of the most significant issues is the continued financing of educational costs of teaching hospitals. The costs of medical and dental residency and fellowship training programs in teaching hospitals are now primarily financed through teaching hospital operating revenues. The total cost of these programs in teaching hospitals during fiscal year 1981, including instruction, is estimated to be \$2.3 billion. Of this total approximately \$1.8 billion is financed from revenues of nonfederal teaching hospitals, of which \$1.2 billion is funded by the 270 COTH members that are the major affiliates of colleges of medicine.³⁴ In a competitive environment, these costs would obviously put teaching hospitals at a considerable price disadvantage.

The scope of educational programs in affiliated community hospitals would also be threatened. These programs assist in providing the clinical experience essential to a well-balanced health educational system. The number of community hospitals affiliated with medical schools grew from 517 in 1966 to 1,168 in 1976,³⁵ and further increases are desirable to provide students and trainees the necessary exposure to primary and secondary levels of care. However, expanded competition in health care could discourage future growth in affiliations, as well as threaten existing agreements. If competition forces community hospitals to disengage from participation in medical education, tertiary teaching hospitals would not have the patient base and other resources to provide the necessary educational experience for all students, physicians and dentists currently in training.

Several theoretical alternatives for financing graduate medical education were explored by the "Task Force on Graduate Medical Education" of the Association of American Medical Colleges (AAMC) in 1980. The report concluded that no effective alternative is likely to replace funding through teaching hospital reimbursement.³⁶ The alternatives explored included the following:

- To finance graduate medical education from a separate governmental, tax-supported fund. The magnitude of such a fund, the complexities of its management and disbursements, and recent experience with capitation support of medical schools make this alternative a questionable option for long-term financing.
- To transfer the obligation for financing graduate medical education to medical schools. Since medical schools would be able to finance such education only through appropriated tax dollars or philanthropy (without relying on professional fee income), this alternative would severely tax their already tight budgetary situation.
- To utilize revenue generated by teaching physicians from professional fees. Reliance on professional fees could discourage patient admissions by some private practitioners who hold appointments on the staffs of teaching hospitals and could promote fee increases necessary to offset the costs of graduate medical education. Additionally, as a practical matter, the mix of income sources for most teaching hospital staffs would make implementation impossible.

- To have residents pay for their own graduate medical education. Such a policy would directly conflict with efforts to encourage students without financial means to enter medicine, by increasing the burden of indebtedness which must be repaid following completion of residency training. It could also reduce the quality of future practice as physicians who cannot afford to finish residency training opt to begin their practices earlier.

In summary, the AAMC study concluded that there was no practical alternative to the present practice of supporting residency training through teaching hospital revenues. Nor, in the opinion of the Association, was there any good reason to look for other alternatives because the present approach does, in fact, spread the burden equitably across the population. The report stated this conclusion as follows:

Patients benefit from the services they receive as residents participate in their care in teaching hospitals, and 94% of all hospital revenues are now derived from third-party insurers. These insurers ... diffuse the educational costs throughout the population through their premium charges or taxation. These insurers have a social obligation to support graduate medical education, for the education and training of future practitioners is an essential investment by the public provided through private health insurance and government programs. This investment ensures that the³⁷ medical care needs of future generations are met.

While graduate medical and dental education has been the teaching hospital's largest educational expense, other educational programs conducted by and in teaching hospitals generate additional costs--directly through some support of stipends and

instructor salaries and, to a larger extent, indirectly through additional spatial and environmental requirements and productivity losses in patient service associated with teaching. These educational programs include undergraduate training in medicine, nursing, dentistry, pharmacy, and an array of other health professional and technical fields. Teaching hospitals' financing of this broad range of socially essential educational programs is also at risk in a competitive health system.

Ambulatory Care Program Deficits: A second financial issue is whether specialized large-scale ambulatory care programs could continue to be provided in teaching hospitals. To evaluate the impact of a competitive system on the financing of ambulatory care programs and other responsibilities of teaching hospitals, The University of Iowa Hospitals and Clinics recently surveyed 20 university-owned teaching hospital members of the Council of Teaching Hospitals (Iowa survey). Based on an extrapolation of the data provided by the sample hospitals to the volume of ambulatory services provided by the 270 COTH members with major college of medicine affiliations, preliminary estimates of aggregate ambulatory care deficits in fiscal year 1981 were made and are reflected in Exhibit I (pages I-1 to I-3). The aggregate deficit for ambulatory care in fiscal year 1981 was estimated to be \$820 million. Of this total ambulatory care deficit, it was estimated that the charity and bad debt component was \$341 million. Costs of educational programs based in these ambulatory care settings amounted to \$484 million. When these

educational costs were removed from the \$820 million estimated total deficit for ambulatory care in these hospitals, the remaining deficit was \$336 million.³⁸

These deficits arise in part from inappropriate methodologies for cost allocations which are required by governmental and other third-party payers. At the present time, space-related hospital costs must often be allocated to ambulatory clinics on the basis of unweighted square feet, although it costs substantially less to construct, maintain and heat a square foot of clinic space than other patient care units of the hospital. Additionally, educational costs must be allocated to clinics on the basis of assigned time of trainees in the clinic. The number of students, and to some degree residents, assigned to a clinic is often a function of the number of students needing training in ambulatory care and not necessarily a function of patient care needs in the clinic. Educational costs could be more appropriately allocated to revenue centers on a "general burden" concept, recognizing that all hospital revenue centers and all hospital charges to the patient should contain a proportionate factor to support educational programs of teaching hospitals, whether or not a given revenue center is directly involved in an educational effort.

Also significantly affecting ambulatory care deficits are the increased spatial and other resources needed for clinic educational programs. Examination and treatment rooms in clinics, as well as inpatient rooms and other ostensibly "noneducational"

space, require larger dimensions to accommodate students and teaching activities. Additional space and time is also required because the complexity of patient disease and related social condition requires a greater involvement of social workers, counselors, psychologists, therapists, dieticians and other professionals. Also, efficiency or "productivity" in providing ambulatory patient care is substantially reduced with the integration of clinic-based educational programs. Charges for ambulatory care services, which are largely uninsured, cannot reasonably be structured to cover the high overhead cost per patient visit that results from these educational requirements, even in a noncompetitive market.

It is not clear how clinic-based ambulatory care and the associated educational programs could continue if teaching hospitals were forced into direct price competition with hospitals that do not provide these programs requiring large subsidies from inpatient revenues or other sources. It should also be recognized that the ambulatory care setting has become increasingly important in meeting educational objectives related to the goal of training physicians and other health professionals in the methods of providing diagnostic and therapeutic care without expensive inpatient hospitalization.

Charity Care of Patients: Most teaching hospitals provide substantial amounts of uncompensated care and will attempt to continue to care for patients "falling between the cracks" of health insurance coverage. Given the dearth of endowments and other philanthropic funds available for this purpose, it is not

clear how this charity care could be maintained when institutions that avoid such care would be at a competitive advantage. Some hospitals may be required to continue charity care under federal, state and local mandates, thus reducing their viability in the competitive marketplace.

To obtain an indication of the magnitude of the costs of charity care, the Iowa survey also collected data on uncompensated charity care and collection losses on the inpatient and ambulatory care services of the surveyed hospitals.³⁹ Among the 20 university-owned teaching hospitals surveyed, total charity and collection loss allowances ranged from \$1.2 to \$17.8 million, averaging 9.0% of gross patient revenue (Exhibit I-4). This includes ambulatory charity/collection losses ranging from \$130 thousand to \$4.5 million, averaging 11.7% of gross revenues from ambulatory care (Exhibit I-1). Projecting for the 270 COTH members with major college of medicine affiliations, total charity/collection losses were estimated at \$2.0 billion in fiscal year 1981, of which \$0.3 billion arises from ambulatory patient care programs (Exhibits I-3 and I-5). The above figures would, obviously, be increased if all 332 nonfederal COTH hospitals were included.

Teaching hospitals are the primary source of health care services for millions of this nation's needy. These services will be difficult, if not impossible, to maintain if tertiary care centers are required to compete on the basis of price. The resultant erosion in the quality and accessibility of care for millions of patients should be of great concern to all.

Features of some competition bills might reduce the charity care burden for all hospitals. Bills that mandate universal coverage would minimize the need for charity care for those services covered. To the extent select services were not covered due to the economic incentive to opt for less comprehensive plans, there would be increased need for the excluded services to be provided as charity care. However, most of the bills do not mandate universal coverage or comprehensive benefits. An alternative approach to the charity care issue is taken by the Gephardt-Stockman bill. It proposes to pay hospitals 50 percent of their charges in the case of services to nonmembers of approved plans who do not pay hospital accounts after reasonable collection efforts.⁴⁰ This would be beneficial for hospitals, but it would be a solution to the problem only for those hospitals whose charity care is a small percentage of total care provided, not for hospitals with a large volume of uncompensated services.

Fostering of Advances in Health Care--New Technology

Development: Another financial implication involves the cost of developing and implementing innovative procedures and technological advances designed to enhance patient care throughout the system. Some current hospital reimbursement formulae provide an increment for "growth and development" to encourage innovation, while others absorb such costs as a routine element of aggregate operating costs and charges. Recent and exciting breakthroughs in molecular and cellular biological research point to an expanded need for clinical research and technological

development activities within teaching hospitals during the period immediately ahead. Therefore, these increments may be increasingly necessary. It is not clear how funding for this crucial development could be generated under a competitive system. In addition, it is not evident how compensation for services employing innovative technology would be generated during the initial testing phase when competitive plans would be motivated to exclude such procedures from coverage in their efforts to minimize costs. Unfortunately, no studies have been conducted to estimate the aggregate cost of these frontier-cutting responsibilities of teaching hospitals.

Clinical Research Support: The future of some biomedical research, essential to the vitality of academic health centers and to the improvement of health care, is also at risk. One element of a teaching hospital's responsibility is the creation of an environment that encourages and nurtures biomedical research in order to sustain this vitality. In addition to problems arising from a shrinking patient base, the financial support of this research initiative could also be reduced. Professional fee earnings of the medical faculty and teaching hospital patient care revenues have been used to support many small research projects that, for a variety of reasons, do not lend themselves to external grant support. Revenues of teaching hospitals have supported research of this nature through occasional direct allocations and substantial indirect allocations of technical staff, diagnostic tests, space, and other hospital

resources. It is probable that a portion of the higher staff-to-bed ratios of some teaching hospitals is due to staff time devoted to research endeavors with a patient care orientation.

The potential decline of the patient base due to changes in referral patterns is an even greater threat to biomedical research, because many types of clinical research are possible only with a large patient base. In the case of some rare diseases, even the largest teaching hospitals have not had a sufficient patient base and have moved to research protocols involving multiple institutions. Such multicenter research is extremely expensive and difficult to conduct because of the problem in establishing sufficient consistency between the centers to assure valid results. Decentralization of the patient base would force increased use of these expensive multicenter studies, smaller study populations, or longer study periods. Smaller study populations would create difficulties in obtaining appropriate sample sizes for study, and longer study periods would make consistency and interest over the study period more difficult to maintain. This reduction in patient base, coupled with constrained financial resources, could significantly impair the scope and quality of biomedical research.

Provision of Highly Specialized Services: Another financial issue is whether high cost, low volume services which have historically been centralized in tertiary hospitals could be maintained. The patient case mix in tertiary teaching hospitals,

presenting a broad array of complex clinical problems of patients referred from primary and secondary providers, enables these hospitals to meet their service, education and research missions. When negotiating with a competitive plan, teaching hospitals would be at a significant disadvantage in competing with the rates of community hospitals because the teaching hospital, to meet the needs of a complicated patient case mix, must have clinical resources far beyond those required in community hospitals. To meet these added responsibilities, staff-to-patient ratios must be higher due to severity of patient problems; around-the-clock physician presence in major specialties is essential; breadth and depth of laboratory, radiology and other ancillary services are greater; technological investments are substantial; and spatial requirements are greater due to educational programs, faculty offices, and the whole gamut of support services required. The funding necessary to support the extensive teaching hospital resources essential to diagnose and treat tertiary-level patients must be provided so such services can be maintained.

It is unlikely that competitors of teaching hospitals would either have the capacity or the desire to provide these services. There is also a question whether teaching hospitals would be able to continue to provide them under a price competitive system.

To make the introduction of highly expensive services within teaching hospitals more publicly acceptable, it is now common practice to partially underwrite the cost of these

services with revenues from other patient earnings. Higher prices resulting from elimination of this practice could lead competitive plans to exclude such services from coverage, forcing teaching hospitals to either end the services, thereby depriving society of their availability, or develop a separate program to finance them.

Faculty Practice Plans--Reduced Support of Education: In addition to problems associated with the continued financing of societal contributions, the competition proposals could also reduce the earnings derived from the professional fees of teaching physicians. This reduction could affect teaching physicians before private practitioners because of the relative ease with which fees emanating from physicians in teaching hospitals can be targeted by competitive plans. Because of the close association of teaching physicians and hospitals, some competitive plans could attempt to treat their combined fees and charges as a single "package," leading to pressure for physicians to reduce their fees to make the package of hospital and medical services more price competitive with the nonteaching setting. Coupled with possible reductions in patient referrals, this financial loss could further jeopardize faculty practice plans which are now heavily relied upon to finance programs of medical education, support nonsponsored research, and meet physician income levels essential to retention of medical faculties of high quality.⁴¹

This differential impact on the teaching hospital environment would create incentives for physicians and dentists to leave academia in favor of private practice or to convert practice plans into more private practice-oriented models, thereby curtailing their availability for support of academic programs. Because medical service plan earnings have been the fastest growing segment of college of medicine budgets over the past decade, this risk is of great import to both collegiate deans and university presidents.⁴² Unless reductions in earnings of practice plans were replaced through general appropriations, endowments or other support, universities would be confronted with the difficult, if not impossible, job of reallocating already depleted general university dollars to the extent they decide to sustain health science education programs at present levels.

It is important to recognize that the multiple functions of teaching hospitals are usually performed simultaneously and that the resulting costs of individual functions could ultimately be separated only on the basis of somewhat arbitrary criteria which have not yet been developed. The Iowa survey assessed three measurable societal contributions of teaching hospitals to estimate the financial magnitude of the problem. However, it is impossible to identify and quantify the costs for all societal contributions of teaching hospitals with sufficient accuracy on an institution-by-institution basis for categorical subsidy, even if other sources of funding could be identified. It is not simply a matter of altering current accounting procedures and transferring the costs to new, separately funded accounts.

System-Wide Quality of Care Erosion

The quality of care in the health system could be adversely affected by changes in patient referral patterns and by financial dilemmas resulting from competitive approaches. As discussed earlier, tertiary-level teaching hospitals anchor the nation's health care system by delivering highly specialized patient care, while serving as the clinical base for education, research, technology development, and continuing education. A decline in the ability of teaching hospitals to finance any of these societal contributions could erode the quality of health care at all levels. A reduction in the number and types of patients referred to teaching hospitals would intrinsically curtail the access of patients with complex and expensive diseases to the highest level of care.

A competitive system would also challenge the traditional emphasis on providing the best patient care possible by shifting the focus to cost. Health professionals and hospitals have already become increasingly sensitized to cost. There is, however, a danger that competition may move the system too far in the direction of cost consciousness, perhaps sacrificing the quality of care to patients.

Differences in quality are difficult to communicate to the typical person by either government or some other intermediary or agent, possibly causing disproportionate consideration to be given to the price of services. This facilitates the development of plans which are competitively priced, but which may not assure access to services of high quality. Additionally, if the services of teaching hospitals are either directly or indirectly excluded from competitive plans, a significant decline in the patient care function of

teaching hospitals may be experienced. This would ultimately be reflected in the aggregate health status of the population.

The concentration on cost in any competitive financing structure could eventually lead to a counterbalancing focus on quality control. The public will demand service, and the government will expect a return on its investment in the form of improved health status. Unfortunately, this return is difficult to quantify with existing measures of quality and health status. Therefore, it is imperative for teaching hospitals to pursue a position of leadership in the evaluation and preservation of health services of high quality to patients, regardless of the future structure of the health system.

In addition, reductions in patient referrals would also limit opportunities for health science students to gain the broad clinical exposure necessary for quality health science education and future practice. Recently, there has been broad expansion in the use of affiliated community hospitals for attaining clinical experience, particularly in primary care. This may tempt some reformers to advocate further decentralization of health science education, and thus bring about a narrowed role and need for teaching hospitals. While decentralization of selected portions of the educational experience may enrich overall training, it is essential that the bulk of medical education (all in some specialties) be conducted in a setting where a full-time faculty can provide essential knowledge and properly supervised clinical experience. The setting of teaching hospitals is necessary to insure that the student is challenged at the bedside and in regular conferences with the searching questions of academic clinicians actively engaged in the testing and discovery of new knowledge through current research. The case mix in tertiary

teaching hospitals assures that all students and trainees are exposed to an appropriate range of challenging medical problems at each level of clinical education so that they can be trained systematically and efficiently. Since the entire professional staff of the teaching hospital is oriented to and encourages education, the requisite environment for learning and appropriate supervision can be maintained, despite the associated loss in "productivity" related to patient care. Educational opportunities in affiliated community hospitals are an important adjunct to the clinical education in teaching hospitals, but cannot serve as a substitute as long as society desires to maintain and enhance the present level of performance of its physicians and other health professionals.

A THEORETICAL APPROACH TO STRUCTURING OF THE COMPETITIVE SYSTEM
TO RECOGNIZE THE UNIQUE SOCIETAL CONTRIBUTIONS OF TEACHING HOSPITALS

While the wisdom and likelihood of widescale implementation of expanded competition in the health field is still a matter of broad debate, it is a fact that the concept currently has significant support. One of the perplexing questions that remains is how the nation might alternatively finance the approximately \$6.7 billion cost of societal contributions now financed through teaching hospital patient charges (Exhibit II-1). If any competitive system which may evolve is to include teaching hospitals fairly and effectively, a practical answer to this dilemma must be found. Some competition advocates have proposed that the "teaching and research costs" of teaching hospitals be supported from another source(s). However, none of the current competition proposals have explored in sufficient depth how this might be accomplished.

A theoretical approach is set forth here to stimulate further discussion regarding options for addressing this vital concern. Based on the broad range of complexities and assumptions involved in structuring this conceptual approach

to reimbursement of societal contributions under competition, it would not be unreasonable to anticipate reservation, or even opposition, by teaching hospitals. Such concern would flow from the financial uncertainties involved in converting to a new, untried payment system for a broad range of their ongoing responsibilities. Nevertheless, a need to theoretically address the issue remains. If the movement toward expanded competition is to become a long-range reality, it is essential that the competitive proposals include some appropriate mechanism for preserving teaching hospital societal contributions.

Industries of all types finance "research and development" activities as an integral operating cost, recognizing that their future in the market will be impaired by lack of knowledge or failure to innovate. In the past, the financial decisions of teaching hospitals to invest in education, research, and development have served the public well. Fragmentation and/or scaling down of the existing system whereby teaching hospitals effectively invest in the future of the nation's health care system would be unwise and shortsighted. Two of the theoretical options for avoiding this problem are for the competition proposals to include mechanisms for payment of the cost of teaching hospital societal contributions through grants for individual programs or through payments for institutional support.

One of the first competition promotion bills to recognize the need for such mechanisms was the Gephardt-Stockman bill. It proposed a program grant approach by providing for grants covering not more than 70 percent of the direct costs of educational programs, "to the extent the Secretary [of HHS] finds such compensation is necessary to provide training for needed health care professionals."⁴³ As the authors of the bill recognize, this provision does not fully address the problems of teaching hospitals. It does not provide payment for any of the societal contributions other than education, and it implicitly assumes that teaching hospitals will be able to cover the remaining

30 percent of direct educational costs plus all of the indirect costs of these programs. However, the 1980 bill served its intended purpose because it has led to further discussion of this issue, assisting Representative Gephardt's attempts to formulate a more comprehensive approach to the whole problem of funding teaching hospital societal contributions for inclusion in a modified bill he plans to introduce later in the 97th Congress.

There are other difficulties with program grants which suggest that they are less practical than payments for institutional support. Program grants cannot provide the continuing commitment of resources to create the necessary stability within teaching hospitals because they are subject to frequent review and short-term decision making. Program grants would also present virtually insurmountable administrative barriers in separating the costs of each societal contribution. They would not provide for the continuing allocation of these monies within each teaching hospital by knowledgeable executive and academic staff, essential to sustaining the proper balance of all patient care and academic programs.

Institutional support payments could be viewed as more appropriate because they avoid many of these difficulties. The calculation of these institutional payments would still be based in whole or in part on the aggregate costs of programs within the institution, but the payments would not be tied to governmental program evaluations or to a mandated allocation among individual programs. However, the problem remains of maintaining a commitment over the long term. This problem could be mitigated, but not eliminated, by providing some insulation from short-term political decisions through an earmarked surcharge on premiums for all health plan coverage. The surcharge would be deposited in a trust fund and allocated to teaching hospitals under the guidance of an academically oriented Teaching Hospital Advisory Council. If this approach were adopted,

the government could wisely forego the additional burden of the program grant alternative to meet these needs, as well as the annual appropriation process. This would continue the flexibility and stability necessary for sustaining the vital clinical and academic environment now fostering a broad spectrum of societal contributions within teaching hospitals.

The theoretical payment approach outlined here is predicated upon teaching hospitals continuing to generate a large portion of their financial requirements through charges to competitive health plans and patients for patient care services at competitive rates. Beyond this, the approach would create a Teaching Hospital Societal Contribution Fund generated from a surcharge on health plan premiums. Monies from the Fund would be distributed to teaching hospitals to reimburse societal contribution costs through the two payment mechanisms specified below.

- I. The first mechanism would encompass prospective payments for measurable societal contributions, which include graduate medical and dental education, other hospital sponsored educational programs, ambulatory care deficits, and charity care. The measurable cost of graduate medical and dental education for all nonfederal teaching hospitals is approximately \$1.8 billion for 1980-81, of which \$1.2 billion is incurred in the 270 COTH members with major college of medicine affiliations. The estimated additional costs for measurable societal contributions in these 270 teaching hospitals is \$2.2 billion. Thus, the total estimated value of measurable societal contributions is approximately \$4.0 billion for 1980-81 (Exhibit II-1).
- II. The second mechanism would be retrospective payment of the costs of unmeasurable societal contributions, which include the indirect costs of hospital sponsored graduate and other educational programs, all

other undergraduate health educational programs, new technology testing, clinical research, and care of a highly intense patient case mix. The estimated cost of unmeasurable societal contributions for the 270 COTH members is approximately \$2.7 billion for 1980-81 (Exhibit II-1).

Payment Mechanism I--Separately identified and quantified analysis of each teaching hospital's measurable societal contributions for prospective funding. All teaching hospitals would receive payment under this mechanism for their measurable societal contributions. This could enhance the capability of a large number of teaching hospitals, including many large urban and specialized children's hospitals, to compete fairly in a competitive health care system because their costs of societal contributions are predominantly in three areas -- graduate medical and dental education and other hospital sponsored educational programs, ambulatory care deficits, and charity care -- which are sufficiently identifiable for prospective quantification and payment. These hospitals would be able to obviate seeking payment under Payment Mechanism II with its attendant involvement in extensive financial analyses and reporting.

While the three societal contributions identified for prospective payment under Payment Mechanism I are reasonably measurable on a prospective basis, there are many contingencies, such as changes in the local or national economy, that could make prospectively calculated payments inequitable for some or all teaching hospitals in certain years. Thus, a means for teaching hospitals to apply for a retrospective adjustment of prospective payments would be necessary to preclude undue hardships.

Payment Mechanism II--Separate retrospective funding of the nation's comprehensive tertiary teaching hospitals' unmeasurable societal contributions.

A second payment mechanism would be needed to accommodate the costs of the unmeasurable societal contributions of undergraduate education, indirect costs

of graduate and other educational programs, new technology testing, clinical research, and the incremental cost of the highly intensive patient case mix common to most comprehensive tertiary care teaching hospitals. These contributions defy separate and accurate quantification under any accounting system because they are so inextricably interwoven with the patient care and graduate medical and dental education programs of teaching hospitals. Sufficiently refined analyses of case mix and related costing methodologies, now under intensive investigation by the Association of American Medical Colleges, the Health Care Financing Administration, and others, are probably several years away from a sound methodological basis. One might consider encompassing the unmeasurable costs within the first payment mechanism described above by applying a multiplier to the measurable costs to arrive at the total required payment for measurable and unmeasurable societal contributions for each teaching hospital. However, as described in the Appendix, when the measurable costs of the group of 20 surveyed university teaching hospitals were compared, it became clear that the costs predicted by the multiplier were not reasonable estimations of actual costs. While it is natural to hope for a simple methodology such as a multiplier or resident trainee capitation allowance, it should be recognized that complex problems frequently require complex solutions. The fact that the competition dialogue over the past several years has not resulted in a single comprehensive proposed solution to the societal contribution issue reflects the high level of complexity involved.

The second payment mechanism suggested would be used by those teaching hospitals with substantial involvement in unmeasurable societal contributions. Generally, these would be the comprehensive tertiary teaching hospitals which serve as principal teaching hospitals of the nation's medical schools. Such teaching hospitals would charge insurers, prepaid health plans, and self-pay patients for hospital services at competitive rates. They would receive

prospective reimbursement of their measurable societal contributions through Payment Mechanism I. Unmeasurable societal contributions would be reimbursed through retrospective payments to these teaching hospitals of the difference between full financial requirements and the amounts received from direct patient care payments, Payment Mechanism I, and other sources of revenue, as certified by audited financial statements. As the Medicare and Medicaid programs have recognized, interim payments would be required with a retrospective settlement after the end of each year in order to maintain an operating cash flow within these hospitals.

Under this payment system, teaching hospitals would compete both on the basis of quality and price. They would be motivated to contain costs and prices by three forces. First, there would not be unlimited dollars available for societal contribution payments. In some years, the aggregate needs of teaching hospitals would exceed available funds, resulting in some hospitals receiving less than the full amount sought from the Fund. An equitable allocation system could be designed to assure that partial payments were made to the less efficient teaching hospitals, while full payment of the costs of societal contributions were reserved for the more efficient. This threat of potential nonpayment could motivate further cost containment and possible programmatic reduction efforts by teaching hospitals. Second, the long-term viability of the Surcharge and Teaching Hospital Societal Contribution Fund would depend on their political acceptability. Because cost would be an important factor in this outcome, teaching hospitals would be motivated to contain costs to preserve the Surcharge and Fund. Finally, public opinion would have substantial impact because attention would be focused on the costs of providing highly expensive tertiary services and other societal contributions common to teaching hospitals. It is possible that some teaching hospitals could not respond to

these forces immediately; but the system for allocation of the Fund would eventually require additional cost containment, except where other sources of revenue were developed on a local basis.

These payment mechanisms could substantially reduce one hazard in the competitive system related to quality. Because competitive plans would pay teaching hospitals at rates competitive with those paid to community hospitals, the disincentive to refer patients requiring expensive diagnostic and therapeutic care to the tertiary teaching hospital would be curtailed. Thus, teaching hospitals would be able to continue to serve as the referral centers for community hospitals without a substantial impediment related to price.

One practical difficulty in implementing Payment Mechanism II would be the identification of comprehensive tertiary teaching hospitals for participation. One approach would be to focus participation in Payment Mechanism II on these teaching hospitals which have substantial involvement with the full array of societal contributions, where the payment is most needed. Consultation with the AAMC and other organizations in developing criteria to be used in identifying appropriate hospitals for inclusion under the two separate payment mechanisms would be essential. Congress could place such criteria in the legislation or leave their development and promulgation to an administrative agency, specifying mandatory consultation with an appropriate academically related advisory group, such as the Teaching Hospital Advisory Council previously identified.

Both payment mechanisms would have the benefit of not interjecting any further governmental regulation of decisions regarding the numbers and types of residency training positions in teaching hospitals or the scope of other programs in teaching hospitals. The development of new technology and services would continue to be subject to substantial regulation by the Food and Drug

Administration and selective monitoring by the National Center for Health Care Technology.

These payment mechanisms would involve reimbursement of hospital dollars only. It is essential that physicians and dentists practicing in teaching hospitals continue to have the opportunity to be paid for their services in the same manner as their colleagues in the community, so that academic medical centers are not put at a competitive disadvantage in attracting and retaining clinical faculty of high quality.

The Teaching Hospitals Societal Contribution Fund and Surcharge: The dual payment mechanisms would be predicated upon the availability of a reliable continuing source of funding relatively insulated from short-term political decisions. It is suggested that a "Health Manpower Replenishment and Health Service Development Surcharge" on all health plan premiums could be such a source of funding. The Surcharge would not constitute new dollars to the health field or teaching hospitals and would not represent a new burden for patients. Rather, it would represent a "transfer payment" in order to continue the traditional practice of patients paying for the replenishment and advancement of their health care system while purchasing health insurance or hospital services.

The Surcharge could be collected from competitive plans and could be based on a percentage of their total premiums. If such a system were initiated on a national scale in fiscal year 1981, the Surcharge would be required to generate approximately \$6.7 billion in teaching hospital societal contribution costs (Exhibit II-1). In order to cover this cost, an estimated 8 percent surcharge on competitive plan premiums would be required.⁴⁴ A flow chart portraying the theoretical flow of dollars into the Fund and its subsequent distribution among societal contributions is reflected in Exhibit III. As

shown on the Exhibit, the Fund would support approximately 30 percent of the total cash flow of the 270 COTH members with major college of medicine affiliations.

It should be recognized that inordinate inflation, the establishment of new programs in teaching hospitals and other factors would result in insufficient dollars in the Teaching Hospital Societal Contribution Fund in some years. To accommodate this circumstance and to moderate the reasonableness of teaching hospital requests from the fund, equitable standards and formulae for allocation of "shortfalls" would have to be developed by the Teaching Hospital Advisory Council previously described. As indicated, such standards and formulae could be used to create additional incentives for teaching hospitals to further contain costs and to be maximally competitive.

The Surcharge and resulting Teaching Hospital Societal Contribution Fund would serve as a safeguard for the entire health care system. The competition proposals have, as a prime feature, the minimization of regulation in the health field in exchange for hospitals' willingness to risk their survival in a free market. One of the anticipated outcomes is a shrinkage of the health system and resulting economy through closure of hospitals. Use of a free market for bringing this about represents a revolutionary change in the structure of this nation's health system, the outcome of which no one can accurately predict. Accordingly, discretion would require the establishment of certain safeguards in a system change as colossal as the one being proposed. One of these protections should be a device to sustain the vigor of our nation's teaching hospitals which underpin the quality of the entire health care system.

If the unique societal contributions of teaching hospitals were separately provided for in the manner outlined, the patient care functions of all hospitals theoretically could be encompassed in a competitive system. A provision for

the protection of teaching hospital societal contributions is the prudent minimum which should be in place if the nation is to conduct a massive experiment with competition within its health care system. After several years of experience with a competitive system, it may be appropriate to alter these safeguards when such changes could be based on actual knowledge of the effects of competition on teaching hospitals and other health system components. Techniques for quantifying the costs of the now unmeasurable societal contributions (such as patient case mix methodologies) could also evolve, permitting the consolidation of the two mechanisms for payment of societal contributions into a single, simpler method.

The foregoing discussion of a theoretical approach to financing the societal contributions of teaching hospitals under competition is intended to respond to the challenge to develop a framework for modified funding and examine its implications. It is not intended as support for the approach, but is presented as a contribution to the debate.

FUTURE CHALLENGES FOR TEACHING HOSPITALS

The competitive environment appears to be evolving, albeit slowly. To stay abreast of this trend, there are a number of initiatives which teaching hospitals should pursue with increasing vigor.

Teaching hospitals and health services researchers should undertake further studies of the resources committed to societal contributions and of possible alternative ways of securing support for these programs. If legislation promoting competition is not passed, teaching hospitals will require the results of such studies to support their submissions and their appeals to conventional funding agencies. If such legislation is passed, the research findings will be needed to justify reimbursement from the Teaching Hospital Societal Contribution Fund described earlier or some similar mechanism.

The agenda for teaching hospital self-study should include the following:

- Teaching Hospital Educational Costs: Analyses of health manpower should be undertaken to quantify more precisely the extent to which the quality and output of educational programs are compatible with the needs of society at local and regional levels. Such studies could exert a positive impact upon the strategic planning processes of teaching hospitals, medical schools, and other health colleges.
- Ambulatory Care Program Deficits: Teaching hospitals must continue to study their ambulatory care programs to determine whether they can be further restructured to reduce current large operating deficits while preserving the essential educational experience for medical and other health science trainees.
- Highly Specialized Services: The AAMC has initiated a major study to evaluate the patient case mix of teaching hospitals, and, as previously mentioned, research and development experiments in this area are being conducted by HCFA and others. Teaching hospitals should participate in the voluntary evaluation of patient case mix, review their own internal data gathering and review systems, and support the future development of refined methodologies to evaluate the intensity of services required by their patient populations.
- Charity Care of Patients: Some teaching hospitals are already addressing a segment of the cost problem associated with charity care through state and local governmental programs. Further, evolution of existing programs and development of new financing initiatives must be pursued if teaching hospitals are to continue to serve all patients without regard to financial means.

- Clinical Research: Teaching hospitals should be reviewing the research being conducted within their facilities supported by hospital patient care dollars. While continued teaching hospital support for research is necessary, it should be done systematically, based on clearly articulated institutional priorities. Appropriate outside funding should be sought whenever possible, and ways should be explored to promote greater direct support for such research by private philanthropy and government.
- Relationships Within Academic Health Centers: Teaching hospitals must more closely scrutinize their financial relationships with academic health centers. Some teaching hospitals have shouldered a much larger proportion of the cost of educational and research programs than others. The wide range of staff-to-occupied bed ratios and per diem costs now present in the nation's teaching hospitals may be due in part to variable patterns of supporting research and educational costs.
- Alternative Delivery Systems and Multi-Hospital Systems: Teaching hospitals will also need to expand their efforts in exploring relationships with evolving multi-hospital systems and alternative delivery systems such as HMOs. Some teaching hospitals have found it beneficial to create such systems, others have developed relationships with existing systems, and the remainder have no relationships of this type. The experiences of teaching hospitals have varied on a continuum from success to disaster. Because teaching programs have generally been successful in alternative delivery settings only on a subsidized basis, such

relationships must be carefully structured if teaching hospitals are to sustain their societal contributions.

CONCLUDING STATEMENT

It is clear that the United States' system of health care financing and delivery must undergo change to reach a new balance between the demands of society and available resources. The extent of these changes and how they will be initiated and implemented is still an open question. A variety of approaches should be examined and tested prior to wide-scale adoption. The theory of competition with its concomitant deregulation represents an intriguing idea that appears to be in accord with the emerging national mood. It would be ill-advised, however, to rapidly convert a highly complex and pluralistic system of 7,000 hospitals and 440,000 physicians serving 225 million people to a new system unproven on a national scale -- particularly when this nation's system of health care currently delivers the best medical care in the world. A more prudent approach would involve study of the effects of competition through evaluation of demonstration projects and other research. Areas for further research would include the sources and extent of cost savings, the effects on access and quality, and the impact of competition on education, research, and other societal contributions of teaching hospitals. Perhaps government, industry and labor could help create incentives in the voluntary development of new competitive systems through full integration in competitive experiments of Medicare, Medicaid and other health care plans. If consistent, positive results begin to emerge after full evaluation of the experiments, it is likely that competition will continue to expand on a voluntary basis. Further promotional steps could then be taken when there is solid evidence and confidence that a positive national outcome will be achieved.

Budget-conscious congressmen may be attracted to some features of the competition proposals in order to establish control over federal expenditures for health care. As outlined early in this paper, current competition proposals have a complex mixture of objectives. The main attraction to Congress may be the possible containment of federal expenditures. Congress could choose to enact alterations in the federal income tax structure in order to limit governmental expenditures for health care, without including the full agenda of current competition proposals. In making this decision, Congress should be cognizant that it would risk reversal of the trend away from the two-class system of health care.

If this pragmatic view of controlled evolution of competition in the health care system does not prevail and Congress instead decides to promote competition on a national scale, it is crucial that safeguards be included to protect the essential societal contributions of teaching hospitals. Fortunately, teaching hospitals and those who understand their importance still have time in which to address these issues and influence the future direction of health policy as it shapes the health care system of the nation's future.

FOOTNOTES

1. A. Enthoven, "Shattuck Lecture--Cutting Cost Without Cutting the Quality of Care," New England Journal of Medicine, Vol. 298, No. 22, June 1, 1978, p. 1236.
2. The added cost of the regulatory burden has been estimated in studies, such as the Hospital Association of New York State study discussed on pages 89-94 of the January 16, 1979 issue of Hospitals. While these studies do not give precise estimates due to methodological and definitional problems, they clearly establish that there is a substantial added cost. One example of an effort to reduce this burden is sections 302 and 306 of the "National Health Care Reform Act of 1980," H.R.7527, introduced in 1980 by Representatives Gephardt and Stockman. The bill was reintroduced as the "National Health Care Reform Act of 1981," H.R.850, on January 16, 1981.
3. H. Luft, "Trends in Medical Care Costs: Do HMOs Lower the Rate of Growth?" Medical Care, Vol. 18, No. 1, January 1980, pp. 1-16.
4. U.S. Congress, House, "National Health Care Reform Act of 1980," H.R. 7527, 96th Cong., 2nd sess., 1980.
5. O.D. Dickerson, "Regulation," in Health Insurance (Homewood, Ill.: Richard D. Irwin, Inc. 1968), Third edition, pp. 435-452.
6. R. Blair, J.R. Johnson, and R. Vogel, "Economies of Scale in the Administration of Health Insurance," Review of Economics and Statistics, May 1975, pp. 185-189.
7. J.A. Lennie, "Economic Liability of Community-Operated Prepaid Health Plans," Health Care Management Review, Vol. 1, Summer 1976, pp. 53-57.
8. A. Enthoven, "How Interested Groups have Responded to a Proposal for Economic Competition in Health Services," American Economic Review, Vol. 70, No. 2, May 1980, pp. 142-148.
9. Ibid.
10. Group Health News, Vol. 22, January 1981, pp. 1 & 4 - 5.
11. Telephone conversation with Ms. Monti Laughnan of the Office of Personnel Management on January 5, 1981. The 9% reflects HMO enrollment on April 22, 1980.
12. H. Luft, "How Do Health Maintenance Organizations Achieve Their 'Savings'? Rhetoric and Evidence," New England Journal of Medicine, Vol. 298, No. 24, June 15, 1978, pp. 1336-43.
13. Ibid.
14. H. Luft, "Trends in Medical Care Costs, Do HMOs Lower the Rate of Growth?" Medical Care, Vol. 18, No. 1, January 1980, pp. 1-16.

15. Ibid.
16. H. Luft, "HMO Performance: Current Knowledge and Questions for the 1980s," The Group Health Journal, Winter, 1980.
17. D.M. Kinzer, "The Future of Health Care in the United States and Canada," unpublished paper presented to the AHA-CHA Convention, Montreal, Canada, July 28, 1980, p. 11.
18. W. McNerney, "Control of Health-Care Costs in the 1980's," New England Journal of Medicine, Vol. 303, No. 19, November 6, 1980, p. 1091.
19. D.M. Kinzer, "The Future of Health Care in the United States and Canada," unpublished paper presented to the AHA-CHA Convention, Montreal, Canada, July 28, 1980, p. 11.
20. R. Knapp, "Toward a More Contemporary Public Understanding of the Teaching Hospital," unpublished paper prepared for the Council of Teaching Hospitals, AAMC, Spring Meeting, May 1979, p. 42.
21. Ibid.
22. Ibid.
23. J.W. Colloton and R. Knapp, "Testimony on the Health Incentives Reform Act, S. 1968," before the Subcommittee on Health, Committee on Finance, U.S. Senate, on behalf of the Association of American Medical Colleges, March 19, 1980, p. 3.
24. Ibid., p. 4.
25. Ibid.
26. Ibid.
27. The 215,336 undergraduates include 63,533 medical students (1980-81 AAMC Directory of American Medical Education), 22,225 dental students (Annual Report-Dental Education 1979/80, p.15), 98,939 nursing students (State-Approval Schools of Nursing-R.N. 1980, pp. 82-83), 22,560 pharmacy students (American Journal of Pharmaceutical Education, Vol. 44, No. 2, May 1980, pp. 177-181) and 8,079 public health students (telephone conversation with Mr. Steven Howard, Association of Schools of Public Health, January 6, 1981). The 66,252 residents in training include 64,615 resident physicians ('80-'81 Directory of Residency Training Programs, p. 51) and 1,637 resident dentists (telephone conversation with Alice Deforest, American Dental Association, January, 1981). The Interim Report of the Graduate Medical Education National Advisory Committee (DHEW Publication No. (HRA) 79-633), April 1979, p. 287, estimated that the 5,582 internal medicine fellows were 37.5% of the total, yielding a total of 14,885.

28. The \$18.6 billion estimate is derived from adding the total operating expenses for fiscal year 1978-79 of the 270 COTH teaching hospitals that are major affiliates of medical colleges (total: \$14.74 billion), and increasing the total by the 25.9 percent increase in the Consumer Price Index for the Hospital "Room" component of "Other Medical Care Services" from July, 1978, to June, 1980. The operating expense data is from the Council of Teaching Hospital's Committee Structure and Membership Directory, 1980 and the American Hospital Association's Guide to the Health Care Field, 1980.
29. The other operating revenue of the 20 surveyed teaching hospitals was 10 percent of total operating revenues (Exhibit II-5; footnote 3).
30. The percentage estimate is based on the assumption that the present percentage is the same as the 1978-79 percentage. The \$14.74 billion total teaching hospital expenses in 1978-79 (see note 28) were 18 percent of the total annual hospital expenditure level, \$79.8 billion, for the same year reported in the American Hospital Association's Guide to the Health Care Field, (1980 Edition), p. A6.
31. W. McNerney, "Control of Health-Care Costs in the 1980's," The New England Journal of Medicine, Vol. 303, No. 19, November 6, 1980, p. 1091.
32. E. Ginsberg, "Sounding Boards--The Competitive Solution: Two Views, Competition and Cost Containment," The New England Journal of Medicine, Vol. 303, No. 19, November 6, 1980, p. 1115.
33. R.M. Heyssel, "Competition and the Market Place Approach to Containing the Cost of Medical Care," unpublished paper, p. 7.
34. This includes estimates for the costs of resident and clinical fellow stipends and benefits supported by hospitals; measurable indirect costs for graduate medical education; and the costs of supervisory and teaching services of faculty physicians. In developing these estimates, the following sources were used: Richard M. Knapp and Peter W. Butler, "Financing Graduate Medical Education," New England Journal of Medicine, Vol. 301, October 4, 1979, p. 749; Letter, Richard M. Knapp to John W. Colloton, December 5, 1980, University of Iowa Hospitals and Clinics; Interim Report of the Graduate Medical Education National Advisory Committee (DHEW Publication No. (HRA) 79-633) April, 1979, pp. 285-288; "COTH Survey of House Staff Stipends, Benefits, and Funding, 1980" (Washington, D.C.: Department of Teaching Hospitals, Association of American Medical Colleges, November, 1980), pp. 7, 76; "COTH Survey of House Staff Policy and Related Issues, 1976" (Washington, D.C.: Council of Teaching Hospitals, Association of American Medical Colleges, 1976), p. 10; and U. S. Department of Labor - Bureau of Labor Statistics, "Consumer Price Index - U.S. City Average for July, 1973 and July, 1980."
35. J.W. Colloton and R. Knapp, "Testimony on the Health Incentives Reform Act S.1968," submitted to the Subcommittee on Health, Committee on Finance, U.S. Senate, on behalf of the Association of American Medical Colleges, March/18, 1980, p. 9.

36. Association of American Medical Colleges, Task Force on Graduate Medical Education, Graduate Medical Education: Proposals for the Eighties (Washington, D.C.: AAMC 1980), pp. 115-53.
37. Ibid., p. 128.
38. It is probable that the ambulatory care deficit estimate is low because reimbursement formulae and insurance coverage make it desirable to maximize allocation of costs to inpatient units and to minimize such allocations to outpatient ambulatory care programs. The figures in the text would also be increased if all 332 nonfederal COH teaching hospitals were included. However, calculation of the increase by extrapolation to these hospitals is probably not warranted because the preponderance of these societal contributions is in teaching hospitals with major college of medicine affiliations.
39. Charity care allowances represent the uncompensated dollar value of services provided to patients who, at the time of admission or during their stay, are determined to be unable to pay the costs of their care. Collection losses represent revenue lost by a hospital due to nonpayment for services by patients classified as paying. Uncompensated charity patient care costs and collection loss allowances have been aggregated because in many hospitals a clear distinction between these elements of costs is not made unless there is a formalized indigent care charity program with specified determination protocols for prospectively identifying eligible patients. Thus, accounts retrospectively written off as collection losses in one institution would have been prospectively classified as charity in another institution.
40. U.S. Congress, House, "National Health Care Reform Act of 1980," H.R. 7527, 96th Cong., 2nd sess., 1980, Section 223.
41. Des Moines Register, December 21, 1980, p. 3C.
42. D. Rogers, "On Preparing Academic Health Centers for the Very Different 1980s," Journal of Medical Education, Vol. 55, No. 1, January 1980, pp. 1-12.
43. U.S. Congress, House, "National Health Care Reform Act of 1980," H.R. 7527, 96th Cong., 2nd sess., 1980, section 301.
44. The Surcharge percentage would depend on the fund size required and the total number of dollars to which the Surcharge was applied. Since under many of the competition proposals governmental payments would be channeled through commercial premium payments, it is probably not accurate to extrapolate from historical premium payment totals. Thus, the base was estimated to be \$84 billion, by adding the \$85.3 billion in aggregate hospital charges and \$40.6 billion in physician fees in 1979 (HCFA estimates cited in Hospitals, September 16, 1980, p. 37) and deducting 33% for the approximate portion of payments which are out-of-pocket (Health United States, 1979 (DHEW Publication No. (PHS) 80-1232), p. 191). The estimated amount needed in the fund, \$6.7 billion (see Exhibit II), is 8% of \$84 billion.

**AMBULATORY CARE PROGRAM FINANCIAL SURVEY OF TWENTY UNIVERSITY OWNED TEACHING HOSPITALS
BY THE UNIVERSITY OF IOWA HOSPITALS AND CLINICS**

Ambulatory Care Program Data -- 1979-80

<u>Hospital</u>	<u>Total Clinic Visits(1)</u>	<u>Gross Ambulatory Revenue(2)</u>	<u>Charity/Coll. Loss Allowances(3)</u>	<u>Contractual/ Other Allowances(4)</u>	<u>Net Ambulatory Revenue(5)</u>	<u>Total Ambulatory Operating Expense(6)</u>	<u>Net Operating Surplus (Deficit)(7)</u>	<u>Educational Program Costs(8)</u>
1.	318,056	\$ 14,410,000	\$ 417,042	\$ 706,958	\$ 13,286,000	\$ 19,108,200	\$(5,822,200)	\$ 3,053,114
2.	280,475	8,616,307	865,296	56,934	7,694,077	10,918,578	(3,224,501)	332,717
3.	219,921	14,337,445	1,546,112	645,367	12,145,966	20,174,172	(8,028,206)	4,066,089
4.	201,806	19,620,696	4,543,521	2,150,647	12,926,528	13,935,751	(1,009,223)	4,385,903
5.	200,792	14,333,461	129,748	--	14,203,713	15,976,617	(1,772,904)	1,055,901
6.	185,486	27,553,762	3,306,844	1,494,328	22,752,590	22,920,601	(168,011)	1,360,733
7.	182,008	10,654,415	1,065,442	(604,226)	10,193,199	13,791,697	(3,598,498)	1,588,990
8.	174,744	9,359,629	300,616	229,941	8,829,072	9,256,675	(427,603)	219,416
9.	168,823	6,201,515	1,089,367	497,845	4,614,303	8,575,578	(3,961,275)	1,168,489
10.	159,455	7,914,102	595,976	537,285	6,780,841	7,566,580	(785,739)	1,728,188
11.	157,756	5,250,782	765,466	555,350	3,929,966	4,899,238	(969,272)	401,897
12.	146,112	15,593,778	1,179,644	4,437,707	9,976,427	17,915,531	(7,939,104)	4,491,014
13.	140,762	5,770,959	917,670	(260,890)	5,114,179	7,346,886	(2,232,707)	973,211
14.	122,714	4,364,496	1,439,454	437,279	2,487,763	5,670,302	(3,182,539)	837,146
15.	100,255	5,127,294	1,673,184	147,134	3,306,976	4,705,017	(1,398,041)	867,128
16.	100,177	9,922,547	733,098	1,447,188	7,742,261	13,103,492	(5,361,231)	2,835,094
17.	96,062	3,510,436	837,642	258,255	2,414,539	6,404,743	(3,990,204)	1,967,944
18.	82,250	7,812,653	726,908	(435,315)	7,521,060	9,246,965	(1,725,905)	1,543,243
19.	37,876	7,021,578	503,482	841,440	5,676,656	5,969,332	(292,676)	201,410
20.	37,355	4,256,617	1,022,748	306,730	2,927,139	3,981,353	(1,054,214)	553,832
TOTALS	<u>3,112,885</u>	<u>\$201,632,472</u>	<u>\$23,659,260</u>	<u>\$13,449,957</u>	<u>\$164,523,255</u>	<u>\$221,467,308</u>	<u>\$(56,944,053)</u>	<u>\$33,631,459</u>
TOTALS ADJUSTED TO 1980-81(9)	<u>3,112,885</u>	<u>\$228,046,000</u>	<u>\$26,758,000</u>	<u>\$15,212,000</u>	<u>\$186,076,000</u>	<u>\$250,480,000</u>	<u>\$(64,404,000)</u>	<u>\$38,037,000</u>

FOOTNOTES

- (1) Includes all clinic and emergency visits.
- (2) Includes gross ambulatory, clinic, emergency, and ancillary service revenues related to ambulatory patients.
- (3) Charity allowances represent the uncompensated dollar value of services provided to patients who at the time of their clinic visit are determined to be unable to pay costs of their care, while collection losses represent the revenue from patient accounts which the hospitals were unable to collect.
- (4) Contractual and other allowances represents the difference between gross revenue from services rendered and amounts received from patients and third party payors.
- (5) Net Ambulatory Revenue represents Gross Ambulatory Revenue less Charity/Collection Loss Allowances and Contractual and Other Allowances.
- (6) Total Ambulatory Operating Expense includes direct and indirect expenses for clinic, emergency, and ancillary services related to ambulatory patients.
- (7) Net Operating Surplus (Deficit) represents Net Ambulatory Revenue less Total Ambulatory Operating expense.
- (8) Educational Program Costs include all measurable ambulatory clinic, emergency, and ancillary service educational costs. These costs are defined as those borne by the hospital relating to health science educational programs, as well as medical and dental residency programs including payments for stipends; supervisory physicians and dentists; professional liability insurance; house staff health insurance; uniforms; subsidized cafeteria services and other educational overhead costs as defined by Medicare cost reimbursement principles.
- (9) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 percent increase in the Consumer Price Index change for Hospital "Room" Component of "Other Medical Care Services" component from July, 1979 - July, 1980.

ESTIMATION OF TOTAL AMBULATORY CARE PROGRAM DEFICIT IN 270 COTH TEACHING HOSPITALS
WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Total Ambulatory Care Program Deficit in 20 Sample Teaching Hospitals	\$ 56,944,053
2. Total Clinic Visits in 20 Sample Teaching Hospitals	3,112,885
3. Average Ambulatory Care Program Deficit Per Clinic Visit in 20 Sample Teaching Hospitals	\$ 18.29
4. Total Clinic Visits in all 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽¹⁾	39,630,854
5. Total Estimated Ambulatory Care Program Deficit in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (39,630,854 Visits x \$18.29)	<u>\$724,848,320</u>

1980-81

1. Total Estimated Ambulatory Care Program Deficit in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (<u>\$724,848,320</u> x 1.131 ⁽²⁾)	<u>\$819,803,000</u>
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ESTIMATION OF AMBULATORY CARE PROGRAM DEFICIT EXCLUSIVE OF CHARITY/COLLECTION LOSS ALLOWANCE COSTS
IN 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Total Ambulatory Care Program Deficit (\$56,944,053) Less Charity/Collection Loss Allowance Costs in 20 Sample Teaching Hospitals (\$23,659,260)	\$ 33,284,793
2. Total Clinic Visits in 20 Sample Teaching Hospitals	3,112,885
3. Average Ambulatory Care Program Deficit Exclusive of Charity/Collection Loss Allowance Costs in 20 Sample Teaching Hospitals Per Patient Visit	\$ 10.69
4. Total Clinic Visits in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽¹⁾	39,630,854
5. Total Estimated Ambulatory Care Program Deficit Less Charity/Collection Loss Allowance Costs for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (39,630,854 Visits x \$10.69)	<u>\$423,653,829</u>

1980-81

1. Total Estimated Ambulatory Care Program Deficit Less Charity/Collection Loss Allowance Costs for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (<u>\$423,653,829</u> x 1.131 ⁽²⁾)	<u>\$479,152,000</u>
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FOOTNOTES

- (1) Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980.
- (2) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 percent increase in the Consumer Price Index change for Hospital "Room" Component of "Other Medical Care Services" Component from July, 1979, to July, 1980.

ESTIMATION OF CHARITY/COLLECTION LOSS ALLOWANCE COSTS INCLUDED IN
AMBULATORY CARE PROGRAM DEFICITS OF 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Total Estimated Ambulatory Care Program Deficit in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations	<u>\$724,848,320</u>
2. Total Estimated Ambulatory Care Program Deficit Less Charity/Collection Loss Allowance Costs	<u>\$423,653,829</u>
3. Total Estimated Charity/Collection Loss Allowance Costs Included in Ambulatory Care Program Deficits of 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$724,848,320 - \$423,653,829)	<u>\$301,194,491</u>

1980-81

1. Total Estimated Charity/Collection Loss Allowance Costs Included in Ambulatory Care Program Deficits of 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$301,194,491 x 1.131 ⁽²⁾)	<u>\$340,651,000</u>
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ESTIMATION OF EDUCATIONAL COSTS INCLUDED IN AMBULATORY CARE PROGRAM DEFICITS OF
270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Educational Costs Included in Ambulatory Care Program Deficits in 20 Sample Teaching Hospitals	\$ 33,631,459
2. Total Clinic Visits in 20 Sample Teaching Hospitals	3,112,885
3. Average Educational Cost Per Clinic Visit in 20 Sample Teaching Hospitals	\$ 10.80
4. Total Clinic Visits in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽¹⁾	39,630,854
5. Total Estimated Educational Costs in Ambulatory Care Program Deficits of 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (39,630,854 x \$10.80)	<u>\$428,013,223</u>

1980-81

1. Total Estimated Educational Costs in Ambulatory Care Program Deficits of 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$428,013,223 x 1.131 ⁽²⁾)	<u>\$484,083,000</u>
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FOOTNOTES

- (1) Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980.
- (2) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 percent increase in the Consumer Price Index change for Hospital "Room" Component of "Other Medical Care Services" Component from July, 1979, to July, 1980.

TOTAL INPATIENT AND OUTPATIENT DATA FOR 20 UNIVERSITY OWNED TEACHING HOSPITALS -- 1979-80

Hospital	Total Patient Days ⁽¹⁾	Gross Patient Revenue ⁽²⁾	Charity/Collection Loss Allowances ⁽³⁾	Contractual/Other Allowances ⁽⁴⁾	Other Operating Revenue ⁽⁵⁾	Total Operating Revenue ⁽⁶⁾	Total Operating Expense ⁽⁷⁾	Net Operating Surplus (Deficit) ⁽⁸⁾	Educational Program Costs ⁽⁹⁾
1.	313,009	\$ 117,054,402	\$ 4,700,779	\$ 4,552,023	\$ 6,237,319	\$ 114,038,919	\$ 101,243,193	\$ 12,795,726	\$ 8,362,600
2.	59,939	28,596,224	1,583,114	188,963	1,925,088	28,749,235	32,288,974	(3,539,739)	1,298,307
3.	218,674	106,625,233	11,494,865	4,798,135	3,278,378	93,610,611	104,561,982	(10,951,371)	12,768,210
4.	159,017	82,788,641	17,828,528	10,082,332	26,886,987	81,764,768	77,420,841	4,343,927	4,385,903
5.	203,393	99,182,037	1,249,590	3,165,240	10,771,969	105,539,176	106,408,560	(869,384)	11,767,841
6.	183,896	137,163,155	6,347,110	7,639,046	8,982,901	132,159,900	130,122,933	2,036,967	7,828,665
7.	149,682	66,163,083	3,268,339	474,954	5,056,091	67,475,881	64,735,783	2,740,098	5,000,000
8.	105,112	44,672,332	1,434,803	1,097,481	6,093,554	48,233,602	45,739,755	2,493,847	952,017
9.	80,204	36,301,345	4,091,265	2,988,372	5,286,104	34,507,812	35,392,226	(884,414)	3,633,377
10.	126,816	56,979,436	4,290,221	3,868,723	2,011,859	50,832,351	45,079,517	5,752,834	3,111,610
11.	129,195	41,261,594	3,155,589	4,659,041	215,973	33,662,937	32,433,325	1,229,612	2,580,990
12.	162,846	76,768,655	10,446,000	17,212,056	24,787,727	73,898,326	73,446,385	451,941	9,073,084
13.	243,373	84,095,592	4,346,171	1,803,681	1,810,739	79,756,479	81,892,078	(2,135,599)	4,986,083
14.	177,687	54,075,846	13,644,504	4,144,928	11,831,663	48,118,077	45,613,957	2,504,120	3,386,539
15.	118,081	44,605,757	13,567,976	6,368,723	8,098,225	32,767,283	30,362,434	2,404,849	3,272,905
16.	103,844	46,396,984	3,878,089	7,655,623	283,725	35,146,997	51,630,130	(16,483,133)	4,444,395
17.	106,171	30,737,477	7,244,632	2,234,042	--	21,258,803	34,473,650	(13,214,847)	6,541,243
18.	170,905	73,446,282	7,126,966	5,743,300	1,275,122	61,851,138	60,551,156	1,299,982	3,942,523
19.	221,023	113,188,449	1,429,611	25,326,895	2,016,281	88,448,224	87,409,616	1,038,608	5,899,123
20.	96,334	48,169,040	3,455,711	2,757,261	--	41,956,068	38,975,870	2,980,198	2,010,203
TOTALS	<u>3,129,201</u>	<u>\$1,388,271,564</u>	<u>\$124,583,863</u>	<u>\$116,760,819</u>	<u>\$126,849,705</u>	<u>\$1,273,776,587</u>	<u>\$1,279,782,365</u>	<u>\$(6,005,778)</u>	<u>\$105,245,618</u>
TOTALS ADJUSTED TO 1980-81 ⁽¹⁰⁾	<u>3,129,201</u>	<u>\$1,570,135,000</u>	<u>\$140,904,000</u>	<u>\$132,057,000</u>	<u>\$143,467,000</u>	<u>\$1,440,641,000</u>	<u>\$1,447,434,000</u>	<u>\$(6,793,000)</u>	<u>\$119,033,000</u>

FOOTNOTES

- (1) Includes newborn patient days.
- (2) Includes all patient service revenues.
- (3) Charity allowances represent the uncompensated dollar value of services provided to patients who at the time of admission (or clinic visit) or during their stay are determined to be unable to pay costs of their care, while collection losses represent the revenue from patient accounts which the hospitals were unable to collect.
- (4) Contractual and other allowances represent the difference between gross revenue from services rendered and amounts received from patients or third-party payors.
- (5) Includes other revenues not identifiable with patient services.
- (6) Total operating revenue represents gross patient revenue less charity/collection loss allowance and contractual/other allowance plus other operating revenue.
- (7) Total operating expense includes salaries and fringe benefits, supplies and services, interest expense, and depreciation.
- (8) Net operating surplus (deficit) represents total operating revenue less total operating expense.
- (9) Educational program costs include all measurable direct and indirect educational costs. These costs are defined as those borne by the hospital relating to health science educational programs, as well as medical and dental residency programs including payments for stipends; supervisory physicians and dentists; professional liability insurance; house staff health insurance; uniforms; subsidized cafeteria services and other educational overhead costs as defined by Medicare cost reimbursement principles.
- (10) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 percent increase in the Consumer Price Index change for Hospital "Room" Component of "Other Medical Care Services" component from July, 1979 - July, 1980.

ESTIMATION OF TOTAL INPATIENT & OUTPATIENT CHARITY/COLLECTION LOSS ALLOWANCE COSTS
FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Total Charity/Collection Loss Allowance for 20 Sample Teaching Hospitals	\$ 124,583,863
2. Total Adjusted Patient Days for 20 Sample Teaching Hospitals ⁽¹⁾	3,660,882
3. Average Total Charity/Collection Loss Allowance Per Adjusted Patient Day for 20 Sample Teaching Hospitals	\$ 34.03
4. Total Adjusted Patient Days for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽²⁾	52,403,477
5. Total Estimated Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (52,403,477 Adjusted Patient Days x \$34.03)	<u>\$1,783,290,322</u>

1980-81

1. Total Estimated Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$1,783,290,322 x 1.131 ⁽³⁾)	<u>\$2,016,901,000</u>
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ESTIMATION OF INPATIENT CHARITY/COLLECTION LOSS ALLOWANCE COSTS FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS

1979-80

1. Total Estimated Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations	\$1,783,290,322
2. Total Estimated Ambulatory Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (EX. 1 - 3)	\$ 301,194,491
3. Total Estimated Inpatient Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$1,783,290,322 - \$301,194,491)	<u>\$1,482,095,831</u>

1980-81

1. Total Estimated Inpatient Charity/Collection Loss Allowance for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$1,482,095,831 x 1.131 ⁽³⁾)	<u>\$1,676,250,000</u>
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FOOTNOTES

- (1) "Adjusted patient days" is an aggregate figure reflecting the number of inpatient days of care rendered by the 20 sample teaching hospitals (3,129,201), plus (531,681) equivalent patient days extrapolated for outpatient services. The extrapolation was made after determining for the 20 hospitals the ratio of their average revenue per clinic visit (\$64.77) to their average revenue per inpatient day (\$379.21) which yields (.1708 clinic visits to 1 patient day). The total clinic visits for the 20 hospitals (3,112,885) was then multiplied by .1708 to determine the 531,681 equivalent patient days.
- (2) "Adjusted patient days" for the 270 COTH teaching hospitals was derived using the same ratio of revenue per clinic visit to revenue per inpatient day (.1708 clinic visits to 1 patient day) as for the 20 sample hospitals. On this basis, the clinic visits for the 270 hospitals (39,630,854) were multiplied by (.1708) to yield 6,768,950 equivalent patient days. When this figure is added to total patient days (45,634,527) for the 270 hospitals, the total adjusted patient days is 52,403,477.
- (3) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 percent increase in the Consumer Price Index change for Hospital "Room" Component of "Other Medical Care Services" Component from July, 1979 - July, 1980.

SUMMARY OF EXHIBIT II
MEASURABILITY AND ESTIMATED ANNUAL COST OF SOCIETAL CONTRIBUTIONS
FOR 270 COH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS
(Graduate Medical and Dental Educational Costs Relate to All Nonfederal Teaching Hospitals)

<u>Societal Contribution</u>	<u>Measurable</u>	<u>Unmeasurable</u>	
1) GRADUATE MEDICAL & DENTAL EDUCATION:			
A. Direct	\$1,570,000,000	---	
B. Indirect (Measurable)	\$ 238,000,000	---	
C. Indirect (Unmeasurable)	---	\$?	
SUBTOTAL	(\$1,808,000,000)*	(\$?)	
2) OTHER EDUCATIONAL PROGRAMS:			
A. Direct	\$ 126,000,000		
B. Indirect (Measurable)	\$ 22,000,000		
C. Indirect (Unmeasurable)	---	\$?	
SUBTOTAL	(\$ 148,000,000)*	(\$?)	
3) AMBULATORY CARE PROGRAM DEFICITS:	\$ 336,000,000 **	---	
(Excludes all educational program costs included in items #1 and #2 above and includes ambulatory charity/collection loss costs)			
4) CHARITY CARE/COLLECTION LOSSES ARISING FROM <u>INPATIENT CARE</u> PROGRAMS FOR WHICH NO DIRECT COMPENSATION IS RECEIVED	\$1,676,000,000 ***	---	
5) NEW TECHNOLOGY TESTING:			
A. Direct	---	\$?	
B. Indirect	---	\$?	
6) CLINICAL RESEARCH:			
A. Direct	---	\$?	
B. Indirect	---	\$?	
7) LOW VOLUME, HIGHLY SPECIALIZED SERVICES:			
A. Direct	---	\$?	
B. Indirect	---	\$?	
8) INTENSIVE CASE MIX:			
A. Direct	---	\$?	
B. Indirect	---	\$?	
 TOTAL SOCIETAL CONTRIBUTIONS FOR 270 COH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS	 <u>\$3,968,000,000</u>	 <u>\$2,725,000,000</u>	 (Estimated on Exhibit II - 4)
 GRAND TOTAL	 <u>\$6,693,000,000</u>		

* For source see footnote number 31 in paper.
** For calculation see Exhibit II - 3.
*** For calculation see Exhibit I - 5

MEASURABILITY AND ESTIMATED ANNUAL COST OF SOCIETAL CONTRIBUTIONS
FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS
(Graduate Medical and Dental Educational Costs Relate to All Nonfederal Teaching Hospitals)

1980-81

<u>Societal Contribution</u>	<u>Measurable</u>	<u>Unmeasurable</u>	<u>Remarks</u>
1) GRADUATE MEDICAL & DENTAL EDUCATION:			
A. Direct	\$1,570,000,000	-----	Direct costs of Graduate Medical and Dental education could be derived directly from each teaching hospital's annual budget. The aggregate data reported here were derived from existing data and extrapolations of data from COTH, Institute of Medicine and GMENAC sources, adjusted for inflation.
B. Indirect (Measurable) . .	\$ 238,000,000	-----	Measurable indirect costs could be derived directly from each teaching hospital's cost finding report. These include depreciation on space and associated overhead costs (e.g. housekeeping, building maintenance, equipment depreciation, interest on capital borrowing) for clinical faculty and associated academic support personnel offices, call quarters, conference rooms, library and classrooms; and, subsidized cafeterias, housing services, uniforms, House Staff Affairs Office functions and other general supporting services. The aggregate measurable data reported here for indirect costs were derived from existing data and extrapolations from the sources indicated above.
C. Indirect (Unmeasurable)	-----	\$?	Numerous unmeasurable indirect costs are also associated with graduate medical and dental education programs. These include the costs of staff other than teaching physicians who provide support to house staff in their learning process, additional space included in patient accommodations and other supporting facilities to meet educational program needs, and an undetermined proportion of diagnostic testing which may be utilized for educational purposes. However, no estimates exist or can be developed at this time which would provide these costs.
SUBTOTAL		(\$1,808,000,000)	(\$?)
2) OTHER EDUCATIONAL PROGRAMS:			
A. Direct	\$ 126,000,000		Actual cost figures of hospital sponsored educational programs in this category could be derived for direct and measurable indirect costs of Other Educational Programs from operating budgets and cost finding reports of each teaching hospital. The estimates provided here were derived by using 1978 COTH data to determine the relationship between graduate medical and dental education costs and other health science educational program costs for 58 university owned teaching hospitals and applying this relationship to the total graduate medical and dental education costs of the 270 teaching hospitals with major college of medicine affiliations. This estimate of total Other Educational Program cost was then segregated into direct and indirect measurable costs on the basis of the direct - indirect cost relationship for Graduate Medical and Dental Education set forth above.
B. Indirect (Measurable) . .	\$ 22,000,000		
C. Indirect (Unmeasurable)	-----	\$?	Unmeasurable indirect costs also exist as they do for graduate medical and dental education, and no means is available for measuring them. Significant among these are programs for undergraduate medical education, nursing, pharmacy and dentistry.
SUBTOTAL		(\$ 148,000,000)	(\$?)

<u>Societal Contribution</u>	<u>Measurable</u>	<u>Unmeasurable</u>	<u>Remarks</u>
3) AMBULATORY CARE PROGRAM DEFICITS: (Excludes all educational program costs included in items #1 and #2 above and includes ambulatory charity/collection loss costs.)	\$ 336,000,000	-----	Figures for total Ambulatory Care Program Deficits could be measured for each teaching hospital from existing accounting records. The figure specified here was derived by extrapolating data from 20 university owned teaching hospitals on their clinic, emergency and ancillary ambulatory program deficits to the volume of ambulatory services provided by the 270 COTH teaching hospitals. See Exhibit I - 2 & 3: Total estimated ambulatory care program deficit in the 270 COTH teaching hospitals (\$819,803,000) less total estimated educational costs in ambulatory care program deficits (\$484,083,000) = \$335,720,000.
4) CHARITY CARE/COLLECTION LOSSES ARISING FROM INPATIENT CARE PROGRAMS FOR WHICH NO DIRECT COMPENSATION IS RECEIVED .	\$1,676,000,000	-----	This figure could be derived from existing accounting records in teaching hospitals. The estimate provided here was derived by extrapolating data obtained from 20 university owned teaching hospitals on uncompensated charity care and collection losses to the 270 COTH teaching hospitals.
5) NEW TECHNOLOGY TESTING:			
A. Direct	-----	\$?	New Technology Testing encompasses all activities which teaching hospitals undertake to test and develop new equipment and procedures used for patient diagnosis and treatment. No means exist for measuring the direct and indirect costs of new technology testing and innovation, but it is generally recognized that the cost of this societal contribution is significant. At the University of Iowa Hospitals and Clinics alone, some 250 new procedures and tests were introduced for patient care and diagnosis in the period from 1973 to 1978.
B. Indirect	-----	\$?	
6) CLINICAL RESEARCH:			
A. Direct	-----	\$?	While the bulk of Clinical Research conducted in teaching hospitals is supported by grants and other separate funding awarded for research purposes, some clinical research is directly or indirectly supported through patient care earnings. There are no studies which have been conducted to determine the aggregate costs of clinical research support provided directly by teaching hospitals.
B. Indirect	-----	\$?	
7) LOW VOLUME, HIGHLY SPECIALIZED SERVICES:			
A. Direct	-----	\$?	No estimates of the cost of Low Volume, Highly Specialized Services are available and no methodology has been developed for deriving such estimates.
B. Indirect	-----	\$?	
8) INTENSIVE CASE MIX:			
A. Direct	-----	\$?	No studies have been conducted to determine the costs which the 270 teaching hospitals incur in providing Intensive Case Mix Services and no reliable methodology has yet been developed to provide such costs.
B. Indirect	-----	\$?	
TOTAL SOCIETAL CONTRIBUTIONS FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS	\$3,968,000,000^a	\$2,725,000,000	(See following page for calculation of this unmeasurable figure.)
GRAND TOTAL	\$6,693,000,000		

^aThe above figure would be increased if all 332 nonfederal COTH teaching hospitals were included. However, inclusion of all 332, for other than Graduate Medical and Dental Education, was not felt warranted because the preponderance of societal contributions are generated in teaching hospitals with major college of medicine affiliations.

**ESTIMATION OF UNMEASURABLE SOCIETAL CONTRIBUTIONS
FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS**

1980-81

1.	Estimated Average Charge Per Inpatient Day for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽¹⁾	\$ 414
2.	Estimated Average Charge Per Inpatient Day for All U. S. Nonfederal Short-Term General and Other Special Hospitals Excluding 270 COTH Teaching Hospitals ⁽²⁾	\$ 297
3.	Average Cost Per Inpatient Day of Societal Contributions of Teaching Hospitals (\$414 - \$297)	\$ 117
4.	Average Cost Per Adjusted Patient Day of Measurable Societal Contributions for 270 COTH Teaching Hospitals (\$3.397 Billion ⁽³⁾ ÷ 52,403,477 ⁽⁴⁾ adjusted patient days)	\$ 65
5.	Average Cost per Adjusted Patient Day of Unmeasurable Societal Contributions (\$117 - \$65)	\$ 52
6.	Total Annual Cost of Unmeasurable Societal Contributions (\$52 x 52,403,477 adjusted patient days ⁽⁴⁾)	<u>\$2,725,000,000⁽⁵⁾</u>

FOOTNOTES

(1) See Exhibit II - 5 for derivation.

(2) See Exhibit II - 6 for derivation.

(3) See Exhibit II - 7 for derivation.

(4) "Adjusted Patient Days" is an aggregate figure reflecting the number of inpatient days of care rendered by the 270 COTH teaching hospitals (45,634,527) plus (6,768,950) equivalent patient days extrapolated for outpatient services. The extrapolation was made by multiplying the ratio of revenue per clinic visit to revenue per inpatient day for the 20 sample hospitals (.1708 clinic visits to 1 patient day) by the 20 hospitals' total clinic visits (39,630,854) to determine the equivalent patient days (6,768,950). (Source for 270 COTH Teaching Hospital patient days and clinic visits - Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980).

(5) The above figure would be increased if all 332 nonfederal COTH teaching hospitals were included. However, calculation of the additional increase by extrapolation to them is probably not warranted because the preponderance of these societal contributions is in the 270 COTH members with major College of Medicine affiliations.

ESTIMATION OF AVERAGE CHARGE PER INPATIENT DAY IN 270 COTH TEACHING HOSPITALS
WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS
1980-81

I. ESTIMATION OF RELATIONSHIP OF INPATIENT COST TO INPATIENT REVENUE IN 20 SAMPLE TEACHING HOSPITALS		
A.	Gross 1980-81 Inpatient Revenue in 20 Sample Teaching Hospitals [Weighted Average Charge Per Inpatient Day Reported by 20 Sample Teaching Hospitals (\$388) ⁽¹⁾ x 1.131 ⁽²⁾ x Total Patient Days (3,129,201)]	\$ 1,373,181,000
B.	Total Inpatient Expense in 20 Sample Teaching Hospitals [Total Operating Expense (\$1,447,434,000) less Total Ambulatory Operating Expense (\$250,480,000) less Expense Allocated to Other Operating Revenues ⁽³⁾ (\$144,743,000)]	\$ 1,052,211,000
C.	Relationship of Inpatient <u>Costs</u> to Inpatient <u>Charges</u> in 20 Sample Teaching Hospitals (\$1,052,211,000 ÷ \$1,373,181,000)	77%
II. ESTIMATION OF AVERAGE <u>COST</u> PER INPATIENT DAY IN 270 NONFEDERAL COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS		
A.	Total Inpatient and Ambulatory Care Operating Expense for 270 Nonfederal COTH Teaching Hospitals with Major College of Medicine Affiliations [1978-79 Total Operating Expense (\$14,744,786,000 ⁽⁴⁾ x 1.259 ⁽²⁾ = \$18,563,686,000) Less Expense Allocable to Other Operating Revenue (\$18,563,686,000 x the Ratio of Other Operating Revenue to Total Operating Revenue for 20 Sample Teaching Hospitals, .10 ⁽³⁾ = \$1,856,369,000)]	\$16,707,317,000
B.	Total Adjusted Patient Days for 270 Nonfederal COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽⁵⁾	52,403,477
C.	Estimated Average <u>Cost</u> Per Inpatient Day for 270 Nonfederal COTH Teaching Hospitals with Major College of Medicine Affiliations (\$16,707,317,000 ÷ 52,403,477 Adjusted Patient Days)	\$ <u>319</u>
III. ESTIMATION OF AVERAGE <u>CHARGE</u> PER INPATIENT DAY IN 270 NONFEDERAL COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS		
A.	Estimated Average <u>Cost</u> Per Inpatient Day for 270 Nonfederal COTH Teaching Hospitals with Major College of Medicine Affiliations	\$ <u>319</u>
B.	Relationship of Average Estimated <u>Cost</u> Per Inpatient Day to Average Estimated <u>Charge</u> Per Inpatient Day in 20 Sample Teaching Hospitals	77%
C.	Estimated Average <u>Charge</u> Per Inpatient Day in 270 Nonfederal COTH Teaching Hospitals with Major College of Medicine Affiliations (\$319 ÷ 77%)	\$ <u>414</u>

FOOTNOTES

- (1) Calculated by multiplying the Gross Average Charge Per Inpatient Day Reported by Each of the 20 Sample Teaching Hospitals by their Individual Reported Patient Days and Dividing by Total Patient Days for all 20 Hospitals.
- (2) Department of Labor, Bureau of Labor Statistics. This reflects a 13.1 and 25.9 percent increase in the Consumer Price Index for Hospital "Rooms" Component of "Other Medical Care Services" Component from July, 1979 - July 1980, and July, 1978 - July, 1980, respectively.
- (3) Derived by relating Other Operating Revenue for the 20 Sample Teaching Hospitals (\$143,467,000) to Total Operating Revenue (\$1,440,641,000) and applying this relationship (.10 to 1) to Total Operating expense (\$1,447,434,000).
- (4) Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980; and American Hospital Association, Guide to the Health Care Field, 1980, (Chicago: American Hospital Association, 1980).
- (5) "Adjusted Patient Days" for the 270 COTH Teaching Hospitals was derived using the ratio of revenue per clinic visit to revenue per inpatient day (.1708 clinic visits to 1 patient day) for the 20 sample hospitals. On this basis, the clinic visits for the 270 COTH hospitals (39,630,854) were multiplied by (.1708) to yield 6,768,950 equivalent patient days. When this figure is added to total patient days (45,634,527) for the 270 COTH hospitals, the total is 52,403,477.

**ESTIMATION OF THE AVERAGE CHARGE PER INPATIENT DAY
FOR U.S. NONFEDERAL, SHORT-TERM GENERAL AND OTHER SPECIAL HOSPITALS
EXCLUDING 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS**

	<u>Gross Inpatient Revenue</u>	<u>Inpatient Days of Care</u>	<u>Average Charge (Revenue) Per Inpatient Day</u>
1. 1978-79 Inpatient Revenue, Inpatient Days of Care and Average Charge (Revenue) Per Inpatient Day for 5,842 Nonfederal, Short-Term General and Other Special Hospitals . . .	\$66,821,103,000 ⁽¹⁾	265,205,203 ⁽²⁾	\$251.96 ⁽¹⁾
2. 1980-81 Inpatient Revenue, Inpatient Days of Care and Average Charge (Revenue) Per Inpatient Day for 5,842 Nonfederal, Short-Term General and Other Special Hospitals . . .	\$84,127,768,677 ⁽³⁾	265,205,203 ⁽⁴⁾	\$317.00 ⁽³⁾
3. 1980-81 Inpatient Revenue, Inpatient Days of Care, and Average Charge (Revenue) Per Inpatient Day for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations	\$18,892,694,178 ⁽⁵⁾	45,634,527 ⁽⁶⁾	\$414.00 ⁽⁷⁾
4. <u>Estimation of Gross Inpatient Revenue and Inpatient Days of Care for U.S. Nonfederal, Short-Term General and Other Special Hospitals Excluding 270 COTH Teaching Hospitals</u>			
a. Gross Inpatient Revenue (\$84,127,768,677 - \$18,892,694,178)		\$65,235,074,499 ⁽⁸⁾	
b. Inpatient Days of Care (265,205,203 - 45,634,527)		219,570,676 ⁽⁸⁾	
5. Estimation of Average Charge Per Inpatient Day for U.S. Nonfederal, Short-Term, General and Other Special Hospitals Excluding 270 COTH Teaching Hospitals with Major College of Medicine Affiliations [Gross Patient Revenue (\$65,235,074,499) ÷ Inpatient Days of Care (219,570,676)]			<u>\$297.10 = \$297</u>

FOOTNOTES

- (1) American Hospital Association, Hospital Statistics (Chicago: American Hospital Association, 1980), p. 186.
- (2) Gross Inpatient Revenue (\$66,821,103,000) ÷ Average Charge (Revenue) Per Inpatient Day (\$251.96) = 265,205,203 Inpatient Days of Care.
- (3) These figures were obtained by multiplying 1978-79 Gross Inpatient Revenue (\$66,821,103,000) and Average Charge (Revenue) Per Inpatient Day (\$251.96) by 1.259. The 1.259 reflects a 25.9 percent increase in the Consumer Price Index for the Hospital "Room" Component of the "Other Medical Services" Component from July, 1978 - July, 1980, per Department of Labor, Bureau of Labor Statistics.
- (4) It is assumed that Inpatient Days of Care remained constant between 1978-79 and 1980-81.
- (5) This figure is determined by multiplying Total Inpatient Days of Care for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (45,634,527) by the Average Charge (Revenue) Per Inpatient Day Estimated for the 270 COTH Teaching Hospitals (\$414.00).
- (6) Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980.
- (7) See Exhibit II-7 for derivation.
- (8) It is assumed that all 270 COTH Teaching Hospitals are included in the 5,842 Nonfederal, Short-Term General and Other Special Hospitals in performing these calculations. This assumption is supported by the response rate to the American Hospital Association survey from which the 1978-79 Gross Revenue and Average Charge (Revenue) Per Inpatient Day data for the 5,842 Nonfederal, Short-Term General and Other Special Hospitals were drawn. All 270 COTH hospitals have over 100 beds and the response rate to the AIA survey for hospitals with over 100 beds exceeded 92 percent. See American Hospital Association, Ibid., p. xxi.

ESTIMATION OF TOTAL MEASURABLE SOCIETAL CONTRIBUTION COSTS FOR 270 COTH TEACHING HOSPITALS ONLY

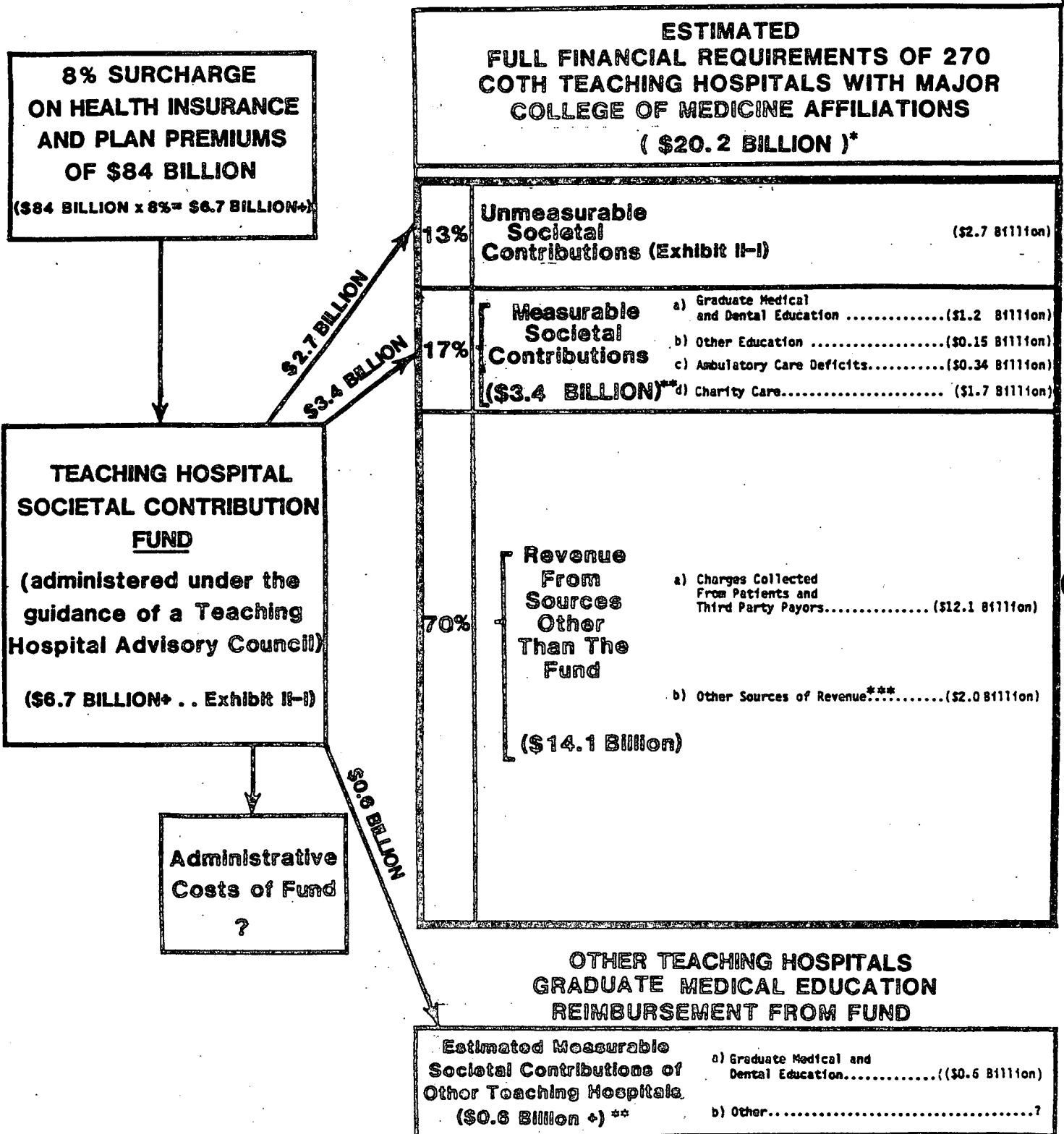
1980-81

I. ESTIMATION OF GRADUATE MEDICAL AND DENTAL EDUCATION COSTS FOR 270 COTH TEACHING HOSPITALS WITH MAJOR COLLEGE OF MEDICINE AFFILIATIONS	
1. Total Graduate Medical and Dental Education Costs for All Nonfederal Teaching Hospitals ⁽¹⁾	<u>\$1,808,000,000</u>
2. Total Medical Residents ⁽²⁾ Engaged in Residency Training in All Teaching Hospitals ⁽³⁾	64,615
3. Total Medical Residents ⁽²⁾ Engaged in Residency Training in 270 COTH Teaching Hospitals with Major College of Medicine Affiliations ⁽⁴⁾	44,206
4. Relationship of 270 COTH Teaching Hospital Medical Residents to all Medical Residents (44,206 ÷ 64,615).	68.4%
5. Total Graduate Medical and Dental Education Costs for 270 COTH Teaching Hospitals with Major College of Medicine Affiliations (\$1,808,000,000 x .684).	<u>\$1,237,000,000</u>
 II. TOTAL MEASURABLE SOCIETAL CONTRIBUTION COSTS FOR 270 COTH TEACHING HOSPITALS ONLY	
1. Graduate Medical and Dental Education ⁽¹⁾	\$1,237,000,000
2. Other Educational Programs ⁽¹⁾	\$ 148,000,000
3. Ambulatory Care Program Deficits Excluding Educational Costs Included in A and B but Including Ambulatory Charity/Collection Loss Costs ⁽¹⁾	\$ 336,000,000
4. Inpatient Charity Care/Collection Loss Costs ⁽¹⁾	<u>\$1,676,000,000</u>
5. Total	<u>\$3,397,000,000</u>

FOOTNOTES

- (1) See Exhibit II - 2 and 3.
- (2) Medical Residents only are used to estimate the proportion of total graduate Medical and Dental Education Costs funded from Hospital revenues which are attributable to the 270 COTH teaching hospitals with major College of Medicine affiliations because information is not available on the number of dental residents and clinical fellows in the individual teaching hospitals.
- (3) American Medical Association, 80/81 Directory of Residency Training Programs Accredited by the Liaison Committee on Graduate Medical Education, (Chicago: American Medical Association, 1980).
- (4) Council of Teaching Hospitals, Association of American Medical Colleges, Committee Structure and Membership Directory, 1980, Washington, D.C., 1980; and Ibid.

**A THEORETICAL APPROACH TO STRUCTURING OF THE
COMPETITIVE SYSTEM TO RECOGNIZE THE UNIQUE
SOCIETAL CONTRIBUTIONS OF TEACHING HOSPITALS
(DOLLARS ARE 1980-81 ESTIMATES)**



* FULL FINANCIAL REQUIREMENTS ARE TOTAL OPERATING EXPENSES (\$18.6 BILLION - FOOTNOTE NO. 27) INCREASED TO INCLUDE AN ESTIMATED EIGHT PERCENT MARGIN TO MEET WORKING CAPITAL AND A PORTION OF CAPITAL REQUIREMENTS. (\$20.2 BILLION = \$18.6 BILLION + .92).

** \$3.4 BILLION + \$0.6 BILLION BELOW = \$4.0 BILLION TOTAL OF MEASURABLE SOCIETAL CONTRIBUTIONS (EXHIBIT II-1).

*** SOURCES OF REVENUE OTHER THAN CHARGES AND THE SOCIETAL CONTRIBUTION FUND ARE ESTIMATED TO BE 10% OF TOTAL REQUIREMENTS (EXHIBIT II-5, FOOTNOTE 3).

USE OF AN AVERAGE MULTIPLIER TO ESTIMATE TOTAL SOCIETAL CONTRIBUTIONS OF TEACHING HOSPITALS
AN IMPRACTICAL METHOD

In view of the current inability to separately identify the costs associated with the multiple societal contributions of teaching hospitals, an alternative procedure has been proposed by some individuals for determining reimbursement to a teaching hospital for all such costs. This alternative procedure would involve estimating the cost of unmeasurable societal contributions on a formula basis from known characteristics and financial data about teaching hospitals.

An approach which has been proposed for deriving this estimation would involve selection of one societal contribution of teaching hospitals for which cost data are available--for example, measurable educational costs--and then applying a multiplier to these costs to estimate the total amount of a teaching hospital's societal contributions. In an attempt to determine if such a method would be feasible, data were collected from a sample of 20 major teaching hospitals on the costs of three measurable societal contributions: education costs, charity care costs, and ambulatory care deficits.

A review of the data indicates that a dramatic difference exists among teaching hospitals both in the individual amounts of each societal contribution and in the relative proportionality of the cost of individual measurable societal contributions to the aggregate costs of all measurable societal contributions. If the variation in unmeasurable societal contribution costs across teaching hospitals is as great as these measurable items, it is apparent that no simple estimating procedure would be satisfactory as a basis for reimbursement.

In order to demonstrate this point dramatically, the average ratio of educational costs to total measurable costs (defined here as the total of education costs, charity/collection loss allowances, and ambulatory care deficits) was calculated for all 20 hospitals in the sample (See Table I) and for hospitals grouped according to total clinic visits and by bed size (See Table II). The relevant ratio (multiplier) was then multiplied by each hospital's educational costs to derive a predicted aggregate cost of education, charity/collection loss allowances and ambulatory care program deficits. Comparisons of actual total measurable costs to predicted total measurable costs are presented in each of the tables. Table I compares the actual total measurable costs to the multiplier-predicted total measurable costs; and Table II compares total actual measurable costs to the distribution of the multiplier-predicted total measurable costs for each of the hospital clinic visit and bed size groupings. As is readily apparent, with a few exceptions, the predictions were in gross error; and these results show that a simple technique for estimation of the societal contributions of teaching hospitals does not appear to be viable.

More elaborate and accurate estimating procedures have, as yet, eluded researchers investigating this issue. Therefore, prospective reimbursement programs have been faced with many difficulties in their attempts to devise a systematic method for dealing with teaching hospitals. Most of these programs have resorted to bilateral bargaining mechanisms rather than depending on strict formulae for estimating. While several promising research projects for investigating this issue are now underway, none appear to provide an accurate and practical method that can be safely and equitably utilized in the near future.

COMPARISON OF THE ACTUAL AND AVERAGE MULTIPLIER PREDICTED TOTAL COST OF EDUCATION, CHARITY/COLLECTION LOSS ALLOWANCES,
AND AMBULATORY CARE DEFICITS FOR A SAMPLE OF 20 UNIVERSITY OWNED TEACHING HOSPITALS

1979-00

Hospital	Actual Cost of Education	Actual Total Cost of Education Charity/Collection Loss Allowances, and Ambulatory Patient Care Deficits	Predicted Total Cost of Education Charity/Collection Loss Allowances, Ambulatory Patient Care Deficits*	Error Between Actual and Average Multiplier Predicted Total Cost of Education, Charity/ Collection Loss Allowances, and Ambulatory Patient Care Deficits	
				Monetary	Percentage
1.	\$ 8,362,600	\$ 15,832,465	\$ 20,739,248	\$ 4,906,703	31.0%
2.	1,298,307	5,773,205	3,219,801	(2,553,404)	(44.2)
3.	12,760,210	28,225,192	31,665,161	3,439,969	12.2
4.	4,385,903	18,837,751	10,877,039	(7,960,712)	(42.3)
5.	11,767,041	13,734,434	29,184,246	15,449,812	112.5
6.	7,828,665	12,983,053	19,415,089	6,432,036	49.5
7.	5,000,000	10,277,047	12,400,000	2,122,153	20.6
8.	952,017	2,151,943	2,361,002	209,059	9.7
9.	3,633,377	10,517,428	9,010,775	(1,506,653)	(14.3)
10.	3,111,610	7,469,260	7,716,793	247,533	3.3
11.	2,500,990	6,303,954	6,400,855	96,901	1.5
12.	9,073,004	22,967,174	22,501,240	(465,926)	(2.0)
13.	4,986,083	10,591,750	12,365,486	1,773,736	16.7
14.	3,386,539	19,376,436	8,398,617	(10,977,819)	(56.7)
15.	3,272,905	17,371,794	8,116,004	(9,254,990)	(53.3)
16.	4,444,395	10,000,621	11,022,100	173,479	1.6
17.	6,541,243	15,808,135	16,222,203	414,148	2.6
18.	3,942,523	18,590,549	9,777,457	(8,813,092)	(47.4)
19.	5,899,123	7,420,000	14,629,825	7,209,825	97.2
20.	2,010,203	5,966,296	4,985,303	(980,993)	(16.4)
TOTALS . . .	<u>\$105,245,618</u>	<u>\$261,047,287</u>	<u>\$261,009,132</u>		

*Average Multiplier Used in Calculation = $\$261,047,287 \div \$105,245,618 = 2.48$

TABLE I

COMPARISON OF THE ACTUAL AND AVERAGE MULTIPLIER PREDICTED TOTAL COSTS OF EDUCATION, CHARITY/COLLECTION LOSS ALLOWANCES, AND AMBULATORY CARE DEFICITS FOR A SAMPLE OF 20 UNIVERSITY OWNED TEACHING HOSPITALS ACCORDING TO CLINIC VISIT AND BED SIZE GROUPINGS

1979-80

<u>Sample Hospital Grouping</u>	<u>Actual Average Cost of Education</u>	<u>Actual Average Total Cost of Three Societal Contributions</u>	<u>Multiplier Value</u>	<u>Distribution of the Ratio of Cost Estimated by Use of A Multiplier to Actual Hospital Costs for Three Societal Contributions (Number of Hospitals in the Ratio Ranges)</u>						
				<u>Under .50</u>	<u>.50 - .75</u>	<u>.75 - 1.00</u>	<u>1 - 1.25</u>	<u>1.25 - 1.50</u>	<u>over 1.50</u>	
1. Distribution Based on Total CLINIC VISITS										
200,000 & Over . . .	\$7,716,572	\$16,480,609	2.14	2		1	1			1
150,000 - 199,999 . .	\$3,851,110	\$ 8,283,914	2.15		1	3	1		1	
100,000 - 149,999 . .	\$5,032,601	\$16,231,153	3.23		2				2	1
Under 100,000 . . .	\$4,598,273	\$11,946,245	2.60		1	1	1			1
2. Distribution Based on BED SIZE										
Over 750	\$8,004,004	\$15,517,349	1.94			2	1			1
600 - 750	\$6,842,237	\$16,232,919	2.37	1	1				1	1
400 - 599	\$4,788,908	\$14,112,673	2.95		2		4		1	
Under 400	\$2,467,660	\$ 7,051,498	2.86		1	2	1		1	